

GRAPHIC OPERATION TERMINAL GOT2000 Series

Connection Manual (Mitsubishi Product)

For GT Works3 Version1



ETHERNET CONNECTION
DIRECT CONNECTION TO CPU
COMPUTER LINK CONNECTION
BUS CONNECTION
MELSECNET/H CONNECTION, MELSECNET/10 CONNECTION
CC-Link IE CONNECTION
CC-Link CONNECTION
INVERTER CONNECTION
SERVO AMPLIFIER CONNECTION

- ■ROBOT CONTROLLER CONNECTION
- ■CNC CONNECTION
- ■INSTRUMENT CONNECTION
- ■GOT MULTI-DROP CONNECTION
- ■MULTI-CHANNEL FUNCTION
- ■FA TRANSPARENT FUNCTION

SAFETY PRECAUTIONS

(Always read these precautions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.

The precautions given in this manual are concerned with this product.

In this manual, the safety precautions are ranked as "WARNING" and "CAUTION".



Note that the <u>A</u> caution level may lead to a serious accident according to the circumstances. Always follow the instructions of both levels because they are important to personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

[DESIGN PRECAUTIONS]

- Some failures of the GOT, communication unit or cable may keep the outputs on or off.
 Some failures of a touch panel may cause malfunction of the input objects such as a touch switch.
 An external monitoring circuit should be provided to check for output signals which may lead to a serious accident.Not doing so can cause an accident due to false output or malfunction.
- Do not use the GOT as the warning device that may cause a serious accident. An independent and redundant hardware or mechanical interlock is required to configure the device that displays and outputs serious warning. Failure to observe this instruction may result in an accident due to incorrect output or malfunction.
- The GOT backlight failure disables the operation on the touch switch(s).
 When the GOT backlight has a failure, the POWER LED blinks (orange/blue) and the display section dims. In such a case, the input by the touch switch(s) is disabled.
- The display section of the GOT is an analog-resistive type touch panel. [GT27]

The GOT is multi-touch compliant; however, do not touch three points or more simultaneously on the display section. Doing so may cause an accident due to incorrect output or malfunction. [GT23]

If you touch the display section simultaneously in two points or more, the switch that is located around the center of the touched point, if any, may operate.Do not touch the display section in two points or more simultaneously.Doing so may cause an accident due to incorrect output or malfunction.

• When programs or parameters of the controller (such as a PLC) that is monitored by the GOT are changed, be sure to reset the GOT, or turn on the unit again after shutting off the power as soon as possible.Not doing so can cause an accident due to false output or malfunction.

[DESIGN PRECAUTIONS]

If a communication fault (including cable disconnection) occurs during monitoring on the GOT, communication between the GOT and PLC CPU is suspended and the GOT becomes inoperative. For bus connection (GT27 Only) : The CPU becomes faulty and the GOT becomes inoperative. For other than bus connection : The GOT becomes inoperative.
 A system where the COT is used should be configured to perform any significant energiation to the configured to perform any significant energiation to the configured to perform any significant energiation.

A system where the GOT is used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption that a GOT communication fault will occur.

Not doing so can cause an accident due to false output or malfunction.

- Do not bundle the control and communication cables with main-circuit, power or other wiring. Run the above cables separately from such wiring and keep them a minimum of 100mm apart. Not doing so noise can cause a malfunction.
- Do not press the GOT display section with a pointed material as a pen or driver. Doing so can result in a damage or failure of the display section.
- When the GOT is connected to the Ethernet network, the available IP address is restricted according to the system configuration.
 - When multiple GOTs are connected to the Ethernet network :
 - Do not set the IP address (192.168.3.18) for the GOTs and the controllers in the network.
 - When a single GOT is connected to the Ethernet network :
 - Do not set the IP address (192.168.3.18) for the controllers except the GOT in the network. Doing so can cause the IP address duplication.

The duplication can negatively affect the communication of the device with the IP address (192.168.3.18).

The operation at the IP address duplication depends on the devices and the system.

• Turn on the controllers and the network devices to be ready for communication before they communicate with the GOT.

Failure to do so can cause a communication error on the GOT.

• When the GOT is subject to shock or vibration, or some colors appear on the screen of the GOT, the screen of the GOT might flicker.

[MOUNTING PRECAUTIONS]

 Be sure to shut off all phases of the external power supply used by the system before mounting or removing the GOT main unit to/from the panel.

Not doing so can cause the unit to fail or malfunction.

 Be sure to shut off all phases of the external power supply used by the system before mounting or removing the option unit onto/from the GOT.(GT27 Only)

[MOUNTING PRECAUTIONS]

Use the GOT in the environment that satisfies the general specifications described in this manual. Not doing so can cause an electric shock, fire, malfunction or product damage or deterioration. • When mounting the GOT to the control panel, tighten the mounting screws in the specified torque range (0.36 N·m to 0.48 N·m) with a Phillips-head screwdriver No.2. Undertightening can cause the GOT to drop, short circuit or malfunction. Overtightening can cause a drop, short circuit or malfunction due to the damage of the screws or the GOT. • When loading the communication unit or option unit other than wireless LAN unit to the GOT, fit it to the connection interface of the GOT and tighten the mounting screws in the specified torque range (0.36 N•m to 0.48 N•m) with a Phillips-head screwdriver No.2. When loading the wireless LAN unit to the GOT, fit it to the side interface of GOT and tighten the mounting screws in the specified torque range (0.10 N•m to 0.14 N•m) with a Phillips-head screwdriver No.2. Under tightening can cause the GOT to drop, short circuit or malfunction. Overtightening can cause a drop, failure or malfunction due to the damage of the screws or unit.(GT27 Only) When closing the USB environmental protection cover, fix the cover to the GOT by pushing the [PUSH] mark on the latch firmly to comply with the protective structure.(GT27 Only) • Remove the protective film of the GOT. When the user continues using the GOT with the protective film, the film may not be removed.In addition, for the models equipped with the human sensor function, using the GOT with the protective film may cause the human sensor not to function properly • Operate and store the GOT in environments without direct sunlight, high temperature, dust, humidity, and vibrations.

• When using the GOT in the environment of oil or chemicals, use the protective cover for oil.Failure to do so may cause failure or malfunction due to the oil or chemical entering into the GOT.

[WIRING PRECAUTIONS]

• Be sure to shut off all phases of the external power supply used by the system before wiring. Failure to do so may result in an electric shock, product damage or malfunctions.

- Make sure to ground the FG terminal and LG terminal of the GOT power supply section to the protective ground conductors dedicated to the GOT with a ground resistance of 100 Ω or less.
- When tightening the terminal screws, use a Phillips-head screwdriver No.2.
- Terminal screws which are not to be used must be tightened always at torque 0.5 N·m to 0.8 N·m. Otherwise there will be a danger of short circuit against the solderless terminals.

[WIRING PRECAUTIONS]

 Use applicable solderless terminals and tighten them with the specified torque. If any solderless spade terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure.
 Correctly wire the GOT power supply section after confirming the rated voltage and terminal arrangement of the product. Not doing so can cause a fire or failure.
 Tighten the terminal screws of the GOT power supply section in the specified torque range (0.5 N·m to 0.8 N·m). Undertightening can cause a short circuit or malfunction.
 Overtightening can cause a short circuit or malfunction. Overtightening can cause a short circuit or malfunction due to the damage of the screws or the GOT. Exercise care to avoid foreign matter such as chips and wire offcuts entering the GOT. Not doing so can cause a fire, failure or malfunction
 The module has an ingress prevention label on its top to prevent foreign matter, such as wire offcuts, from entering the module during wiring. Do not peel this label during wiring.Before starting system operation, be sure to peel this label
 Plug the communication cable into the GOT interface or the connector of the connected unit, and tighten the mounting screws and the terminal screws in the specified torque range. Undertightening can cause a short circuit or malfunction.
 Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit. Plug the QnA/ACPU/Motion controller(A series) bus connection cable by inserting it into the connector of the connected unit until it "clicks".
After plugging, check that it has been inserted snugly. Not doing so can cause a malfunction due to a contact fault.(GT27 Only)

• Before performing the test operations of the user creation monitor screen (such as turning ON or OFF bit device, changing the word device current value, changing the settings or current values of the timer or counter, and changing the buffer memory current value), read through the manual carefully and make yourself familiar with the operation method.

During test operation, never change the data of the devices which are used to perform significant operation for the system.

False output or malfunction can cause an accident.

[STARTUP/MAINTENANCE PRECAUTIONS]

- When power is on, do not touch the terminals.
 Doing so can cause an electric shock or malfunction.
- Correctly connect the battery connector.
 Do not charge, disassemble, heat, short-circuit, solder, or throw the battery into the fire.
 Doing so will cause the battery to produce heat, explode, or ignite, resulting in injury and fire.
- Before starting cleaning or terminal screw retightening, always switch off the power externally in all phases.

Not switching the power off in all phases can cause a unit failure or malfunction.

Undertightening can cause a short circuit or malfunction.

Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit.

- Do not disassemble or modify the unit.
 Doing so can cause a failure, malfunction, injury or fire.
- Do not touch the conductive and electronic parts of the unit directly. Doing so can cause a unit malfunction or failure.
- The cables connected to the unit must be run in ducts or clamped. Not doing so can cause the unit or cable to be damaged due to the dangling, motion or accidental pulling of the cables or can cause a malfunction due to a cable connection fault.
- When unplugging the cable connected to the unit, do not hold and pull from the cable portion. Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault.
- Do not drop the module or subject it to strong shock. A module damage may result.
- Do not drop or give an impact to the battery mounted to the unit. Doing so may damage the battery, causing the battery fluid to leak inside the battery. If the battery is dropped or given an impact, dispose of it without using.
- Before touching the unit, always touch grounded metals, etc. to discharge static electricity from human body, etc.

Not doing so can cause the unit to fail or malfunction.

- Use the battery manufactured by Mitsubishi Electric Corporation. Use of other batteries may cause a risk of fire or explosion.
- Dispose of used battery promptly. Keep away from children.Do not disassemble and do not dispose of in fire.
- Be sure to shut off all phases of the external power supply before replacing the battery or using the dip switch of the terminating resistor.
 Not doing so can cause the unit to fail or malfunction by static electricity.

[TOUCH PANEL PRECAUTIONS]

• For the analog-resistive film type touch panels, normally the adjustment is not required. However, the difference between a touched position and the object position may occur as the period of use elapses.

When any difference between a touched position and the object position occurs, execute the touch panel calibration.

• When any difference between a touched position and the object position occurs, other object may be activated.

This may cause an unexpected operation due to incorrect output or malfunction.

[PRECAUTIONS WHEN THE DATA STORAGE IS IN USE]

• If the SD card mounted on drive A of the GOT is removed while the GOT is accessed, processing for the GOT might be interrupted about for 20 seconds.

The GOT cannot be operated during this period.

The functions that run in the background including a screen updating, alarm, logging, scripts, and others are also interrupted.

Since this interruption makes an impact to the system operation, it might cause failure. After checking the light off of SD card access LED, remove the SD card.

• If the data storage mounted on the GOT is removed while the GOT is accessed, the data storage and files are damaged.

To remove the data storage from the GOT, check that the access to the data storage in SD card access LED, the system signal, and others is not performed.

- When inserting a SD card into the GOT, make sure to close the SD card cover. Failure to do so causes the data not to be read or written.
- When removing the SD card from the GOT, make sure to support the SD card by hand as it may pop out.

Failure to do so may cause the SD card to drop from the GOT, resulting in a failure or break.

- When inserting a USB device into a USB interface of the GOT, make sure to insert the device into the interface firmly.
 - Failure to do so may cause the USB device to drop from the GOT, resulting in a failure or break.
- Before removing the USB device from the GOT, follow the procedure for removal on the utility screen of the GOT.

After the successful completion dialog is displayed, remove the USB device by hand carefully. Failure to do so may cause the USB device to drop from the GOT, resulting in a failure or break.

[DISPOSAL PRECAUTIONS]

When disposing of this product, treat it as industrial waste.
 When disposing of batteries, separate them from other wastes according to the local regulations.
 (Refer to the GOT2000 Series User's Manual (Hardware) for details of the battery directive in the EU member states.)

[TRANSPORTATION PRECAUTIONS]

- When transporting lithium batteries, make sure to treat them based on the transport regulations. (Refer to the GOT2000 Series User's Manual (Hardware) for details of the regulated models.)
- Make sure to transport the GOT main unit and/or relevant unit(s) in the manner they will not be exposed to the impact exceeding the impact resistance described in the general specifications of this manual, as they are precision devices.

Failure to do so may cause the unit to fail.

Check if the unit operates correctly after transportation.

• When fumigants that contain halogen materials such as fluorine, chlorine, bromine, and iodine are used for disinfecting and protecting wooden packaging from insects, they cause malfunction when entering our products.

Please take necessary precautions to ensure that remaining materials from fumigant do not enter our products, or treat packaging with methods other than fumigation (heat method). Additionally, disinfect and protect wood from insects before packing products.

INTRODUCTION

Thank you for choosing Mitsubishi Graphic Operation Terminal (Mitsubishi GOT). Read this manual and make sure you understand the functions and performance of the GOT thoroughly in advance to ensure correct use.

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REVISIONS

WARRANTY

List of Manuals for GT Works3

For the manuals related to this product, install the manuals with the drawing software. If you need a printed manual, consult your local Mitsubishi representative or branch office.

■1. List of Manuals for GT Designer3(GOT2000)

(1) Screen drawing software manuals

Manual name	Manual number (Model code)
GT Works3 Version1 Installation Procedure Manual	-
GT Designer3 (GOT2000) Help	-
GT Converter2 Version3 Operating Manual for GT Works3	SH-080862ENG (1D7MB2)
GOT2000 Series MES Interface Function Manual for GT Works3 Version1	SH-081228ENG

(2) Connection manuals

Manual name	Manual number (Model code)
GOT2000 Series Connection Manual (Mitsubishi Products) for GT Works3 Version1	SH-081197ENG (1D7MJ8)
GOT2000 Series Connection Manual (Non-Mitsubishi Products 1) for GT Works3 Version1	SH-081198ENG
GOT2000 Series Connection Manual (Non-Mitsubishi Products 2) for GT Works3 Version1	SH-081199ENG
GOT2000 Series Connection Manual (Microcomputer, MODBUS Products, Peripherals) for GT Works3 Version1	SH-081200ENG

(3) GT SoftGOT2000 manuals

Manual name	Manual number (Model code)
GT SoftGOT2000 Version1 Operating Manual	SH-081201ENG

(4) GOT2000 manuals

Manual name	Manual number (Model code)
GOT2000 Series User's Manual (Hardware)	SH-081194ENG (1D7MJ5)
GOT2000 Series User's Manual (Utility)	SH-081195ENG (1D7MJ6)
GOT2000 Series User's Manual (Monitor)	SH-081196ENG (1D7MJ7)

■2. List of Manuals for GT Designer3(GOT1000)

Refer to the Help and manuals for GT Designer3(GOT1000)

Abbreviations and Generic Terms

The following shows the abbreviations and generic terms used in Help.

■1. GOT

Abbreviations and generic terms		eric terms	Description
	GT27	GT2712-S	GT2712-STBA, GT2712-STWA, GT2712-STBD, GT2712-STWD
		GT2710-S	GT2710-STBA, GT2710-STBD
		GT2710-V	GT2710-VTBA, GT2710-VTWA, GT2710-VTBD, GT2710-VTWD
COT2000 Sorias		GT2708-S	GT2708-STBA, GT2708-STBD
GOT2000 Series		GT2708-V	GT2708-VTBA, GT2708-VTBD
	0700	GT2310-V	GT2310-VTBA, GT2310-VTBD
	6125	GT2308-V	GT2308-VTBA, GT2308-VTBD
	GT SoftGOT2000		GT SoftGOT2000 Version1
GOT1000 Series			GOT1000 Series
GOT900 Series			GOT-A900 Series, GOT-F900 Series
GOT800 Series			GOT-800 Series

■2. Communication unit

Abbreviations and generic terms	Description
Bus connection unit	GT15-QBUS, GT15-QBUS2, GT15-ABUS, GT15-ABUS2, GT15-75QBUSL, GT15-75QBUS2L, GT15-75ABUSL, GT15-75ABUS2L
Serial communication unit	GT15-RS2-9P, GT15-RS4-9S, GT15-RS4-TE
MELSECNET/H communication unit	GT15-J71LP23-25, GT15-J71BR13
CC-Link IE Controller Network communication unit	GT15-J71GP23-SX
CC-Link IE Field Network communication unit	GT15-J71GF13-T2
CC-Link communication unit	GT15-J61BT13
Wireless LAN communication unit	GT25-WLAN
Serial multi-drop connection unit	GT01-RS4-M
Connection conversion adapter	GT10-9PT5S

■3. Option unit

Abbreviations and generic terms		Description
Printer unit		GT15-PRN
	Video input unit	GT27-V4-Z (A set of GT16M-V4 and GT27-IF1000)
Video/PCP unit	RGB input unit	GT27-R2-Z (A set of GT16M-R2 and GT27-IF1000)
VIGEO/RGB UTIL	Video/RGB input unit	GT27-V4R1-Z (A set of GT16M-V4R1 and GT27-IF1000)
	RGB output unit	GT27-ROUT-Z (A set of GT16M-ROUT and GT27-IF1000)
Multimedia unit		GT27-MMR-Z (A set of GT16M-MMR and GT27-IF1000)
Video signal conversion unit		GT27-IF1000
External I/O unit		GT15-DIO, GT15-DIOR
Sound output unit		GT15-SOUT

■4. Option

Abbreviations and generic terms		Description
SD card		L1MEM-2GBSD, L1MEM-4GBSD
Battery		GT11-50BAT, GT11-BAT
Protective sheet	For GT27	GT25-12PSGC, GT25-10PSGC, GT25-08PSGC, GT25-12PSCC, GT25- 10PSCC, GT25-08PSCC, GT25-12PSCC-UC, GT25-10PSCC-UC, GT25- 08PSCC-UC
	For GT23	GT25-10PSCC-UC, GT25-08PSCC-UC
Protective cover for oil		GT20-10PCO, GT20-08PCO
USB environmental protection cover		GT25-UCOV
Stand		GT15-90STAND, GT15-80STAND, GT15-70STAND, GT15-60STAND
Attachment		GT15-70ATT-98, GT15-70ATT-87, GT15-60ATT-97, GT15-60ATT-96, GT15- 60ATT-87, GT15-60ATT-77

■5. Software

(1) Software related to GOT

Abbreviations and generic terms	Description
GT Works3	SW1DNC-GTW3-J, SW1DND-GTW3-J, SW1DNC-GTW3-E, SW1DND-GTW3-E, SW1DND-GTW3-C
GT Designer3 Version1	Screen drawing software GT Designer3 for GOT2000/GOT1000 series
GT Designer3	Screen drawing software for GOT2000 series included in GT Works3
GT Designer3 (GOT2000)	
GT Designer3 (GOT1000)	Screen drawing software for GOT1000 series included in GT Works3
GT Simulator3	Screen simulator GT Simulator3 for GOT2000/GOT1000/GOT900 series
GT SoftGOT2000	Monitoring software GT SoftGOT2000 series
GT Converter2	Data conversion software GT Converter2 for GOT1000/GOT900 series
GT Designer2 Classic	Screen drawing software GT Designer2 Classic for GOT900 series
GT Designer2	Screen drawing software GT Designer2 for GOT1000/GOT900 series
DU/WIN	Screen drawing software FX-PCS-DU/WIN for GOT-F900 series

(2) Software related to iQ Works

Abbreviations and generic terms	Description
iQ Works	Abbreviation of iQ Platform compatible engineering environment MELSOFT iQ Works
MELSOFT Navigator	Generic term for integrated development environment software included in the SW DNC-IQWK (iQ Platform compatible engineering environment MELSOFT iQ Works) (□ indicates a version.)

(3) Other software

Abbreviations and generic terms	Description
GX Works2	SWDDNC-GXW2-J (-JA, -JAZ) type programmable controller engineering software (□ indicates a version.)
GX Simulator2	GX Works2 with the simulation function
GX Simulator	SW□D5C-LLT-J (-JV) type ladder logic test tool function software package (SW5D5C-LLT (-V) or later versions) (□ indicates a version.)
GX Developer	SW□D5C-GPPW-J (-JV)/SW□D5F-GPPW (-V) type software package (□ indicates a version.)
GX LogViewer	SW□DNN-VIEWER-J type software package (□ indicates a version.)
PX Developer	SWDD5C-FBDQ-J type FBD software package for process control (D indicates a version.)
MT Works2	Motion controller engineering environment MELSOFT MT Works2(SWnDNC-MTW2-J) (n indicates a version.)
MT Developer	SW□RNC-GSV type integrated start-up support software for motion controller Q series (□ indicates a version.)
MR Configurator2	SW□DNC-MRC2-J type servo configuration software (□ indicates a version.)
MR Configurator	MRZJW□-SETUP type servo configuration software (□ indicates a version.)
FR Configurator	Inverter setup software (FR-SW□-SETUP-WJ) (□ indicates a version.)
NC Configurator	CNC parameter setting support tool NC Configurator
FX Configurator-FP	Parameter setting, monitoring, and testing software packages for FX3U- 20SSC-H (SW=D5CFXSSCJ) (□ indicates a version.)
FX3U-ENET-L Configuration tool	FX3U-ENET-L type Ethernet module setting software (SW1D5-FXENETL-J)
RT ToolBox2	Robot program creation software (3D-11C-WINJ)
MX Component	MX Component Version (SW D5C-ACT-J, SW D5C-ACT-JA) (indicates a version.)
MX Sheet	MX Sheet Version_(SWD5C-SHEET-J, SWD5C-SHEET-JA) (□ indicates a version.)
QnUDVCPU·LCPU Logging Configuration Tool	QnUDVCPU·LCPU logging configuration tool (SW1DNN-LLUTL-J)

■6. License key (for GT SoftGOT2000)

Abbreviations and generic terms	Description
License key	GT27-SGTKEY-U

■7. Others

Abbreviations and generic terms	Description
IAI	IAI Corporation
AZBIL	Azbil Corporation
OMRON	OMRON Corporation
KEYENCE	KEYENCE CORPORATION
KOYO EI	KOYO ELECTRONICS INDUSTRIES CO., LTD.
JTEKT	JTEKT Corporation
SHARP	Sharp Manufacturing Systems Corporation
SHINKO	Shinko Technos Co., Ltd.
CHINO	CHINO CORPORATION
TOSHIBA	TOSHIBA CORPORATION
TOSHIBA MACHINE	TOSHIBA MACHINE CO., LTD.
PANASONIC	Panasonic Corporation
PANASONIC IDS	Panasonic Industrial Devices SUNX Co., Ltd.
HITACHI IES	Hitachi Industrial Equipment Systems Co., Ltd.
HITACHI	Hitachi, Ltd.
FUJI ELECTRIC	FUJI ELECTRIC CO., LTD.
YASKAWA	YASKAWA Electric Corporation
YOKOGAWA	Yokogawa Electric Corporation
RKC	RKC INSTRUMENT INC.
ALLEN-BRADLEY	Allen-Bradley products manufactured by Rockwell Automation, Inc.
GE IP	GE Intelligent Platforms KK
LSIS	LS Industrial Systems Co., Ltd.
SCHNEIDER	Schneider Electric SA
SICK	SICK AG
SIEMENS	Siemens AG
PLC	Programmable controller manufactured by each corporation
Control equipment	Control equipment manufactured by each corporation
Temperature controller	Temperature controller manufactured by each corporation
Indicating controller	Indicating controller manufactured by each corporation
Controller	Controller manufactured by each corporation

PREPARATORY PROCEDURES FOR MONITORING

1.1	Setting the Communication Interface	. 1 - 3
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1.3	Option Devices for the Respective Connection	1 - 15
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1. PREPARATORY PROCEDURES FOR MONITORING

The following shows the procedures to be taken before monitoring and corresponding reference sections.



1.1 Setting the Communication Interface

Set the communication interface of GOT and the connected equipment.

When using the GOT at the first time, make sure to set the channel of communication interface and the communication driver before writing to GOT.

Set the communication interface of the GOT at [Controller Setting] and [I/F Communication Setting] in GT Designer3.

1.1.1 Setting connected equipment (Channel setting)

Set the channel of the equipment connected to the GOT.

Setting

Manufacturer: MITSUBISHI Controller Typg: MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700 Routing Information J/F: Standard J/F(RS422/485) • Driver: Q/L/QnA/A CPU, QJ71C24, LJ71C24 Data Setting • Property Value Transmission Speed(BPS) 115200 Timeout Time(Sec) 3 Deby Time(ms) 0 Format 1 Monitor Speed High(Normal)	CH1:MELSEC-Q/QS, Q						Ê
Controller Type: MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700 Filter Type: MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700 Filter Type: MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700 Filter Type: QL/QnA/A CPU, QJ7IC24, LJ7IC24 Property Value Filter Type: Detail Setting Property Value Filter Tansmission Speed(BPS) 115200 Retry(Times) 0 Filter Timeout Time(Sec) 3 Debay Time(ms) 0 Format 1 Monitor Speed High(Normal) Monitor Speed High(Normal)	CH2:None	<u>M</u> anufa	cturer:	MITSUBISHI		•	
Routing Information J/F: Standard I/F(RS422/485) Communication Driver: Q/L/QnA/A CPU, QJ71C24, LJ71C24 Gateway Serve Detail Setting Detail Setting Detail Setting Station No. Switch Property Value Transmission Speed(BPS) Diagram 0 Timeout Time(Sec) 3 Delay Time(ms) 0 Format 1 Monitor Speed High(Normal)	CH4:None Network/Duplex Settir	Control	er Typ <u>e</u> :	MELSEC-Q/QS,	Q17nD/M/NC/DR, CRnD-700	•]	
Communication Gateway Server Mail FTP Server Q Redundant Station No. Switch Driver: Q/L/QnA/A CPU, QJ71C24, LJ71C24 Property Q Redundant Retry(Times) Detail Setting Timeout Time(Sec) 3 Delay Time(ms) 0 Format 1 Monitor Speed High(Normal)	Routing Informatio	J/F:		Standard I/F(R	5422/485)	•	
Gateway Clert Detail Setting FIP Server Property Value Q Redundant Transmission Speed(BPS) 115200 Station No. Switch 0 Timeout Time(Sec) 3 Delay Time(ms) 0 0 Format 1 Monitor Speed High(Normal)	Communication	Driver:		Q/L/QnA/A CP	U, QJ71C24, LJ71C24	•	
Mail File Transfer (File Transfer (File Transmission Speed(BPS) 115200 Retry(Tmes) 0 0 Timeout Time(Sec) 3 0 Delay Time(ms) 0 0 Format 1 1 Monitor Speed High(Normal) 0	Gateway Client	Detail S	etting				
Property Value Q Redundant 115200 Station No. Switch 0 Timeout Time(Sec) 3 Delay Time(ms) 0 Format 1 Monitor Speed High(Normal)	Mail						
Q Redundant Station No. Switch Transmission Speed(BPS) 115200 Retry(Times) 0 Timeout Time(Sec) 3 Delay Time(ms) 0 Format 1 Monitor Speed High(Normal)	File Transfer (F		Property		Value		
Retry(Times) 0 Timeout Time(Sec) 3 Delay Time(ms) 0 Format 1 Monitor Speed High(Normal)	Redundant		Transmission	n Speed(BPS)	115200		-
Timeout Time(Sec) 3 Delay Time(ms) 0 Format 1 Monitor Speed High(Normal)	cation no. Switch		Retry(Times	5)	0		
Deby Time(ms) 0 Format 1 Monitor Speed High(Normal)			Timeout Tir	ne(Sec)	3		
Format 1 Monitor Speed High(Normal)			Delay Time(ims)	0	_	
Monitor Speed High(Normal)			Format		1		
			Monitor Spe	ed	High(Normal)		
				_	_		
				_			
				_			
III P				_	_		

- **1.** Select [Common] \rightarrow [Controller Setting] from the menu.
- 2. The Controller Setting dialog box appears. Select the channel No. to be used from the list menu.
- 3. Refer to the following explanations for the setting.

POINT.

Channel No.2 to No.4

Use the channel No.2 to No.4 when using the Multi-channel function. For details of the Multi-channel function, refer to the following.

ST Mitsubishi Products 19. MULTI-CHANNEL FUNCTION

Setting item

This section describes the setting items of the Manufacturer, Controller Type, Driver and I/F. When using the channel No.2 to No.4, put a check mark at [Use CH*].

Controller Setting CH1:MELSEC-Q/QS, Q:					
CH2:None	Manufacturer:	MITSUBI	SHI		•
CH4:None	Controller Typ <u>e</u>	: MELSEC-	Q/QS, Q17nD/M	1/NC/DR, CRnD-700	•
h Network/Duplex Settir		*Please s	et the Ethernet	Setting of the Control	er with a list of lower scr
Gateway	I∕F:	Standard	I/F(Ethernet):	Multi	•
Communication	Driver:	Ethernet	(MELSEC), 017	nNC. CRnD-700. Gatew	av 🔹
Gateway Serve	-	(metomotion			
	Detail Setting			GOT Ethernet S	Setting
FTP Server	Proper	ty	Valu	e	
🖷 Q Redundant	GOT N	et No.	1	ā.	
Station No. Switch	GOT S	tation	1		
	GOT E	thernet Setting	192.	168.3.18	
	GOT C	ommunication Por	t No. 5001	1	
	Retry(Times)	3		
	Startu	o Time(Sec)	3		
	Timeo	ut Time(Sec)	3		
	Delay	Fime(ms)	0		
	Ethernet Setti	19			
	(6		
	H	lost Net No.	Station	Unit Type	IP Address
	-	* 1	1	OnUD(D)V/OnUDEU	102 168 2 20

Item	Description
Use CH*	Select this item when setting the channel No.2 to No.4.
Manufacturer	Select the manufacturer of the equipment to be connected to the GOT.
Туре	Select the type of the equipment to be connected to the GOT. For the settings, refer to the following. $[3, 3, 3, 5]$ (2)Setting [Controller Type]
l/F	Select the interface of the GOT to which the equipment is connected. For the settings, refer to the following.
Driver	Select the communication driver to be written to the GOT. For the settings, refer to the following. $[\overline{\mathcal{F}}]$ (1)Setting [Driver]
Detail Setting	Make settings for the transmission speed and data length of the communication driver.

(1) Setting [Driver]

The displayed items for a driver differ according to the settings [Manufacturer], [Controller Type] and [I/F]. When the driver to be set is not displayed, confirm if [Manufacturer], [Controller Type] and [I/F] are correct. For the settings, refer to the following.

(2) Setting [Controller Type] The types for the selection differs depending on the PLC to be used. For the settings, refer to the following.

_		Туре	Model name
Туре	Model name		CNC C70
	Q00CPU		(Q173NCCPU)
	Q01CPU		CRnQ-700
	QU2CPU		(Q172DRCPU)
	Q02HCPU		CR750-Q
	Q06HCPU	MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700	(Q172DRCPU)
	Q12HCPU		CR751-Q
	Q25HCPU		(Q172DRCPU)
	Q02PHCPU		CRnD-700
			CR750-D
	Q25PHCPU		CR751-D
	0172CDU		Q00JCPU
	0173CPU		Q00CPU
	Q172CPUN		Q01CPU
	Q173CPUN		Q02CPU
	Q172HCPU		
	Q173HCPU		Q06HCPU
	Q00UJCPU		Q12HCPU
	Q00UCPU		Q25HCPU
	001UCPU		Q02PHCPU
			Q06PHCPU
	QUZUCPU		Q12PHCPU
	Q03UDCPU		Q25PHCPU
	Q04UDHCPU		Q12PRHCPU
	Q06UDHCPU		Q25PRHCPU
		MELSEC-QnA, MELDAS C6*	QS001CPU
			Q2ACPU
			Q2ACPU-S1
MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700			Q3ACPU
			Q4ACPU
	Q06UDEHCPU		Q4ARCPU
	Q10UDEHCPU		Q2ASCPU
	Q13UDEHCPU		02ASCPU-S1
	Q20UDEHCPU		
	Q26UDEHCPU		QZASHCPU
			Q2ASHCPU-S1
			MELDAS C6
			(FCA C6)
			MELDAS C64
	Q13UDVCPU		
	Q26UDVCPU		
	Q04UDPVCPU		
	Q06UDPVCPU		L26CPU-BT
	Q13UDPVCPU		L02CPU-P
	Q26UDPVCPU	MELSEC-L	L06CPU-P
	Q12DCCPU-V		L26CPU-P
	Q24DHCCPU-V		L26CPU-PBT
			L02SCPU
	Q172DCPU		N72GE-ETR
	Q173DCPU-S1	" when using the multiple CPU system When using the GOT to monitor th	e multiple CPU system of
		other station, select [MELSEC-Q(M	lulti)/Q-Motion], or
	Q173DSCPU	[MELSEC-QnU/DC,Q17nD/M/NC/I type regardless of the host PLC CF	DR,CRnD-700] for the PU type.
	Q170MCPU		,po.
	Q170MSCPU	*2 When connecting to the remote I/O sta	Ation in the MELSECNET
	Q170MSCPU-S1	MELDAS C6 *].	MELOLUQIIA/Q/QO,

1. PREPARATORY PROCEDURES FOR MONITORING 1.1 Setting the Communication Interface

Ture	Madalaama	Туре	Model name
Туре			A1FXCPU
			A273UCPU
	A2UCPU-S1		A273UHCPU
	A3UCPU		A273UHCPU-S3
	A4UCPU		A373UCPU
	A2ACPU		A373UCPU-S3
	A2ACPUP21		A171SCPU
	A2ACPUR21	MELSEC-A	A171SCPU-S3
	A2ACPU-S1		A171SCPU-S3N
	A2ACPUP21-S1		A171SHCPU
	A2ACPUR21-S1		A171SHCPUN
	A3ACPU		A172SHCPU
	A3ACPUP21		A172SHCPUN
	A3ACPUR21		A173UHCPU
	A1NCPU		A173UHCPU-S1
	A1NCPUP21		FX ₀
	A1NCPUR21		FX ₀ s
	A2NCPU		FXON
	A2NCPUP21		FX1
	A2NCPUR21		FX2
	A2NCPU-S1		FX2C
	A2NCPUP21-S1		FX1s
	A2NCPUR21-S1		FX1N
	A3NCPU	MELSEC-EX	FX2N
	A3NCPUP21		FX1NC
	A3NCPUR21		EX2NC
	A2USCPU		FX3S
	A2USCPU-S1		FX3G
	A2USHCPU-S1		EX300
	A1SCPU		FX3GE
	A1SCPUC24-R2		FYau
	A1SHCPU		EXauc
	A2SCPU		WS0_CPU0
	A2SHCPU	MELSEC-WS	WS0-CPU1
	A1SJCPU		
	A1SJCPU-S3		
	A1SJHCPU		MELSERVO-J2M- DO
	A0J2HCPU	MELSERVO-J2S- A	MELSERVO-J2S- A
	A0J2HCPUP21		MELSERVO-J2S- CF
	A0J2HCPUR21	MELSERVO-J25- CL	MELSERVO-J2S- CL
	A0J2HCPU-DC24		MELSERVU-J3-A
	A2CCPU		MELSERVO-J3-*
	A2CCPUP21		MELSERVO-J4-*A
	A2CCPUR21	MELSERVO-JE-*A	MELSERVO-JE-*A
	A2CCPUC24		
	A2CCPUC24-PRF		

Туре	Model name
	FREQROL-S500
	FREQROL-S500E
	FREQROL-E500
	FREQROL-F500
	FREQROL-F500L
	FREQROL-F500J
	FREQROL-A500
	FREQROL-A500L
	FREQROL-V500
FREQROL 500/700/800, SENSORLESS SERVO	FREQROL-V500L
	FREQROL-D700
	FREQROL-E700
	FREQROL-F700
	FREQROL-F700P
	FREQROL-F700PJ
	FREQROL-A700
	FREQROL-A800
	FREQROL-F800
	FREQROL-E700EX
	FREQROL-A800
FREQROL 800 (Automatic Negotiation)	FREQROL-F800

(3) Setting [I/F]

The interface differs depending on the GOT to be used. Set the I/F according to the connection and the position of communication unit to be mounted onto the GOT.



1.1.2 I/F communication setting

Setting

This function displays the list of the GOT communication interfaces. Set the channel and the communication driver to the interface to be used.

ndard I/F Setting			
	CH No.	Driver	
F-1: RS422/485	1	 Q/L/QnA/A CPU, QJ71C24, LJ71C24 	Detail Setting
F-2: RS232	0	▼ None	▼ Detail Setting
F-3: USB	9	+ Host (PC)	•
		 Approximate and the second seco	
F-4: Ethernet RS232 Setting – Ena end I/F Setting	0 able the 5V	None	▼ Detail Setting
F-4: Ethernet RS232 Setting – Ena end I/F Setting	0 able the 5V CH No.	None None Driver	▼ Detail Setting
F-4: Ethernet R5232 Setting – Ena end 1/F Setting 1st	0 able the 5V CH No. 0		Detail Setting Detail Setting
F-4: Ethernet R5232 Setting – Ena end I/F Setting 1st 2nd	0 able the 5V CH No. 0 0		Detail Setting Detail Setting Detail Setting Detail Setting
F-4: Ethernet RS232 Setting – Ena end I/F Setting 1st 2nd 3rd	CH No.		

- **1**. Select [Common] \rightarrow [I/F Communication Setting] from the menu.
- 2. The I/F Communication Setting dialog box appears. Make the settings with reference to the following explanation.

POINT.

When using the parameter reflection function of MELSOFT Navigator.

When setting [Controller Setting] in GT Designer3 using the parameter function of MELSOFT Navigator, all of I/F Communication Setting are grayout and cannot be edited Set these items at [Controller Setting] or [Peripheral Unit Setting].

and the second second	No. in the				
			(here)		
	<u>N</u>	20	A/GAM1/0 (PE-1/01024,0)/71(24	12	Detail Setting
	1	18	Host (PC)		
/F.(4) H04020444	1	18	Nore	1	DetailSelling.
F-1 Ellismet	Π.		None		DetalSetting_
W					
mental (Manageman					
dend for seem			5 wee		
stor (1.5-1	9 04) 11		Diver Intera	14	DetaiSeting
ider 10-1 Tr Sec	95 10 10 10 10		Divet Rom Rom	2	DetaiSetting DetaiSetting
dor 10-1 le Jac Jac	0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	ূলে ব	Tinen Rom Rom	E E	DetailSetting DetailSetting DetailSetting
dor (1A-1 le Jac Att	0 041 0 0 0		Diver Nore Nore	2 y 2	DetailSetting DetailSetting DetailSetting
der 114-1 Te Sec Art oter 114-1	0144 1011 1011 1011 1011		Diver Inone Mane Diver	x x	DetailSetting DetailSetting DetailSetting
den 108-1 ie 3e 3e 3e 3e 3e 3e 3e 3e 3e			Dirver Hildran Hidran Hidran Dirver Hiddran	2 C 2	DetailSetting DetailSetting DetailSetting DetailSetting
der 104 1 der 104 1 der 204 der 204 de			Drives Roma Rome Rome Drives Rome Rome	2 2 2 2	DetailSetting DetailSetting DetailSetting DetailSetting DetailSetting

Setting item

The following describes the setting items for the standard I/F setting and extension I/F setting.

	CH No).	Driver		
F-1: RS422/485	1	•	Q/L/QnA/A CPU, QJ71C24, LJ71C24	•]	Detail Setting
F-2: RS232	0	•	None	•	Detail Setting
F-3: USB	9	*	Host (PC)	•	
F-4: Ethernet	0	-	None	•	Detail Setting
RS232 Setting — Ena	ble the : CH No	5V pov).	ver supply Driver		
RS232 Setting — Enal end I/F Setting	CH No	5V pov).	ver supply Driver		Detail Setting
RS232 Setting — Ena end I/F Setting 1st 2nd	CH No	5V pov). 	ver supply Driver None	•	Detail Setting
RS232 Setting — Ena end I/F Setting 1st 2nd 3rd	CH Nc 0 0 0	5V pov). •	ver supply Driver None None None	•	Detail Setting Detail Setting Detail Setting
RS232 Setting — Enai end I/F Setting 1st 2nd 3rd Wireless LAN	CH No O O O O	5V pov). •	ver supply Driver None None None None	• • •	Detail Setting Detail Setting Detail Setting Detail Setting

Item		Description			
Standard I/F setting		Set channel No. and drivers to the GOT standard interfaces.			
	CH No.	 Set the CH No. according to the intended purpose. 0: Not used 1 to 4: Used for connecting a controller of channel No. 1 to 4 set in Setting connected equipment (Channel setting) 5 to 8: Used for barcode function, RFID function, remote personal computer operation unction (serial) 9: Used for connecting Host (PC) or Ethernet download A: Used for the report function (with a serial printer), hard copy function (with a serial printer), remote personal computer operation function (Ethernet), VNC server function, gateway function, and MES interface function. Multi: Used for multi-channel Ethernet connection 			
	I/F	The communication type of the GOT standard interface is displayed.			
	Driver	Set the driver for the device to be connected. • None • Host (Personal computer) • Each communication driver for connected devices			
	Detail Setting	Make settings for the transmission speed and data length of the communication driver.			
	RS232 Setting	To validate the 5V power supply function in RS232, mark the [Enable the 5V power supply] checkbox. The RS232 setting is invalid when the CH No. of [I/F-1: RS232] is [9].			
Extension I/F setting		Set the communication unit attached to the extension interface of the GOT.			
	CH No.	 Set the CH No. according to the intended purpose. The number of channels differs depending on the GOT to be used. 0: Not used 1 to 4: Used for connecting a controller of channel No. 1 to 4 set in Setting connected equipment (Channel setting) 5 to 8: Used for barcode function, RFID function, remote personal computer operation (serial) A: Used for the video/RGB display function, multimedia function, external I/O function, operation panel function, RGB output function, report function, hard copy function (with a printer), sound output function, gateway function, MES interface function, and wireless LAN connection. 			

POINT,

Channel No., drivers, [RS232 Setting]

(1) Channel No.2 to No.4

Use the channel No.2 to No.4 when using the Multi-channel function. For details of the Multi-channel function, refer to the following.

F Mitsubishi Products 19. MULTI-CHANNEL FUNCTION

(2) Drivers

The displayed items for a driver differ according to the settings [Manufacturer], [Controller Type] and [I/F]. When the driver to be set is not displayed, confirm if [Manufacturer], [Controller Type] and [I/F] are correct.

[37 [Setting the communication interface] section in each chapter

1.1.3 Precautions

(1) When using the multiple CPU system When using the GOT to monitor the multiple CPU system of other stations, select [MELSEC-Q(Multi)/Q-Motion] or [MELSEC-QnU/DC, Q17nD/M/NC/DR, CRnD-700] for the type, regardless of the host PLC CPU type (QCPU, QnACPU, ACPU).

When other models are selected, the setting of the CPU No. becomes unavailable.

- (2) Precautions for changing model
 - (a) When devices that cannot be converted are included. When setting of [Manufacturer] or [Controller Type] is changed, GT Designer3 displays the device that cannot be converted (no corresponding device type, or excessive setting ranges) as [??]. In this case, set the device again.
 - (b) When the changed Manufacturer or Controller Type does not correspond to the network. The network will be set to the host station.
 - (c) When the Manufacturer or Controller Type is changed to [None] The GT Designer3 displays the device of the changed channel No. as [??]. In this case, set the device again.

Since the channel No. is retained, the objects can be reused in other channel No. in a batch by using the [Device Bach Edit], [CH No. Batch Edit] or [Device List].
Write the package data onto the GOT.

For details on writing to GOT, refer to the following help.

GT Designer3 (GOT2000) Help

1.2.1 Writing the Package Data onto the GOT

РС	GOT Information
Write Data:	Get GOT Type:
	GOT Name:
Data Size: ROM: 853 KB RAM: 976 KB	Free Space/Capacity:
	КВ / КВ
бот бот	De <u>t</u> ail
Destination Drive: C:Built-in Flash Memory -	
What is package data? Package data are project data that work in GOT and	
ystem applications (data required for GOT operation).	Ê
	GOT Write

- **1**. Select [Communication] \rightarrow [Write to GOT...] from the menu.
- The [Communication configuration] dialog box appears. Set the communication setting between the GOT and the personal computer. Click the OK button when settings are completed.
- **3**. The [GOT Write] tab appears on the [Communicate with GOT] dialog box. Select the [Project data, OS] radio button of the Write Data.
- **4**. Check-mark a desired standard monitor OS, communication driver, option OS, extended function OS, and Communication Settings and click the [GOT Write] button.

1.2.2 Checking the package data writing on GOT

Confirm if the package data is properly written onto the GOT by reading from GOT using GT Designer3. For reading from the GOT, refer to the following help.

GOT	Project Data	GOT Information GOT Type:	Get GOT Information
PC PC	GT Designer3	Free Space/Cap	Dețai
			GOT Read

GT Designer3 (GOT2000) Help

- 1. Select [Communication] → [Read from GOT...] from the menu.
- The [Communication configuration] dialog box appears. Set the communication setting between the GOT and the personal computer. Click the OK button when settings are completed.
- **3**. The [GOT Read] tab appears on the [Communicate with GOT] dialog box. Select the [Drive information] radio button of the Read Data.
- **4**. Click the [Info Reception] button.
- 5. Confirm that the project data and OS are written correctly onto the GOT.

1.3 Option Devices for the Respective Connection

The following shows the option devices to connect in the respective connection type. For the specifications, usage and connecting procedure on option devices, refer to the respective device manual.

1.3.1 Communication module

Product name	Model	Specifications
	GT15-QBUS	For QCPU (Q mode), motion controller CPU (Q series) Bus connection (1ch) unit standard model
	GT15-QBUS2	For QCPU (Q mode), motion controller CPU (Q series) Bus connection (2ch) unit standard model
	GT15-ABUS	For A/QnACPU, motion controller CPU (A series) Bus connection (1ch) unit standard model
Rus connection unit	GT15-ABUS2	For A/QnACPU, motion controller CPU (A series) Bus connection (2ch) unit standard model
Bus connection unit	GT15-75QBUSL	For QCPU (Q mode), motion controller CPU (Q series) Bus connection (1ch) unit slim model
	GT15-75QBUS2L	For QCPU (Q mode), motion controller CPU (Q series) Bus connection (2ch) unit slim model
	GT15-75ABUSL	For A/QnACPU, motion controller CPU (A series) Bus connection (1ch) unit slim model
	GT15-75ABUS2L	For A/QnACPU, motion controller CPU (A series) Bus connection (1ch) unit slim model
	GT15-RS2-9P	RS-232 serial communication unit (D-sub 9-pin (male))
Serial communication unit	GT15-RS4-9S	RS-422/485 serial communication unit (D-sub 9-pin (female))
	GT15-RS4-TE	RS-422/485 serial communication unit (terminal block)
MELSECNET/H communication unit	GT15-J71LP23-25	Optical loop unit
	GT15-J71BR13	Coaxial bus unit
	GT15-J71LP23-25	Optical loop unit (MELSECNET/H communication unit used in the MNET/10 mode)
MELSECINE 1/10 communication unit	GT15-J71BR13	Coaxial bus unit (MELSECNET/H communication unit used in the MNET/10 mode)
CC-Link IE Controller Network communication unit	GT15-J71GP23-SX	Optical loop unit
CC-Link IE Field Network communication unit	GT15-J71GF13-T2	CC-Link IE Field Network (1000BASE-T) unit
CC-Link communication unit	GT15-J61BT13	Intelligent device station unit CC-LINK Ver. 2 compatible
Ethernet communication unit	Built into GOT	Ethernet (100Base-TX)
Wireless LAN communication unit	GT25-WLAN	For the connection to personal computer, IEEE802.11b/g/n compatible, built-in antenna, station (wireless LAN adapter), for Japanese domestic use

1.3.2 Option unit

Product name	Model	Specifications	
Multimedia unit	GT27-MMR-Z	For video input signal (NTSC/PAL) 1 ch, playing movie	
Video input unit	GT27-V4-Z	For video input signal (NTSC/PAL) 4 ch	
RGB input unit	GT27-R2-Z	For analog RGB input signal 2 ch	
Video/RGB input unit	GT27-V4R1-Z	For video input signal (NTSC/PAL) 4 ch, for analog RGB mixed input signal 1 ch	
RGB output unit	GT27-ROUT-Z	For analog RGB output signal 1 ch	
Sound output unit	GT15-SOUT	For sound output	
External I/O unit	GT15-DIOR	For the connection to external I/O device or operation panel (Negative Common Input/Source Type Output)	
	GT15-DIO	For the connection to external I/O device or operation panel (Positive Common Input/Sink Type Output)	

1.3.3 Conversion cables

Product name	Model	Specifications	
RS-485 terminal block conversion modules	FA-LTBGT2R4CBL05		
	FA-LTBGT2R4CBL10	RS-422/485 (Connector) ↔ RS-485 (Terminal block) Supplied connection cable dedicated for the conversion unit	
	FA-LTBGT2R4CBL20		

1.3.4 Serial Multi-Drop Connection Unit

Product name	Model	Specifications	
Serial multi-drop connection unit	GT01-RS4-M	GOT multi-drop connection module	

1.3.5 Installing a unit on another unit (Checking the unit installation position)

This section describes the precautions for installing units on another unit.

For the installation method of each unit, refer to the User's Manual for the communication unit and option unit you are using.

For the method for installing a unit on another unit, refer to the following.

GOT2000 Series User's Manual (Hardware)

When using a bus connection unit

The installation position varies depending on the bus connection unit to be used.

(1) Wide bus units (GT15-75QBUS(2)L, GT15-75ABUS(2)L, GT15-QBUS2, GT15-ABUS2)

Install a bus connection unit in the 1st stage of the extension interface. If a bus connection unit is installed in the 2nd stage or above, the unit cannot be used.

Example: Installing a bus connection unit and serial communication units



(2) Standard size bus connection unit (GT15-QBUS and GT15-ABUS)
 A bus connection unit can be installed in any position (1st to 3rd stage) of the extension interface.

Example: Installing a bus connection unit and serial communication units



When using a MELSECNET/H communication unit, CC-Link IE Controller Network communication unit, CC-Link IE Field Network communication unit, or CC-Link communication unit (GT15-J61BT13)

Install a MELSECNET/H communication unit, CC-Link IE Controller Network communication unit, CC-Link IE Field Network communication unit, or CC-Link communication unit in the 1st stage of an extension interface. If a bus connection unit is installed in the 2nd stage or above, the unit cannot be used.

Example: When installing a MELSECNET/H communication unit and a serial communication unit



When using a serial communication unit

A serial communication unit can be installed in any position (1st to 3rd stage) of the extension interface.



When using the sound output unit or external I/O unit The sound output unit or external I/O unit can be installed in any position (1st to 3rd stage) of the extension interface.



1 - 18

1. PREPARATORY PROCEDURES FOR MONITORING 1.3 Option Devices for the Respective Connection

When using the video input unit, RGB input unit, video/RGB input unit, RGB output unit, or multimedia unit

Install the video input unit, RGB input unit, video/RGB input unit, RGB output unit, or multimedia unit at the 1st stage of the extension interface. These communication units cannot be used if installed in the 2nd or higher stage. When any of these units is used, the communication units indicated below must be installed in the 2nd stage of the extension interface.

Communication unit	Model
Bus connection unit	GT15-QBUS2, GT15-ABUS2
MELSECNET/H communication unit	GT15-J71LP23-25, GT15-J71BR13
CC-Link IE Controller Network connection	GT15-J71GP23-SX
CC-Link communication unit	GT15-J61BT13

Example: When installing a video input unit and a MELSECNET/H communication unit



1.4 Connection Cables for the Respective Connection

To connect the GOT to a device in the respective connection type, connection cables between the GOT and a device are necessary.

For cables needed for each connection, refer to each chapter for connection.

1.4.1 GOT connector specifications

The following shows the connector specifications on the GOT side. Refer to the following table when preparing connection cables by the user.

RS-232 interface

Use the following as the RS-232 interface and the RS-232 communication unit connector on the GOT. For the GOT side of the connection cable, use a connector and connector cover applicable to the GOT connector.

(1) Connector specifications

GOT	Hardware Version ^{*1}	Connector type	Connector model	Manufacturer
GT27 GT23	-	9-pin D-sub (male) inch screw fixed type	17LE-23090-27(D4C□)	DDK Ltd.
GT15-RS2-9P	-	9-pin D-sub (male)		
GT01-RS4-M	-	inch screw fixed type	17LE-23090-27(D3CC)	DDK Llū.

(2) Connector pin arrangement



RS-422/485 interface

Use the following as the RS-422/485 interface and the RS-422/485 communication unit connector on the GOT. For the GOT side of the connection cable, use a connector and connector cover applicable to the GOT connector.

(1) Connector model

GOT	Connector type	Connector model	Manufacturer	
GT27 GT23	9-pin D-sub (female) M2.6 millimeter screw fixed type	17LE-13090-27(D2AC)	DDK Ltd.	
GT15-RS4-9S	9-pin D-sub (female)			
GT01-RS4-M	M2.6 millimeter screw fixed type	17LE-13090-27(D3AC)	DDK Ltd.	
GT15-RS4-TE	-	-	SL-SMT3.5/10/90F BOX	

(2) Connector pin arrangement

GT27, GT23, GT15-RS4-9P, GT01-RS4-M GOT main part connector see from the front $8 \frac{14}{10} \frac{14}{7}$ 14-pin (female)

1.4.2 Coaxial cableconnector connection method

The following describes the method for connecting the BNC connector (connector plug for coaxial cable) and the cable.



- Make sure that the solder does not bead up at the soldered section.
- Make sure there are no gaps between the connector and cable insulator or they do not cut into each other.
- Perform soldering quickly so the insulation material does not become deformed.

1. PREPARATORY PROCEDURES FOR MONITORING 1.4 Connection Cables for the Respective Connection

1.4.3 Terminating resistors of GOT

The following shows the terminating resistor specifications on the GOT side. When setting the terminating resistor in each connection type, refer to the following.

RS-422/485 communication unit

Set the terminating resistor using the terminating resistor setting switch.

Terminating	Switch No.		
resistor*1	1	2	
100 OHM	ON	ON	' ∐
Disable	OFF	OFF	· .

*1 The default setting is "Disable".

• For RS422/485 communication unit



Terminating resistor setting switch

Rear view of RS-422/485 communication unit.

GT27

Set the terminating resistor using the terminating resistor setting switch.

Terminating	Switch No.		
resistor*1	1	2	
100 OHM	ON	ON	
Disable	OFF	OFF	



*1 The default setting is "Disable".



Terminating resistor setting switch (inside the cover)



1.5 Verifying GOT Recognizes Connected Equipment

Verify the GOT recognizes controllers on [Communication Settings] of the Utility.

· Channel number of communication interface, communication drivers allocation status

Channel-Driver assign

OK

None

8:Barcode connection *:Other connection

Communication unit installation status

3.

Standard I/F Setting

I/F Setting

efinition of ChNe

1st

2nd 3rd on Setti

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)



 After powering up the GOT, touch [GOT basic set] → [Controller] from the Utility.

- 2. The [Communication Settings] appears.
- **3.** Verify that the communication driver name to be used is displayed in the communication interface box to be used.
- When the communication driver name is not displayed normally, carry out the following procedure again.
 1.1Setting the Communication Interface

POINT.

Utility

(1) How to display Utility (at default)



(2) Utility call

When setting [Pressing time] to other than 0 second on the setting screen of the utility call key, press and hold the utility call key until the buzzer sounds. For the setting of the utility call key, refer to the following.

- GOT2000 Series User's Manual (Utility)
- (3) Communication interface setting by the Utility

The communication interface setting can be changed on the Utility's [Communication setting] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

(4) Precedence in communication settingsWhen settings are made by GT Designer3 or the Utility, the latest setting is effective.

1.6 Checking for Normal Monitoring

1.6.1 Check on the GOT

Check for errors occurring on the GOT

Presetting the system alarm to project data allows you to identify errors occurred on the GOT, PLC CPU, servo amplifier and communications.

For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)

Error code	Communicatior	n Channel No.
Debug/self check:Syste	m alarm display	×
GOT error:	ChNo.1	Reset
⊷402 Communication time	eout. Confirm communication pa	athway or modules. 17:17:36
CPU error: No Error		
Network error:		
No Error		
Error messa	age Time (Dis	e of occurrence



Alarm popup display

With the alarm popup display function, alarms are displayed as a popup display regardless of whether an alarm display object is placed on the screen or not (regardless of the display screen).

Since comments can be flown from right to left, even a long comment can be displayed all.

For details of the alarm popup display, refer to the following manual.

GT Designer3 (GOT2000) Help

Perform an I/O check

Whether the PLC can communicate with the GOT or not can be checked by the I/O check function. If this check ends successfully, it means correct communication interface settings and proper cable connection. Display the I/O check screen by Main Menu.

• Display the I/O check screen by [Maintenance] → [I/O check].

For details on the I/O check, refer to the following manual:

GOT2000 Series User's Manual (Utility)

1:RS232 OPU Self

1. Touch [CPU] on the I/O check screen. Touching [CPU] executes the communication check with the connected PLC.

2. When the communication screen ends successfully, the screen on the left is displayed.



0 K

1:RS232

Confirming the communication status with network unit by GOT

(1) For MELSECNET/H, MELSECNET/10 network system The communication status between the GOT and the MELSECNET/H, MELSECNET/10 network system can be confirmed by the Utility screen of the GOT. For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)



(2) For CC-Link IE Controller Network system The communication status between the GOT and CC-Link IE Controller Network can be confirmed by the utility screen of the GOT.

For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)

Debug/self_check:Sel CT1E_F71CD22_SVNETH	check:NETW	WK unit			X
<pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre></pre>	(N: IN: IN: IN: IN: IN: IN: IN: IN: IN: I	Loop Info> Loop Sts.: LoopBK Sta LoopBK fac loopBK fac loopBK St : LoopBK St :	<pre> Normal i tor: a. iNormal a: ctor: a. ink in prog. info.> e: Oms 2ms 2ms me: 12ms </pre>	Transient Status> Transmission Err ErrCode:(1) (2) (3) (4) (5) (6) (7) (8) (7) (8) (7) (8) (10) (11) (12) (13) (14) (15) (16)	0
Connction:Normal IN: cable disconnct IN: line err count:	count: 0	0 OUT: OUT:	cable disconn line err coun	ct count: 2 t: 0	

(3) For CC-Link IE Field Network system

The communication status between the GOT and CC-Link IE Field Network can be confirmed by the utility screen of the GOT.

For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)

Debug/self check	:Self check:NETWK unit	×
GT 15-J71GF 13-T2	NETWK No.[1] ST[0]	
<led status=""></led>	<pre></pre>	
	Unit error: 0 ErrCode:(1) (2)	
	<pre><host info.="" link="" port2=""> (3) Link up status:Linking down (5)</host></pre>	
	(6) (7) (8)	
	 <d-link info=""> Com Status:B-Pass stopped Com Status:B-Pass stopped Cause of Ssn: </d-link>	
	Cable disconnection (12) Cause of Stop: (13) Normal Comm (15)	
GOT R/W	<pre>(13) (13) (16) Current LS time: Oms Max. LS time: Oms Min. LS time: Oms</pre>	
<host line="" sts.<="" td=""><td>Constant LS time:ms</td><td></td></host>	Constant LS time:ms	
Connction:Disco PORT1: cable di PORT1: line err	nnect (PORT1: cable disconnected, PORT2: cable disconnected) sconnct count: 0 PORT2: cable disconnct count: 0 count: 0 PORT2: line err count: 0	

(4) For CC-Link system

The communication status between the GOT and the CC-Link System can be confirmed by the Utility screen of the GOT.

For details on the operation method of the GOT Utility screen, refer to the following manual.

GOT2000 Series User's Manual (Utility)

Debug/self_check:	Self check:NETWK unit	×
GT15-J61BT13	ST[1]	
<led status=""> RUN ERR.</led>	<d-link info=""> D-Link Boot Status: D-Link in prog.</d-link>	
S MST LOCAL	Error Status: Normal	
R PRM O TIME R LINE		
GUT R/WL		

1.6.2 Confirming the communication state on the GOT side (For Ethernet connection)

- Confirming the communication state on Windows[®], GT Designer3
 - When using the Command Prompt of Windows[®] Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication
 C:\>Ping 192.168.3.18
 Reply from 192.168.3.18: bytes=32 time<1ms TTL=64
 - (b) When abnormal communication C:\>Ping 192.168.3.18 Request timed out.
 - (2) When using the [PING Test] of GT Designer3 Select [Communication] → [Communication configuration] → [Ethernet] and → [Test].

Test	
GOT IP Address:	192 . 168 . 0 . 18
	Select From IP Label:
	✓
Timeout Period(PIN	G Test): 5 🔷 (Sec)
- Test Result	
2	
2.	
	PING Test Connection Close
	Click!

- Specify the [GOT IP Address] of the [PING Test] and click the [PING Test] button.
- 2. The [Test Result] is displayed after the [PING Test] is finished.

- (3) When abnormal communication
 - At abnormal communication, check the followings and execute the Ping command again.
 - Mounting condition of Ethernet communication unit
 - Cable connecting condition
 - Confirmation of [Communication Settings]
 - IP address of GOT specified by Ping command

POINT.

Ethernet diagnostics of GX Developer

Ethernet diagnostics of GX Developer is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Developer, refer to the following manual.

 $\fbox{\sc starter}$ User's manual of the Ethernet module

Confirming the communication state on the GOT

[PING Test] can be confirmed by the Utility screen of the GOT. For details on the operation method of the GOT Utility screen, refer to the following manual.

Self check:Diagnostics:Ethernet status ch	eck
IP address of the other terminal	Ping transmission

GOT2000 Series User's Manual (Utility)

1.6.3 Confirming the communication state to each station (Station monitoring function)

The station monitoring function detects the faults (communication timeout) of the stations monitored by the GOT. When detecting the abnormal state, it allocates the data for the faulty station to the GOT special register (GS).

- (1) No. of faulty stations
 - (a) Ethernet connection (Except for Ethernet multiple connection) Total No. of the faulty CPU is stored.

Device	b15 to b8	b7 to b0
GS230	(00н fixed)	No. of faulty stations

(b) Ethernet multiple connection

Total No. of the faulty connected equipment is stored.

Channel	Device	b15 to b8	b7 to b0
Ch1	GS280	(00H fixed)	No. of faulty stations
Ch2	GS300	(00н fixed)	No. of faulty stations
Ch3	GS320	(00н fixed)	No. of faulty stations
Ch4	GS340	(00н fixed)	No. of faulty stations

POINT,

When monitoring GS230 on Numerical Display

When monitoring GS230 on Numerical Display, check [mask processing] with data operation tab as the following. For the data operation, refer to the following manual.

GT Designer3 (GOT2000) Help

Numerical Display (Data Operation tab)

Basic Settings A Device Style Extended	dvanced Settings Trigger/Operation/Script	
Only the setting of selected Operation Type: ONone	"Operation Type" is valid. O Data Operation O Script	
I Bit Mask Mask Typ <u>e</u> : ● AND	© OR © XOR Mask Pattern: 00FF ★ (HEX)	
Bit Shift		
Data Operatio <u>n</u> : None 	Data Expression Set [mask processing] to the upper eight bit to b15) of GS230 on Numerical Display.	ts (b8
Name:	OK Cancel	

(2) Faulty station information

The bit corresponding to the faulty station is set. (0: Normal, 1: Abnormal) The bit is reset after the fault is recovered.

(a) Ethernet connection (Except for Ethernet multiple connection)

		Eth	erne	et Setting														
					Host	Net No.	Station	Unit Type	IP Address	Port No.	Communication							
GS231 bit 0	·	·	·	1	*	1	2	QJ71E71/LJ71E71	192.168.3.39	5001	UDP							
GS231 bit 1	•	·	·	2		1	3	QJ71E71/LJ71E71	192.168.3.40	5001	UDP							
GS231 bit 2	•	·	·	3		1	4	AJ71QE71	192.168.3.41	5001	UDP							
GS231 bit 3				4		1	5	AJ71E71	192.168.3.42	5006	UDP							

Device		Station number														
Device	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS231	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GS232	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
GS233	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
GS234	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
GS235	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
GS236	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
GS237	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
GS238	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113

(b) Ethernet multiple connection, servo amplifier connection, inverter connection

The station number to which each device corresponds changes according to the connection/non connection with Ethernet.

With Ethernet connection: 1 to 128

With other than Ethernet connection: 0 to 127

Example) With Ethernet connection, when PC No. 100 CPU connecting to Ch3 is faulty, GS327.b3 is set. The following table shows the case with Ethernet connection.

Device					Station number														
Ch1	Ch2	Ch3	Ch4	b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
GS281	GS301	GS321	GS341	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
GS282	GS302	GS322	GS342	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
GS283	GS303	GS323	GS343	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
GS284	GS304	GS324	GS344	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
GS285	GS305	GS325	GS345	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
GS286	GS306	GS326	GS346	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81
GS287	GS307	GS327	GS347	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97
GS288	GS308	GS328	GS348	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113

For details on the GS Device, refer to the following help.

GT Designer3 (GOT2000) Help

(3) Network No., station No. notification

The network No. and station No. of the GOT in Ethernet connection are stored at GOT startup. If connected by other than Ethernet, 0 is stored.

	Dev	vice		Description
CH1	CH2	CH3	CH4	Description
GS376	GS378	GS380	GS382	Network No. (1 to 239)
GS377	GS379	GS381	GS383	Station No. (1 to 64)

1.6.4 Check on GX Developer

Check if the PLC CPU recognizes the GOT (For bus connection) (QCPU (Q mode) only) Using the [System monitor] of GX Developer, check if the PLC CPU recognizes the GOT or not. For the GX Developer operation method, refer to the following manual.

GX Developer Version Operating Manual

(1) Check the Module Name, I/O Address and Implementation Position. (The display example is based on GX Developer Version 8)

Startup procedure

GX Developer \rightarrow [Diagnostics] \rightarrow [System monitor]

Module's Detailed Inf	ormation		
Module Module Name 1/0 Address	GOT1000 40 Expansion Base 1, 0S	Product information 060610(00000000 - B
Module Information Module access Status of External Powe Fuse Status Status of I/O Address V	Possible r Supply erify Agree	I/D Clear / Hold Settings Noise Filter Setting Input Type Remote password setting stai	 !us
Error Display	Present Error No Err Er The display sequen The latest error is d	or Display form rror History Great HEX	C DEC
Error contents - Dispos Contents: Disposal:	al		<
H/W Information	Start monitor	Stop monitor	Close
Not displayed		No erro at all tir	or displayed

Checking the wiring state (For optical loop system only)

Check if the optical fiber cable is connected correctly in [Loop test] of GX Developer. For the GX Developer operation method, refer to the following manual.

Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

(1) Check the [Receive direction error station] (The display example on GX Developer Version 8)

Startup procedure

GX Developer → [Diagnostics] → [MELSECNET (II)/10/H diagnostics] → Loop test

Loop test													(
Network NET/HLoop] Network No. 1 Type Net control station, PLC-PLC Group No. 0 Module No. 1 Loop status orward/revers Total No. of stations 2 Groward Greection Station Mo. 1 Groward Greection Station No. 0 Greective direction error designation C Module 3 C Module 3 C Module 3 C Module 3 C Module 3 C Module 4 C Module 4						i dule ule 1 ule 2 ule 3 ule 4							
Execution results	X	INVALIE)						R:Re:	erved	Static	on	
Receive direction error Non-responding station	1 2	2 3	4	5 6	7	8	9 1	0 11	12	13	14	15	16
Receive direction error Non-responding station	17 1	8 19	20	21 2	2 23	24	25 2	26 27	28	29	30	31	32
Receive direction error Non-responding station	33 3	4 35	36	37 3	8 39	40	41 4	2 43	44	45	46	47	48
Receive direction error Non-responding station	49 5	0 51	52	53 5	4 55	56	57 5	58 59	60	61	62	63	64
											Clo	ose	

Checking if the GOT is performed the data link correctly

(1) For MELSECNET/H, MELSECNET/10 network system Check if the GOT is performed the data link correctly in [Other station information]. For the GX Developer operation method, refer to the following manual.

C Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

(a) Check [Communication status of each station] and [Data-Link status of each station] (The display example on GX Developer Version 8)

Startup procedure

GX Developer	→ [Diagnostics] → [MELSECNET (II)/10/H diagnostics] → Other station info.
	Other station information	
	Network info. Network NET/H(Loop) Type Net control station, F Module No. 1	Network No. 1 PLC-PLC Group No. 0 Station No. 1
	Other station info. Error info. Communication status of each station Data-Link status of each station	(Communication status of each station) Normal Error communication [Disconnected] 1 12
	Parameter status of each station CPU operation status of each station	
	CPU RUN status of each station	
	Loop status of each station Reserved station	
	PSU operation status of each station extension	
	Each station PLC operation	
	Each station paring status	
	Each station PLC system status	Start monitor Stop monitor Close
	status	

(2) For CC-Link IE Controller Network system

Use [CC IE Control diagnostics...] of GX Developer to check if the GOT is correctly performed the data link. For the GX Developer operation method, refer to the following manual.

- CC-Link IE Controller Network Reference Manual
- (a) Check the [Select station network device status display] (The display example on GX Developer Version 8)

Startup procedure

GX Developer → [Diagnostics] → [CC IE Control diagnostics...] → [CC IE Control Network Diagnostics]

et oprimologie dule 1 Network No. 1 Totel No. of stations: 2 (40 dule 1 Network No. 1 Totel No. of stations: 2 (40 st confination concheck the path from concest to defination itation.	I/O master station (Block): 0.1 (O master station (Block): 0.1 2 2 2 2 2 2 2 2 2 2 2 2 2	V Next elivali, device status digit	Lr	k sçan time: Ems
tuiel Network No. Total No. of stations: 2 (V storyfination Communication test. Communication test. Lo destination states.	Presser station(Elock): UI 2 Select station Press Select station No Station No	V Next V Next		K scon time: Zms
t confinedion immunication lest.	2 Pre- Select station in vested station	Next Next Next Next	1	
confilmation atminureation liest con check the path tion connects to destination relation.	Pres Select statum in vested station	Present David Assign Carled	1	
t confimation ammunication test.	Select station in vested station	Vestar Control Assign Control Next elivati, device status displ	1	
confination timumskicn list. to destination defan.	Select station in vested station	Next Next Next o.1	1	
confination ammunication lest.	Select station in Select station in Istation No.	NExt elwork device statur displ 0.1	1	
confittetion aimunication liest con check the path from connect to destination relation.	Select station in vested station	Next Intervent device status displ	1	
confinitation timum salion liest to destination relation.	Select station in vested station	Next elvcek device status displ 0.1	1	
confinetion timunisation less. to destination relation.	Select station in vested station	Next elivati device status displ 0.1	1	
confilmation annuncation leat.con check the path from connect to destination ideation.	Pres Select statum in Vested station	Next etwork device status displ 0.1	Ĵ	
confilmation immunication last con check the path time connect to destination ideation.	Pres Select station in rested station	NEXt etwork device status displ 0.1	1	
confinetion Immunisation list. con check the path tree connects to destination idealion.	Select station no vected station	Next etwork.device status cispt 0.1		
confinitelion nimunication test.con check the path from connect to destination idealon.	Select station in vected station	Next Next etwork device status displ 0.1		
confilmation officer last con check the path from connect to destination relation.	Select station in Select station in Station No.	Next etwork device status displ 0,1		
confination immunisation lest. can check the path from convection to destination relation.	Select station in Select station No	Next etwork device status displ 0,1		
t confirmation animultisation list	Select station in Nected station	etwork device status displ	0	
t confirmation annunication test. to destination station.	nected station	0,1	<i></i>	
ammunication lest can check the path from connect to destination station.	nected station	0.1	Grour	Not
to destination station.	A COMPANY OF A COM	2011 - A 192		vie Online
restances provide a second second			in.	Jue.onme
Link statt/stop. can operate station ink Statt/Stop	Step			
	00000		PELINA PERMIT	
mation confirmation			MODE DLINK	
Locopa can save error munitoring and error	(enviorin		SD ED	
corrected station.	and high		ENH:	
and makes as seen			(Company of the Comp	
Costan provider				
aysiem monifil. can check UPU status in select si				
	et station.			
	st station.			

(3) For CC-Link system

Use [Monitoring other station] of the GX Developer to check if the GOT is correctly performed the data link. For the GX Developer operation method, refer to the following manual.

- CC-Link System Master/Local Module User's Manual QJ61BT11N
- (a) Check the [Status] (The display example on GX Developer Version 8)

Startup procedure

GX Developer → [Diagnostics] → [CC-Link / CC-Link LT diagnostics] → [Monitoring other station]

с	C-Lin	<mark>k / CC</mark> -Li	ink/LT Dia	gnostics (Oth	er station)			X
		Station	Reserve	Invalid Error	Station Type	Occupied Number		1
		1			Ver.1 Intelligent	1	Normal	1
		2			Ver.1 Intelligent	4	Normal	1
		6	ж		Ver.1 I/0	1	Normal	1
	•						Þ	
	Inval	id station if	temporary e	rror				
	Se	tting / Can	cel For cu	urrent cursor statio	Start Monitoring	Stop Monitoring	Close	

1.6.5 Check on GX Works2

For CC-Link IE Controller Network system

Use [CC IE Field diagnostics] of GX Works2 to check if the GOT is correctly performed the data link. For the GX Works2 operation method, refer to the following manual.

MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual

Startup procedure

GX Works2 → [diagnostics] → [CC IE Field diagnostics]



1.6.6 Check on the PLC

Checking the wiring state of the optical fiber cable (For CC-Link IE Controller Network only) Check if the fiber-optic cable is connected correctly to all the modules in the CC-Link IE Controller Network. Perform the line test from the control station of the CC-Link IE Controller Network to check the wiring state of the fiber-optic cable.

For the line testing method, refer to the following manual.

CC-Link IE Controller Network Reference Manual

Checking the wiring state of the CC-Link dedicated cable (For CC-Link system only) Check if the CC-Link dedicated cable is connected correctly to all the modules in the CC-Link system. Perform the line test from the master station of the CC-Link System to check the wiring state of the CC-Link dedicated cable.

For the line testing method, refer to the following manuals.

- CC-Link System Master/Local Module User's Manual QJ61BT11N
- CC-Link System Master/Local Module User's Manual AJ61QBT11, A1SJ61QBT11
- CC-Link System Master/Local Module User's Manual AJ61BT11, A1SJ61BT11



MITSUBISHI PLC CONNECTIONS

DEVICE RANGE THAT CAN BE SET
ACCESS RANGE FOR MONITORING
HOW TO MONITOR REDUNTANT SYSTEM4 - 1
ETHERNET CONNECTION
DIRECT CONNECTION TO CPU
COMPUTER LINK CONNECTION
BUS CONNECTION
MELSECNET/H CONNECTION (PLC TO PLC NETWORK), MELSECNET/10 CONNECTION (PLC TO PLC NETWORK) 9 - 1
CC-Link IE CONTROLLER NETWORK CONNECTION 10 - 1
CC-Link IE FIELD NETWORK CONNECTION
CC-Link CONNECTION (INTELLIGENT DEVICE STATION)
CC-Link CONNECTION (Via G4)



2

DEVICE RANGE THAT CAN BE SET

2.1	MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700 2 - 8
2.2	MELSEC-QnA, MELDAS C6 * 2 - 9
2.3	MELSEC-L 2 - 10
2.4	MELSEC-A
2.5	MELSEC-FX
2.6	MELSEC-WS 2 - 13

2. DEVICE RANGE THAT CAN BE SET

The device ranges that can be set for the Mitsubishi PLCs are as follows.

Note that the device ranges in the following tables are the maximum values that can be set in GT Designer3.

The device specifications of controllers may differ depending on the models, even though belonging to the same series. Please make the setting according to the specifications of the controller actually used.

When a non-existent device or a device number outside the range is set, other objects with correct device settings may not be monitored.

- 2.1 MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700^{*1}
- 2.2 MELSEC-QnA, MELDAS C6 * *2
- 2.3 MELSEC-L
- S 2.4 MELSEC-A
- 2.5 MELSEC-FX
- 2.6 MELSEC-WS

Setting item



(For MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700)



Unit No.: 00 💌

When selecting buffer memory (G) with the following controllers MELSEC-QnU/DC, Q17nD/M/NC/DR, CRnD-700 MELSEC-L

MELSEC-QnA/Q/QS, MELDAS C6 * MELSEC-Q(MULTI)/Q MOTION

(For MELSEC-FX)

Item			Description
	Set the devi	ce name, devi	ce number, and bit number.
	The bit num	ber can be set	only by specifying the bit of word device.
	When settin	g buffer memo	ry (BM) and (G), set the buffer memory address in the space for the device number.
	Block		Set the block number of the extended file register.
	DIOCK		This item can be set only when the extended file register (ER) is selected.
			Set when the buffer memory (BM) is selected.
	Intolligent	Unit top I/O	Set the head I/O number of the buffer memory for the intelligent function module.
	function		Set the first 2 digits of the 3-digit head I/O number.
Davias	module		Set when the buffer memory (G) is selected.
Device	modulo	Unit No.	Set the head I/O number of the buffer memory for the intelligent function module.
			Set the first 2 digits of the 3-digit head I/O number.
			Set for using the buffer memory of MELSEC-FX series.
	Mask type		Set the mask type for monitoring or writing only specified bits of the buffer memory.
	MELSEC-		(4) Setting of the mask type (MELSEC-FX)
	FX buffer		Set for using the huffer memory of MELSEC EV equips
	memory		Set the module No. of the special function unit or special function block to monitor or write
		Unit No.	
			(5) Setting of the module No. (MELSEC-FX)
Information	Displays the device type a		nd its setting range selected in [Device].
	Set the station number of		he controller to be monitored.
	CPU No.		Set the CPU No. of the controller.
			(1) Setting of the CPU No.
Network	HOST		
			Select this for monitoring other controllers.
	0.1		After selecting the item, set the station number and network number of the controller to be
	Other		monitored.
			NW No.: Set the network No.
	Reading the	device comm	ent data created by GX Developer and confirming the device comment/device name are
Swich to the device	available du	ring device set	lling.
comment dialog		m the procedu	
	GT ⊑	Designer3 (GO	T2000) Help

(1) Setting of the CPU No.



Set the CPU No. (0 to 4) in [CPU No.] when monitoring a multiple CPU system. When [CPU No.] is set to "0", the monitoring target differs depending on the connection method.

Connection method	Monitoring target
Direct CPU connection	Connected PLC CPU
 Bus connection Computer link connection MELSECNET connection Ethernet connection CC-Link connection 	Control CPU

- (2) When monitoring link relay (B) and link register (W) assigned in link parameter and network parameter. Set the device link relay (B) and link register (W) running cyclic communication as [Host]. If it is set as [Other] in the network setting, the cyclic transmission is changed to the transient transmission regardless of the network type, resulting in delay of the object display.
- (3) Setting the device by inputting directly from the keyboard

When setting the device by inputting directly from the keyboard, set the items as follows. (For devices except BM and G)



(For device BM and CPU No. 0)



(For device BM and CPU No. 1 to 4)



(For device G and CPU No. 0)

Numerical Dis	blay	
Basic Setti Device S	ngs Advance tyle Extended Trigge	ed Setti er Ope
Type:	Numerical Display	C
<u>D</u> evice:		+
	Devic	e numbe e name

(For device G and CPU No. 1 to 4)

asic Settin	gs	Advanc	ed Set
Device St	/le / Exte	ended Trigg	jer VO
-	@ 11	1.001	
Type:	Numer	ical Display	
Device:	0-FF/1 U	01- <u>G</u> 0	
		- Devi	ce nui
			ce nai
			No.
		Unit	INU.

(4) Setting of the mask type (MELSEC-FX) Set the item for monitoring or writing only the specified bits of the buffer memory.



Mask type

The mask type is effective when using for the buffer memories divided per 4 bits, such as an analog input block.

 (a) Mask type 0 Monitor and write the buffer memory value directly.

(b) Mask type 1

• (For 16 bits)

Monitor and write only b0 to b3 of the buffer memory.

Example:

The monitor value is 0001H when monitoring BM=4321H as mask type 1.



BM0=0001H when writing input value 4321H to BM0=0000H as mask type 1.



• (For 32 bits)

Monitor and write only b0 to b3 and b16 to 19 of the buffer memory.

Example:

The monitor value is 00050001H when monitoring BM0=87654321H as mask type 1.

BM0	8	7	6	5	4	3	2	1	н
				Ŧ				Ŧ	
Monitor value	0	0	0	5	0	0	0	1	Н

BM0=00050001н when writing input value 87654321н to BM0=00000000н as mask type 1.



- (c) Mask type 2
 - (For 16 bits) Monitor and write only b4 to b7 of the buffer memory.

Example:

The monitor value is 0002H when monitoring BM0=4321H as mask type 2.



BM0=0010H when writing input value 4321H to BM0=0000H as mask type 2.



• (For 32 bits)

Monitor and write only b4 to b7 and b20 to 23 of the buffer memory.

Example:

The monitor value is 00060002H when monitoring BM0=87654321H as mask type 2.



BM0=00500010н when writing input value 87654321н to BM0=00000000н as mask type 2.



(d) Mask type 3

 (For 16 bits) Monitor and write only b8 to b11 of the buffer memory.

Example:

The monitor value is 0003H when monitoring BM0=4321H as mask type 3.



BM0=0100H when writing input value 4321H to BM0=0000H as mask type 3.



• (For 32 bits)

Monitor and write only b8 to b11 and b28 to 31 of the buffer memory.

Example:

The monitor value is 00070003H when monitoring BM0=87654321H as mask type 3.



BM0=05000100н when writing input value 87654321н to BM0=00000000н as mask type 3.



- (e) Mask type 4
 - (For 16 bits)

Monitor and write only b12 to b15 of the buffer memory.

Example:

The monitor value is 0004H when monitoring BM0=4321H as mask type 4.



BM0=1000н when writing input value 4321н to BM0=0000н as mask type 4.



• (For 32 bits)

Monitor and write only b12 to b15 and b28 to 31 of the buffer memory.

Example:

The monitor value is 00080004H when monitoring BM0=87654321H as mask type 4.



BM0=50001000H for writing input value

87654321н to BM0=0000000н as mask type 4.



(f) Mask type 5 • (For 16 bits)

Monitor and write only b0 to b7 of the buffer memory.

Example:

The monitor value is 0021H when monitoring BM0=4321H as mask type 5.



BM0=0021H when writing input value 4321H to BM0=0000H as mask type 5.



• (For 32 bits)

Monitor and write only b0 to b7 and b16 to 23 of the buffer memory.

Example:

The monitor value is 00650021 μ when monitoring BM0=87654321 μ as mask type 5.



BM0=00650021н when writing input value 87654321н to BM0=00000000н as mask type 5.



(g) Mask type 6

(For 16 bits)

Monitor and write only b8 to b15 of the buffer memory.

Example:

The monitor value is 0043 $\mbox{\tiny H}$ when monitoring BM0=4321 $\mbox{\tiny H}$ as mask type 6.



BM0=2100H when writing input value 4321H to BM0=0000H as mask type 6.



• (For 32 bits)

Monitor and write only b8 to b15 and b24 to 31 of the buffer memory.

Example:

The monitor value is 00870043H when monitoring BM0=87654321H as mask type 6.



BM0=65002100н when writing input value 87654321н to BM0=00000000н as mask type 6.



(5) Setting of the module No. (MELSEC-FX)

Set the module No. of the special function unit or special function block to monitor or write. The module No.0 to No.7 are assigned in order for the nearest module or block from the main unit. For details of the module No., refer to the following.

Ser's Manual (Hardware) of MELSEC-FX

(a) Direct specification

Specify the module No. (No.0 to No.7) of the special function unit or special function block directly, to monitor or write when setting the devices.

(b) Indirect specification^{*1}

Specify the module No. of the special function unit or special function block indirectly, to monitor or write when setting the devices, by using the 16-bit GOT internal data register (GD10 to GD25). When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 corresponding to the module No. will be the module No. of the special function unit or special function block.

Module No.	Compatible device	Setting range		
100	GD10	0 to 7		
101	GD11	For the setting other than the above,		
:		error (dedicated device is out of range will occur.		
114	GD24	If a non-existent module No. is set, a		
115	GD25	timeout error occurs.		

 The module No. cannot be specified indirectly for the multidrop connection.

2.1 MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700

The table below shows the device ranges in [MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700] as the controller type.

Device name ^{*6}			Setti	Device No.			
					representation		
	Input (X)		X0	to	X3FFF	Hexadecimal	
-	Output (Y)		Y0	to	Y3FFF		
	Internal rela	y (M) ^{^5^8}	M0	to	M61439		
	Latch relay	(L)	L0	to	L32767	Decimal	
	Annunciator	Annunciator (F)		to	F32767		
	Link relay (E	Link relay (B)		to	B9FFFF	Hexadecimal	
	Timer ^{*5}	Contact (11)	110	to	1132767		
evice			TC0	to	1C32767		
	Counter*5	Contact (CT)		to	0000707		
	On a sint value			to	0.10055	Decimal	
it de	Special relay	y (SIVI)	SIVIU	10	SM2255		
ш	Kelenlive	Contact (SS)	550	10	5532707		
	timer ^o	Coll (SC)	SCU	to	SC32767		
	Step relay (S	5) 	SO	to	S32767		
	LINK Special	relay (SB)	SB0	to	SB/FFF	Hexadecimai	
			5p follo		ed bit of the		
				ont Ti	mor Counter		
	Word device	e bit		optivo	timor Indox	_	
			rei	nister	and Buffer		
				me	mory)		
	Data regista	r (D)*5*8	00	to			
	Data registe	r (D) = =	000	10	000055	Decimal	
	Special data i	register (SD)	SDU	to	SD2255	l lavada simal	
	LINK register	*(VV)	VVU	to	W4AEBFF	Hexadecimai	
	Timer (curren	Timer (current value) (TN)*5		to	TN32767		
	Counter (cu	Counter (current value)		to	CN32767		
	(CN) ^{*5}		CINU	10	01102707	Decimal	
	Retentive timer		SNO.	to	SN32767		
	(current value) (SN)*5		3110	10	31132707		
	Link special register (SW)		SW0	to	SW7FFF	Hexadecimal	
	File register	R0	to	R32767			
	Extension Block		0	to	255		
	file register						
	(ER) ^{*1}	Device	ER0	to	ER32767		
	Extension fil	Extension file register					
	(7R)*1*3		ZR0	to	ZR4849663	Decimal	
e	Index registe	er (7)	70	to	719		
devi	Buffer memo	in/	20	10	215		
Ę	(Intelligent function module)		GO	to	C65535		
Ň	$(G)^{*4}$		00	10	000000		
	(G)		14/10/0	to			
	WW '	vvwu	10	VVWIFFF			
	Wr [^]		Wr0	to	Wr1FFF		
Ī	Multiple CPU	Multiple CPU high speed		0000	to U3E024335		
	transmission	transmission memory (U3E0)				Hexadecimal	
	Multiple CPU	Multiple CPU high speed		0000	to U3E124335		
	transmission	memory (U3E1)					
	Multiple CPU	Multiple CPU high speed		0000			
	transmission memory (U3E2)						
	Multiple CPU high speed		U3E310000 to U3E324335				
	transmission						
	Motion devic	#0	to	#12287	Decimal		
		Conv	erting				
	Bit device word ^{*9}		de	vices	_		
			(Except Timer, Counter			l	
			and	i Kete			

- *1 Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program] by the PLC parameter of GX Developer. Otherwise, read/write at GOT will be erroneous.
- Available for file register of block No. switched with the RSET instruction.
- *3 Available for file register of block No. of file name switched with the QDRSET instruction.
- *4 Only the intelligent function module on the station connected to GOT can be specified.
- Set within the address range of the buffer memory existing in the target intelligent function module.
- *5 Do not use local devices set in the MELSEC-Q system. Otherwise, normal monitoring is not performed.
- *6 Even though Universal model QCPU processes 64-bit data, the GOT cannot monitor 64-bit data.
- *7 This cannot be monitored when in GOT multi-drop connection.
- *8 For monitoring the internal relay (M) or data register (D) of a C Controller module, configure the settings related to the device functions in the device setting tab of the language controller setting utility.
- *9 The device No. must be set in multiples of 16.

(When using the QCPU)

- * For details of *1 to *6, refer to 2.2 MELSEC-QnA, MELDAS C6 *.
- *7 This is not supported by GT10.
 *8 This cannot be monitored when in GOT multi-drop connection.

(When using the Q Motion)

- 9 When setting special internal relay M9000 to M9255, use SM for the device name and set the value subtracted 9000 for the device number (0 to 255).
- *10 The setting range is D9000 to D9255 when setting the special data register.
- *11 D8192 to D8999 and D9256 to D9999 are out of the valid setting range.

(When using the QCPU/Q Motion)

- 12 Do not use local devices set in the MELSEC-Q (Multi)/Q Motion system.
 - Otherwise, normal monitoring is not performed.
MELSEC-QnA, MELDAS C6 * 2.2

The device ranges that can be set when selecting [MELSEC-QnA/, MELDAS C6*] as the controller type are as follows.

	Device na	me ^{*6*7*10}		Settir	ng range	Device No.
_	Donico na				5 5	representation
	Input (X)		X0	to	X3FFF	Hexadecimal
	Output (Y)		Y0	to	Y3FFF	
	Internal rela	y (M) ^{*8}	M0	to	M32767	
	Latch relay	(L)	L0	to	L32767	Decimal
	Annunciator	Annunciator (F)			F32767	
	Link relay (E	B0	to	B7FFF	Hexadecimal	
	Timor*8	Contact (TT)	TT0	to	TT32767	
	Timer	Coil (TC)	TC0	to	TC32767	
a	Counter ^{*8}	Contact (CT)	CT0	to	CT32767	
evice	Counter	Coil (CC)	CC0	to	CC32767	Docimal
it de	Special rela	y (SM)	SM0	to	SM2047	Decimal
ш	Retentive	Contact (SS)	SS0	to	SS32767	
	timer ^{*8}	Coil (SC)	SC0	to	SC32767	
	Step relay (S)	S0	to	S32767	
	Link special	relay (SB)	SB0	to	SB7FFF	Hexadecimal
			Sp	ecifie	d bit of the	
			follow	wing \	word devices	
	Word device	e bit	(Exce	ept Ti	mer, Counter,	_
		Retentive timer, Index				
		reę	jister me	mory)		
_	Doto registe	DO	to	D32767		
	Special date	$(D)^{1}$	800	to	SD2047	Decimal
			300	to	302047	Llavadasimal
	LINK registe	I (VV)	700	10		nexadecimai
	Timer (currer	it value) (TN) °	I NO	to	TN32767	
	Counter (cu	rrent value)	CN0	to	CN32767	
	(CN) ^{*8}					Decimal
	Retentive tir	mer	SN0	to	SN32767	
	(current valu	ue) (SN) ^{°8}				
	Link special	register (SW)	SW0	to	SW7FFF	Hexadecimal
	File register	(R) ^{*1*2}	R0	to	R32767	
e	Extension	Block	0	to	255	
d devi	file register (ER) ^{*1*9}	Device	R0	to	R32767	
Nor	Extension fi	le register				
-	(ZR) ^{*1*3*9}	Ū	ZR0	to	ZR1042431	Decimal
	Index regist	er (Z)	Z0	to	Z15	
	Buffer memo	ory				
	(Intelligent fu	inction module)	G0	to	G65535	
	(G) ^{*4*9}	(G) ^{*4*9}				
	Ww ^{*9}		Ww0	to	Ww1FFF	Hexadecimal
	Wr ^{*9}		Wr0	to	Wr1FFF	
			Conv	erting	the above bit	
	Bit device w	rord ^{*5}	de	vices	into words	_
			(Exc	ept Ti	mer, Counter	
			and	Rete		

- Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program] by the PLC parameter of *1 GX Developer.(Except MELSEC-QnA) Otherwise, read/write at GOT will be erroneous.
- *2 Available for file register of block No. switched with the RSET instruction.
- *3 Available for file register of block No. of file name switched with the QDRSET instruction.
- Only the intelligent function module on the station connected *4 to GOT can be specified.
- Set within the address range of the buffer memory existing in the target intelligent function module. *5
- The device No. must be set in multiples of 16. When monitoring MELDAS C6/64, if a word device outside *6 the range is set, the value becomes indefinite. When a bit device outside the range is set, the object may not be displayed or the set function may fail to operate.
- Check the set device using the device list of GT Designer3. Devices used by the MELDAS C6/64 system cannot be *7 used.
- Do not use local devices set in the MELSEC-Q system. *8 Otherwise, normal monitoring is not performed. This cannot be monitored when in GOT multi-drop
- *9 connection.
- *10 Only reading is possible from QS001CPU.

MELSEC-L 2.3

The device ranges that can be set when selecting [MELSEC-L] as the controller type are as follows.

	Device	name		Settin	ia range	Device No.	
	Dovido	hamo		ootai	ig runge	representation	
	Input (X)		X0	to	X3FFF	Hexadecimal	
	Output (Y)		Y0	to	Y3FFF	Tiexadeoimai	
	Internal rela	y (M) ^{*5}	M0	to	M61439		
	Latch relay	(L)	L0	to	L32767	Decimal	
	Annunciator	- (F)	F0	to	F32767		
	Link relay (E	B0	to	BEFFF	Hexadecimal		
	Timor ^{*5}	Contact (TT)	TT0	to	TT32767		
	Timer °	Coil (TC)	TC0	to	TC32767		
0	0	Contact (CT)	CT0	to	CT32767		
evice	Counter °	Coil (CC)	CC0	to	CC32767	Desimal	
it d€	Special rela	y (SM)	SM0	to	SM2047	Decimal	
В	Retentive	Contact (SS)	SS0	to	SS32767		
	timer ^{*5}	Coil (SC)	SC0	to	SC32767		
	Step relay (S)	S0	to	S8191		
	Link special	relay (SB)	SB0	to	SB7FFF	Hexadecimal	
			Sp	ecifie	d bit of the		
			follow	wing v	vord devices		
	Word device	e bit	(Exce	ept Tir	mer, Counter,	_	
		Rete	entive	timer, Index			
		reg	gister	and Buffer			
			me	mory)			
	Data registe	D0	to	D421887	Decimal		
	Special data	register (SD)	SD0	to	SD2047		
	Link registe	r (W)	W0	to	W66FFF	Hexadecimal	
	Timer (curren	it value) (TN) ^{*5}	TN0	to	TN32767		
	Counter (cu	rrent value)	CNIO	to	CN32767		
	(CN) ^{*5}		CINU	ιυ	CN32767	Decimal	
	Retentive tir	mer	SN0	to	SN32767		
	(current valu	ue) (SN) ^{*5}	0.10		0.102.01		
	Link special r	egister (SW)	SW0	to	SW7FFF	Hexadecimal	
vice	File register	(R) ^{*1*2}	R0	to	R32767		
d de	Extension fi	le register	ZR0	to	ZR393215		
Wor	(ZR) ^{*1*3}					.	
-	Index regist	er (Z)	Z0	to	Z19	Decimal	
	Buffer memo	ory					
	(Intelligent fu	inction module)	G0	to	G65535		
	(G) +						
	Ww ^o		Ww0	to	Ww1FFF	Hexadecimal	
	Wr ^{*6}		Wr0	to	Wr1FFF		
			Conv	erting	the above bit		
	Bit device w	rord ^{*7}	de	vices	into words	_	
			(Exc	ept T	imer contact		
		and	Cour				

- Do not set a file register by GT Designer3 when executing multiple programs with the file of the file register set at [Use the same file name as the program] by the PLC parameter of *1 GX Developer.
- Otherwise, read/write at GOT will be erroneous. *2 Available for file register of block No. switched with the RSET instruction.
- Available for file register of block No. of file name switched with the QDRSET instruction. *3
- Only the intelligent function module on the station connected *4 to GOT can be specified. Set within the address range of the buffer memory existing in
- *5
- the target intelligent function module. Do not use local devices set in the MELSEC-L system. Otherwise, normal monitoring is not performed. (The data register (D) can be used for D32768 or later.) This cannot be monitored when in GOT multi-drop
- *6 connection.
- *7 The device No. must be set in multiples of 16.

The device ranges that can be set when selecting [MELSEC-A] as the controller type are as follows.

(1) For GT27

	Device name			Settin	g range	Device No. representation
	Input (X)		X0	to	X1FFF	Llovadasimal
	Output (Y)		Y0	to	Y1FFF	nexadecimai
	Internal rela internal rela	y/Special y (M)	M0	to	M32767	Destant
	Latch relay	L0	to	L32767	Decimai	
	Annunciator	· (F)	F0	to	F32767	
e	Link relay (E	3)	B0	to	B7FFF	Hexadecimal
evic	Time	Contact (TT)	TT0	to	TT32767	
3it d	Timer	Coil (TC)	TC0	to	TC32767	Desimal
ш	0	Contact (CT)	CT0	to	CT32767	Decimai
	Counter	Coil (CC)	CC0	to	CC32767	
	Link special	relay (SB)	SB0	to	SB7FF	Hexadecimal
	Word device	Sp follov (Exc and	ecifie wing v cept In d Buffe	d bit of the vord devices dex register er memory)	_	
	Data registe register (D)	D0	to	D32767	Decimal	
	Link registe	W0	to	W7FFF	Hexadecimal	
	Timer (curre	ent value) (TN)	TN0	to	TN32767	
	Counter (cu (CN)	CN0	to	CN32767	Decimal	
	Link special	register (SW)	SW0	to	SW7FF	Hexadecimal
	File register	(R)	R0	to	R32767	
	Extension	Block	1	to	255	
vice	file register (ER) ^{*1}	Device	ER0	to	ER32767	Decimal
d de	Index	(Z)	Z0	to	Z15	
Nor	register*2	(V)	V0	to	V6	
-	Accumulato	r (A)	A0	to	A1	
	Buffer memo (Intelligent fu (BM) ^{*3}	BM0	to	BM32767	Decimal	
	Ww		Ww0	to	Ww7FF	Hevedecimal
	Wr		Wr0	to	Wr7FF	Пелацесниа
	Bit device w	Conv de (E	erting vices xcept Cou	the above bit into words Timer and unter)	_	

*1 In the computer link connection, the bit specification writing of the word device to the ER29-0 (block 29 of the extension file register) or later of A3ACPU, A3UCPU, or A4UCPU is not available. When the bit specification writing of the word device is

- required, use the range of block No. 0 to 28.
- *2 In the computer link connection, writing to the index register (e.g., the touch switch function, numerical input function) is not available.
- *3 Only the intelligent function module on the station connected to GOT can be specified. Set within the address range of the buffer memory existing in the trend in the address range of the buffer memory existing in
- the target intelligent function module.*4 The device No. must be set in multiples of 16.
- *5 If the special internal relay (M) is converted to the word device, treat 9000 of the device No. as 0 and set in multiples of 16.
 - Example: M9000, M9016, M9240

(2) For GOT MULTI-DROP CONNECTION

	Device name			Settin	Device No. representation	
	Input (X)		X0	to	X1FFF	
	Output (Y)		Y0	to	Y1FFF	
	Internal rela Special inte	M0	to	M9255	Decimal	
	Latch relay	(L)	L0	to	L8191	
d)	Annunciator	· (F)	F0	to	F2047	
evice	Link relay (E	3)	B0	to	B1FFF	Hexadecimal
3it de	Timor	Contact (TT)	TT0	to	TT2047	
ш	Timer	Coil (TC)	TC0	to	TC2047	Desimal
	Countor	Contact (CT)	CT0	to	CT1023	Decimal
	Counter	Coil (CC)	CC0	to	CC1023	
	Word device	Sp follov (Exc	ecifie wing v ept In	_		
	Data registe Special data	D0	to	D9255	Decimal	
	Link registe	r (W)	W0	to	W1FFF	Hexadecimal
	Timer (curre	ent value) (TN)	TN0	to	TN2047	
e	Counter (cu (CN)	CN0	to	CN1023		
devi	File register	(R)	R0	to	R8191	Decimal
ord	Index	(Z)	Z0	to	Z6	
Š	register*1	(V)	V0	to	V6	
	Accumulato	r (A) ^{*2}	A0	to	A1	
	Bit device w	Conv de (E	erting vices xcept Cou	the above bit into words Timer and unter)	_	

*1 In the computer link connection, writing to the index register (e.g., the touch switch function, numerical input function) is not available.

*2 With the computer link connection, the GOT cannot read/ write data from/to the accumulator.

*3 The device No. must be set in multiples of 16.
 *4 If the special internal relay (M) is converted to the word device, treat 9000 of the device No. as 0 and set in multiples of 16.

Example: M9000, M9016, M9240

2.5 MELSEC-FX

The device ranges that can be set when selecting [MELSEC-FX] as the controller type are as follows.

	Device name	S	etting ra	ange	Device No. representation
	Input relay (X)	X0	to	X377	Octal
	Output relay (Y)	Y0	to	Y377	Octai
	Auxiliary relay (M)	M0	to	M7679	
	Special auxiliary relay (M)	M8000	to	M8511	
/ice	State (S)	S0	to	S4095	Decimal
de∖	Timer contact (T)	Т0	to	T511	
Bit	Counter contact (C)	C0	to	C255	
	Word device bit ^{*1}	Spe follow (Excep and Co	cified bi ing word t Timer (ounter (s	t of the d devices (set value) set value))	_
	Data register (D)	D0	to	D0999	
	File register (D)	D1000	to	D7999	
	Special data register (D)	D8000	to	D8511	
	Timer (current value) (T)	Т0	to	T511	
	Counter (current value) (C)	C0	to	C255	
	Timer (set value) (TS) ^{*3*5}	TS0	to	TS511	
d device	Counter (set value) (CS) ^{*4*5}	CS0	to	CS255	Decimal
Vor	Extension register (R)	R0	to	R32767	
-	Index register (V)	V0	to	V7	
	Index register (Z)	Z0	to	Z7	
	Buffer memory (BM) ^{*6}	BM0	to	BM32767	
	Bit device word*2	Conve dev (Exce and (rting the ices into ept Time Counter		

*1 When executing the touch switch function set during the bit specification of the word device, do not write any data to the word device through the sequence program.

- *2 The device No. must be set in multiples of 16.
- *3 Only 16-bit (1-word) designation is allowed.
 *4 For CS0 to CS199, only 16-bit (1-word) designation is allowed.
- For CS200 to CS255, only 32-bit (2-word) designation is allowed.
- *5 Monitoring or writing is not possible in the continuous device designation mode.
- In addition, setting values of the timer and counter, which are not used for the program, cannot be monitored. If monitoring is executed, a reading error occurs.
- *6 Can be used only for special blocks or special units compatible with FX1N, FX1NC, FX2N, FX2NC, FX3G, FX3GC, FX3U, FX3UC. (Except FX0N-3A, FX2N-2AD, and FX2N-2DA)

POINT,

- (1) Precautions when using the buffer memory
 - When the power supply of the special block or special module is turned off, the contents of the buffer memory are initialized, except for some keeping areas.
 - When the buffer memory is monitored by the GOT, the PLC scan time may increase instantly.
 - Use the 16 bit specification for the buffer memory of 16 bit data. Use the 32 bit specification for the buffer memory of 32 bit data.

If using the 16 bit specification for a buffer memory of 32 bit data, monitoring and writing may not be executed normally. For the data size of each buffer memory, refer to the following.

- User's Manual of the special block or special module
 - When reading from/writing to the special block or special module by interrupt processing of the sequence program, monitoring/writing from GOT to the buffer memory may not be executed normally.
- (2) How to select a keyword protection level For equipment that are allowed to operate the FX PLC online, 3 levels of protection level can be set. When monitoring or changing settings by any online equipment is required, set a keyword referring to the following.
 - (a) When setting the keyword only Select a protection level by the initial letter of the keyword.
 All operation protect: Set a keyword with the initial letter "A", "D" to "F", or "0" to "9".
 Incorrect write/read protect: Set a keyword with the initial letter "B".
 Incorrect write protect: Set a keyword with the initial letter "C".
 - (b) When setting the keyword and 2nd keyword Select a protection level by [Registration condition].
- (3) Monitoring availability at each keyword protection level

ltem		When ke	registerin eyword on	ig the ly	When r keywo k	Keyword not		
		All operation protect	Incorrect write/ read protect	Incorrect write protect	All online operation protect	Read/ write protect	Write protect	or protection cancelled
Monitorin devices	ıg	0	0	0	×	0	0	0
Changing devices	T, C set value and file register (D1000 and the following)	×*1	×*1	×*1	×	0	0	0
	Other than above	0	0	0	×	0	0	0
	*1 W	hen the T	. C set v	alues an	e specifie	ed indir	ectly, cl	hanging

The following shows the device monitoring availability at each keyword protection level.

When the T, C set values are specified indirectly, changing devices is available.

(4) Difference between all online operations prohibition and all operations prohibition When specifying all online operations prohibition, displaying devices and inputting data with programming tools or GOT are all prohibited. When all operations are prohibited, displaying devices and inputting data with the GOT are enabled while all operations using programming tools are prohibited. The device ranges that can be set when selecting [MELSEC-WS] as the controller type are as follows.

	Device	S	Setting ra	Device No. representation	
	Input (I)	11.1	to	l12.8	
ø	Output (Q)	Q1.1	to	Q12.8	Decimal
evio	Logic result (LQ)	LQ0.0	to	LQ3.7	+Decimal
3it d	Logic input (LI)	LI0.0	to	LI3.7	
ш	Word device bit	Spe follow	ecified bi	-	
	Data (byte)(D)	D0	to	D99	Desimal
	Data (word)(W)	W0	to	W49	Decimal
d device	EFI input (byte)(EI)	EI110	to	EI233	Decimal +Decimal +Decimal
Word	EFI output (byte)(EQ)	EQ10	to	EQ22	Decimal +Decimal
	Logic input (byte)(LD)	LD0	to	LD3	Decimal
	Logic input (word)(LW)	LW0	to	LW1	Decimal

POINT

- (1) Devices of MELSEC-WS Only reading is possible for all devices.
- (2) Device settings of MELSEC-WSInput(I), Output(Q)

Device			
I •	12	· .	8
Device name			Input position(1 to 8) Module number(1 to 12)

• Logic result(LQ), Logic input(LI)



• EFI input(EI)



• EFI output(EQ)



 (3) Engineering software for MELSEC-WS and device representation of GT Designer3 The engineering software for MELSEC-WS and the device representation of GT Designer3 are different. Set the device by referring to the following table.

Device	GT Designer3	Engineering software for MELSEC-WS
ا*1	$I \square \Box$. \triangle $\Box \square (1-12(Dec))$: Module number $\triangle (1-8)$: Input position	▲▲▲[□□].I△ ▲▲▲: I/O model name (such as XTIO) □□(1-12(Dec)): Module number △(1-8): Input position
Q*1	Q□□.△ □□(1-12(Dec)): Module number △(1-8): Output position	 ▲▲▲▲[□□].Q△ ▲▲▲: I/O model name (such as XTIO) □(1-12(Dec)): Module number △(1-8): Output position
LQ ^{*1}	LQ∏.∆ □(0-3): Byte number △(0-7): Bit position	▲▲□.△ ▲▲: "Result" □(0-3): Byte number △(0-7): Bit position
LI ^{*1}	LI∏.∆ □(0-3): Byte number △(0-7): Bit position	▲▲▲[0] .□.△ ▲▲▲: CPU type (CPU0, CPU1) □(0-3): Byte number △(0-7): Bit position
El ^{*1}	EIO∏∆ O(1-2): EFI number □(1-3): Device number △(0-3): Byte number	▲▲▲[0].EFIO:□, Byte △ ▲▲▲: CPU type (CPU0, CPU1) O(1-2): EFI number □(1-3): Device number △(0-3): Byte number
EQ ^{*1}	EQO \triangle O(1-2): EFI number \triangle (0-2): Byte number	▲▲▲[0].EFIO:1, Byte △ ▲▲▲: CPU type (CPU0, CPU1) O(1-2): EFI number △(0-2): Byte number
D	D∆ ∆(0-99(Dec)): Byte number	RS232 data (Safety controller to RS232)
W	W∆ ∆(0-49(Dec)): Word number Word virtualization of D device W0= (D1(Upper bits), D0(Lower bits))	GOT independent device (Not available)
LD	LD∆ ∆(0-3): Byte number	RS232 data (Safety controller to RS232)

Device	GT Designer3	Engineering software for MELSEC-WS			
LW	LW∆ △(0-1): Word number Word virtualization of LD device LW0= (LD1(Upper bits), LD0(Lower bits))	GOT independent device (Not available)			
*1 When the mapping position is changed by the MELSEC-WS					

When the mapping position is changed by the MELSEC-WS engineering software, a mismatch occurs between virtual devices on GOT and MELSEC-WS mapping devices. When mapping is changed, use D devices or LD devices. (4) When using offset specification When setting devices using the offset function, the device values are as follows.

(a) Input(I)

Offset	+0	+1	+2	+3	+4	+5	+6	+7	+8 to +15
+0	11.1	l1.2	l1.3	l1.4	l1.5	l1.6	11.7	l1.8	
+16	I2.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	
+32	I3.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	
+48	I4.1	14.2	14.3	14.4	14.5	I4.6	14.7	14.8	
+64	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	
+80	l6.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	Fixed to 0
+96	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	(OFF)
+112	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	
+128	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	
+144	I10.1	110.2	I10.3	I10.4	l10.5	I10.6	110.7	I10.8	
+160	111.1	111.2	111.3	111.4	111.5	111.6	111.7	111.8	
+176	l12.1	112.2	l12.3	l12.4	l12.5	I12.6	112.7	I12.8	
+192				De	vice ran	ge error			

(b) Output(Q)

Offset	+0	+1	+2	+3	+4	+5	+6	+7	+8 to +15
+0	Q1.1	Q1.2	Q1.3	Q1.4	Q1.5	Q1.6	Q1.7	Q1.8	
+16	Q2.1	Q2.2	Q2.3	Q2.4	Q2.5	Q2.6	Q2.7	Q2.8	
+32	Q3.1	Q3.2	Q3.3	Q3.4	Q3.5	Q3.6	Q3.7	Q3.8	
+48	Q4.1	Q4.2	Q4.3	Q4.4	Q4.5	Q4.6	Q4.7	Q4.8	
+64	Q5.1	Q5.2	Q5.3	Q5.4	Q5.5	Q5.6	Q5.7	Q5.8	Fixed to 0 (OFF)
+80	Q6.1	Q6.2	Q6.3	Q6.4	Q6.5	Q6.6	Q6.7	Q6.8	
+96	Q7.1	Q7.2	Q7.3	Q7.4	Q7.5	Q7.6	Q7.7	Q7.8	
+112	Q8.1	Q8.2	Q8.3	Q8.4	Q8.5	Q8.6	Q8.7	Q8.8	
+128	Q9.1	Q9.2	Q9.3	Q9.4	Q9.5	Q9.6	Q9.7	Q9.8	
+144	Q10.1	Q10.2	Q10.3	Q10.4	Q10.5	Q10.6	Q10.7	Q10.8	
+160	Q11.1	Q11.2	Q11.3	Q11.4	Q11.5	Q11.6	Q11.7	Q11.8	
+176	Q12.1	Q12.2	Q12.3	Q12.4	Q12.5	Q12.6	Q12.7	Q12.8	
+192				De	vice ran	ge error			

(c) Logic result(LQ)

Offset	+0	+1	+2	+3	+4	+5	+6	+7		
+0	LQ0.0	LQ0.1	LQ0.2	LQ0.3	LQ0.4	LQ0.5	LQ0.6	LQ0.7		
+8	LQ1.0	LQ1.1	LQ1.2	LQ1.3	LQ1.4	LQ1.5	LQ1.6	LQ1.7		
+16	LQ2.0	LQ2.1	LQ2.2	LQ2.3	LQ2.4	LQ2.5	LQ2.6	LQ2.7		
+24	LQ3.0	LQ3.1	LQ3.2	LQ3.3	LQ3.4	LQ3.5	LQ3.6	LQ3.7		
+32	Device range error									

(d) Logic input(LI)

Offset +0 +1 +2 +3 +4 +5 +6 +7 LI0.0 LI0.5 LI0.6 +0 LI0.1 LI0.2 LI0.3 LI0.4 LI0.7 +8 LI1.0 LI1.2 LI1.3 LI1.4 LI1.5 LI1.6 LI1.1 LI1.7 +16 LI2.0 LI2.1 LI2.2 LI2.3 LI2.4 LI2.5 LI2.6 LI2.7 +24 LI3.0 LI3.1 LI3.2 LI3.3 LI3.4 LI3.5 LI3.6 LI3.7 +32 Device range error

(e) EFI input(EI)

Offset	+0	+1	+2	+3	+8 to +15					
+0	EI110	EI111	EI112	EI113						
+16	EI120	EI121	EI122	EI123						
+32	EI130	EI131	EI132	EI133						
+48 : +240		Fixed	d to 0		Fixed to 0					
+256	EI210	EI211	EI212	El213						
+272	EI220	El221	EI222	EI223						
+288	EI230	EI231	EI232	EI233	Device range error					
+302		Device range error								

(f) EFI output(EQ)

Offset	+0	+1	+2	+3 to +15			
+0	EQ10	EQ11	EQ12				
+16 : +240		Fixed to 0		Fixed to 0			
+256	EQ20	EQ21	EQ22	Device range error			
+272	Device range error						



3

ACCESS RANGE FOR MONITORING

3.1	Access Range for Monitoring Stations on Network Systems
3.2	Access Range for Monitoring when Using Ethernet Connection
3.3	CC-Link System Access Range for Monitoring
3.4	Data Link System (MELSECNET/B, (II)) Access Range for Monitoring
3.5	Access Range for Monitoring when Connecting FXCPU3 - 18
3.6	Connection to Remote I/O Station in MELSECNET/H Network System
3.7	Connection to the Head Module of CC-Link IE Field Network System

3

3. ACCESS RANGE FOR MONITORING

3.1 Access Range for Monitoring Stations on Network Systems

3.1.1 MELSECNET/H, MELSECNET/10, CC-Link IE Controller Network, CC-Link IE Field Network



• Devices of other stations (other than devices B and W that are allocated by the network parameter) may not allow monitoring depending on their PLC CPU.

Image: Second setting method of monitor devices (Examples 1 to 2)

- The motion controller CPU (Q Series) at other stations cannot be monitored.
 - *1 The control station and normal station correspond to the master station and local station in the CC-Link IE field network respectively.

(2) When connecting to QCPU (Q mode)/QnACPU/AnUCPU

- The GOT can monitor the control station and all the normal stations on the network.
- The GOT can monitor the control station and all the normal stations on other networks.
 (For monitoring stations on other networks, be sure to set the routing parameter)
 When the Universal model QCPU is used as a relay station, the GOT can monitor stations with the station No.65 or later in the CC-
- When connected to a relay station and the data link system is included, the master station and local stations can be monitored.
- When connected to a relay station, it is not necessary to designate the data link parameter [Effective unit number for accessing other stations] for the PLC CPU of the connected station. (Even if designated, the parameter is ignored)
- Devices of other stations (other than devices B and W that are allocated by the network parameter) may not allow monitoring depending on their PLC CPU.
 - Monitor accessible range of other stations and setting method of monitor devices (Examples 1 to 2)
 - *1 The control station and normal station correspond to the master station and local station in the CC-Link IE field network respectively.
- (3) When connecting to AnACPU/AnNCPU

Link IE controller network.

- The GOT can monitor the control station on the network. When the PLC CPU on the control station is the QCPU (Q mode) or QnACPU, the GOT cannot monitor devices other than B and W assigned for the network parameter.
- The GOT cannot monitor normal stations on the network.
- The GOT cannot monitor any stations on the other networks.



GOT

Control

Normal

station



Control

statior

Normal station

Normal

station

Normal

station

GOT



Direct CPU connection/computer link connection

- (1) When connecting to multiple CPU system
 Corresponding to the access range described in Bus connection (1).
- (2) When connecting to QCPU (Q mode)/QnACPU
 Corresponding to the access range described in Bus connection (2).
- (3) When connecting to QCPU (A mode)/AnUCPU
 The GOT can monitor the control station and all the normal stations on the network.
 For monitoring devices (other than B and W assigned for the network

parameter) of other stations, the GOT cannot monitor the devices of the PLC CPU that is the QCPU (Q mode) or QnACPU.

• If connected to a relay station, use data link parameter [Effective unit number for accessing other stations] to designate the unit number that is connected to the network to be monitored.





(4) When connecting to AnACPU/AnNCPU

• Corresponding to the access range described in ■ Bus connection (3).

(5) When connecting to motion controller CPU (Q series), CNC (CNC C70), or robot controller (CRnQ-700) via direct CPU connection

Monitor the motion controller CPU (Q series), CNC (CNC C70), or robot controller (CRnQ-700) via the following QCPUs in the multiple CPU system.

	Cor	troller	Relay CPU
Motion controller CPU (Q Series)	Q172HCPU,	Q173HCPU	QCPU (Q mode)
	Q172DCPU,	Q173DCPU	
CNC (CNC C70)	Q173NCCPU		QnUCPU
Robot controller (CRnQ-700)	Q172DRCPU		

*1 The control station and normal station correspond to the master station and local station in the CC-Link IE field network respectively.

CC-Link connection (intelligent device station), CC-Link connection (via G4)

• Only the station connected to the GOT can be monitored.

- Monitor accessible range of other stations and setting method of monitor devices Example 6: When using CC-Link connection (intelligent device station) /CC-Link connection (via G4)
- When the station connected to the GOT is in the multiple CPU system, the GOT can monitor CPU No.1 to No.4.
- The GOT cannot monitor other stations.

MELSECNET/H connection, MELSECNET/10 connection, CC-Link IE Controller Network connection, CC-Link IE Field Network connection

POINT.

Precautions for cyclic transmission

When transmitting cyclic transmission with a GOT, even if link device X and/or Y are assigned to a GOT when setting the network parameter for the control station, the GOT cannot access the host station. When transmitting cyclic transmission, use link device B and/or W.

• The GOT is regarded as a normal station and monitors the control station and all normal stations on the network.

When the monitoring target is a PLC CPU within a multiple CPU system, the GOT can monitor CPU No. 1 to CPU No. 4 by specifying CPU No.

• When monitoring other networks, a CPU on another Ethernet, MELSECNET/H, MELSECNET/10, CC-Link IE Controller Network, or CC-Link field network is accessible via the PLC CPU.

However, the GOT cannot monitor the CNC C70 on other networks.

On the Ethernet network, only QCPU (Q mode) and QnACPU can be accessed.

• When monitoring other networks in MELSECNET/10 connection, install the MELSECNET/H communication unit on the GOT.

• To monitor other networks, setting of routing parameters is required.

For routing parameter setting, refer to the following manuals.

Routing parameter setting for the GOT

- 9. MELSECNET/H CONNECTION (PLC TO PLC NETWORK), MELSECNET/10 CONNECTION (PLC TO PLC NETWORK)
- 10. CC-Link IE CONTROLLER NETWORK CONNECTION

11. CC-Link IE FIELD NETWORK CONNECTION

Routing parameter setting for the PLC CPU (MELSECNET/H network system, MELSECNET/10 network system)

Corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

Routing parameter setting for the PLC CPU (When connecting to the CC-Link IE Controller Network)

CC-Link IE Controller Network Reference Manual

Routing parameter setting for the PLC CPU (When connecting to the CC-Link IE Field Network)

CC-Link IE Field Network Master/Local Module User's Manual

• If devices of other stations (other than devices B and W that are allocated by the network parameter) are monitored, monitoring may not be available depending on the PLC CPU of the network system to be monitored.

■ Monitor accessible range of other stations and setting method of monitor devices Example 5: When using MELSECNET/10 connection

POINT.

Precautions when using the QCPU redundant system

When monitoring other networks, do not set the QCPU redundant system as a relay station.

If the QCPU redundant system is set as a relay station, the GOT cannot switch the monitoring target automatically when the system is switched.

(A timeout error occurs due to failed monitoring)

Monitoring devices of other stations on the network

If devices of other stations on the network system are monitored, the display speed will be significantly reduced. Therefore, monitor the link relay (B) and link register (W) that are allocated by the network parameter.

Monitoring devices of other networks (Bus connection, CPU direct connection, computer link connection)

• Be sure to designate the routing parameter to the PLC CPU of the connected station.

• If another network is monitored, the display speed of object etc. will be significantly reduced.

Monitor accessible range of other stations and setting method of monitor devices Example 1: <u>When using bus connection</u>



- Monitor accessible range of devices (other than B or W) of other stations or other networks Specify the accessing network No. or station as shown in the following table.
- (1) To monitor B or W of the connected station (host station) assigned with a network parameter, specify the host station.
- (2) To monitor another station (other than B or W) or another network, specify the station (network No. and station No.).

Station to be accessed		Netwo	rk No.1			Netwo	Network No.2			
Station connected to GOT	AnU (1-1)	QnA (1-2)	AnA (1-3)	AnU (1-4)	QnA (2-1)	AnU (2-2)	AnN (2-3)	AnU (2-4)		
Anl (1-1)	0	×	0	0	×	0	×	0		
,	Host		Other (1-3)	Other (1-4)		Network No.2 AnU (2-2) AnN (2-3) A O × O Other (2-2) — OI O × OI Other (2-2) — OI X × I O × I O × I O × I O × I O × I O × I O O I O O I O O I O O I O O I O O I O O I O I I O I I O I I O I I O I I O X I O X <	Other (2-4)			
OnA (1-2)	0	0	×	0	0	0	×	0		
	Other (1-1)	Host		Other (1-4)	Other (2-1)	Other (2-2)		Other (2-4)		
ΔηΔ (1-3)	0	×	0	×	×	×	×	×		
	Other (0-0)		Host							
(1-4)	0	×	×	0	×	0	×	0		
(2-2)	Other (1-1)			Host		Host		Other (2-4)		
On∆ (2-1)	0	0	×	0	0	0	0	0		
	Other (1-1)	Other (1-2)		Other (1-4)	Host	Other (2-2)	Other (2-3)	Other (2-4)		
AnN (2-3)	×	×	×	×	×	×	0	×		
, unv (2 0)							Host	—		
Anl (2-4)	0	×	×	0	×	0	×	0		
/ 410 (Z- T)	Other (1-1)			Other (1-4)		Other (2-2)		Host		

How to read the table

Upper line: Accessibility O: Accessible ×: Not accessible Lower line: Network settings Host Other (Network No. - Station number)

POINT.

Monitoring link device B or W

For monitoring devices B and W that are allocated by the link parameter, use the host device number even when designating devices allocated to another station. Otherwise, the display speed will be reduced.

Example 2: When using bus connection



- Monitor accessible range of devices (other than B or W) of other stations or other networks Specify the accessing network No. or station as shown in the following table.
- (1) To monitor B or W of the connected station (host station) assigned with a network parameter, specify the host station.
- (2) To monitor another station (other than B or W) or another network, specify the station (network No. and station No.).

St	ation to be		Network No.1			Netwo	rk No.2		C	Data link system			
Station connected	accessed to GOT	QnA (1-1)	AnA (1-2)	QnA (1-3)	AnU (2-1)	QnA (2-2)	AnU (2-3)	AnU (2-4)	QnA (M)	QnA (L1)	AnA (L2)		
		0	0	0	0	0	0	0	0	×	×		
QnA	(1-1)	Host	Other (1-2)	Other (1-3)	Other (2-1)	Other (2-2)	Other (2-3)	Other (2-4)	Other (1-3) or Other (2-2)	_	_		
ΔnΔ	(1-2)	×	0	×	×	×	×	×	×	×	×		
7407	(12)		Host										
0-1	(1-3)	0	×	0	0	0	0	0	0	×	0		
QnA	(Z-Z) (M)	Other (1-1)		Host	Other (2-1)	Host	Other (2-3)	Other (2-4)	Host		Other (0-2) ^{*1}		
Anl J	(2-1)	×	×	×	0	×	0	0	×	×	×		
7410	(2 1)			-	Host		Other (2-3)	Other (2-4)					
Anl J	(2-3)	×	×	×	0	×	0	0	×	×	×		
	(20)			-	Other (2-1)		Host	Other (2-4)					
ΔnL	(2-4)	×	×	×	0	×	0	0	×	×	×		
7410	(2 4)				Other (2-1)		Other (2-3)	Host					
OnA	(11)	×	×	×	×	×	×	×	×	0	×		
Scill ((=-)									Host			
AnA	(12)	×	×	×	×	×	×	×	×	×	0		
7 11/7	()										Host		

When monitoring the data link system, designate the network No. as 0.

How to Upper line: read the table Lower line:

Upper line: Accessibility

O: Accessible ×: Not accessible Network settings Host Other (Network No. - Station number)

POINT,

*1

Monitoring link device B or W

For monitoring devices B and W that are allocated by the link parameter, use the host device number even when designating devices allocated to another station. Otherwise, the display speed will be reduced.

Example 3: When using CPU direct connection or computer link connection



- Monitor accessible range of devices (other than B or W) of other stations or other networks Specify the accessing network No. or station as shown in the following table.
- (1) To monitor B or W of the connected station (host station) assigned with a network parameter, specify the host station.
- (2) To monitor another station (other than B or W) or another network, specify the station (network No. and station No.).

Station to be accessed		Netwo	rk No.1			Network No.2				
Station connected to GOT	AnU (1-1)	Q(Q mode) (1-2)	AnA (1-3)	AnU (1-4)	QnA (2-1)	AnU (2-2)	AnN (2-3)	AnU (2-4)		
AnU (1-1)	0	×	0	0	×	0	×	×		
	Host		Other (1-3)	Other (1-4)		Other (2-2)		_		
$O(O \mod e) = (1-2)$	0	0	×	0	0	0	×	0		
	Other (1-1)	Host		Other (1-4)	Other (2-1)	Other (2-2)	_	Other (2-4)		
ΔnΔ (1-3)	0	×	0	×	×	×	×	×		
	Other (0-0)		Host				_			
(1-4)	0	×	×	0	×	0	×	×		
(2-2)	Other (1-1)			Host	_	Host	_	_		
OnA (2-1)	0	0	×	0	0	0	0	0		
	Other (1-1)	Other (1-2)		Other (1-4)	Host	Other (2-2)	Other (2-3)	Other (2-4)		
AnN (2-3)	×	×	×	×	×	×	0	×		
/ unv (2 0)							Host			
Anl I (2-4)	×	×	×	×	×	0	×	0		
/ 110 (2-4)					_	Other (2-2)		Host		

How to read the table

Upper line: Accessibility O: Accessible ×: Not accessible Lower line: Network settings Host Other (Network No. - Station number)

POINT,

Monitoring link device B or W

For monitoring devices B and W that are allocated by the link parameter, use the host device number even when designating devices allocated to another station.

Otherwise, the display speed will be reduced.

ACCESS RANGE FOR MONITORING

Example 4: When using CPU direct connection or computer link connection



- Monitor accessible range of devices (other than B or W) of other stations or other networks Specify the accessing network No. or station as shown in the following table.
- (1) To monitor B or W of the connected station (host station) assigned with a network parameter, specify the host station.
- (2) To monitor another station (other than B or W) or another network, specify the station (network No. and station No.).

Statio		Network No.1			Netwo	ork No.2		D	ata link syste	a link system QnA (L1) AnA (L2)		
Station connected to GO	ccessed	QnA (1-1)	AnA (1-2)	QnA (1-3)	AnU (2-1)	QnA (2-2)	AnU (2-3)	AnU (2-4)	QnA (M)	QnA (L1)	AnA (L2)	
		0	0	0	0	0	0	0	0	×	×	
Q (Q mode)	(1-1)	Host	Other (1-2)	Other (1-3)	Other (2-1)	Other (2-2)	Other (2-3)	Other (2-4)	Other (1-3) or Other (2-2)	_	_	
AnA	(1-2)	×	0	×	×	×	×	×	×	×	×	
	(12)		Host		—							
OnA	(1-3)	0	×	0	0	0	0	0	0	×	0	
	(M)	Other (1-1)		Host	Other (2-1)	Host	Other (2-3)	Other (2-4)	Host	_	*1 Other (0-2)	
Apl	(2.1)	×	×	×	0	×	0	0	×	×	×	
Allo	(2-1)			_	Host		Other (2-3)	Other (2-4)			_	
Apl I	(2-3)	×	×	×	0	×	0	0	×	×	×	
Allo	(2-0)				Other (2-1)		Host	Other (2-4)				
Apl I	(2-1)	×	×	×	0	×	0	0	×	×	×	
Allo	(2-4)				Other (2-1)		Other (2-3)	Host				
OnA	(1)	×	×	×	×	×	×	×	×	0	×	
	(= -)									Host		
AnA	(12)	×	×	×	×	×	×	×	×	×	0	
	()									_	Host	

*1 When monitoring the data link system, designate the network No. as 0.

How to	Upper line:	Accessibility
read the		O: Accessible
table		×: Not accessible
	Lower line:	Network settings
		Host
		Other (Network No Station number)



Monitoring link device B or W

For monitoring devices B and W that are allocated by the link parameter, use the host device number even when designating devices allocated to another station. Otherwise, the display speed will be reduced.

Example 5: When using MELSECNET/10 connection



· Monitor access range for other station devices (other than B and W)

Station to be accessed		Netwo	rk No.1		Network No.2			
Station connected to GOT	QnA (1-1)	Q (Q mode) (1-2)	GOT (1-3)	AnU (1-4)	Q (Q mode) (2-1)	QnA (2-2)	AnN (2-3)	AnU (2-4)
GOT (1-3)	0	0		0	0	0	×	0

- Designating network No. and station number for setting monitor device
- (a) Monitoring devices B and W that are allocated by network parameter NW No.: 1, Station number: Host

POINT,

For monitoring devices B and W that are allocated by the link parameter, use the local device number if designating devices allocated to another station.

Otherwise, the display speed will be reduced.

(b) Monitoring other stations (other than B and W)

Station to be accessed Station connected to GOT	QnA (1-1)	Q (Q mode) (1-2)	GOT (1-3)	AnU (1-4)	How to read the table <u>1</u> , <u>Other (2)</u> ↑ ↑
GOT (1-3)	1, Other (1)	1, Other (2)		1, Other (4)	NW No. Station number

5



Example 6: When using CC-Link connection (intelligent device station) /CC-Link connection (via G4)

Station to be accessed Station connected to GOT	QnA (1-1)	Q (Q mode) (1-2)	AnA (1-3)	AnN (1-4)
QnA (1-1)	0	×	×	×
Q(Q mode) (1-2)	×	0	×	×
AnA (1-3)	×	×	0	×
AnN (1-4)	×	×	×	0

O: Accessible ×: Not accessible

Access Range for Monitoring when Using Ethernet Connection

Access range

3.2

(1) MITSUBISHI PLC

The PLC can be monitored via the Ethernet module set in the Ethernet setting on GT Designer3. The GOT can access CPUs on another Ethernet, MELSECNET/H, MELSECNET/10, CC-Link IE Controller Network, or CC-Link field network via the QCPU or QnACPU. However, the GOT cannot monitor the CNC C70 on other networks.

(The GOT cannot monitor the AnNCPU on the CC-Link IE Controller Network, MELSECNET/H, and MELSECNET/10 networks)

For monitoring CPUs on the MELSECNET/H, MELSECNET/10, CC-Link IE Controller Network, and CC-Link field network, set the routing parameter.

For the routing parameter setting, refer to the following manuals.

Routing parameter setting of the GOT

- 5. ETHERNET CONNECTION
- Routing parameter setting for accessing CPUs on the MELSECNET/H network system, or MELSECNET/10 network system

CF Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

Routing parameter setting for accessing CPUs on the CC-Link IE Controller Network

CC-Link IE Controller Network Reference Manual

Routing parameter setting for accessing CPUs on the CC-Link IE Field Network

MELSEC-Q CC-Link IE Field Network Master/Local Module User's Manual

CC-Link IE Field Network Ethernet Adapter Module User's Manual

Monitoring via the MELSECNET (II) or MELSECNET/B network cannot be performed.



POINT,

- (1) Host in the Ethernet connection While the GOT is handled as the host in MELSECNET/H, MELSECNET/10 or CC-Link connection, the station (Ethernet module) set as the host in the Ethernet setting of GT Designer3 is handled as the host in Ethernet connection.
- Precautions when using the QCPU redundant system
 When monitoring other networks, do not set the QCPU redundant system as a relay station.
 If the QCPU redundant system is set as a relay station, the GOT cannot switch the monitoring target automatically when the system is switched.
 (A timeout error occurs due to failed monitoring)

Various settings

For the Ethernet setting by GT Designer3, refer to the following.

5. ETHERNET CONNECTION

3.3 CC-Link System Access Range for Monitoring

When using Bus connection/CPU direct connection/computer link connection Only connected stations can be monitored.

When using CC-Link connection (intelligent device station)

(1) Access range

The master station and local station can be monitored.

O: Can be monitored, X: Cannot be monitored

Monitor target	Monitoring by cyclic transmission	Monitoring by transient transmission		
Master station (Remote network Ver.2 mode)	0	0		
Local station Station No.1 (Ver.1 compatible)	0	0		
Local station Station No.6 (Ver.2 compatible)	O ^{*1}	0		

*1 Monitoring is available only when the CC-Link communication module is the GT15-J61BT13.

All devices RX, RY, RWw and RWr that are allocated to the master station by the CC-Link parameter setting can be monitored.

When the monitor target is the multi-PLC system, CPU No. 1 to No. 4 can be monitored.

The device range of RX, RY, RWw, RWr to be allocated to the GOT differs according to the setting of the number of CC-Link communication units (one station/four station) occupied.

For details on the number of CC-Link stations occupied, refer to the following manual .

User's manual of the CC-Link master unit to be connected

(2) Setting device name and device number

- (a) Monitoring devices RX, RY, RWw and RWr that are allocated to the master station by CC-Link parameter setting
 - Use the following device names.

For devices RX, RY, RWw and RWr, designate the addresses allocated by station number setting.

• In the case of CC-Link Ver.2 (Device names to be refreshed automatically are indicated as X, Y, and D.)

Device name on PLC CPU		Automatic	Device name on master station		Link	GT Designer3 settings		
		refresh			scan	Device name	Set device range	
Input	Х	\leftarrow	Remote input	RX	←	Х	X0 to X1FFF	
Output	Y	\rightarrow	Remote output	RY	\rightarrow	Y	Y0 to Y1FFF	
Register (write area)	D	Ļ	Remote register (write area)	RWw	Ļ	Ww	Ww0 to Ww7FF	
Register (read area)	D	\rightarrow	Remote register (read area)	RWr	\rightarrow	Wr	Wr0 to Wr7FF	

• In the case of CC-Link Ver.1 (Device names to be refreshed automatically are indicated as X, Y, and D.)

Device name on PLC CPU		Automatic	Device name on master		Link	GT Designer3 settings		
Device name on FEC	refresh station			scan	Device name	Set device range		
Input	х	←	Remote input	RX	←	Х	X0 to X7FF	
Output	Y	\rightarrow	Remote output	RY	\rightarrow	Y	Y0 to Y7FF	
Register (write area)	D	÷	Remote register (write area)	RWw	Ļ	Ww	Ww0 to WwFF	
Register (read area)	D	\rightarrow	Remote register (read area)	RWr	\rightarrow	Wr	Wr0 to WrFF	

ACCESS RANGE FOR MONITORING

3

(b) Monitoring PLC CPU devices of other stations Set the device name and device No.

2. DEVICE RANGE THAT CAN BE SET

- (3) Setting NW No. and station number
 - (a) When monitoring devices RX, RY, RWw and RWr that are allocated to the master station by CC-Link parameter setting NW No.: 0, PLC station number: Local
 - (b) When monitoring PLC CPU devices of another station
 NW No. 0, PLC station number: Other (Station number: n)
 (n: Station number of another station to be monitored (0: Master station, 1-64: Local station))

POINT

For monitoring devices RX, RY, RWw and RWr that are allocated by CC-Link parameter, <u>use the local device even</u> <u>if designating devices allocated to another station.</u> Otherwise, the display speed will be reduced.

■ When using CC-Link connection (via G4) (Q series only)

- (1) Access range GT27 can monitor the master station and local stations.
- (2) Setting NW No. and station number
 - (a) When monitoring master station NW No.: 0, PLC station number: Host/other (station number: 0)
 - (b) When monitoring local station NW No.: 0, PLC station number: Other (station number: 1 to 64)
- (3) Setting device name and device number Set the device name and device No.

2. DEVICE RANGE THAT CAN BE SET

Monitoring overview

The following two methods are available for monitoring by the GOT with CC-Link communication unit.

Monitoring method	Monitoring by transient transmission*2	Monitoring by cyclic transmission*2
Contents	Devices of the PLC CPU on the CC-Link system master and local station are specified and monitored.	All remote inputs/outputs and remote registers assigned to the Master station by CC-Link parameter setting are specified and monitored.
Advantage	The CC-Link parameter setting sequence program is required. However, the GOT communication sequence program is not needed. ^{*1}	The data communication processing speed is high.
Disadvantage	The data communication processing speed is lower than that of cyclic transmission.	 Writing from the GOT (read command from the master station) can be performed only to remote outputs and remote registers assigned to the GOT of the master station and to the GOT internal registers. GOT communication sequence program is required.^{*1}
*1 Th sat	s program is not required if the CC-Link parameter setting sequences is for the following conditions.	Lence program and GOT communication sequence program

Use a QCPU (Q mode) or QnACPU whose number given in the DATE field of the rating plate is "9707B" or later as the PLC CPU of the master station.

• Use GX Developer or SW2□-GPPW and make CC-Link parameter setting and batch refresh device setting in the CC-Link setting on the package.

For details of the connection method, refer to the following manual .

User's manual of the CC-Link master unit to be connected
 *2 For whether the data can be sent to/received from the CC-Link Ver. 2 compatible station by transient transmission and cyclic transmission, refer to the following.

↓ When using CC-Link connection (intelligent device station)

POINT.

In transient transmission, connection of several (five or more as a guideline) intelligent device stations (GOTs and intelligent device units) reduces the data communication speed.

To raise the data communication speed, increase the CC-Link system, for example, and do not connect five or more intelligent device stations to a single CC-Link system.

3.4 Data Link System (MELSECNET/B, (II)) Access Range for Monitoring

Bus connection, CPU direct connection, Computer link connection

- (1) When connecting to the master station
 - Local stations can be monitored.
 When the PLC CPU of the local station is QnACPU, devices other than B and W that are allocated by the link parameter cannot be monitored.
- (2) When connecting to the local station
 - The master station can be monitored. However, when the PLC CPU of the local station is QnACPU, devices other than B and W that are allocated by the link parameter cannot be monitored.
 - Other local stations cannot be monitored.
- (3) When connecting to the master station on the third layer
 - The master station on the second layer and local stations on the third layer can be monitored.

However, when the PLC CPU of the local station is QnACPU, devices other than B and W that are allocated by the link parameter cannot be monitored.

· Local stations on the second layer cannot be monitored.





Monitoring devices of other stations

If devices of other stations on the data link system are monitored, the display speed will be significantly reduced. Therefore monitor the link relay (B) and link register (W) that are allocated by the link parameter.

Setting method of monitor device

The following example describes the method of setting the network No. and the station numbers when setting monitor devices .



- (1) Monitoring the connected station (host station) and B and W allocated by the link parameter Specify the host station.
- (2) Monitoring devices of other stations Network No.: 0, Station number: Refer to the following table.

Station to be accessed Station connected to GOT	М	L1	L2 m	L3	ℓ1	ℓ2	L3
М	Host	Other 1	Other 2	Other 3	—	_	—
L1	Other 0	Host	_	-	_	-	-
L2 m	Other 0	_	Host	_	Other 1	Other 2	Other 3
L3	Other 0	—	_	Host	_	-	-
.ℓ1	—	—	Other 0	_	Host	—	—
.l2	—	—	Other 0	_	—	Host	—
.l3	—	—	Other 0	_	_	—	Host

Setting of the station No.

POINT,

Monitoring link device B or W

For monitoring devices B and W that are allocated by the link parameter, use the host device number even when designating devices allocated to another station.

Otherwise, the display speed will be reduced.

3.5 Access Range for Monitoring when Connecting FXCPU

The access range that can be monitored for the direct CPU connection is only the connected CPU. (The GOT cannot monitor other stations.)

The access range that can be monitored for the Ethernet connection is the host and others.

The access range that can be monitored for the multi-drop communication is only the CPU to which the serial multi-drop connection unit (GT01-RS4-M) is connected directly.

3.6 Connection to Remote I/O Station in MELSECNET/ H Network System

When connected to the remote I/O station of the MELSECNET/H network system, the GOT can monitor the PLC CPU of the master station.

When connecting the GOT to the remote I/O station, use the following connection methods.



Connection to remote I/O station of MELSECNET/B, (II) or /10

The GOT cannot be connected to the remote I/O station on the MELSECNET/B, (II) data link system and MELSECNET/10 network system.

Connect the GOT to the remote I/O station on the MELSECNET/H network system.



3

Direct CPU connection

(1) The network units (QJ72LP25-25, QJ72LP25G, QP72BR15) of the remote I/O station are handled as PLC CPU. Connect the GOT to the RS-232 interface of the network unit.

For cables required for connection with the network module and other details, refer to the following.

6. DIRECT CONNECTION TO CPU

(2) Specify a type including MELSEC-Q (including multiple), or MELSEC-QnU for the controller type on GT Designer3. Then, specify [[NW No.] (Network No. of the remote I/O network) to 1, and specify [Station No.] (Master station) to 0.] as the monitoring target in the network setting of the device setting dialog box. (GT16, GT15 only)

The GOT monitors stations on the MELSECNET/H network with the transient transmission.

Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU. For displaying objects with a shorter time-lag, execute the cyclic transmission so that the GOT can monitor link devices B and W of the host station set in the MELSECNET/H network.

For settings required for the PLC CPU, refer to the following manual.

CF Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/Q network)

(3) To monitor other networks, set the routing parameter to the PLC CPU as necessary. For routing parameter settings of the PLC CPU, refer to the following manual.

Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

Computer link connection

(1) Connect the GOT to the serial communication module (QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71C24N-R4) or modem interface module (QJ71CMO) mounted on the remote I/O station. For the cables required for connection with the serial communication module or modem interface module and other details, refer to the following.

7. COMPUTER LINK CONNECTION

(2) Specify a type including MELSEC-Q (including multiple), or MELSEC-QnU for the controller type on GT Designer3. Then, specify [[NW No.] (Network No. of the remote I/O network) to 1, and specify [Station No.] (Master station) to 0.] as the monitoring target in the network setting of the device setting dialog box. (GT16, GT15 only)

The GOT monitors stations on the MELSECNET/H network with the transient transmission. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU. For displaying objects with a shorter time-lag, execute the cyclic transmission so that the GOT can monitor link devices B and W of the host station set in the MELSECNET/H network. For settings required for the PLC CPU, refer to the following manual.

C Corresponding MELSECNET/H Network System Reference Manual (Remote I/Q network)

(3) To monitor other networks, set the routing parameter to the PLC CPU as necessary. For routing parameter settings of the PLC CPU, refer to the following manual.

CF Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

5

Ethernet connection

(1) Connect the GOT to the Ethernet module (QJ71E71-100, QJ71E71-B5, QJ71E71-B2, QJ71E71) mounted on the remote I/O station.

For details of cables and others required for connecting the GOT to the Ethernet module, refer to the following.

5. ETHERNET CONNECTION

(2) Specify a type including MELSEC-Q (including multiple), or MELSEC-QnU for the controller type on GT Designer3. Then, specify [[NW No.] (Network No. of the remote I/O network) to 1, and specify [Station No.] (Master station) to 0.] as the monitoring target in the network setting of the device setting dialog box. (GT16, GT15 only)

The GOT monitors stations on the MELSECNET/H network with the transient transmission. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU.

For displaying objects with a shorter time-lag, execute the cyclic transmission so that the GOT can monitor link devices B and W of the remote I/O station.

For settings required for the PLC CPU, refer to the following manual.

Corresponding MELSECNET/H Network System Reference Manual (Remote I/Q network)

(3) To monitor other networks, set the routing parameter to the GOT and PLC CPU as necessary. For routing parameter settings of the GOT, refer to the following manual.

5. ETHERNET CONNECTION

For routing parameter settings of the PLC CPU, refer to the following manual.

CF Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

Restrictions on connection to remote I/O station

The GOT does not allow the clock of the master station to be set in the clock setting of the utility function.

The master station clock will not change even if the clock setting is made.

Use GX Developer or a similar software to set the PLC CPU clock of the master station.

3.7 Connection to the Head Module of CC-Link IE Field Network System

When connected to the head module of the CC-Link IE Field Network, the GOT can monitor the PLC CPUs of the master station and local stations. When connecting the GOT to the head module, use the following connection methods.

Computer link connection



(1) Connect the GOT to the serial communication module (LJ71C24, LJ71C24-R2) mounted on the head module. For cables required for connection with the serial communication module and other details, refer to the following.

7. COMPUTER LINK CONNECTION

(2) Specify a GOT type which includes MELSEC-QnU in the controller type on GT Designer3. Then, specify [Network No. 1 (Network No. of CC-Link IE Field Network), Station No. 0 (Master station)] as the monitoring target in the network setting of the device setting dialog box. (GT16, GT15, GT14 only) In this case, the GOT monitoring is performed by transient transmission of the CC-Link IE Field Network. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU. For displaying objects with a shorter time-lag, execute the cyclic transmission so that the GOT can monitor link devices B and W of the host station set in the CC-Link field network. For settings required for the PLC CPU, refer to the following manual.

MELSEC-L CC-Link IE Field Network Head Module User's Manual

(3) To monitor other networks, set the routing parameter to the PLC CPU as necessary. For routing parameter setting of the PLC CPU, refer to the following manual.

MELSEC-L CC-Link IE Field Network Head Module User's Manual

Restrictions on connection to head module

The GOT does not allow the clock of the master station to be set in the clock setting of the utility function. The master station clock will not change even if the clock setting is made. Use GX Works or similar software to set the PLC CPU clock of the master station.

4

HOW TO MONITOR REDUNTANT SYSTEM

4.1	Connection to Remote I/O Station in MELSECNET/H Network System
4.2	Direct CPU Connection
4.3	CC-Link Connection (Intelligent Device Station)
4.4	CC-Link Connection (Via G4)
4.5	MELSECNET/H and MELSECNET/10 Connections (Network Systems)
4.6	CC-Link IE Controller Network Connection (Network System)
4.7	Ethernet Connection4 - 24
4.8	Connection to the Redundant Type Extension Base Unit4 - 25
4.9	Q Redundant Setting
4.10	Switch the Monitor Target to the Control System Using the Script Function

4. HOW TO MONITOR REDUNTANT SYSTEM



In a redundant system, the monitoring can be performed with the monitoring target specified as the control system or the standby system on the GOT. By specifying the monitoring target PLC CPU as the control system of the redundant system, the monitoring target is automatically changed to the PLC CPU in the control system when system switching occurs.

To enable this automatic changing of the monitoring target at the GOT, settings are required in the GT Designer3.

2.9 Q Redundant Setting

The following connection methods are available for the QCPU redundant system.

- · Connection to remote I/O station in MELSECNET/H network system
 - (1) Direct CPU connection (Remote I/O station of MELSECNET/H network system)

[37 4.1.1 Direct CPU connection (Direct CPU connection to the remote I/O station)

(2) Computer link connection (Serial communication module mounted on remote I/O station of MELSECNET/H network system)

(I/O station) 4.1.2 Computer link connection (Connection to serial communication module mounted on remote

(3) Ethernet connection (Ethernet module mounted on the remote I/O station of the MELSECNET/H network system)

[37] 4.1.3 Ethernet connection (Connection to Ethernet module mounted on remote I/O station)

Direct CPU connection

F 4.2 Direct CPU Connection

· CC-Link connection (intelligent device station)

4.3 CC-Link Connection (Intelligent Device Station)

• CC-Link connection (Via G4)

4.4 CC-Link Connection (Via G4)

MELSECNET/H connection, MELSECNET/10 connection (Network system)

[37 4.5 MELSECNET/H and MELSECNET/10 Connections (Network Systems)

· CC-Link IE Controller Network connection (Network system)

[37 4.6 CC-Link IE Controller Network Connection (Network System)

Ethernet connection

4.7 Ethernet Connection

- · Connection to the redundant type extension base unit
 - (1) Computer link connection (Serial communication module mounted on the redundant type extension base unit)
 - 4.8.1 Computer link connection (Connection to the Serial communication module mounted on the redundant type extension base unit)
 - (2) Ethernet connection (Ethernet module mounted on the redundant type extension base unit)
 - 4.8.2 Ethernet connection (Connection to the Ethernet module mounted on redundant type extension base unit)
 - (3) CC-Link connection (intelligent device station) (CC-Link module mounted on the redundant type extension base unit)

4.8.3 CC-Link connection (intelligent device station) (Connection to the CC-Link module mounted on redundant type extension base unit)

(4) CC-Link connection (Via G4) (CC-Link module mounted on the redundant type extension base unit)

4.8.4 CC-Link connection (Via G4) (Connection to the CC-Link module mounted on redundant type extension base unit)

For details of PLC CPUs that can be monitored in each connection method of GOT, refer to the following.

Monitorable controllers of each chapter

Δ

The following table shows the features of each connection method.





4



PLC CPU in the previous control system to the control system after system switching. *2

To monitor the control system after the system switching without the Q redundancy setting, refer to the following.

4.10Switch the Monitor Target to the Control System Using the Script Function
Δ

POINT,

Precautions for monitoring the QCPU redundant system

A system alarm may be detected when the system is switched in a redundant system.
 When Q redundant setting is made : "450 Path has changed or timeout occurred in redundant system."
 When Q redundant setting is not made : "402 Communication timeout. Confirm communication pathway or modules."

However, even if the error occurs, the GOT automatically resumes monitoring and there are no problems in the monitoring operation.

(2) The system alarm is displayed when the system is switched due to cable disconnection etc. (when the path is changed).

The system alarm is not displayed when the system is switched by the user.

- When connected to the remote I/O station, the GOT can monitor only the following GOT functions.
 Monitoring function
 System monitoring function
- (4) When connected to the remote I/O station, the GOT does not allow the PLC CPU clock of the master station to be set in the clock setting of the utility. The master station clock will not change even if the clock setting is made. Use GX Developer or a similar software to set the PLC CPU clock of the master station.
- (5) When the Q redundant setting is not made, the GOT does not automatically change the monitoring target even if system switching occurs in the redundant system. When the GOT is connected to the standby system, data written to a device are overwritten by the data of the control system, failing to be reflected. In this case, when data are written to a device in the standby system normally, the system alarm "315 Device writing error. Correct device." is not detected.
- (6) For monitoring the QCPU redundant system when connecting to MELSECNET/H, use QCPU of function version D or later, with the upper five digits later than "07102". Also, use GX Developer of Version 8.29F or later.
- (7) A message "Unable to communicate with CPU." is displayed when the system switching occurs while an option function such as the ladder monitor is used.
- (8) In the MELSECNET/H connection or MELSECNET/10 connection, when the control station of the MELSECNET/H network or MELSECNET/10 network fails and is taken over by a station outside the QCPU redundant system, the timeout is detected as the system alarm. If this occurs, the monitor display speed may slow down.
- (9) In the direct CPU connection, the GOT fails to automatically change the monitoring target in the following cases.
 - · When the power supply to the CPU where the GOT is connected is OFF
 - When the cable connecting the GOT with the CPU is broken
 - · When the tracking is disabled
- (10) If the Q redundant setting is made for a system that is not a QCPU redundant system, no error occurs at the start up of the GOT and the GOT operates normally. In this case, if an abnormality (such as powering OFF, or communication timeout error) occurs at the PLC CPU for which the Q redundant setting has been made, the PLC CPU may operate in a different way from the monitoring target change mode that was set in the Q redundant setting.
- (11) If the QCPU redundant system is in the debug mode, do not make the Q redundant system setting for the GOT side when connecting the GOT.

4.1 Connection to Remote I/O Station in MELSECNET/ H Network System

Direct CPU connection (Direct CPU connection to the remote I/O station) 4.1.1

This section explains the direct CPU connection that connects the GOT to the remote I/O station of the MELSECNET/H network system.

The following shows an example of connecting the GOT to the remote I/O station of the MELSECNET/H network system.



(1) Connection method

Connect the GOT to the RS-232 interface of the network module (QJ72LP25-25, QJ72LP25G, QJ72BR15) on the remote I/O station of the MELSECNET/H network system. For details, refer to the following.

6. DIRECT CONNECTION TO CPU

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item		Settings	Model
Controller Type	MELSEC-Q/QS,	Q17nD/M/NC/DR, CRnD-700	GT
Dovice setting (Network setting)	Othor	NW No.: Network No. of MELSECNET/H remote I/O network	GT
Device setting (Network setting)	Other	Station No.: 0 (Master station)	23
Q Redundant Setting	Do not set the ite	em.	GS

In this case, the GOT monitoring is performed by transient transmission of the MELSECNET/H network system. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU. For displaying objects with a shorter time-lag, set the device for link devices B and W of the host station set in the MELSECNET/H network and execute the cyclic transmission.

For details, refer to the following manual.

CFT Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/Q network)

(3) Monitoring target change when system switching occurs in a redundant system When the system switching occurs, the multiplexed remote sub master station switched to the control system takes over the master operation of MELSECNET/H. Since the GOT monitors the master station, the monitoring target is automatically changed to the PLC CPU that is operating as the master.

4.1.2 Computer link connection (Connection to serial communication module mounted on remote I/O station)

This section explains the computer link connection that connects the GOT to the serial communication module mounted on the remote I/O station of the MELSECNET/H network system.

The following shows an example of connecting the GOT to the serial communication module mounted on the remote I/O station of the MELSECNET/H network system.



(1) Connection method

Connect the GOT to the serial communication module (QJ71C24, QJ71C24-R2, QJ71C24N, QJ71C24N-R2, QJ71C24N-R4) or modem interface module (QJ71CM0) mounted on the remote I/ O station of the MELSECNET/H network system.

For details, refer to the following.

7. COMPUTER LINK CONNECTION

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item		Settings	Model
Controller Type	MELSEC-Q/QS	, Q17nD/M/NC/DR, CRnD-700	GT
Device setting (Network setting)	Other	NW No.: Network No. of MELSECNET/H remote I/O network	GT
Device setting (Network setting)	Other	Station No.: 0 (Master station)	23
Q Redundant Setting	Do not set the it	em.	GS

In this case, the GOT monitoring is performed by transient transmission of the MELSECNET/H network system. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU. For displaying objects with a shorter time-lag, set the device for link devices B and W of the host station set in the MELSECNET/H network and execute the cyclic transmission.

For details, refer to the following manual.

CFT Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/Q network)

(3) Monitoring target change when system switching occurs in a redundant system

When the system switching occurs, the multiplexed remote sub master station switched to the control system takes over the master operation of MELSECNET/H.

Since the GOT monitors the master station, the monitoring target is automatically changed to the PLC CPU that is operating as the master.

4.1.3 Ethernet connection (Connection to Ethernet module mounted on remote I/O station)

This section explains the Ethernet connection for connecting the GOT to the Ethernet module mounted on the remote I/ O station of the MELSECNET/H network system.

The following shows an example of connecting the GOT to the Ethernet module mounted on the I/O station of the MELESCNET/H network system.



(1) Connection method

Connect the GOT to the Ethernet module (QJ71E71-100, QJ71E71-B5, QJ71E71-B2, QJ71E71) mounted on the remote I/O station of the MELSECNET/H network system. For details, refer to the following.

5. ETHERNET CONNECTION

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item		Settings	Model
Controller Type	MELSEC-Q/QS	MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700	
Device setting (Network setting)	Other	NW No.: Network No. of MELSECNET/H remote I/O network	^{ст} 27
Device setting (Network setting)	Other	Station No.: 0 (Master station)	^{GT} 23
Q Redundant Setting	Do not set the it	em.	GS
Routing Information Setting	5. ETHE	5. ETHERNET CONNECTION	

In this case, the GOT monitoring is performed by transient transmission of the MELSECNET/H network system. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU. For displaying objects with a shorter time-lag, set the device for link devices B and W of the host station set in the MELSECNET/H network and execute the cyclic transmission.

For details, refer to the following manual.

CF Q Corresponding MELSECNET/H Network System Reference Manual (Remote I/Q network)

(3) Monitoring target change when system switching occurs in a redundant system When the system switching occurs, the multiplexed remote sub master station switched to the control system takes over the master operation of MELSECNET/H.

Since the GOT monitors the master station, the monitoring target is automatically changed to the PLC CPU that is operating as the master.

4.2 Direct CPU Connection

This section describes the direct CPU connection by which a GOT is connected to a PLC CPU in the redundant system. Two methods for the CPU direct connection, using one or two GOTs, are available.

4.2.1 When using one GOT



(1) Connection method

Connect the GOT to the RS-232 interface of the control system CPU module (Q12PRHCPU, Q25PRHCPU) of the redundant system.

For details, refer to the following.

6. DIRECT CONNECTION TO CPU

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings	Model
Controller Type	MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700	GT
Device setting (Network setting)	Host	Z7 GT
Q Redundant Setting	4.9 Q Redundant Setting	23 GS

(3) Monitoring target change when system switching occurs in a redundant system When the system switching occurs, the PLC CPU (other station) of the control system after system switching takes over the host station operation.
Since the COT mentation the control system to control system after system switching

Since the GOT monitors the control system, the monitoring target is automatically changed to other station.

POINT,

To monitor the control system without Q redundant setting

If the system switching occurs when the Q redundant setting is not made, the GOT cannot change the monitoring target at the occurrence of system switching since it monitors the connected PLC CPU (host station). As a countermeasure, change the cable connection from the PLC CPU in the previous control system to the control system after system switching.

4.2.2 When using two GOTs



Connect a GOT to each PLC CPU to respond to the system switching.

(1) Connection method

Connect GOTs to the RS-232 interface of the control system and standby system CPU modules (Q12PRHCPU, Q25PRHCPU) of the redundant system.

For details, refer to the following.

6. DIRECT CONNECTION TO CPU

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings	Model
Controller Type	MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700	GT 27
Device setting (Network setting)	Host	GT
Q Redundant Setting	4.9 Q Redundant Setting	GS

(3) Monitoring target change when system switching occurs in a redundant system When the system switching occurs, the GOT cannot change the monitor target automatically in response to the system switching.

The GOT that is connected to the control system CPU module after system switching continues the monitoring. Different from the case using one GOT, no cable reconnection is required.

POINT,

To automatically change the monitoring target after system switching using one GOT, make the Q redundant settings.

C 4.9 Q Redundant Setting

4.2.3 Precautions when connecting a GOT directly to a PLC CPU in the redundant system without making Q redundant setting

- As the GOT monitors exclusively the PLC CPU that is directly connected to, the monitor target cannot be changed in response to the system switching of the redundant system. To change the target monitor in response to the system switching, change the target of the connection cable between the GOT and PLC CPU to the other PLC CPU, or configure the system using GOTs connected to each PLC CPU.
- (2) In CPU direct connection, when monitoring a PLC CPU in the redundant system, only the PLC CPU that is directly connected to the GOT can be monitored.
- (3) When connected to the standby system PLC CPU, the writing of the GOT to a device in the connected PLC CPU is not reflected. Design a monitor screen that disables writing to the standby system. In the redundant system, the tracking function transfers device data from control system to standby system. When the tracking function is enabled, the device value of the standby system PLC CPU is overwritten by the device value transferred from the control system to the standby system even if the GOT writes to the standby system PLC CPU (Numerical input, Ascii input, Script, Recipe, or others).



As countermeasures to the above, perform the following.

- Display a monitor screen which indicates that "the connected PLC CPU is the standby system" on a GOT when connecting the GOT to the standby system PLC CPU.
- To display the specified monitor screen when connecting the GOT to the standby system PLC CPU, use the special relay SM1515 (Control status identification flag) of the PLC CPU.
 (Miser the SM1515 is SEE the secretarial PLC CPU.
- (When the SM1515 is OFF, the connected PLC CPU is the standby system)
- Control the operation of each object by the SM1515, which is set for the operation condition.
- For the screen switching device, use a GOT internal device.

If a device of the PLC CPU is used, the trigger action operation of the GOT may be disabled since the device data of the PLC CPU will is overwritten by the device value transferred with the redundant system tracking function.

The following diagram shows an example of screen setting using SM1515. System configuration example: when using one GOT



Create a monitor screen on the base screen 1 that performs the following operations for when connecting a GOT to control system and standby system.

- 1) When connecting to the control system, the monitor screen displays a message calling a touch switch operation, by which the screen switches to the next screen.
- 2) When connecting to the standby system, the monitor screen displays a message calling the reconnection of the connection cable.

1) When connecting to the control system

2) When connecting to the standby system

Start screen (Screen 1)
The operation status is the control system. Touch the screen to display the next screen.

Start screen (Screen 1)

The operation status is the standby system. Re-connect the PLC connection cable to the control system. Choose [Common] \rightarrow [GOT Environmental Setting] \rightarrow [Screen Switching/Window], and set the internal device GD100 as the base screen switching device.

(Do not use PLC CPU devices for the screen switching device. If used, the Trigger Action operation of the GOT may be disabled since the device data of the PLC CPU is overwritten by the device value transferred with the redundant system tracking function)

Screen Switching / W	/indow Setting	·
Base Screen :	GD100	
Overlap Window		
Screen Sv	vitching Device	Use also as a system window De
1 📝 GD101		🔲 Use
🕅 Display	Position: X: Y:	
	Screen Switching / W Base Screen : Overlap Window Screen Sv 1 V GD101 Display	Screen Switching / Window Setting Base Screen : GD100 Overlap Window Screen Switching Device 1 Ø GD101 © Display Position: X: Y:

2. Set the trigger action.

Make the setting so that the base screen 1 is displayed when the connected PLC CPU is the standby system (SM1515 is OFF) in the project specified by selecting [Common] \rightarrow [Trigger Action].

Condition 1 : SM1515 (while OFF)	Ļ	When the SM1515 is OFF, the connected PLC CPU is the standby system.
Operation : GD100=1	←	The screen switches to the base screen 1.

Create the trigger action in the project on the Project tab.

iggerAct	tion		×
Projec	t Screen		
No.	Trigger	Action	<u>A</u> dd
1	OFF(SM1515)	Data Set 16bit (GD100)	<u>E</u> dit
			<u>С</u> ору
			Paste
			Delete
		ОК	Cancel

3. Set the comment display on the base screen 1.

Set a comment to be displayed on the base screen 1 depending on the system status (ON/OFF of the SM1515) of the connected PLC CPU using the Comment Display (Bit).

Select [Object] → [Comment Display] → [Bit Comment] and set Comment Display (Bit).

Device/Style tab		
Device	:	SM1515
Shape	:	None
Comment tab	:	Basic Comment
Comment Display Type Text (ON)	:	The operation status is control system.
		Touch the screen to display the next screen.
Comment Display Type Text (OFF)	:	The operation status is standby system.
		Reconnect the PLC connection cable to the control system CPU.

1) Device/Style tab screen



2) Comment tab screen (ON status)

OFT-ON(=)	Comment Group Group No.: Fixed Device	
OFF Reserves a standby	Adjudt Text 52e Minimum 52e: B Comment Dobby Type Comment No. Picet The operAdvalue is control system. A	
ON The survey of the second se	Truck the screen to deploy the next screen.	
	Common Settings of State	
	Eont: Outline Goths: •	
	Text Sige: 16 + (Dot)	
opy Range: Al Settings NI->OFF <u>C</u> opy	Alignment: XC C C C C C C C C C C C C C C C C C C	
réview		

3) Comment tab screen (OFF status)

FLOFT-ON(=)	Comment Group Group No.1 Fixed Device
OFF Status Status E status Different Status E status Status Status E status Different Status E con The semantic e status E con	
Copy Range: Al Settings Off->ONOpj ineview	Bing: None Reverse Common Settings of State

4. Set the touch switches on the base screen 1.

By using the go to screen switch function, set a touch switch for shifting the screen to the next screen with a screen touch, when the connected PLC CPU is the control system (SM1515 is ON).

Select [Object] \rightarrow [Switch] \rightarrow [Go To Screen Switch] and set the screen switching function. Set the same size for the touch switch as the base screen size so that touching any place of the screen enables the switch operation.

Next Screen tab	
Screen Type	: Base
Go To Screen	: Fixed 2
Style tab	
Display Style	: None (Shape)
Trigger tab	
Trigger Type	: ON
Trigger Device	: SM1515

1) Next Screen tab

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See handridets
 Trekel TR-ObjOrt" of "Whe
 tempholes

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Correct to company

2) Style tab screen



The following shows the created base screen 1.

Start screen (Screen 1)
The operation status is the control system. Touch the screen to display the next screen.

4.3 CC-Link Connection (Intelligent Device Station)

This section describes the CC-Link connection (intelligent device station) that connects the GOT set as the intelligent device station to the CC-Link network.

The following shows an example of connecting the GOT set as the intelligent device station to the CC-Link network.



Connect the CC-Link network system to the GOT. For details, refer to the following.

12. CC-Link CONNECTION (INTELLIGENT DEVICE STATION)

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings		Model
Controller Type	MELSEC-QnA, MELDAS C6*		GT 27
Device setting (Network setting)	Other	NW No.: 0 (fixed)	GT
	Other	Station No.: 0 (Master station)	23
Q Redundant Setting	Do not set the item.		65

In this case, the GOT monitoring is performed by transient transmission of the CC-Link network system. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU. For displaying objects with a shorter time-lag, set the device for RX, RY, RWw, RWr of the host station set in the CC-Link network and execute the cyclic transmission.

For details, refer to the following.

3.3 CC-Link System Access Range for Monitoring

Ζ

- (3) Monitoring target change when system switching occurs in a redundant system
 - (a) System switching due to an alarm occurred in the control system When system switching occurs, the CC-Link switches the station No. 0 of the master station and the station No. 1 of the standby master station on the network. The CC-Link module of the new control system after system switching takes over the control as the master station. Since the GOT monitors the master station, the monitoring target is automatically changed to the new control system after system switching. (b) System switching due to a network communication error occurred in other than the CC-Link of the control system, or due to switching by the user When system switching occurs, the CC-Link does not switch the station No. 0 of the master station and the station No. 1 of the standby master station on the network.

The CC-Link module of the new control system after system switching takes over the control as the standby master station.

Since the GOT monitors the master station, the monitoring target is not automatically changed to the new control system after system switching.

To automatically change the monitoring target of the GOT to the new control system after system switching, switch the data link control from the standby master station to the master station by the sequence program of the new control system.

For details of the sequence program, refer to the following manual.

C QnPRHCPU User's Manual (Redundant System) (Sample Programs when Using CC-Link)

POINT.

CC-Link network setting

To automatically change the monitoring target in the QCPU redundant system when using the CC-Link connection, set the CC-Link master station as System A and the standby master station as System B. For details of using the CC-Link network in the redundant system, refer to the following manual.

CC-Link System Master/Local Module User's Manual

C QnPRHCPU User's Manual (Redundant System)

4.4 CC-Link Connection (Via G4)

This section explains the CC-Link connection (via G4) that connects the GOT to the AJ65BT-G4-S3 of the CC-Link network.

Network No. 0, Station No. 2

The following shows an example of connecting the GOT to the AJ65BT-G4-S3 of the CC-Link network.



 Connection method Connect the AJ65BT-G4-S3 of the CC-Link network to the GOT. For details, refer to the following.

13. CC-Link CONNECTION (Via G4)

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings	Model
Controller Type	MELSEC-QnA, MELDAS C6*	GT
Device setting (Network setting)	Host	GT
Q Redundant Setting	Do not set the item.	CS

Ζ

- (3) Monitoring target change when system switching occurs in a redundant system
 - (a) System switching due to an alarm occurred in the control system When system switching occurs, the CC-Link switches the station No. 0 of the master station and the station No. 1 of the standby master station on the network. The CC-Link module of the new control system after system switching takes over the control as the master station. Since the GOT monitors the master station, the monitoring target is automatically changed to the new control system after system switching. (b) System switching due to a network communication error occurred in other than the CC-Link of the control system, or due to switching by the user When system switching occurs, the CC-Link does not switch the station No. 0 of the master station and the station No. 1 of the standby master station on the network.

The CC-Link module of the new control system after system switching takes over the control as the standby master station.

Since the GOT monitors the master station, the monitoring target is not automatically changed to the new control system after system switching.

To automatically change the monitoring target of the GOT to the new control system after system switching, switch the data link control from the standby master station to the master station by the sequence program of the new control system.

For details of the sequence program, refer to the following manual.

C QnPRHCPU User's Manual (Redundant System) (Sample Programs when Using CC-Link)

POINT.

CC-Link network setting

To automatically change the monitoring target in the QCPU redundant system when using the CC-Link connection, set the CC-Link master station as System A and the standby master station as System B. For details of using the CC-Link network in the redundant system, refer to the following manual.

CC-Link System Master/Local Module User's Manual

C QnPRHCPU User's Manual (Redundant System)

4.5 MELSECNET/H and MELSECNET/10 Connections (Network Systems)

This section explains the MELSECNET/H and MELSECNET/10 connections (network systems) that connect the GOT to the MELSECNET/H and MELSECNET/10 network system.

The following provides an example of connecting the GOT set as a normal station to the MELSECNET/ H network system.



(1) Connection method

Connect the MELSECNET/H network system to the GOT.

For details, refer to the following.

- 9. MELSECNET/H CONNECTION (PLC TO PLC NETWORK), MELSECNET/10 CONNECTION (PLC TO PLC NETWORK)
- (2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings		Model
Controller Type	MELSEC-QnA, I	/IELSEC-QnA, MELDAS C6*	
Device setting (Network setting)	Other	NW No.: Network No. of MELSECNET/H PLC to PLC network	27 GT 23
		Station No.: Station number of the control system	23
Q Redundant Setting	4.9 Q Redundant Setting		65

(3) Monitoring target change when system switching occurs in a redundant system When system switching occurs, the network module station No. 2 changes from the normal station to the sub control station and takes over the control of the MELSECNET/H network system. Since the GOT monitors the control system, the monitoring target is automatically changed to the network module station No. 2.

POINT.

To monitor the control system without Q redundant setting

When system switching occurs, the network module station No. 2 changes from the normal station to the sub control station and takes over the control of the MELSECNET/H network system.

Since the GOT monitors the station of the specified station number, the monitoring target cannot be changed to the station No. 2 in response to the system switching.

As a countermeasure, create a screen to monitor the PLC CPU of the control system by switching the station numbers between System A and System B using the script function.

1.10 Switch the Monitor Target to the Control System Using the Script Function

4.6 CC-Link IE Controller Network Connection (Network System)

This section explains the CC-Link IE Controller Network connection (network system) that connects the GOT to the CC-Link IE controller network.

The following shows an example of connecting the GOT set as a normal station to the CC-Link IE Controller Network.



(1) Connection method

Connect the GOT to the CC-Link IE Controller Network. For details, refer to the following.

10. CC-Link IE CONTROLLER NETWORK CONNECTION

(2) GT Designer3 setting

Set GT Designer3 as described below.

Setting item	Settings		Model
Controller Type	MELSEC-QnA,	VELSEC-QnA, MELDAS C6*	
Device setting (Network setting)	Othor	NW No.: Network No. of CC-Link IE Controller Network	<u>27</u> GT
	Other	Station No.: Station number of the control system	23
Q Redundant Setting	4.9 Q R	edundant Setting	GS

To specify the station number which was set in the Q redundant setting in the device setting, set the station number as the other station.

(3) Monitoring target change when system switching occurs in a redundant system

When system switching occurs, the network module station No.2 changes from a normal station to the sub control station, and the system with the module takes over the control of the CC-Link IE Controller Network as the control system.

Since the GOT monitors the control system, the monitoring target is automatically changed to the network module station No. 2.

4.7 Ethernet Connection

This section explains the Ethernet connection that connects the GOT to the Ethernet network system. The following shows an example of connecting the GOT to the Ethernet network.



(1) Connection method

Connect the Ethernet network system to the GOT.

Set the Ethernet modules of System A and System B (including NW No., station No, and IP address) to the Ethernet setting of the GOT side.

For details, refer to the following.

5. ETHERNET CONNECTION

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings		
Controller Type	MELSEC-QnA, MELDAS C6*		
Device setting (Network setting)	Host	Host (The control system is monitored.)	27
	Other	NW No.: Network No. of Ethernet	GT 23
	Other	Station No.: Station number of the control system	GS
Q Redundant Setting	4.9 Q Redundant Setting		

To specify the station number which was set in the Q redundant setting in the device setting, set the station number as the other station.

(3) Monitoring target change when system switching occurs in a redundant system

When system switching occurs, Ethernet module station No. 2 takes over the control of the Ethernet network system as the control system.

Since the GOT monitors the control system, he monitoring target is automatically changed to the Ethernet module station No. 2.

POINT.

When monitoring control system without Q redundant setting

When system switching occurs, Ethernet module station No. 2 takes over the control of the Ethernet network system as the control system.

Since the GOT monitors the station of the specified station number, the monitoring target cannot be changed to the station No. 2 in response to the system switching.

As a countermeasure, create a screen to monitor the PLC CPU of the control system by switching the station numbers between System A and System B using the script function.

3.10 Switch the Monitor Target to the Control System Using the Script Function

4.8 Connection to the Redundant Type Extension Base Unit

4.8.1 Computer link connection (Connection to the Serial communication module mounted on the redundant type extension base unit)

This section explains the computer link connection for connecting the GOT to the serial communication module mounted on the redundant type extension base unit.

The following shows an example of connecting the GOT to the serial communication module mounted on the redundant type extension base unit.



(1) Connection method

Connect the GOT to the serial communication module (QJ71C24N) mounted on the redundant type extension base unit.

For details, refer to the following.

7. COMPUTER LINK CONNECTION

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings	Model
Controller Type	MELSEC-QnA, MELDAS C6*	GT 27
Device setting (Network setting)	Host	GT
Q Redundant Setting	Do not set the item.	CS

(3) Monitoring target change when system switching occurs in a redundant system When the system switching occurs, the GOT automatically changes the monitoring target to the PLC CPU switched to the control system. Ζ

4.8.2 Ethernet connection (Connection to the Ethernet module mounted on redundant type extension base unit)

This section explains the Ethernet connection for connecting the GOT to the Ethernet module mounted on the redundant type extension base unit.

The following shows an example of connecting the GOT to the Ethernet module mounted on the redundant type extension base unit.



(1) Connection method

Connect the GOT to the Ethernet module (QJ71E71-100, QJ71E71-B5, QJ71E71-B2) mounted on the redundant type extension base unit.

For details, refer to the following.

5. ETHERNET CONNECTION

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings	Model
Controller Type	MELSEC-QnA, MELDAS C6*	GT
Device setting (Network setting)	Host	GT
Q Redundant Setting	Do not set the item.	23 GS

(3) Monitoring target change when system switching occurs in a redundant system When the system switching occurs, the GOT automatically changes the monitoring target to the PLC CPU switched to the control system.

4.8.3 CC-Link connection (intelligent device station) (Connection to the CC-Link module mounted on redundant type extension base unit)

This section explains the CC-Link connection for connecting the GOT to the CC-Link module mounted on the redundant type extension base unit.

The following shows an example of connecting the GOT to the CC-Link module mounted on the redundant type extension base unit.



(1) Connection method

Connect the GOT to the CC-Link module (QJ61BT11N) mounted on the redundant type extension base unit. For details, refer to the following.

12. CC-Link CONNECTION (INTELLIGENT DEVICE STATION)

- (2) GT Designer3 setting
 - Set GT Designer3 as follows.

Setting item	Settings		Model
Controller Type	MELSEC-QnA, MELDAS C6*		GT
Device setting (Network setting)	Other	NW No.: 0 (fixed)	GT
	ould	Station No.: 0 (Master station)	23
Q Redundant Setting	Do not set the item.		GS

In this case, the GOT monitoring is performed by transient transmission of the CC-Link network system. Therefore, a longer time-lag occurs for displaying objects compared with directly monitoring the PLC CPU. For displaying objects with a shorter time-lag, set the device for RX, RY, RWw, RWr of the host station set in the CC-Link network and execute the cyclic transmission.

For details, refer to the following.

3.3 CC-Link System Access Range for Monitoring

(3) Monitoring target change when system switching occurs in a redundant system When the system switching occurs, the GOT automatically changes the monitoring target to the PLC CPU switched to the control system.

4.8.4 CC-Link connection (Via G4) (Connection to the CC-Link module mounted on redundant type extension base unit)

This section explains the CC-Link connection (Via G4) for connecting the GOT to the CC-Link module mounted on the redundant type extension base unit via the AJ65BT-G4-S3.

The following shows an example of connecting the GOT to the AJ65BT-G4-S3 of the CC-Link network.



 Connection method Connect the AJ65BT-G4-S3 of the CC-Link network to the GOT. For details, refer to the following.

13. CC-Link CONNECTION (Via G4)

(2) GT Designer3 setting

Set GT Designer3 as follows.

Setting item	Settings	Model
Controller Type	MELSEC-QnA, MELDAS C6*	GT
Device setting (Network setting)	Host	GT GT
Q Redundant Setting	Do not set the item.	CS

(3) Monitoring target change when system switching occurs in a redundant system When the system switching occurs, the GOT automatically changes the monitoring target to the PLC CPU switched to the control system.

4.9 Q Redundant Setting

The following explains the setting for automatically change the monitoring target of the GOT when monitoring a QCPU redundant system.

POINT,

Before making the Q redundant setting

In the Q redundant setting, do not set stations other than redundant CPUs.

- **1.** Select [Common] \rightarrow [Controller Setting] \rightarrow [Q Redundant] from the menu.
- 2. The setting dialog box appears. Make the settings with reference to the following explanation.
- 3. Make the settings for the Q redundant setting. In the Q Redundant Setting dialog box, settings can be made for each channel of the controller.



(Example: Ethernet connection (Station No. 5), redundant CPU pair No. 1 and No. 2, redundant CPU station No. 1 to 4)

Item		Contents	
CH1 to CH4		Select a tab of the CH No. for the Q redundant setting.	
Target at its own (0-FF)	Station	Select this item to monitor the control system as a host station. (In Ethernet connection, not available even when selected)	
Pair No *1	NW No.	Set the network No. (1 to 225) for each of pair numbers (1 to 64). Upper row: Setting for the first redundant CPU. Lower row: Setting for the second redundant CPU. (The same value as the value set for the first redundant CPU is displayed)	
Pair No. S	Station No.	Set the station No. (1 to 63) of the redundant CPU for each of pair numbers (1 to 64). Upper row: Setting for the first redundant CPU. Lower row: Setting for the second redundant CPU. (The value of "Setting for the first redundant CPU" + 1 is displayed)	ст 27 23 GS
New		Create a new pair No.	
Duplicate	licate Copies one setting of the selected pair number to append it at the last line.		
Delete		Deletes one setting of the selected pair. After deletion, the succeeding pair numbers are renumbered to fill the deleted pair number.	
Delete All		Deletes the setting of all pair numbers.	
Copy All	Copy All Copies the Q redundant setting on the selected CH No. tab.		
Paste All		Pastes the copied Q redundant setting in the selected CH No. tab.	

For details of *1, refer to the explanation below.

*1 Pair number

Redundant CPU pair means the redundant CPUs (System A / System B) in the redundant system configuration. Pair number is the number assigned to each redundant CPU pair.

Example: Ethernet connection (Pair No. 1 and Pair No. 2)



POINT,

Precautions for making Q redundant setting

Pay attention to the following items when making the Q redundant setting.

• In the setting, station Nos. of the System A CPU and System B CPU must be adjacent numbers to be set as a pair.

As long as adjacent numbers are used, allocation of them to the System A CPU and System B CPU may be determined as desired.

- Pairing of the last station No. and station No. 1 (Example: Station No. 64 and station No. 1) is not allowed.
- Make sure that the QCPU in the station for which Q redundant setting is made is a redundant CPU. If any of the QCPUs to which the Q redundant setting is made is not a redundant CPU, the GOT fails to automatically change the monitoring target to the control system when the system is switched.
- When making the Q redundant setting for MELSECNET/H, MELSECNET/10, or Ethernet connections, check the station Nos. of network modules before the setting. If the settings of the Q redundant setting and the actual network module station Nos. are not matched, the GOT fails to automatically change the monitoring target to the control system when the system is switched.
- The redundant pair number setting is necessary in the Q redundant setting when the monitoring target changes automatically at the system switching with the host station specified in Ethernet connection. (The "Target at its own Station (0-FF)" function of the Q redundant setting is not valid in Ethernet connection.)
- GOT supports the backup mode (separate mode), which is the operation mode of the QCPU redundant system, and does not support the debug mode.

4.10 Switch the Monitor Target to the Control System Using the Script Function

The following explains how to create a script screen, to be used for the MELSECNET/H or MELSECNET/10 connection (network system), or Ethernet connection, that automatically changes the monitoring target (Station No.) at the occurrence of system switching even if the Q redundant setting is not made.

The script executes the station number switching function or screen switching function.

The following shows the advantages and disadvantages of the station number switching function and screen switching function.

Function	Advantage	Disadvantage
Station number switching function	The monitor screens for Station No. 1 (control system) and Station No. 2 (standby system) can be created on one screen.	Some objects do not allow the station number to be switched.
Screen switching function	All objects can be used since monitor screens are created for each station number.	Monitor screens must be created separately for Station No. 1 (control system) and Station No. 2 (standby system).

The following explains how to use each function.

4.10.1 Method for using the station number switching function

- As a feature of this function, monitor screens for Station No. 1 (control system) and Station No. 2 (standby system) can be created on one screen.
- If the system switching occurs, the GOT can change the monitoring target to the control system PLC CPU on the same monitor screen.
- To achieve this, the script of the GOT monitors the special relay SM1515 (Control system identification flag) of the PLC CPU and stores the station number of the latest control system into the station number switching device.
- Restrictions: Some objects do not allow the station number to be switched.

GT Designer3 (GOT2000) Help

GOT connected to MELSECNET/H network or MELSECNET/10

network

Setting method (For MELSECNET/H connection, MELSECNET/10 connection)

System configuration example 1: MELSECNET/H connection, MELSECNET/10 connection



3

1. Set the station number switching device.

Select [Common] \rightarrow [Controller Setting] \rightarrow [Station No. Switching], and set the internal device GD100 as the station number switching device.

Do not use a device of PLC CPU as a screen switching device. Since the device information is transferred by the tracking transfer function of the redundant system, the trigger action may be disabled.



2. Set the trigger action.

Make the settings so that the station number is switched when the faulty station information (SW70) of MELSECNET/H turns ON in the project specified by selecting [Common] \rightarrow [trigger action].

Condition 1	: SW70.b0 (while ON)	← When b0 is ON, Station No. 1 is abnormal.
Operation	: GD100=2	← Station No. is changed to 2.
Condition 1	: SW70.b1 (while ON)	← When b1 is ON, Station No. 2 is abnormal.
Operation	: GD100=1	← Station No. is changed to 1.

Create the trigger action in the project on the Project tab.



POINT,

Setting for the trigger action function

For the trigger action function, hexadecimals cannot be used. To use the trigger action function, set the N/W No. and the station No. of the PLC CPU in [Unsigned BIN]. (For the trigger action function, set [Unsigned BIN] for [Storing Device])

```
Example:
When N/W No.: 1 and Station No.: 1 (0101H)
Set "257".
When N/W No.: 10 and Station No.: 10 (0A0AH)
Set "2570".
```

3. Create a monitor screen.

For MELSECNET/H connection, MELSECNET/10 connection or Ethernet connection: (Common) In the device setting (network setting) of each object, set Network No. 1 and Station No. 1 of the control system.

4. Validate the station number switching function.

On the Basic tab screen specified by selecting [Screen] \rightarrow [Screen Property], select the item [Switch Station No.] to validate the station number changing function.

Make this setting for each monitor screen.

	Screen Property						*
	Bask Key Window Basic	t Setting ∕ Ke	y Window Advanced Se	tting Y Dialog W	ndow		
	Screen <u>H</u> o.: Screen Name:	1	<u></u>				
	Screen Type:	Base Sr	steen				
	Ogtailed Description:					-	
	Security:	0	죄				
	Front Layer Transparent C	Jolor:					
	El Set screen backgro <u>u</u> nd	f color:	Batterni Papari Grup		•		
beck here.—	Switch Station No.		Bacground Color		•		
	Daplay alarms as popup	n:	Display Position:	Bottom			
	Display the screen gesure Display the screen g	gesture macti a in he glic ac	ve area The Sop of the speen (Sunour sied with	alphoraeth	ane)	
						Ск	(Cancel)

5. Change the station number switching device value in the script.

By selecting [Common] \rightarrow [Script] \rightarrow [Script], create a script for each monitor screen that checks the SM1515 status of the current monitor station, and if it is OFF (standby system), changes the station number switching device value.

Set the trigger type of the script as [Ordinary] or [Sampling(about 3s)].

· Screen script for MELSECNET/H connection and MELSECNET/10 connection:

// If the host station is r	not a control station, the station number is switched to that of the other station.
if([b:SM1515]==OFF){	
if([w:GD100]]==1){
	[w:GD100]=2;
}else{	
	[w:GD100]=1;
}	
}	

Set the created script for each screen on the Screen tab.

Screen No.:	1 4	() Window		- Browse.
Order	Script No.	Comment	TriggerType	Add
1	No. 1	Station	Ordinary	Edit
				Conv
				Paste
				Delete
				10
				<u>u</u> o
				The second se
				Down
/ II the host (IbSM1516)= d(IexGD10 IexGD1 Josed [wcGD1]	station is not a contr -OFFX Q== 1X 00]=2 00]=1;	ol station, the station r	weber is switched to that of	t the other station.



When the MELSECNET/H network is connected to the redundant system only, SW56 (current control station) can be set as the station number switching device.

In this case, even if the system switching occurs, the GOT always monitors the station number that is currently the control station.

Setting method (Ethernet connection)

System configuration example 2: Ethernet connection Ethernet Network No. 1 Station No. 3 GOT Q25PRH Q25PRH Standby system Control system QJ71 QJ71 CPU 🖵 E71 (System B) (System A) CPU 🖵 E71 Station No. 1 Station No. 2 Connected module Network No. Station No. Ethernet module of control system 1 Ethernet module of standby system 2 1 GOT connected to the Ethernet network 3

1. Set the station number switching device.

Select [Common] \rightarrow [Controller Setting] \rightarrow [Station No. Switching], and set the internal device GD100 as the station number switching device.

Do not use a device of PLC CPU as a screen switching device. Since the device information is transferred by the tracking transfer function of the redundant system, the trigger action may be disabled.



2. Set the trigger action.

Make the setting so that the station number is switched when the faulty station information (GS231) from the station monitoring specified by selecting [Common] \rightarrow [trigger action] turns ON. (For Network No. 1 and Station No. 2, set "258"(0102H))

_			
	Condition 1	: GS231.b0 (while ON)	← When b0 is ON, Station No. 1 is abnormal.
	Operation	: GD100=258(0102H)	← Station No. is changed to 2.
_			
	Condition 1	: GS231.b1 (while ON)	← When b1 is ON, Station No. 2 is abnormal.
	Operation	: GD100=257(0101H)	← Station No. is changed to 1.

Create the trigger action in the project on the Project tab.

No.	Ingger	Action	Add
1	014(65231:00)	Data Set 16bit (60100)	Edit
z	ON(65231.b1)	Data Set 16bit (6D100)	<u>⊆</u> opy
		Paste	
			Delete

POINT,

Setting for the trigger action function

For the trigger action function, hexadecimals cannot be used.

To use the trigger action function, set the N/W No. and the station No. of the PLC CPU in [Unsigned BIN]. (For the trigger action function, set [Unsigned BIN] for [Storing Device])

Example: When N/W No.: 1 and Station No.: 1 (0101H) Set "257". When N/W No.: 10 and Station No.: 10 (0A0AH) Set "2570".

3. Create a monitor screen.

For MELSECNET/H connection, MELSECNET/10 connection or Ethernet connection: (Common) In the device setting (network setting) of each object, set Network No. 1 and Station No. 1 of the control system. 4. On the screen 1, set the switch for writing the station No. 1 to the station number switching device. After the GOT is started up, the station number switching device value of the GOT is "0". For Ethernet connection, the monitor becomes abnormal when the station number switching device value is "0". Therefore, set the switch for writing the station number to the station number switching device and the switch for shifting to the monitor screen on the screen 1.

To make this setting, select [Object] \rightarrow [Switch] \rightarrow [Switch].

The following shows an example of setting GD100=257 (0101H: Network No. 1, Station No. 1) and base screen=2 to one switch.(Base screen 2 is the actually monitoring screen)

40	uon List:		Add Action
	Action	Write Device/Switching Type	Bit
	Word Set	GD100 + 257	Word
2	Screen Switching	2 Base	SD Exection
			SP Ediction
			Screen Switching
			Station No. Switching
			Key Code
			Key Window Dis <u>p</u> lay
			Utilize
			Edit
			Delete
se <u>r</u> La	ID for a key input: mp (Timing to change Key Touch State Bit-ON/OFF Word Range	Change C shape/text) *Select "Bt-ON/OFF" or "Word Range" when combination with a device.	using Key Touch State in

5. Validate the station number switching function. On the Basic tab screen specified by selecting [Screen] → [Property], select the item [Switch Station No.] to validate the station number changing function.

Make this setting for each monitor screen.

However, do not make this setting on the screen 1 created in the item 4, above.

	Scheen Wope ta						-3
		Setting Files	Window Advanced Set	ting 7 Dicko We	dtw ¹		
	Screen Kisa	1	6				
	Screen Name:						
	Screen Type:	Base So	ten				
	Defailed Description:					1	
		4				1. T	
	Securitys	0	1				
	Fjort Layer Transparent C	sisri					
	∃Set scietr batkground	20101	Electronic Control of	2.8			
			8.6 0.111	1			
Oh a ala h a sa		١	$108 \gtrsim 1.51 \pm 0.01$	1			
Check here.	215Att 35tion No.	J		_			
	Tigebys spine as building	<	Olyptics: Politicate	Bottom	-		
	line the scient cesture	thinthas:					
	Tipleake the second Tipleake the second	pestura roadov a v tragostrati	e altas Nervos: et dire cereci i lo	arisan 11 AR	a girt blac no	ier (
	-					СК	Cancel
	L						

6. Change the station number switching device value in the script.

By selecting [Common] \rightarrow [Script] \rightarrow [Script], create a script for each monitor screen that checks the SM1515 status of the current monitor station, and if it is OFF (standby system), changes the station number switching device value.

Set the trigger type of the script as [Ordinary] or [Sampling(about 3s)].

Screen script for Ethernet connection:

// If the ho	st station is not a	a control station, the station numb	er is switched to that of the other station.
if([b:SM18	515]==OFF){		
	if([w:GD100]==0	0x0101){	// Station No. 1 to 2
		[w:GD100]=0x0102;	
	}else{		// Station No. 2 to 1
		[w:GD100]=0x0101;	
	}		
}			

For the Ethernet connection, create a script so that the network No. and station number are set to the station switching device.

For Network No. 1 and Station No. 2, create "[w:GD100]=0x0102".

Set the created script for each screen on the Screen tab.

Scroon No.	e. e pase	Wheew		- Browse
acreen IIon	- Ind	1.2008.00.02		Add
Order	SCIPT NO.	Comment	Inggeritype	
	10.1	Starter	Orenavy	Edit
				Сору
				Paste
				Delete
				助
				Do <u>un</u>
7 R the base	station is not a porth	al status the station of	under is switched to that of the oth	e: station

4.10.2 Method for using the screen changing function

- As a feature of this function, monitor screens are created for each station number.
 When the system switching occurs, the GOT can change the monitoring target to the control system PLC CPU on the other monitor screen.
- To achieve this, the script of the GOT monitors the special relay SM1515 (Control system identification flag) of the PLC CPU and stores the screen number corresponding to the latest station number of the control system into the screen switching devices.
- Precautions:

There are the following 8 different screen switching devices.Set the screen switching devices for all screens to be used.

- (1) Base screen switching device
- (2) Overlap window 1 switching device
- (3) Overlap window 2 switching device
- (4) Overlap window 3 switching device
- (5) Overlap window 4 switching device
- (6) Overlap window 5 switching device
- (7) Superimpose window 1 switching device
- (8) Superimpose window 2 switching device

Setting method (For MELSECNET/H connection, MELSECNET/10 connection)

System configuration example 1: MELSECNET/H connection, MELSECNET/10 connection



1. Set the screen switching device of the base screen.

network

Select [Common] \rightarrow [GOT Environmental Setting] \rightarrow [Screen Switching/Window], and set the internal device GD100 as the base screen switching device.

👎 Environmental Setting		
Screen Switching/Window	Screen Switching / Window Setting	<u>^</u>
Dialog Window Key Window System Information Security	Base Screen : GD100 Overlap Window	
Startup Logo	Screen Switching Device	Use also as a system window De

2. Set the trigger action.

Set the trigger action so that the station number is switched when the faulty station information (SW70) of MELSECNET/H turns ON in the project specified by choosing [Common] \rightarrow [trigger action].

	Condition 1	: SW70.b0 (while ON)	← When b0 is ON, Station No. 1 is abnormal.
	Operation	: GD100=2	← Screen No. is changed to 2.
	Condition 1	: SW70.b1 (while ON)	 When b1 is ON, Station No. 2 is abnormal.
	Operation	: GD100=1	← Screen No. is changed to 1.
Trigger	rAction		
No 1 2	o. Trigger ON(SW0070.b0) ON(SW0070.b1)	Action Data Set 16bit (GD100) Data Set 16bit (GD100)	Add Edt Copy Paste Delete
		ОК	Cancel

Make the setting so that the station number is switched when the faulty station information (GS231) from the station monitoring specified by selecting [Common] \rightarrow [trigger action] turns ON.

С	ondition 1	: GS231.b0 (while ON)	← When b0 is ON, Station No. 1 is abnormal.
0	peration	: GD100=2	← Screen No. is changed to 2.
С	Condition 1	: GS231.b1 (while ON)	← When b1 is ON, Station No. 2 is abnormal.
0	peration	: GD100=1	← Screen No. is changed to 1.

riggerAct	tion		×
Projec	t Screen		
No.	Trigger	Action	<u>A</u> dd
1	ON(GS231.b0)	Data Set 16bit (GD100)	Edit
2	ON(GS231.b1)	Data Set 16bit (GD100)	<u>_</u> <u>C</u> opy
			Paste
			Delete
		ОК	Cancel

3. Set monitor screens.

- For MELSECNET/H connection, MELSECNET/10 connection or Ethernet connection: (Common)
- Create a monitor screen with each object whose network setting is Station No. 1 on Screen No. 1 (1-1).
- Create a monitor screen with each object whose network setting is Station No. 2 on Screen No. 2 (1-2).

4. Change the screen switching device value in the script.

By selecting [Common] \rightarrow [Script] \rightarrow [Script], create a script for each monitor screen that checks the SM1515 status of the current monitor station, and if it is OFF (standby system), changes the station number switching device value.

Set the trigger type of the script as [Ordinary] or [Sampling(about 3s)].

Screen scripts for MELSECNET/H connection and MELSECNET/10 connection: The same script can be used for MELSECNET/H connection, MELSECNET/10 connection and Ethernet connection.

// Script of Screen No. 1
// If Station 1 is not a control station, the screen is changed to that of Station 2.
if([1-1:b:SM1515]==OFF){
[w:GD100]=2;
}
// Script of Screen No. 2
// Script of Screen No. 2// If Station 2 is not a control station, the screen is changed to that of Station 1.
<pre>// Script of Screen No. 2 // If Station 2 is not a control station, the screen is changed to that of Station 1. if([1-2:b:SM1515]==OFF){</pre>
<pre>// Script of Screen No. 2 // If Station 2 is not a control station, the screen is changed to that of Station 1. if([1-2:b:SM1515]==OFF){ [w:GD100]=1;</pre>

Script screen of Screen No. 1

Screen No.:	e: @ base 1 - 한	D Window		- Rrowse.
Order	Script No.	Commant	TriggerType	<u>A</u> dd
1.	No.1	Station	Ordnaryi	-Edit
				Copy
				Pasta
				Delete
				Doym
75aulut 5	romen No. 1 Liss not accentralistat 15]CEF2]	on, the scalars is chern	an as that of Station 1	

Script screen of Screen No. 2

icreen <u>Typ</u> icreen No.	e: 9 Base : 2 0	C Window		Browse
Order	Script No.	Comment	TripperType	<u>A</u> dd
1	No. 2	Station	Onderany	Edit
				Easts Delete
				<u>110</u>
Script of 6 2 Station [1-25 SM18 GD100]=1;	icrean No. 2 2 is not a control stat: 16]=OFFI[on, the apreen is onlarg	ed to that of Station 1	- BALL BOOM

HINT

When the MELSECNET/H network is connected to the redundant system only, SW56 (current control station) can be set as the screen switching device.

In this case, even if the system switching occurs, the GOT always monitors the station number that is currently the control station.

Setting method (Ethernet connection)



Set the screen switching device of the base screen.
 Select [Common] → [GOT Environmental Setting] → [Screen Switching/Window], and set the internal device GD100 as the base screen switching device.

🖵 Environmental Setting			-
Screen Switching/Window	Screen Switchin	g / Window Setting	
A Dialog Window	Base Screen	GD100	H
System Information	Overlap Wind	ow	
🙂 Startup Logo	Scre	en Switching Device Use also as a system window De	
	1 🔽 GD1	01 🔻 🔲 Use	
	🗖 D	splay Position: X: Y:	

2. Set the trigger action.

Make the setting so that the station number is switched when the faulty station information (GS231) from the station monitoring specified by selecting [Common] \rightarrow [trigger action] turns ON.

Condition 1	: GS231.b0 (while ON)	← When b0 is ON, Station No. 1 is abnormal.
Operation	: GD100=2	← Screen No. is changed to 2.
Condition 1	: GS231.b1 (while ON)	← When b1 is ON, Station No. 2 is abnormal.
Operation	: GD100=1	← Screen No. is changed to 1.

Project Screen No. Trigger Action 1 ON(GS231.b0) Data Set 16bit (GD100) 2 ON(GS231.b1) Data Set 16bit (GD100) <u>Copy</u> Paste <u>Delete</u>	ger Act	tion			
No. Trigger Action Add 1 ON(GS231.b0) Data Set 16bit (GD100) Edit 2 ON(GS231.b1) Data Set 16bit (GD100) Copy Paste Delete	Projec	(Project / Screen)			
1 ON(GS231.b0) Data Set 16bit (GD100) Edit 2 ON(GS231.b1) Data Set 16bit (GD100) Copy Paste Delete	No.	Trigger	Action	<u>A</u> dd	
2 ON(GS231.b1) Data Set 16bit (GD100) Copy Paste Delete	1	ON(GS231.b0)	Data Set 16bit (GD100)	<u>E</u> dit	
Paste Delete	2	ON(GS231.b1)	Data Set 16bit (GD100)	Сору	
Delete				Paste	
				Delete	
			ОК	Cancel	

3. Set monitor screens.

For MELSECNET/H connection, MELSECNET/10 connection or Ethernet connection: (Common)

- Create a monitor screen with each object whose network setting is Station No. 1 on Screen No. 1 (1-1).
- Create a monitor screen with each object whose network setting is Station No. 2 on Screen No. 2 (1-2).

4. Change the screen switching device value in the script.

By selecting [Common] \rightarrow [Script] \rightarrow [Script], create a script for each monitor screen that checks the SM1515 status of the current monitor station, and if it is OFF (standby system), changes the station number switching device value.

Set the trigger type of the script as [Ordinary] or [Sampling(about 3s)].

Screen script for Ethernet connection:

The same script can be used for MELSECNET/H connection, MELSECNET/10 connection and Ethernet connection.



Script screen of Screen No. 1

icreen <u>N</u> o.	e: 🕸 base	Window		- Browse
Order	Script No.	Comment	TriggerType	
1	No. 1	Station	Ordnary	Edt
				Copy
				[
				Qelete
				00
				Dawn
	Lig rul a control stat	ien, dhe samen is chong	ed to that of Station 1	

Script screen of Screen No. 2

Streen No.:	2 1	C MILLOW		-	Browse
Order	Script No.	Comment	TriggerType		Add
1	No. 2	Station	Ordinary		Edita
					Сору
					2aste
					Delete
					100
					Down
/ 0 Station 2 ([1-2±SM15 «GD100]=1	is not a centrol stati (5)==0FF)	on the opreen is chara	red to thet of Otation 1.		
5

ETHERNET CONNECTION

5.1	Connectable Model List 5 - 2
5.2	System Configuration
5.3	GOT Side Settings 5 - 14
5.4	PLC Side Setting 5 - 18
5.5	Precautions 5 - 51

5

ETHERNET CONNECTION 5.

5.1 **Connectable Model List**

5.1.1 PLC/Motion controller CPU

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	Q00JCPU				
	Q00CPU ^{*1}				
Q01CPU ^{*1} Q02CPU ^{*1} Q02HCPU ^{*1} Q06HCPU ^{*1}					
	Q02CPU ^{*1}	\sim	F 11	GT GT GO	
	Q02HCPU*1	0	Ethernet	27 23 ^{GS}	5.2.1
	Q06HCPU ^{*1}				
	Q12HCPU ^{*1}				
	Q25HCPU ^{*1}				
	Q02PHCPU				
	Q06PHCPU				
	Q12PHCPU				
	Q25PHCPU				
	Q12PRHCPU (Main base)	0	Ethernet	GT GT GS	5.2.1
	(Extension base)				
	Q25PRHCPU				
	(Extension base)				
	Q00UJCPU				
MELSEC-Q (Q mode)	Q00UCPU		Ethernet GT GT GS GS		
	Q01UCPU			GT GT GS	
		0			
					<u>F</u> ₹ 5 2 1
	Q06UDHCPU	Ŭ		27 23 66	J.Z. 1
	Q10UDHCPU				
	Q13UDHCPU				
	Q20UDHCPU				
	Q06UDEHCPU				
	Q10UDEHCPU				
	Q13UDEHCPU				
	Q20UDEHCPU				
		0	Ethernet		5.2.1
	Q100UDEHCPU				5.2.2
	Q03UDVCPU				
	Q04UDVCPU				
	Q06UDVCPU				
	Q13UDVCPU				
					
C Controller			Ethernet	GT GT GS	F = 0.0
module	Q24DHCCPU-LS		Laonor	27 23 65	5.2.2 نيسا

*1 *2 When in multiple CPU system configuration, use CPU function version B or later. (Continued to next page)

Use a module with the upper five digits later than 12042.

Series	Model name	Clock	Communication type	Connectable model	Refer to	
MELSEC-QS	QS001CPU	0	Ethernet	GT GT GS	5.2.1	
MELSEC-L	L02CPU L06CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	0	Ethernet	27 CS	[5.2.2 [5.2.1	
MELSEC-Q (A mode)	Q02CPU-A ^{*2} Q02HCPU-A ^{*2} Q06HCPU-A ^{*2}	0	Ethernet	GT GT GS	5.2.1	
MELSEC-QnA (QnACPU)	Q2ACPU ^{*2} Q2ACPU-S1 ^{*2} Q3ACPU ^{*2} Q4ACPU ^{*2} Q4ARCPU ^{*2}	0	Ethernet	GT GT GS	5.2.1	z
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	0	Ethernet	GT GT GS	5.2.1	NECTIO
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUP21 A2ACPUP21 A2ACPUP21-S1 A2ACPUP21-S1 A2ACPUP21-S1 A3ACPU A3ACPUP21 A3ACPUP21 A1NCPUP21 A1NCPUP21 A1NCPUP21 A2NCPUP21 A2NCPUP21-S1 A2NCPUP21-S1 A2NCPUP21-S1 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21	0	Ethernet	GT GS	5.2.1	ETHERNET CON

(Continued to next page)

- If the A series Ethernet module is applied to the QnACPU, the GOT can monitor the devices as the same as the case of AnACPU. *1 However, the following devices cannot be monitored.
 - Devices added to QnACPU

 - Latch relays (L) and step relays (S) (In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)
 - File register (R)
- *2 Combination with the Ethernet module is restricted. 5.1.2 Ethernet module

Series	Model name	Clock	Communication type	Connectable model	Refer to
	A2USCPU				
	A2USCPU-S1				
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU				
(AnSCPU)	A2SCPU	0	Ethernet	$\begin{array}{c} \mathbf{GT} \\ 27 \\ 23 \\ \mathbf{GS} \end{array}$	5.2.1
(A2SCPU-S1				
	A2SHCPU				
	A2SHCPU-S1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
	A0J2HCPU				
	A0J2HCPUP21	×	Ethernet	GT GT CS	5.2.1
	A0J2HCPUR21			27 23 63	
	A0J2HCPU-DC24				
	A2CCPU		-		
MELSEC-A	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24	-		27 23 GS	-
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
	Q172CPU ^{*1*2}				
	Q173CPU ^{*1*2}			6T 6T 23 GS	5.2.1
	Q172CPUN ^{*1}				
	Q173CPUN ^{*1}	0	Ethernet		
	Q172HCPU	Ĩ			
	Q173HCPU				
Motion	Q172DCPU				
controller	Q173DCPU				
CPU	Q172DCPU-S1				
(Q Series)	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU			CT CT	<u>₹</u> 521
	Q170MCPU ^{*3}	0	Ethernet	27 23 GS	5.2.5
	Q170MSCPU*4	1			5.2.5 کی
	Q170MSCPU-S1*4	1			
	MR-MQ100				

(Continued to next page)

When using SV13, SV22, or SV43, use the motion controller CPU on which any of the following main OS version is installed. *1 • SW6RN-SV13Q□: 00H or later

- SW6RN-SV22Q□: 00H or later • SW6RN-SV43Q□: 00B or later
- *2 Use main modules with the following product numbers.

 - Q172CPU: Product number N******* or later
 Q173CPU: Product number M****** or later
- *3 When using Ethernet module, only the first step can be used on the extension base unit (Q52B/Q55B).
- *4 When using Ethernet module, the extension base unit ($Q5\square B/Q6\square B$) can be used.

Series	Model name	Clock	Communication type		Connectable model		Refer to	
	A273UCPU							
	A273UHCPU							
	A273UHCPU-S3							
	A373UCPU							
	A373UCPU-S3							
Motion	A171SCPU							
controller	A171SCPU-S3	_		GT G				
CPU	A171SCPU-S3N	- 0	Ethernet	27 2	3 GS		5.2.1	
(A Series)	A171SHCPU							
	A171SHCPUN							
	A172SHCPU	_						
	A172SHCPUN	_						
	A173UHCPU	_						
	A173UHCPU-S1							_
	WS0-CPU0			CT C				
MELSEC-WS	WS0-CPU1	×	-	27 2	3 GS		-	
	0 1721 P25-25							
MELSECNET/H	Q 172L 25 25		Ethernet	GTG			<u>∼</u> = 5 0 4	
station	QJ72EF23G	- ^	Luienier	27 2	3 65		5.2.1 ج	z
	QJ/ZBR IS							<u>o</u>
Field Network	1.J72GE15-T2	×	-	GTG			_	E E
head module		~		2/ 2	27 23 ^{GS}			Щ
				GT G				Z
CC-LINK IE Field Network		×	CC-Link IE	27 2	3 GS			ō
Ethernet	NZ2GF-ETB			07.0				U U
adapter module		×	Ethernet	27 2	3 GS			Ē
								Z
CNC C70	Q173NCCPU	0	Ethernet	GT G ^T	GS GS		5.2.3	Ш
					.5			근
	CRnQ-700	0						ш
Robot	(Q172DRCPU) CR750-0		*0	GT GT GT				
controller	(Q172DRCPU)		Ethernet ^{*2}	27 2	3 GS		5.2.1	
	CR751-Q							
	(Q172DRCPU)							
	FX ₀							
	FXos							
	FXON	- ×						
	FX1							
	FX2							
	FX2C	- ×	-	GT GT	GS	-		
	FX1s							
	FX1N	_						
	FX _{2N}	- 0						
MELSEC-FX	FX1NC							
	FX2NC	×						
	FY20*1							
	T X33							
	FX3G '	_						
	FX3GC ^{*1}	0	Ethernet	GT G	GS		521	
	FX3GE	Ũ		21 2	.5			
	FX3U ^{*1}							
	FX3UC ^{*1}							
	*1 The suppor	ted versio	on of the main units varie	es depending on the Ethe	ernet module to be used as	shown below.	LL	
	Ethoma	tmodulo	EValues	EVaco	FVac			
	Eulerne	mouule	FA3U(C)	FA36(C)	1-735			
	FX₃∪-ENE	T-L	Ver. 2.21 or later	FX _{3U} -ENET-L is not s	supported.			
	FX3U-ENE	T-ADP	Ver. 3.10 or later	Ver. 2.00 or later	Ver. 1.00 or later			
	*2 Ethernet co	nnections	can be established only	y via the Ethernet module	e (QJ71E71) or the built-in	Ethernet port of C	NUDE.	
					,			

5.1.2 Ethernet module

CPU series		Etherne	t module ^{*1}	
MELSEC-Q (Q mode) MELSEC-QS Motion controller CPU (Q Series) CNC C70 Robot controller (CRnQ-700)	QJ71E71-100	QJ71E71-B5	QJ71E71-B2	QJ71E71
MELSEC-QnA	AJ71QE71N3-T ^{*2} AJ71QE71N-B5T ^{*2} A1SJ71QE71N-B5 ^{*2} A1SJ71QE71-B5	AJ71QE71N-B5 ^{*2} AJ71QE71 A1SJ71QE71N-B2 ^{*2} A1SJ71QE71-B2	AJ71QE71N-B2 ^{*2} AJ71QE71-B5 A1SJ71QE71N-T ^{*2}	AJ71QE71N-T ^{*2} A1SJ71QE71N3-T ^{*2} A1SJ71QE71N-B5T ^{*2}
MELSEC-Q (A mode) MELSEC-A Motion Controller CPU (A Series)	AJ71E71N3-T AJ71E71N-B5T A1SJ71E71N-B2 A1SJ71E71-B2-S3	AJ71E71N-B5 AJ71E71-S3 A1SJ71E71N-T	AJ71E71N-B2 A1SJ71E71N3-T A1SJ71E71N-B5T	AJ71E71N-T A1SJ71E71N-B5 A1SJ71E71-B5-S3
MELSEC-FX	FX3U-ENET-L	FX3U-ENET-ADP		
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB			
MELSEC-L	LJ71E71-100			

*1 If the A series Ethernet module is applied to the QnACPU, the GOT can monitor the devices as the same as the case of AnACPU. However, the following devices cannot be monitored.

Devices added to QnACPU

• Latch relays (L) and step relays (S)

(In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)

• File register (R)

*2 Use B or a later function version of Ethernet module and PLC CPU.

5.2 System Configuration

5.2.1 Connection to Ethernet module

*1

■ When connecting to MELSEC-Q, QS, QnA, A or motion controller

PLC CPU	Ethernet module		GOT	Communication driver
		Connection cable		

	PLC		Connection cable ^{*1}	Maximum	GOT		Number of	
Model name	Ethernet module *3*4	Communication type	Cable model	segment length ^{*3}	Option device	Model	connectable equipment	
MELSEC-Q (Q mode) MELSEC-QS Motion controller CPU (Q Series)* ⁵	QJ71E71-100 QJ71E71-B5 QJ71E71-B2 QJ71E71	Ethernet						ECTION
MELSEC-QnA	AJ71QE71N3-T AJ71QE71N-B5 AJ71QE71N-B2 AJ71QE71N-B5 AJ71QE71N-B5T AJ71QE71-B5 A15J71QE71-B5 A15J71QE71N-B5 A15J71QE71N-B2 A15J71QE71N-T A15J71QE71N-B5T A15J71QE71-B5 A15J71QE71-B2	Ethernet	 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher 10BASE-T Shielded twisted pair cable (STP) or unshielded 	100m	- (Built into GOT)	ଟ 27 ଟ 23 GS	128 GOTs ^{*6} (recommended to 16 units or less)	ETHERNET CONN
MELSEC-A MELSEC-Q (A mode) Motion controller CPU (A Series)	AJ71E71N3-T AJ71E71N-B5 AJ71E71N-B2 AJ71E71N-B5T AJ71E71N-B5T AJ71E71N-B5T A1SJ71E71N3-T A1SJ71E71N-B5 A1SJ71E71N-B5 A1SJ71E71N-B5 A1SJ71E71N-B5T A1SJ71E71-B5-S3 A1SJ71E71-B5-S3 A1SJ71E71-B2-S3 LJ71E71-100	Ethernet	of category 3 or higher					

The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver, or other system equipment corresponding to the applicable Ethernet network system.

Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard. A cross cable is available for connecting the GOT to the Ethernet module.

- *2 A length between a hub and a node.
 - The maximum distance differs depending on the Ethernet device to be used.
 - The following shows the number of the connectable nodes when a repeater hub is used.
 - 10BASE-T: Max. 4 nodes for a cascade connection (500m)
 - 100BASE-TX: Max. 2 nodes for a cascade connection (205m)

When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.

For the limit, contact the switching hub manufacturer.

- *3 For the system configuration of the Ethernet module, refer to the following manuals.
 - Q Corresponding Ethernet Interface Module User's Manual (Basic)
 - For QnA Ethernet Interface Module User's Manual
 - For A Ethernet Interface Module User's Manual
- *4 Select one of the following [Controller Type] in [Ethernet] of GT Designer3.
 - Ethernet module (Q Series): QJ71E71
 - Ethernet module (QnA Series): AJ71QE71
 - Ethernet module (A Series): AJ71QE71

For [Ethernet] of GT Designer3, refer to the following.

- 5.3.4 Ethernet setting
- *5 When using the peripheral I/F of Q170MCPU, Q17nDCPU-S1 or MR-MQ100, refer to the following.
 - 5.2.5 Connecting to PERIPHERAL I/F (Built-in Ethernet port Motion Controller CPU)
- *6 The number of connectable GOTs for one network is 63 units (at most).

When connecting to MELSEC-FX							
F		ernet dule	Connection cable	GOT		Comr [Etherr	nunication driver
	PLC		Connection cable ^{*1}	Maximum	GOT		Number of
Model name	Ethernet module *3*4	Communication type	Cable model	segment length ^{*2}	Option device	Model	connectable equipment
MELSEC-FX (FX3u, FX3G) MELSEC-FX (FX3uc, FX3GC)	FX3∪-ENET-L FX3∪c-1PS-5V, FX2Nc-CNV-IF + FX3∪-ENET-L ^{*5}	Ethernet	 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher 	100m	- (Built into GOT)	^{бт} 27 ^{бт} 23 GS	2 GOTs
MELSEC-FX (FX3u)	FX3U-CNV-BD, FX3U-422-BD, FX3U-232-BD, + FX3U-ENET-ADP ^{*6*7}	Ethernet	• 100BASE-TX Shielded twisted pair				
MELSEC-FX (FX3uc)	FX₃∪-ENET-ADP	Ethernet	twisted pair cable (UTP)			^{бт} 27	
MELSEC-FX (FX3G)	FX3G-CNV-ADP, + FX3U-ENET-ADP ^{*7}	Ethernet	of category 5 or higher • 10BASE-T Shielded twisted pair cable (STP) or unshielded	100m	- (Built into GOT)	GT 23 GS	4 GOTs
MELSEC-FX (FX3GC)	FX3U-ENET-ADP*7	Ethernet	twisted pair cable (UTP) of category 3 or higher				
MELSEC-FX (FX3S)	FX3S-CNV-ADP + FX3U-ENET-ADP ^{*7}	Ethernet					

The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. *1 Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.

Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard.

A cross cable is available for connecting the GOT to the Ethernet module.

*2 A length between a hub and a node. The maximum distance differs depending on the Ethernet device to be used.

The following shows the number of the connectable nodes when a repeater hub is used.

- 10BASE-T: Max. 4 nodes for a cascade connection (500m)
- 100BASE-TX: Max. 2 nodes for a cascade connection (205m)

When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.

- For the limit, contact the switching hub manufacturer.
- *3 For the system configuration of the Ethernet module, refer to the following manuals.
 - For FX Ethernet Interface Module User's Manual
- *4 Select one of the following [Controller Type] in [Ethernet] of GT Designer3.

• Ethernet module (FX Series): FX

For [Ethernet] of GT Designer3, refer to the following.

5.3.4 Ethernet setting

- *5 When using an Ethernet module with the FX3UC series, FX2NC-CNV-IF or FX3UC-1PS-5V is required.
- When using an Ethernet module with the FX3U series, FX3U-CNV-BD, FX3U-422-BD, or FX3U-232-BD is required. *6
- *7 FX3U-ENET-ADP occupies one extension communication adapter CH (Max. 2 CHs) of the FX3U(C) or FX3G(C) and one extension communication adapter CH (Max. 1 CH) of the FX35. One CPU allows the connection of only one FX30-ENET-ADP.

ETHERNET CONNECTION

5.2.2 Connection to Built-in Ethernet port CPU or C Controller module



Select [LCPU] for [Controller Type] in [Ethernet] of GT Des For [Ethernet] of GT Designer3, refer to the following.

5.3.4 Ethernet setting

5.2.3 Connecting to Display I/F



-

5.2.4 Connection to CC-Link IE Field Network Ethernet Adapter Module



5.2.5 Connecting to PERIPHERAL I/F (Built-in Ethernet port Motion Controller CPU)



Direct connection between PERIPHERAL I/F and GOT

The PERIPHERAL I/F and GOT can be directly connected by using a cross cable for the Ethernet connection cable.

-

5. ETHERNET CONNECTION 5.2 System Configuration

5.3 GOT Side Settings

5.3.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.

÷.

one Manufacturer:	MITSUBISHE		-
one Controller Type:	MELSEC-Q/Q5,	Q17nD/M/NC/DR, CRnD-700	•
/Uuplex Setti	"Please set the	Ethemet Setting of the Contr	oler with a list of low <mark>er</mark>
ay <u>y</u> P:	Standard 1/F(E	thernet):Multi	•
unication priver:	Ethemet(NELS	EC), Q17nNC, CRnO-700, Gate	way 🔹
Clent Detai Setting		GOT Etherne	t Setting
(F) Property		Vakie	
GOT Net N	10.	1	
. Switch GOT Static		1	
GOT Ether	net Setting	192.168.3.18	
GOT Com	nunication Port No.	5001	
Retry(Time	is)	3	
Startup Tir	ne(Sec)	3	_
Tmeaut T	me(Sec)	3	_
Delay Time	(me)	0	_
Ethemet Setting	66	_	
Host	Net No. S	itation Unit Type	IP Address
1 *	1	1 QnUD(P)V/QnUDEH	192.168.3.39
Host	Pb E [B] Net No. 5 1	tation Unit Type 1 QnUD(P)V/QnUDEH	IP Address 192.168.3.39

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - @@@
 - Driver:
 - Ethernet(MELSEC), Q17nNC, CRnD-700, Gateway Ethernet(FX), Gateway
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

5.3.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT.

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

5.3.2 Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5001
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station	Set the station No. of the GOT. (Default: 1)	1 to 64
GOT Ethernet Setting	Set the GOT IP address, subnet mask, default gateway, peripheral S/W communication port No., transparent port No.	5.3.3GOT Ethernet setting
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. • For Ethernet (MELSEC), Q17nNC, and CRnD-700 (Default: 5001) • For Ethernet(FX), Gateway (Default: 5019)	1024 to 5010, 5014 to 65534 (Except for 5011 to 5013 and 49153)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (× 10ms)

*1 To connect the GOT with the Ethernet module (Q Series) in the one-on-one relationship using a cross cable, set [Timeout Time] to 6sec. or longer.

POINT

 Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

 Precedence in communication settings
 When settings are made by GT Designer3 or the Utility, the latest setting is effective.

5.3.3 GOT Ethernet setting



Item	Description	Range
GOT IP Address	Set the IP address of the GOT. (Default: 192.168.0.18)	0.0.0.0 to 255.255.255.255
Subnet Mask	Set the subnet mask for the sub network. (Only for connection via router) If the sub network is not used, the default value is set. (Default: 255.255.255.0)	0.0.0.0 to 255.255.255.255
Default Gateway	Set the router address of the default gateway where the GOT is connected. (Only for connection via router) (Default: 0.0.0.0)	0.0.0.0 to 255.255.255.255
Peripheral S/W Communication Port No.	Set the GOT port No. for the S/ W communication. (Default: 5015)	1024 to 5010, 5014 to 65534 (Except for 5011, 5012, 5013 and 49153)
Transparent Port No.	Set the GOT port No. for the transparent function. (Default: 5014)	1024 to 5010, 5014 to 65534 (Except for 5011, 5012, 5013 and 49153)

5.3.4 Ethernet setting



-

- *2 Set only when selecting "AJ71E71" in [Controller Type]. When other than [AJ71E71] is selected, the port No. is as follows.
 - [QnUDE(H)]:5006(fixed)
 - [Q17nNC],[QJ71E71],[AJ71QE71]:5001(fixed)
 - [FX]: 5551 (When using FX_{3U}-ENET-L) 5556 (When using FX_{3U}-ENET-ADP)
- 5556 (When using Built-in Ethernet port FXCPU)
 *3 When selecting the FX in [Controller Type], the communication type is the TCP (fixed).

POINT,

- Example of [Ethernet setting] For examples of [Ethernet setting], refer to the following.
- 5.4 PLC Side Setting
- (2) Parameter reflection function of MELSOFT Navigator
 - (a) The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator.
 - (b) When the settings of N/W No., PLC No., type or IP address are reflected to the parameter from the MELSOFT Navigator, those settings are added. Items set in advance are not deleted. However, if the combination of the N/ W No. and the PLC No. or the IP address overlaps, the item set in advance is overwritten.
- (3) Changing the host on the GOT main unit The host can be changed by the utility function of the GOT main unit. For the detailed connection method, refer to the following manual.
- GOT2000 Series User's Manual (Utility)

/	1 (сн /	2 CH	3 СН	4 CH]				
		Host	NET No.	PLC No.	Mode1	IP Add	ress	Port No.	Communication	1
	1	*	1	1	QJ71E71/LJ71E71	192.168.	3. 1	5001	UDP	
	2		1	2	0J71E71/LJ71E71	192.168.	3. 2	5001	UDP	
	3		1	3	QJ71E71/LJ71E71	192.168.	3. 3	5001	UDP	
L		Restore	e ueraurit	secong	2					
								OK	Cance	1

5.3.5 Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

POINT,

Routing parameter setting

When communicating within the host network, routing parameter setting is unnecessary.

For details of routing parameters, refer to the following manual.

Q Corresponding Ethernet Interface Module User's Manual (Application)



Item	Range
Transfer Network No.	1 to 239
Relay Network No.*1	1 to 239
Relay Station No.*1	1 to 64

*1 When accessing to other networks relaying a Build-in Ethernet port CPU, set the virtual network No. and PLC No. set in the Ethernet settings on GT Designer3.

POINT,

 Routing parameter setting of relay station Routing parameter setting may also be necessary for the relay station. For the setting, refer to the following.

5.4 PLC Side Setting

- (2) Parameter reflection function of MELSOFT Navigator
 - (a) The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator.
 - (b) When the settings of Transfer network No., Relay network No. or Relay station No. are reflected to the parameter from the MELSOFT Navigator, those settings are added. Items set in advance are not deleted. However, if the target network No. overlaps, the item set in advance is overwritten.
 - (c) The routing information is used manually by the user when the data is created. Therefore, after changing the network configuration by MELSOFT Navigator, create a routing information again. For details of the creation of the routing information, refer to the MELSOFT Navigator help.

-

5.4 PLC Side Setting

	Reference	
Built-in Ethernet port QCPU	Q03UDECPU, Q04UDEHCPU, Q06UDEHCPU, Q10UDEHCPU, Q13UDEHCPU, Q20UDEHCPU, Q26UDEHCPU, Q50UDEHCPU, Q100UDEHCPU, Q03UDVCPU, Q04UDVCPU, Q06UDVCPU, Q13UDVCPU, Q26UDVCPU, Q172DSCPU, Q173DSCPU, Q172DCPU-S1, Q173DCPU-S1, Q170MCPU, Q170MSCPU, Q170MSCPU-S1	5.4.1 5.4.2 5.4.11
C Controller module	Q12DCCPU-V Q24DHCCPU-V Q24DHCCPU-LS	5.4.4
Built-in Ethernet port LCPU	L02CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L06CPU	5.4.1 5.4.2
Ethernet module (Q Series)	QJ71E71-100, QJ71E71-B5, QJ71E71-B2, QJ71E71	5.4.0
Ethernet module (L Series)	LJ71E71-100	5.4.3
Ethernet module (QnA Series)	AJ71QE71N3-T, AJ71QE71N-B5, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N-T, AJ71QE71N-B5T, AJ71QE71, AJ71QE71-B5, A1SJ71QE71N3-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-T, A1SJ71QE71N-B5T, A1SJ71QE71-B5, A1SJ71QE71-B2	5.4.5
Ethernet module (A Series)	AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-T, AJ71E71N-B5T, AJ71E71-S3, A1SJ71E71N3-T, A1SJ71E71N3-T, A1SJ71E71N-B5, A1SJ71E71N-B2, A1SJ71E71N-T, A1SJ71E71N-B5T, A1SJ71E71-B5-S3, A1SJ71E71-B5-S3	5.4.6
Ethernet module (FX Series)	FX3U-ENET-L, FX3U-ENET-ADP	5.4.7
Built-in Ethernet port FXCPU	FX3GE	5.4.8
CNC C70	Q173NCCPU	5.4.9
CC-Link IE Field Network Ethernet Adapter Module	QJ71GF11-T2	5.4.10

5.4.1 Connecting to Built-in Ethernet port CPU (one-toone connection)

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

POINT,



5

[Controller Setting] and [Ethernet] of GT Designer3

POINT

(1) [Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT

Designer3, refer to the following.

- 5.3.1 Setting communication interface (Communication settings)
- (2) Ethernet setting

When connecting Built-in Ethernet port QCPU or LCPU to a GOT, the settings items for the network No. and station No. do not exist at the PLC side. However, these virtual values must be set on the GOT side. Therefore, set the network No. and station No.

Therefore, set the network No. and station No. Set the network No. that is not existed on the network system and any station No ..

(1) Controller setting

Item	Set value (Use default value)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5002
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

	Item	Set value				
Ethernet setting No.1	Host	*				
	N/W No.	1 ^{*1}				
	PLC No.	2 ^{*2}				
	Туре	QnUDE(H), LCPU				
	IP address	192.168.3.39				
	Port No.	5006 (fixed)				
	Communication	UDP (fixed)				

Set the same value as that of GOT N/W No. *2

Set a value different from that of GOT PLC No.

Checking communication state of Connecting to Built-in Ethernet port CPU

- (1) When using the Command Prompt of Windows[®]. Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication C:\>Ping 192.168.3.39 Reply from 192.168.3.2: bytes=32 time <10ms TTL=32
 - (b) When abnormal communication C:\>Ping 192.168.3.39 Request timed out.

(2) When abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Cable connecting condition
- · Confirmation of switch and network parameter setting
- · Operation state of PLC CPU (faulty or not)
- The IP address of Built-in Ethernet port CPU specified in the ping command

POINT

Ethernet diagnostics of GX Developer

Ethernet diagnostics of GX Developer is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Developer, refer to the following manual.

- QCPU User's Manual (Hardware Design, Maintenance and Inspection)
- MELSEC-L CPU Module User's Manual 3 (Hardware Design, Maintenance and Inspection)

5.4.2 Connecting to Built-in Ethernet port CPU (multiple connection)

This section describes the settings of the GOT and Built-in Ethernet port CPU in the following case of system configuration.

POINT,

Connecting to Built-in Ethernet port CPU

For details of Built-in Ethernet port CPU, refer to the following manual.

- QnUCPU User's Manual (Communication via Built-in Ethernet Port)
- MELSEC-L CPU Module User's Manual (Built-In Ethernet Function)

System configuration



the virtual values must be set on the GOT side.

[Controller Setting] and [Ethernet] of GT Designer3

- [Q parameter setting] or [L parameter setting] for GX Developer
- (1) Built-in Ethernet port Example: [Q parameter setting] screen

IP address	Jac al	Open settings	
IP address	192 166 6	FTP settings	
Subnet mask pattern			
Default router IP addre	ss	Set if it is needed[Osia.it / Changed	
Communication data cod	• 1		
🐨 Einay code			
C ASCII code			
Enable online chang	ae (FTP, MC protocol)		
T Disable direct conne	ection to MELSOFT		
Do not respond to se	earch for CPU (Built-in Ethernet port	() on network	

Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.1	0
Subnet mask pattern	-	×
Default router IP address	-	×
Communication data code		Δ
Enable online change (FTP, MC protocol)		Δ
Disable direct connection to MELSOFT	(Use default value)	Δ
Do not respond to search for CPU (Built-in Ethernet port) on network		Δ
Open settings	Refer to (2).	0
FTP settings	(Lise default value)	Δ
Time settings		Δ

O: Necessary △: As necessary ×: Not necessary

5

(2) Open settings

The setting is required for all the connected GOTs.

uilt-in Ethernet port open settings					
	Protoco	bl	Open system		Host station port No.
1	UDP	-	MELSOFT connection	•	
2	TCP	-	MELSOFT connection	-	
3	TCP	+	MELSOFT connection	-	
4	TCP	-	MELSOFT connection	-	
5	TCP	-	MELSOFT connection	•	
6	TCP	-	MELSOFT connection	-	
7	TCP	-	MELSOFT connection	-	
8	TCP	-	MELSOFT connection	-	
9	TCP	-	MELSOFT connection	-	
10	TCP	-	MELSOFT connection	-	
11	TCP	-	MELSOFT connection	-	
12	TCP	-	MELSOFT connection	-	
13	TCP	•	MELSOFT connection	•	
14	TCP	•	MELSOFT connection	-	
15	TCP	-	MELSOFT connection	-	
16	TCP	•	MELSOFT connection	-	
End Cancel					

Item	Set value
Protocol	UDP (fixed)
Open system	MELSOFT connection (fixed)
Host station port No.	(Use default value)

[Controller Setting] and [Ethernet] of GT Designer3

POINT.

- (3) [Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT
- Designer3, refer to the following. 5.3.1 Setting communication interface (Communication settings)

(4) Ethernet setting

When connecting Built-in Ethernet port CPU to a GOT, the settings items for the network No. and station No. do not exist at the PLC side. However, these virtual values must be set on the GOT side. Therefore, set the network No. and station No. Set the network No. that is not existed on the network system and any station No..

(1) Controller setting

Item	Set value (Use default value)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5002
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

Itom		Set value		
Ite	em	1	2	
	Host	*	-	
	N/W No.	1 ^{*1}	1 ^{*1}	
	PLC No.	2 ^{*2}	3 ^{*2}	
Ethernet setting No.1	Туре	QnUDE(H), LCPU	QnUDE(H), LCPU	
	IP address	192.168.0.1	192.168.0.2	
	Port No.	5006 (fixed)	5006 (fixed)	
	Communication	UDP (fixed)	UDP (fixed)	

Set the same value as that of GOT N/W No. Set a value different from that of the GOT PLC No. and the PLC No. of other PLCs on the same network.

Checking communication state of Connecting to Built-in Ethernet port CPU

- (1) When using the Command Prompt of Windows[®]. Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication C:\>Ping 192.168.3.1 Reply from 192.168.0.1: bytes=32 time <10ms TTL=32
 - (b) When abnormal communication C:\>Ping 192.168.3.1 Request timed out.
- (2) When abnormal communication At abnormal communication, check the followings and
 - execute the Ping command again.
 - Cable connecting condition
 - · Confirmation of switch and network parameter setting
 - Operation state of PLC CPU (faulty or not)
 - · The IP address of Built-in Ethernet port CPU specified in the ping command

POINT

Ethernet diagnostics of GX Developer

Ethernet diagnostics of GX Developer is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Developer, refer to the following manual.



Maintenance and Inspection) MELSEC-L CPU Module User's Manual

5 (Hardware Design, Maintenance and Inspection)

5.4.3 Connecting to Ethernet module (Q/L Series)

This section describes the settings of the GOT and Ethernet module (Q Series) in the following case of the system configuration.

POINT

Ethernet module (Q/L Series)

For details of the Ethernet module (Q/L Series), refer to the following manual.

- Q Corresponding Ethernet Interface Module User's Manual (Basic)
- MELSEC-L Ethernet Interface Module User's Manual (Basic)

System configuration (for Q series)



POINT

When connecting to Q170MCPU When connected to Q170MCPU, the start I/O No. of the Ethernet module is set to "70".

[Network parameter] of GX Developer

(1) Network parameter

	Module 1		Module 2	
Network type	Ethernet	•	None	-
Starting I/O No.	00	000		
Network No.		1		
Total stations				
Group No.		0		
Station No.		2		
Mode	On line	•		-
	Operational settings			
	Initial settings			
	Open settings			
	Router relay parameter			
	Station No.<->IP information			
	FTP Parameters			
	E-mail settings			
	Interrupt settings			
Necessary setting No s	etting / Alreadyset) Set if it is ne Start I/D No. : Please input the starting I/D No. of the mo	ede	ed(Nosetting / Already: v le in HEX(16 bit) form	set) /alid modu during othe

ltem	Set value	Setting necessity at GOT connection
Network type	Ethernet (fixed)	0
Starting I/O No.*1	0000н	0
Network No.*2	1	0
Group No.	0 (fixed)	0
Station No.*3	2	0
Mode	Online (fixed)	0
Operation setting	Refer to (2)	0
Initial settings		Δ
Open settings		×
Router relay parameter		×
Station No.<->IP information	(Leo default value)	×
FTP Parameters	(Use deladit value)	×
E-mail settings		×
Interrupt settings		×
Redundant settings*4		Δ
Routing Parameters	Refer to (3)	Δ

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

When using Q170MCPU or Q170MSCPU(-S1), set the start *1

- I/O No. to 0070H. *2 Specify the same network No. as that of the GOT.
- Do not set the same station No. as that of the GOT.
- *3 *4 Set when using Ethernet module in a redundant QnPRHCPU system.

(2) Operation setting



Item	Set value	Setting necessity at GOT connection
Communication data code ^{*1}	(Use default value)	×
IP address	192.168.3.39	0
Initial timing ^{*1}		×
Send frame setting		×
Enable Write at RUN time ^{*1}	(Use default value)	×
TCP Existence confirmation setting		×
0.11-		Material

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

- *1 Because port No. 5001 is fixed, these items operate at the following setting without relations to the setting given here.
 - Communication : [Binary code] date code
 - Initial timing : "Always wait for OPEN" (Communication is applicable while stopping the PLC CPU.) Enable Write at : [Enable Write at RUN time] (Writing
 - Data is applicable while running the RUN time PLC CPU.)

POINT.

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

-

(3) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

🔲 Netv	vork pa	rameters S	etting the	MELSECNET	T/E 🔳 🗖 🔀
		Target network No.	Relay network No.	Relay station No.	^
	1	2	1	2	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	10				
	10				
	10				
	19				-
	10				
	Clear	Cheo	x [End	Cancel
2					

Item	Range
Target network No.	1 to 239
Relay network No.	1 to239
Relay station No.	1 to 64

POINT,

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

5.3.5 Routing parameter setting

(4) Communication confirmation

The INIT. LED on the Ethernet module turns on when the module is ready to communicate. For confirming the communication state, refer to the following.

Confirming the communication state of Ethernet module

QJ71E71-100	*1
RUN ERR. INIT. COM.ERR. OPEN 100M SD RD	

*1 The LEDs layout of QJ71E71-100.

[Controller Setting] and [Ethernet] of GT Designer3

(1) Controller setting

Item	Set value (Use default value)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5002
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

	Item	Set value
	Host	*
	N/W No.	1
	PLC No.	2
Ethernet setting No.1	Туре	QJ71E71
g	IP address	192.168.3.39
	Port No.	5001 (fixed)
	Communication	UDP (fixed)

POINT,

[Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)

- Confirming the communication state of Ethernet module
- (1) When using the Command Prompt of Windows[®]. Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication
 C:\>Ping 192.168.3.19
 Reply from 192.168.3.19: bytes=32 time<1ms
 TTL=64
 - (b) When abnormal communication C:\>Ping 192.168.3.19 Request timed out.
- (2) When abnormal communication At abnormal communication, check the followings and execute the Ping command again.
 - Mounting condition of Ethernet communication unit
 - Cable connecting condition
 - · Confirmation of switch and network parameter setting
 - Operation state of PLC CPU (faulty or not)
 - IP address of GOT specified by Ping command

POINT.

Ethernet diagnostics of GX Developer

Ethernet diagnostics of GX Developer is available to a Ping test from the PLC.

For details of Ethernet diagnostics of GX Developer, refer to the following manual.

User's manual of the Ethernet module

5.4.4 Connecting to C Controller module

This section describes the settings of the GOT and C Controller module in the following case of the system configuration.

POINT

C Controller module

For details of C Controller module, refer to the following manual.

C Controller Module User's Manual (Hardware Design, Function Explanation)

System configuration



These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.

IController Setting] and [Ethernet] of GT Designer3 Б

Utility setting for C Controller module

(1) Q12DCCPU-V

Use SW3PVC-CCPU-E Ver.3.05F or later for the C Controller setting utility.

(a) Connection settings

		Test
Target module	192.168.3.3 (Default)	Cl <u>e</u> ar history
Write at	athority	Detailed setting:
User name	Jurger	
Password	[********]	

ltem	Set value	Setting necessity at GOT connection
Target module ^{*1}	192.168.3.3 (Default)	0
Write authority	Mark the checkbox	0
User name ^{*2}	target	0
Password ^{*2}	password	0
Detailed settings	-	Δ

 $\bigcirc: \mathsf{Necessary} \ \bigtriangleup: \mathsf{As necessary} \ \times: \mathsf{Not necessary}$ If the IP address of the C Controller module has been

- *1
- changed, input the changed IP address or host name. If the account of the C Controller module has been changed, *2 input the changed user name and password.

(b) Online operation

Device settings UO acceptent settings Models of constitutes SDAM setting	Multiple GPU settings	Correatization diagnostics Online comption Station cettions
Textician Manual -		a contraction of the second second
Paul purameters		
Read parameters from C Controller module.		Brat
Wite parameters		
Wite parameters to C Controller module.	Close all parameters of	all shriven prior to writing
Verify parameters		
Verify the parameters watch with the C Controller module's parameters	9°8.	Merity
Revole operation		
RUN 🗶 convected CPU 💌		Danuts
Denaled sertiles		
Charge the IP address. Clack, etc. of C Cantroller workle		Detail
mattion settings	Lowel File	Seve File Belo Egit

ltem	Set value	Setting necessity at GOT connection
Detailed settings	Refer to (3)	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(c) Detail settings

IP address	192	168	3	1	
Sybnet mask	255	255	255	0	
<u>D</u> efault gateway	-				
TP address settings CH2					
IP address	Ī				
S <u>u</u> bnet mask	j				
Default gateway					

Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.1	0
Subnet mask	255.255.255.0	0
Default gateway	-	×
IP address settings CH2	-	×

O: Necessary △: As necessary ×: Not necessary

(d) System settings

Device se Module atoms Points occupied b	ntings tion Event he ry empty sist(H) 16 + 7	UO assignment settings story SRAM resolutive sints	Multiple CPU settings Module reprintering WDTWatchdag firme? setting System WDT petting	Contractication diagnostics ation System settings
Particle result [" Allow Output mode at 3 [* Previous ats [* Result cates	TOP to PURA Min # (Y)		Error check Fried Dartey check Fried Diam (feek Module worksature) Operation racks at the time of error Fuse blown	Day •
Entelligent function Interrupt even	n module settings nt mitting intelligent function readul		Makik veriti erar Makik seratamatan 17 Dectmania etallgent kactan i	Dop 💽
Setting Art	Lgad initial set	lined setting a	Buit-in Ethernet part open settings F Endsik NELSOFT connection	
		-	Event history resistation settines (" Do not resister system Orlanes)	lan) event details
e) must be set ide	mically for all CPUs when	usine multiple CPUs		Detwatt
enection settings			Louit File Seve File	Egit
			OR LINE DISDOCRU-V	How cares toget

Item	Set value	Setting necessity at GOT connection
Points occupied by empty slot		Δ
Remote reset		Δ
Output mode at STOP to RUN		Δ
Intelligent function module settings		Δ
Initial settings of intelligent function module	(Use default value)	Δ
WDT (Watchdog timer) setting		Δ
Error check		Δ
Operation mode at the time of error		Δ
Module synchronization		Δ
Built-in Ethernet port open settings	Mark the checkbox	0
Event history registration settings	(Use default value)	Δ

O: Necessary △: As necessary ×: Not necessary

(2) Q24DHCCPU-V

Use SW4PVC-CCPU-E for the C Controller setting utility.

(a) Connection settings

	12	nareadon for con seconds Account 3300	
IP Address Datary IP addres Outries Made Uralisus getereby	190-119072 (002 (1)) 192-1192 (100 (1)) 200-200 (200 (1))	instand	
		Lefault	Otect End Care

Item	Set value	Setting necessity at GOT connection
IP Address ^{*1}	192.168.3.39 (Default)	0
Subnet Mask	255.255.255.0 (Default)	0
Default Gateway	-	×

O: Necessary △: As necessary ×: Not necessary If the IP address of the C Controller module has been changed, input the changed IP address.

[Controller Setting] and [Ethernet] of GT Designer3

POINT,

*1

 (1) [Controller Setting] and [Ethernet] of GT Designer3
 For [Controller Setting] and [Ethernet] of GT

Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)

(2) Ethernet setting

When connecting C Controller module to a GOT, the setting items for the network No. and station No. do not exist at the PLC side. However, these virtual values must be set on the GOT side. Therefore, set the network No. and station No. Set the network No. that is not existed on the network system and any station No..

(1) Controller setting

Item	Set value (Use default value)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

Item		Set value		
		1	2	
	Host	*	-	
Ethernet setting No.1	N/W No.	1 ^{*1}	1 ^{*1}	
	PLC No.	2 ^{*2}	3 ^{*2}	
	Туре	QnD(H)CCPU	QnD(H)CCPU	
	IP address	192.168.3.1	192.168.3.2	
	Port No.	5006 (fixed)	5006 (fixed)	
	Communication	UDP (fixed)	UDP (fixed)	

*1 *2

Set the same value as that of GOT N/W No. Set a value different from that of the GOT PLC No. and the PLC No. of other PLCs on the same network.

- Checking communication state of C Controller module
- (1) When using the Command Prompt of Windows[®]. Execute a Ping command at the Command Prompt of $\mathsf{Windows}^{\mathbb{R}}.$
 - (a) When normal communication C:\>Ping 192.168.3.1 Reply from 192.168.0.1: bytes=32 time <10ms TTL=32
 - (b) When abnormal communication C:\>Ping 192.168.3.1 Request timed out.
- (2) When abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- · Cable connecting condition
- · Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of C Controller module specified in the ping command

5.4.5 Connecting to Ethernet module (QnA Series)

This section describes the settings of the GOT and Ethernet module (QnA Series) in the following case of the system configuration.



 The Ethernet module is mounted on the base unit slot 0. The Start I/O No. of the Ethernet module is set to "0". Switch settings of Ethernet module

Set the operation mode setting switch and exchange condition setting switch.

AJ71QE71N3-T, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N-T, AJ71QE71N-B5T, AJ71QE71, AJ71QE71-B5 A1SJ71QE71N3-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-T, A1SJ71QE71N-B5T, A1SJ71QE71-B5, A1SJ71QE71-B2



1 The figure of AJ71QE71N3-T and A1SJ71QE71N3-T.

(1) Operation mode setting switch

Operation mode setting switch	Description	Set value	Setting necessity at GOT connection
6 6 6 7 6 7 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7	Online	0 (fixed)	0

O: Necessary △: As necessary ×: Not necessary

-

(1)

(2)

(2) Exchange condition setting switch

Exchange condition setting switch	Setting switch	Description	Set value	Setting necessity at GOT connection
	SW1	Selection of line processing at TCP timeout error	OFF	Δ
OFF ON	SW2	Data code setting ^{*2}	OFF (fixed)	×
SW2 SW3	SW3	Self start mode setting ^{*3}	ON	0
SW4 L	SW4	(Must not to be OFF		
SW6	SW5		×	
swa 🛄	SW6		(11100)	
	SW7	CPU exchange timing setting ^{*2}	OFF (fixed)	×
	SW8	Initial timing setting	OFF	Δ

O: Necessary △: As necessary ×: Not necessary

- *2 Because port No. 5001 is fixed, these items operate at the following setting without relations to the setting given here.
 - Data code setting : [Binary code]
 - RUN time
 - Enable Write at : [Enable Write at RUN time] (Writing Data is applicable while running the PLC CPU.)
- *3 When SW3 is ON, the initial processing is executed regardless of the initial request signal (Y19). In addition, communication is applicable while stopping the PLC CPU

For the initial processing by using the initial request signal (Y19), refer to the following manual.

For QnA Ethernet Interface Module User's Manual Ľ

POINT.

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

[Network parameter] of GX Developer

(1) Network parameter

Network parameters	Setting the number of MNET	r (II)	MNET/10(H) Ethernet cards.
			Read Pl
	Module No.1		Module No.2
Network type	Ethernet	-	None 👻
Start I/O No.		0000	
Network No.		1	
Total stations			
Group No.		0	
Station No.		2	2
IP addressDEC	192.168. 0.19 💊		
	Station No.<->IP informati		
	FTP Parameters	- ጋ	
	Router relay parameter	~1	
•		/	
Necessary setting(Nosetting / Alreadyset) Set if	it is ne	ded(Nosetting / Alreadyset)
	Start I/D No.:		Valid module
Interlink transmission paramet	ers Input the start I/O No. installe	ed in th	pdule in 16-point unit.
Acknowledge XY assignme	nt Routing parameters	Ch	ed End
a f			
IP Address			×



Item	Set value	Setting necessity at GOT connection
Network type	Ethernet (fixed)	0
Start I/O No.	0000н	0
Network No.*1	1	0
Group No.	0 (fixed)	0
Station No.*2	2	0
IP address	192.168.0.19	0
Station No.<->IP information		×
FTP Parameters	(Use default value)	×
Router relay parameter		×
Routing parameters	Refer to (2)	Δ

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

Specify the same network No. as that of the GOT. *1

*2 Do not set the same station No. as that of the GOT.

POINT

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

(2) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

Network	vork pa	rameters S	Setting the	MELSECNE	T/E 🔳 🗖 🚺	<
		Target network No.	Relay network No.	Relay station No.	▲ 	
	1	2	1	2		
	2					
	3					
	4					
	5					
	6				_	
	7				_	
	8					
	9				-	
	10				_	
	11				-	
	12				-	
	13				-	
	14				.	
	15				-	
	16				-	
	17				-	
	18					
	19				_	
	Clear	Cher	* 1	End	Cancel	
						1
-						

Item	Range
Target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 64

POINT.

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

5.3.5 Routing parameter setting

(3) Communication confirmation

The RDY LED on the Ethernet module turn on when the module is ready to communicate.

For confirming the communication state, refer to the following.

5.3.5 ■Confirming the communication state of Ethernet module

AJ71QE71N3-T, AJ71QE71N-B5, AJ71QE71N-B2, AJ71QE71N-T, AJ71QE71N-B5T, AJ71QE71, AJ71QE71-B5

RUN	BUF1 BUF2
RDY BSY SW.ERR. COM.ERR.	BUF3 BUF4 BUF5 BUF6
CPU R/W	BUF7 BUF8
	TEST TEST ERR.

A1SJ71QE71N3-T, A1SJ71QE71N-B5, A1SJ71QE71N-B2, A1SJ71QE71N-T, A1SJ71QE71N-B5T,A1SJ71QE71-B5, A1SJ71QE71-B2

RUN RDY BSY SW.ERR. COM.ERR. TEST TEST ERR.	BUF1 BUF2 BUF3 BUF4 BUF5 BUF6 BUF7 BUF7
CPU R/W	BUF8

[Controller Setting] and [Ethernet] of GT Designer3

(1) Controller setting

GOT Net No.	Set value (Use default value)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5002
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

	ltem	Set value
	Host	*
	N/W No.	1
Ethernet setting No.1	PLC No.	2
	Туре	AJ71QE71
	IP address	192.168.0.19
	Port No.	5001 (fixed)
	Communication	UDP (fixed)

-

POINT,

[Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)

5.4.6 Connecting to Ethernet module (A Series)

This section describes the settings of the GOT and Ethernet module (A Series) in the following case of the system configuration.

POINT,

Ethernet module (A Series)

For details of the Ethernet module (A Series), refer to the following manual.

For A Ethernet Interface Module User's Manual

System configuration



*1 The Ethernet module is mounted on the base unit slot 0.

- The Start I/O No. of the Ethernet module is set to "0". *2 These setting items do not exist at the PLC side. However,
- the virtual values must be set on the GOT side.

[] ■ [Controller Setting] and [Ethernet] of GT Designer3

Switch settings of Ethernet module Set the operation mode setting switch and exchange condition setting switch.



*2 The figure of AJ71E71N3-T and A1SJ71E71N3-T.

(1) Operation mode setting switch



O: Necessary △: As necessary ×: Not necessary

(2) Exchange condition setting switch^{*1}

Exchange condition setting switch	Setting switch	Description	Set value	Setting necessity at GOT connection	
	SW1	Selection of line processing at TCP timeout error	OFF	Δ	
OFF ON	SW2	Data code setting (binary code)	OFF (fixed)	0	
SW1 SW2	SW3				
SW3	SW3 SW4	(Must not to be	OFF		
SW4 L	SW5	used) (fixed)	used) (fixed)	×	
SW6	SW6				
SW7 SW8	SW7	CPU exchange timing setting (Enable write at RUN time)	ON (fixed)	0	
	SW8	Initial timing setting	OFF	Δ	

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

The exchange condition setting switches of A1SJ71E71-B5-S3 and A1SJ71E71-B2-S3 are specified as the below.

Exchange condition setting switch	Setting switch	Description	Set value	Setting necessity at GOT connection
	SW1	Selection of line processing at TCP timeout error	OFF	Δ
ON OFF	SW2	Data code setting (binary code)	OFF (fixed)	0
SW2 SW3 SW4	SW3 CPU exchange timing setting (Enable write at RUN time)			0
	SW4	Initial timing setting	OFF	Δ

O: Necessary △: As necessary ×: Not necessary

POINT,

*1

When the switch setting has been changed Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

Sequence program

The sequence program for initial processing and communication line opening processing are required.

(1) Programming condition

This program performs the initial processing of the Ethernet module and the opening processing of connection No. 1 when the stopping PLC CPU starts running.

(a) I/O signal of Ethernet module

For A Ethernet Interface Module User's Manual

(b) Device used by user

Device	Application			
M102	COM.ERR turned off command			
D100	IP address of Ethernet module			
D110	Application setting			
D111	Port No. of Ethernet module			
D112 to D113	IP address of GOT			
D114	Port No. of GOT			
D200	Initial fault code			

(c) Buffer memory settings used in the present example

Buffer memory address Dec (Hex)	ltem	Set value		
200 (
0 to 1 (0 to 1 _H)	IP address of Ethernet module	С0А80013н (192.168.0.19)		
16 (10н)	Application setting ^{*1}	100н		
24 (18н)	Port No. of Ethernet module	5001		
25 to 26 (19 to 1Ан)	IP address of GOT	FFFFFFF		
27 (1Вн)	Port No. of GOT	FFFFH (fixed)		
80 (50н)	Initial fault code	_		

The details of the application setting are shown below. *1 Settings 1), 2) and 3) can be changed by the user. 4), 5) and 6) are fixed.

b15	b14	b13	b12	b11	b10	b9	b8	b7	b6	b5	b4	b3	b2	b1	b0
0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

0		0	0			0	0	0	0	0	0	0	0	l
				 5)	4)	3)						2)	1)	

- 1) Fixed buffer application 0: For sending; no exchange 1: For receiving
- 2) Existence check
 - 0: No
 - 1: Yes
- 3) Pairing open
 - 0: No 1: Yes

ſ

- 4) Communication format (Set to "1" (UDP/IP).) 0: TCP/IP
 - 1: UDP/IP
- 5) Fixed buffer exchange (Set to "0" (With procedure).) 0: With procedure
- 1: Without procedure 6) Open method (Set to "00" (Active, UDP/IP).
 - 00: Active, UDP/IP
 - 10: Unpassive
 - 11: Fullpassive

(2) Example of sequence program



POINT

When changing the sequence program

After writing the sequence program to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

5

(3) Communication confirmation

The RDY LED on the Ethernet module turn on when the module is ready to communicate.

For confirming the communication state, refer to the following.

5.4.3 ■Confirming the communication state of Ethernet module

The BUF1 LED turns on when the opening processing of the connection No. 1 is completed in normal at executing of the sequence program example described at (2).

AJ71E71N3-T, AJ71E71N-B5, AJ71E71N-B2, AJ71E71N-T, AJ71E71N-B5T, AJ71E71-S3

A1SJ71E71N3-T, A1SJ71E71N-B5, A1SJ71E71N-B2, A1SJ71E71N-T, A1SJ71E71N-B5T, A1SJ71E71-B5-S3, A1SJ71E71-B2-S3

BUF8



[Controller Setting] and [Ethernet] of GT Designer3

(1) Controller setting

Item	Set value (Use default value)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5002
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

	Item	Set value
	Host	*
	N/W No.	1
	PLC No.	2
Ethernet setting No.1	Туре	AJ71E71
g	IP address	192.168.0.19
	Port No.	5001
	Communication	UDP (fixed)

POINT.

[Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)
ETHERNET CONNECTION

5.4.7 Connecting to Ethernet module (FX Series)

This section describes the settings of the GOT and Ethernet module (FX Series) in the following case of the system configuration.

POINT.

Ethernet module (FX Series) For details of the Ethernet module (FX Series), refer to the following manual.

FX3U-ENET-L User's manual FX3U-ENET-ADP User's manual



I [Controller Setting] and [Ethernet] of GT Designer3

Ethernet parameter settings of FX3U-ENET-L Configuration tool

(1) Ethernet settings

Set the Ethernet parameter with FX3U-ENET-L Configuration tool.

For using FX3U-ENET-L Configuration tool, install GX Developer Ver. 8.88S or later on the personal computer. For details on FX3U-ENET-L Configuration tool, refer to the following manual.

		Configuration	100
1 3	EX3U-ENET-	Connouration	100
\sim			

- B9	ernet Module settings		
1	Module 2	-	
1	Upwational settings		
	HUGH Stemogra		
1	Ocarosufficias		
	Bauter reliev waren eler		
1	∈ mall patto gr		
Necessary setting(No setting (7) Already set ()	Default	
Necessary setting: Set if it is necessiti nime	Nosetting 7 Alreadyset) Innsetting 7 Alreadyset)	Default Check	
Necessary setting Set if it is necessed; nithe Trainister setu	No setting 1 Already set 3 No setting 1 Already set 3 PLC rando operation	Default Check Disgnostics	
Necessary setting Set if it is noisiled; rithe Transter setu Vide	Ito setting / All early set) Ito acting / Already set) p PLC rance operation Read	Default Onext Disgnoetics Varity	

Item	Setting	Setting (with GOT connected)
Module	Module 0 ^{*1}	0
Operational settings	Refer to (2)	0
Initial settings	(Use default value.)	×
Open settings	Refer to (3)	0
Router relay parameter	(Lise default value)	×
E-mail settings	(Use deladit value.)	×

 \bigcirc :Required \triangle :Set if necessary \times :Not required

1 Set the number of the Ethernet module.

(2) Operational settings



Item	Setting	Setting (with GOT connected)
Communication date code ^{*1}	(Use default value.)	×
IP address	192.168.3.19	0
Initial timing ^{*1}		×
Send frame setting	(Use default value.)	×
TCP Existence confirmation setting		×

O:Required ∆:Set if necessary ×:Not required

- *1 Because the port No. 5551 is fixed, the GOT operates as follows, regardless of the setting for the item.
 Communication date code : [Binary code]
 - Communication date code : [Binary collination of the code : [Binary code :
 - (Communications are enabled while the programmable controller CPU stops.)
- *2 The default value of IP address is 192.168.1.254. Set the IP address corresponding to the system configuration.

POINT.

When changing Ethernet parameter

After writing the Ethernet parameter to the programmable controller CPU, turn off and then on, or reset the programmable controller CPU.

(3) Open settings



Item	Setting	Setting (with GOT connected)
Protocol	TCP	0
Open system	MELSOFT connection	0
Fixed buffer	-	×
Fixed buffer communication procedure		×
Pairing open		×
Existence confirmation	(Use default value.)	×
Host station Port No. (DEC.)	(Use default value.)	×
Transmission target device IP address		×
Transmission target device Port No. (DEC.)		×

 $\bigcirc: \textsf{Required} \ \triangle: \textsf{Set if necessary} \ \times: \textsf{Not required}$

POINT.

When connecting to multiple GOTs and peripheral devices

The number of protocols equivalent to that of the GOTs and devices must be set.



(1) Ethernet settings

Set the Ethernet parameter at [FX Parameter] on GX Works2.

To set FX3U-ENET-ADP, GX Works2 Ver.1.90U or later is required.

For details on the setting of FX3U-ENET-ADP, refer to the following manual.

FX3U-ENET-ADP User's Manual

machine bean bir m	or fact system to have some ef-	Adversion of the second second second
Channel CHI		
JP Address Setting		Onen Settan
	Input Format: DEC	
TD Address		The Setting
p Address	192 108 1 25	<u></u>
Subnet Mask Pattern		Log Hecords Second
Default Router IP Address		Optional Settings (Durlault / Changed
	ter strander bereiter	
Communication Data Code		
🕫 Binery Code		
C ASCIL Code		
Disable direct connection	to MELSOFT	
	for CD for entrony b	

Item	Setting	Setting (with GOT connected)
Channel	CH1 or CH2 ^{*1}	×
IP Address	192.168.1.250 ^{*2}	0
Open Settings	Refer to (2).	0
Communication Data Code	(Use default value.)	×
Disable direct connection to MELSOFT		×
Do not respond to search for CPU on network		×

O:Required △:Set if necessary ×:Not required

- Set a channel according to the installation position of FX_{3U}-ENET-ADP on the CPU body. The default value of IP address is 192.168.1.250. Set the IP
- *2 The default value of IP address is 192.168.1.250. Set the IP address corresponding to the system configuration.

POINT,

*1

When changing Ethernet parameter

After writing Ethernet parameters to the PLC CPU, turn the PLC CPU OFF then back ON again.

(2) Open settings

Ethernet Adapter Open Setting Host Station Port No. Destination Port No. Destination IP Address Protocol Open System MELSOFT Connection 🖉 TCP * * MELSOFT Connection TCP MELSOFT Connection 🛛 👻 • TCP MELSOFT Connection -Input decimal value for the Host Station Port No., Destination IP Address and Destination Port No. End Cancel

Item	Setting	Setting (with GOT connected)
Protocol	TCP	0
Open System	MELSOFT connection	0

POINT,

When connecting to multiple GOTs and peripheral devices $% \left({{{\rm{GOTS}}}} \right) = {{\rm{GOTS}}} \left({{{\rm{GOTS}}}} \right)$

The number of protocols equivalent to that of the GOTs and devices must be set.

Б

[Controller Setting] and [Ethernet] of GT Designer3

(1) Controller setting

Item	Setting (Use default value.)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5019
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	Oms

(2) GOT Ethernet setting

Item	Setting (Use default value.)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

Item		Setting
	Host	*
	N/W No.	1
	PLC No.	2
Ethernet	Туре	FX (fixed)
setting No.1	IP address	192.168.0.19 ^{*1}
	Port No.	5551 ^{*2}
	Communication	TCP (fixed)

- *1 Set the value according to the IP address of the connected PLC.
 *2 Set the value according to the Port No. of the connected
- 2 Set the value according to the Port No. of the connected PLC. For details, refer to the following.
 - 5.3.4 Ethernet setting

POINT.

[Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)

- Confirming the communication state of Ethernet module
- (1) When using the Command Prompt of Windows[®]. Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication
 C:\>Ping 192.168.3.19
 Reply from 192.168.3.19: bytes=32 time<1ms
 TTL=64
 - (b) When abnormal communication C:\>Ping 192.168.3.19 Request timed out.
- (2) When abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Mounting condition of Ethernet communication unit
- Cable connecting condition
- Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
 IP address of GOT specified by Ping command

POINT,

Ethernet diagnostics of FX3U-ENET-L Configuration tool

Ethernet diagnostics of FX3U-ENET-L Configuration tool is available to a Ping test from the PLC. For details of Ethernet diagnostics of FX3U-ENET-L Configuration tool, refer to the following manual.

FX3U-ENET-L Configuration tool Operation manual

5.4.8 Connecting to Built-in Ethernet port FXCPU (FX3GE)

This section describes the settings of the GOT and Ethernet module (FX Series) in the following case of the system configuration.

POINT.

FX3GE

For details of FX3GE, refer to the following manual.

FX3GE SERIES PROGRAMMABLE CONTROLLERS HARDWARE MANUAL



- *1 These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.
 - [Controller Setting] and [Ethernet] of GT Designer3

Ethernet parameter settings of FX3GE

(1) Ethernet settings

Set the Ethernet parameter at [FX Parameter] on GX Works2.

To set FX3GE, GX Works2 Ver.1.91V or later is required. For details on the setting of FX3GE, refer to the following manual.

FX3GE SERIES PROGRAMMABLE CONTROLLERS HARDWARE MANUAL

ary Capacity Desire PLC Nar	n PLC System(1) PLC System(2)	Special Punction Book Postioning Ethomot Adapt	a
Channel CHI		Open Setting	
IP Address Subnet Mask Pattern	Input Format DEC	This Setting	
Default Router IP Address		Optional Settings (Darlault / Change	d)
Communication Data Code			
Disable direct connection	 to MELSOFT for CPU on network		

Item	Setting	Setting (with GOT connected)
Channel	CH1	×
IP Address	192.168.1.250 ^{*1}	0
Open Settings	Refer to (2).	0
Communication Data Code		×
Disable direct connection to MELSOFT	(Use default value.)	×
Do not respond to search for CPU on network		×

O:Required ∆:Set if necessary ×:Not required

The default value of IP address is 192.168.1.250. Set the IP address corresponding to the system configuration.

POINT.

*1

When changing Ethernet parameter After writing Ethernet parameters to the PLC CPU, turn the PLC CPU OFF then back ON again.

(2) Open settings

	Protocol		Open System		Port No.	IP Address	Port No.
1	TCP	-	MELSOFT Connection	-			
2	TCP	-	MELSOFT Connection	-			
3	TCP	-	MELSOFT Connection	-			
4	TCP	-	MELSOFT Connection	-			

Item	Setting	Setting (with GOT connected)
Protocol	TCP	0
Open System	MELSOFT connection	0

POINT.

When connecting to multiple GOTs and peripheral devices

The number of protocols equivalent to that of the GOTs and devices must be set.

[Controller Setting] and [Ethernet] of GT Designer3

(1) Controller setting

Item	Setting (Use default value.)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5019
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Setting (Use default value.)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

Item		Setting
Ethernet	Host	*
	N/W No.	1
	PLC No.	2
	Туре	FX (fixed)
Setting No. 1	IP address	192.168.0.19 ^{*1}
	Port No.	5556 ^{*2}
	Communication	TCP (fixed)

*1 Set the value according to the IP address of the connected PLC.

*2 Set the value according to the Port No. of the connected PLC.
 For details, refer to the following.

5.3.4 Ethernet setting

POINT.

[Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)

- Confirming the communication state of Ethernet module
- (1) When using the Command Prompt of Windows[®]. Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication C:\>Ping 192.168.3.19 Reply from 192.168.3.19: bytes=32 time<1ms TTL=64
 - (b) When abnormal communication C:\>Ping 192.168.3.19 Request timed out.
- (2) When abnormal communication At abnormal communication, check the followings and execute the Ping command again.
 - Mounting condition of Ethernet communication unit
 - · Cable connecting condition
 - · Confirmation of switch and network parameter setting
 - Operation state of PLC CPU (faulty or not)
 - IP address of GOT specified by Ping command

5.4.9 Connecting to Display I/F (CNC C70)

This section describes the settings of the GOT and Display I/F (CNC C70) in the following case of the system configuration.

POINT

Display I/F (CNC C70)

For details of the Display I/F (CNC C70), refer to the following manual.

C70 Series SET UP MANUAL

System configuration



Б

■ IP address settings of CNC C70

(1) Remote monitor tool

Lister													_
II	দা প												
		(BA3E SP) ∉ 1925	EC. PARAI	()		1	51		SET	TIP DARAS	1.19/2	мов	TTOR
		1926 IP 1927 Sibo 1920 Gat 1929 Poc	address net mask eway add: t number	15: 25: (655 (2.168. 5.255.25 3. 0.	h. 19 5. C 5. C 5473C						DI	AGN /OUT
		1930 Spe 1931 1932 1939	ed anato/J	105								PA	DOL IRAM
		1934										- 721	NT III
		1936										N	DI
DAC	x	1936 61) 1 LSK 103 B3.5	DATA) ADE G40 (AXI:	5 (1 6)	NERCEY	840	803	11	-	210	N	DT DT
DAC 1	R Z	1936 61 1) 1 LSK 225 BAS	ADE GAD (S 4	ха Аха 5	6	AXECTOR SS	300	хох 9	0	-	30	III N INS	DT EXT DEL
DAC 1 Q	R Z W	1936 61) 1 LSK ED BASI # B	ATA) AD: GAU 8 4 R	AXI 5 T	6 ¥	NDROLLY 7 U	300 (8 I	9 9 0	0 P	- [4 1 1	INS	DEL C.B
DAC 1 Q A	R Z W S	1936 cr D D USK ED BASI B B B D	ATA) ADE GAU (8 4 R F	sta sta s s c	+ 1 6 Х	ыже ку 7 0 J	RAD I K) 9 0 L	<u>к</u> -	- - -	+ + 1 - 1 -	INS EOB	DEL C.B

Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.19	0
Subnet mask	255.255.255.0	0
Gateway address	0.0.0.0	0
Port number	64758 (fixed)	0
Speed auto/10M	0 (fixed)	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(2) CNC monitor



Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.19	0
Subnet mask	255.255.255.0	0
Gateway address	0.0.0.0	0
Port number	64758 (fixed)	0
Speed auto/10M	0 (fixed)	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(3) Communication check

The CNC C70 can communicate with the GOT when INIT.LED of the CNC C70 is lit. For confirming the communication state, refer to the following.

□ Checking communication state of CNC C70

[Controller Setting] and [Ethernet] of GT Designer3

(1) Controller setting

Item	Set value (Use default value)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5019
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

Item		Set value
	Host	*
	N/W No.	1
	PLC No.	2
Ethernet setting No 1	Туре	Q17nNC
county room	IP address	192.168.3.19
	Port No.	5001 (fixed)
	Communication	UDP (fixed)

POINT,

[Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)

Checking communication state of CNC C70

- (1) When using the Command Prompt of Windows[®]. Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication
 C:\>Ping 192.168.3.19
 Reply from 192.168.3.19: bytes=32 time<1ms
 TTL=64
 - (b) When abnormal communication
 C:\>Ping 192.168.3.19
 Request timed out.
- (2) When abnormal communication At abnormal communication, check the followings and execute the Ping command again.
 - Mounting condition of CNC C70
 - Cable connecting condition
 - · Switch settings and network parameter settings
 - Operation state of PLC CPU (faulty or not)
 - IP address of the CNC C70 specified for the Ping command

5.4.10 Connecting to CC-Link IE Field Network Ethernet Adapter Module

This section describes the settings of the GOT, Ethernet adapter module and the PLC in the following system configuration.

System configuration



mounted on slot 0 of the base unit. The start I/O No. of the CC-Link IE Field Network Master/ Local module is set at [0]. -

GX Works2 network parameter Ethernet/CC IE/MELSECNET

For details of the setting contents of PLC side, refer to the following manual.

- MELSEC-Q CC-Link IE Field Network Master/ Local Module User's Manual
- (1) Network Type, Network No., Total Stations setting Example: Master station setting

	Module 1	Module 2
Network Type	CC IE Field (Master Station) 🛛 🗸	None 🗸
Start I/O No.	0000	
Network No.	1	
Total Stations	2	
Group No.		
Station No.	C	1
Mode	Online (Normal Mode) 🛛 🗸 🗸	
	Network Configuration Setting	
	Network Operation Setting	
	Refresh Parameters	
	Interrupt Setting	
	Specify Station No. by Parameter 🛛 👻	
4		

ltem	Set value			
item	Master station	Local station		
Notwork type	CC IE Field	CC IE Field		
Network type	(Master station)	(Local station)		
Network No.	1	1		
Total Stations	2	-		
Station No.	0 (fixed)	2		

- (2) Routing parameter setting
 - Set the followings as necessary.

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

	Target Network No.	Relay Network No.	Relay Z	<u> </u>
1				
2				
3				
4				
5			_	
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19			•	•

Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	1 to 64

Ethernet Adapter Module setting

Set the parameter with the Ethernet adapter module setting tool.

For details of the setting method, refer to the following manual.

CC-Link IE Field Network Ethernet Adapter Module User's Manual

(1) CC-Link IE Field Network setting

Mode	Online 📉		
Network, No.	1		
Station No.	1		

Item	Set value
Network No.	1 ^{*1}
Station No.	1 ^{*2}

*1 Set the same value as the network No. set on the PLC side.
 *2 Set a value other than the network No. set on the PLC side.

(2) Ethernet setting

Advises 192 178 3 30 mit Alak Patien 256 256 256 0 mit Alak Patien 0 6 Meditellin V	Abareco	Input F	ormet [DEO		×	-Contection Central
nel Mask Faltern 2015 2020 2018 0 unicalan Mode In Magnitelian III Disable direct MELBOFT Connection	IF Address	192	138	3	[30		Comestion Service
nnisafan Nade 🔄 Disable direct MELBOFT Connection	Submit Mask Pathern	255	255	226	σ		
	ommunication Mode		M				Disable direct MELSOFT Connection

*1 Set the IP address within the following range.

192.168.3.30^{*1}

192.168.3.30 Set the fourth octet within the range from 1 to 64. Set the third octet within the range from 1 to 239.

[Controller Setting] and [Ethernet] of GT Designer3

POINT.

[Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)

(1) Controller setting

Item	Set value (Use default value)
GOT Net No.	3 ^{*1}
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5001
Retry	3 times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0ms

*1 Set the GOT network No. according to the third octet (network No.) of the Ethernet adapter module IP address.

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

It	em	Set value
	Host	*
	N/W No.	3 ^{*1}
Ethernet Setting No.1	PC No.	30 ^{*2}
	Туре	NZ2GF-ETB
	IP address	192.168.3.30 ^{*3}
	Port No.	5001(fixed)
	Communication	UDP(fixed)

Set according to the third octet (network No.) of the Ethernet *1

adapter module IP address. Set according to the fourth octet (PC No.) of the Ethernet adapter module IP address. *2

*3 Set according to the Ethernet adapter module IP address.

(4) Routing parameter setting

Item	Set value
Transfer Network No.	1 ^{*1}
Relay Network No.	3 ^{*2}
Relay Station No.	30 ^{*3}

Set the same value as the Ethernet adapter module network *1 No.

Set according to the third octet (network No.) of the Ethernet adapter module IP address. *2

Set according to the fourth octet (PC No.) of the Ethernet *3 adapter module IP address.

5.4.11 Connecting to PERIPHERAL I/F (Built-in Ethernet port Motion Controller CPU)

This section describes the settings of the GOT and Built-in Ethernet port Motion Controller CPU in the following case of system configuration.

POINT,

- GOT type setting For details, refer to the following.
- 1.1.1 Setting connected equipment (Channel setting)
 - (2) Setting [Controller Type]
- (2) CPU No. specification of Q170MCPU and Q170MSCPU(-S1)
 Set whether to monitor the PLC CPU area or the Motion CPU area of Q170MCPU or Q170MSCPU(-S1), in the CPU No. specification. For details, refer to the following.
- 5.5 Precautions
- (3) PLC type of GX Works2/GX Developer When creating a program, set the following PLC type:
 - For Q173D(S)CPU/Q172D(S)CPU QnUD(E)(H)CPU
 - For Q170MCPU and Q170MSCPU(-S1) Q03UDCPU Q03UDCPU
- (4) Built-in Ethernet port CPU For details of Built-in Ethernet port CPU, refer to the following manual.
- User's Manual of Q173D(S)CPU/ Q172D(S)CPU , Q170MCPU, and Q170MS(-S1)CPU

System configuration

Leave the Built-in Ethernet port Motion Controller CPU settings as default in the following system configuration.

[] Controller Setting] and [Ethernet] of GT Designer3



*1 For the settings when using system devices including a hub and a transceiver, refer to the following.

5.4.2 Connecting to Built-in Ethernet port CPU (multiple connection)

*2 These setting items do not exist at the PLC side. However, the virtual values must be set on the GOT side.

[] ■[Controller Setting] and [Ethernet] of GT Designer3

Basic setting of MT Works2

Use the default values of the basic setting for the system configuration above.

(5) Built-in Ethernet port

Multiple CPU Setting System Basic Setting CPU Name Setting	Built-in Ethernet Port Setting
IP Address Setting Input Format Dec. Image: Comparison of the set o	Open Setting Set if it is needed Default / Changed)
	OK Cancel

Item	Set value	Setting necessity at GOT connection
IP address	192.168.3.39 (Default)	0
Subnet mask pattern	-	×
Default router IP address	-	×
Communication data code		Δ
Enable online change (MC protocol)	(Use default value)	Δ
Open settings	Refer to (2)	0

 $\bigcirc: \mathsf{Necessary} \ \bigtriangleup: \mathsf{As necessary} \ \times: \mathsf{Not necessary}$

(6) Open settings

The setting is required for all the connected GOTs.

1 UDP MELSOFT connection TCP MELSOFT connection TCP MELSOFT connection TCP MELSOFT connection TCP TCP	
2 TCP MELSOFT connection TCP MELSOFT connection MELSOFT connection MELSOFT connection TCP MELSOFT connection	
3 TCP VELSOFT connection VELSOFT connection VELSOFT connection VELSOFT	
4 TCP MELSOFT connection	
5 TUP MELSUFI connection	
6 TCP MELSOFT connection	
7 TCP MELSOFT connection	
3 TCP 🛛 🕶 MELSOFT connection 🔍	
9 TCP 💌 MELSOFT connection 💌	
0 TCP 🗨 MELSOFT connection 💌	
1 TCP MELSOFT connection	
12 TCP MELSOFT connection	
13 TCP MELSOFT connection	
14 TCP MELSOFT connection	
15 TCP VELSOFT connection	
16 TCP MELSOFT connection	

Item	Set value
Protocol	UDP (fixed)
Open system	MELSOFT connection (fixed)
Host station port No.	-

[Controller Setting] and [Ethernet] of GT Designer3

POINT

 (1) [Controller Setting] and [Ethernet] of GT Designer3
 For [Controller Setting] and [Ethernet] of GT

Por [Controller Setting] and [Ethernet] of GI Designer3, refer to the following.

5.3.1 Setting communication interface (Communication settings)

(2) Ethernet setting

The settings items for the network No. and station No. do not exist at the Built-in Ethernet port Motion Controller CPU side. However, these virtual values must be set on the GOT side. Therefore, set the network No. and station No. on the GOT side. Set the network No. that is not existed on the network system and any station No..

(1) Controller setting

Item	Setting (Use default value.)
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.1
GOT Communication Port No.	5002
Retry	3times
Startup Time	3 sec
Timeout Time	3 sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Setting (Use default value.)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
Peripheral Communication Port No.	5015
Transparent Port No.	5014

(3) Ethernet setting

Ite	em	Set value
Ethernet setting No.1	Host	*
	N/W No.	1 ^{*1}
	PC No.	2 ^{*2}
	Туре	QnUDE(H)
	IP address	192.168.3.39 ^{*3}
	Port No.	5006 (fixed)
	Communication	UDP (fixed)

*1 Set the same value as that of GOT N/W No.

*2 Set a value different from that of GOT PLC No.

*3 Set it to the IP address value of the Built-in Ethernet port Motion Controller CPU side.

Checking communication state of Connecting to Built-in Ethernet port CPU

- (4) When using the Command Prompt of Windows[®] Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication
 C:\>Ping 192.168.3.39
 Reply from 192.168.3.2: bytes=32 time
 <10ms TTL=32
 - (b) When abnormal communication C:\>Ping 192.168.3.39 Request timed out.
- (5) When abnormal communication

At abnormal communication, check the followings and execute the Ping command again.

- Cable connecting condition
- · Confirmation of switch and network parameter setting
- Operation state of PLC CPU (faulty or not)
- The IP address of Built-in Ethernet port CPU specified in the Ping command

POINT,

Ethernet diagnostics of GX Works2/GX Developer Ethernet diagnostics of GX Works2/GX Developer is available to a Ping test from the PLC. For details of Ethernet diagnostics of GX Works2/GX Developer, refer to the following manual.

- GX Works2 Version1 Operating Manual (Common)
- GX Developer Version8 Operating Manual

5.5 Precautions

Connection to QnA (S) CPU type

Use B or a later function version of Ethernet module (QnA Series) and PLC CPU (QnA/QnASCPU type).

Connection to QSCPU

The GOT can only read device data and sequence programs by the ladder monitor function in the QSCPU. The GOT cannot write any data to the QSCPU.

Connection to Q170MCPU or Q170MSCPU(-S1)

Set [CPU No.] to "2" in the device setting to monitor the device of the Motion CPU area (CPU No.2).

When the CPU No. is set to "1", the device on the PLC CPU area (CPU No.1) is monitored.

When the CPU No. is set to "0", the monitoring target differs depending on the GOT connection destination. Refer to the following.

GOT connection destination	Monitoring target
QJ71E71 module	PLC CPU area (CPU No.1)
PERIPHERAL I/F	Motion CPU area (CPU No.2)

When the CPU No. is set to the number other than "0" to "2", a communication error occurs and the monitoring cannot be executed.

For setting the CPU No., refer to the following manual.

GT Designer3 (GOT2000) Help

Example) Setting dialog box of the bit device

Device X ▼ 0000 ★	Information
7 8 9 D E F 4 5 6 A B C 1 2 3 0 Back CL	[Kind] BIT [Range] Device: 0000-3FFF
Vetwork CPU No.: 2	
Host Other	

Connection in the multiple CPU system

When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

QCPU (Q mode), motion controller CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

Connection to LCPU

LCPU may diagnose (check file system, recovering process, etc.) the SD memory card when turning on the power or when resetting. Therefore, it takes time until the SD memory card becomes available. When the GOT starts before the SD card becomes available, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

When connecting to multiple GOTs

(1) Setting PLC No.

When connecting two or more GOTs in the Ethernet network, set each [PLC No.] to the GOT.

5.3.1 Setting communication interface (Communication settings)

(2) Setting IP address

Do not use the IP address "192.168.3.18" when using multiple GOTs.

A communication error may occur on the GOT with the IP address.

- (3) Setting for starting up multiple GOTs simultaneously (When connected to Built-in Ethernet port CPU) When connecting multiple GOTs to one Built-in Ethernet port CPU, adjust the timing of GOT communication start. When the communication concentrates on the PLC, the communication between GOT and PLC becomes difficult, and the monitoring by GOT may not start. As a method for adjusting the timing, communicating one GOT alone first, and then communicating the other GOTs is effective. Set the following items on each GOT.
 - [Startup Time] of [Controller Setting], or [Title Display Time] of [GOT Setup].
 - [Timeout Time] of [Controller Setting]
 - The following shows a setting example.



When connecting to the multiple network equipment (including GOT) in a segment

By increasing the network load, the transmission speed between the GOT and PLC may be reduced. The following actions may improve the communication performance.

- · Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

5. ETHERNET CONNECTION 5.5 Precautions

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When monitoring to another network No. on the same line

When the network No. of the GOT does not match with that of the PLC on the same Ethernet, the PLC cannot be monitored. When monitoring, set the same network No. as that of the GOT, or connect a Ethernet module to the PLC and set the routing setting to monitor as other network.

When the Multi-channel is supported for GT16, set each channel with the networks No. to monitor.

Remote password for QCPU

Do not set a remote password for QCPU. Monitoring with GOT becomes unavailable.

When connecting to Built-in Ethernet port of Built-in Ethernet port CPU

Connect to GOT after turning on the network equipment such as Built-in Ethernet port CPU or HUB to enable the communication.

When the communication with Built-in Ethernet port CPU is not available, a communication error may occur on the GOT.

The number of connectable CPUs for one GOT

- QCPU : 128 CPUs can be set (10 or less CPUs are recommended)
- FXCPU : 128 CPUs can be set (10 or less CPUs are recommended)

6

DIRECT CONNECTION TO CPU

6.1	Connectable Model List 6 - 2
6.2	System Configuration
6.3	Connection Diagram 6 - 21
6.4	GOT Side Settings 6 - 22
6.5	Precautions

6

DIRECT CONNECTION TO CPU 6.

6.1 **Connectable Model List**

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	Q00JCPU	-			
	Q00CPU ^{*1}				
	Q01CPU ^{*1}		RS-232 RS-422		
	Q02CPU ^{*1}			GT GT	
	Q02HCPU ^{*1}	0		27 23 ^{GS}	<i></i> €.2.1
	Q06HCPU ^{*1}				
	Q12HCPU ^{*1}				
	Q25HCPU ^{*1}				
	Q02PHCPU				
	Q06PHCPU				
	Q12PHCPU	~	RS-232	GT GT CS	
	Q25PHCPU	0	RS-422	27 23 33	6.2.1 تحيي
	Q12PRHCPU (Main base)				
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)		-		
	025PRHCPU	0		27 23 GS	-
	(Extension base)				
MELSEC-Q (Q mode) (Q mode) Q00UCPU Q01UCPU Q02UCPU Q02UCPU	Q00UJCPU				
	Q01UCPU	0			
	Q02UCPU				
			RS-232 RS-422	GT GT CS	
				27 23 65	0.2.1 جا
	Q10UDHCPU				
	Q13UDHCPU				
	Q20UDHCPU				
	Q26UDHCPU				
	Q10UDEHCPU				
	Q13UDEHCPU				
	Q20UDEHCPU				
	Q26UDEHCPU	0	RS-232		<u>F</u> € 2 1
		Ŭ		*2	U.2.1
	Q04UDVCPU				
	Q06UDVCPU				
	Q13UDVCPU				
	Q26UDVCPU				
C Controller	Q12DCCPU-V*3	-	D0 000	GT GT GS	
module	Q24DHCCPU-V	0	RS-232		6.2.1
				*2	
MELSEC-QS	QS001CPU	0	-		-

(Continued to next page)

When in multiple CPU system configuration, use CPU function version B or later. *1

Access via the (RS-232) in the multiple CPU system.

*2 *3 Use a module with the upper five digits of the serial No. later than 12042.

Series	Model name	Clock	Communication type	Connectable model	Refer to	
MELSEC-L	L02CPU ^{*1} L06CPU ^{*1} L26CPU-BT ^{*1} L02CPU-P ^{*1} L06CPU-P ^{*1} L26CPU-P ^{*1} L26CPU-PBT ^{*1} L26CPU-PBT ^{*1} L02SCPU L02SCPU-P	0	RS-232 RS-422	gt gt GS 27 23 GS	6.2.2	
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	0	RS-232 RS-422	CT CT CS CS	6.2.1	
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU	0	RS-422	GT GT GS	6.2.3	
MELSEC-QnA (QnASCPU)	Q4ARCPU Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	0	RS-422 RS-422	ат 27 23 GS	6.2.3	6
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUP21 A2ACPUP21-S1 A2ACPUP21-S1 A2ACPUP21-S1 A2ACPUP21-S1 A3ACPU A3ACPUP21 A3ACPUP21 A3ACPUP21 A1NCPUP21*2 A1NCPUP21*2 A2NCPUP21*2 A2NCPUP21*2 A2NCPUP21-S1*2 A2NCPUP21-S1*2 A3NCPUP21*2 A3NCPUP21*2 A3NCPUP21*2 A3NCPUP21*2	0	RS-422	GT GT 33 GS	6.2.4	DIRECT CONNECTION TO CPU
MELSEC-A (AnSCPU)	A2USCPU	0	RS-422	CT CT CT CS CS	6.2.4	

(Continued to next page)

*1 When connecting in direct CPU connection, the adapter L6ADP-R2 is required.
*2 When monitoring AnNCPU or A2SCPU, only the following or later software version is used to write to the CPU.

AnNCPU(S1) with link: Version L or later, AnNCPU(S1) without link: Version H or later
A2SCPU: Version H or later

Series	Model name	Clock	Communication type	Connectable model	Refer to
	A2USCPU-S1				
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU		DS 422		
MELSEC-A	A2SCPU ^{*1}			GT_GT_CS	
(AnSCPU)	A2SCPU-S1*1		R0-422	27 23 33	6.2.4 نچ
	A2SHCPU				
	A2SHCPU-S1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
	A0J2HCPU ^{*1}				
	A0J2HCPUP21*1		RS-422	GT GT	
	A0J2HCPUR21 ^{*1}	×		27 23 GS	6.2.4
	A0J2HCPU-DC24 ^{*1}				
	A2CCPU ^{*1}				
MELSEC-A	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24	0	RS-422	GT GT GS	3 6.2.4
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
	Q172CPU ^{*2*3}		RS-232 RS-422	^{ст} 27 23 GS	
	Q173CPU*2*3				
	Q172CPUN*2	0			<i>∃</i> 6.2.1
	Q173CPUN*2	-			
	Q172HCPU				
	Q173HCPU				
	Q172DCPU				
Motion	Q173DCPU		D0 000	GT GT GS	
controller	Q172DCPU-S1	0	RS-232		<i>∃</i> 6.2.1
CPU (Q Series)	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU				
	Q170MSCPU	0	RS-232		6.2.7
	Q170MSCPU-S1	1			
	MR-MQ100	0	RS-422	27 CT CS	-

(Continued to next page)

*1 When monitoring A0J2HCPU, A2CCPU or A2SCPU, only the following or later software version is used to write to the CPU. • A0J2HCPU (with/without link): Version E or later

- A0J2HCPU-DC24: Version B or later
- A2CCPU, A2SCPU: Version H or later
- *2 When using SV13, SV22, or SV43, use the motion controller CPU on which any of the following main OS version is installed.
 - SW6RN-SV13Q□: 00E or later
 - SW6RN-SV22Q□: 00E or later
 - SW6RN-SV43Q□: 00B or later
- *3 Use main modules with the following product numbers.
 - Q172CPU: Product number K******* or later
 Q173CPU: Product number J****** or later
- *4 Access via QCPU (RS-232) in the multiple CPU system.

Series	Model name	Clock	Communication type	Connectable model	Refer to	
	A273UCPU					
	A273UHCPU					
	A273UHCPU-S3					
	A373UCPU					
	A373UCPU-S3					
	A171SCPU					
Motion	A171SCPU-S3		PS-422	GT GT CS	M→ CO.A	
CPU (A Series)	A171SCPU-S3N		110-422	27 23 33	0.2.4 ج	
	A171SHCPU					
	A171SHCPUN					
	A172SHCPU					
	A172SHCPUN					
	A173UHCPU					
	A173UHCPU-S1					
MELSEC-WS	WS0-CPU0	×	RS-232	GT GT GS	<u>F</u> €26	
	WS0-CPU1			27 23 00	0.2.0	
MELSECNET/	QJ72LP25-25					
H Remote I/O	QJ72LP25G	×	RS-232		6.2.1	
station	QJ72BR15					
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	T 27 CT CS	-	
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	27 GS	-	
CNC C70	Q173NCCPU	0	RS-232	GT GT GS GS	6.2.1	
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	0	RS-232	GT GT GS 27 23 GS	6.2.1	
	FX0	×				Ξ
	FX ₀ s					
	FX0N	^	PS-422	GT GT CS		
	FX1	×	110-422	27 23 33		
	FX2	×*2				
	FX2C	^				
	FX1s					
	FX1N	0				
MELSEC-FX	FX2N	Ŭ			6.2.5	
	FX1NC					
	FX2NC	×*2	DC 000			
	FX3S		RS-232 RS-422	27 23 GS		
	FX3G]				
	FX3GC					
	FX3GE					
	FX3U					
	FX3UC					

Access via QCPU (RS-232) in the multiple CPU system.

*2 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

6.2 System Configuration

6.2.1 Connecting to QCPU



For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*1



6

6.2.3 Connecting to QnACPU



18. GOT MULTI-DROP CONNECTION

6.2.4 Connecting to ACPU



6

6.2.5 Connecting to FXCPU



■ When connecting to FX0, FX0S, FX0N, FX1, FX2 or FX2C

	Pl	_C		Connection cable		GO	Г	Number of
Model name	Function expansion board ^{*2}	Function adapter ^{*2}	Communi cation type	Cable model	Max. distance	Option device Model e		connectable
FX0 FX0S FX0N		-	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)		- (Built into GOT)	ат 27 ат 23 GS	
	-				30m	GT15-RS4-9S	ст 27 23 GS	
						GT01-RS4-M ^{*1}	-	1 GOT for 1
FX1				GT01-C30R4-25P(3m)		- (Built into GOT)	ет 27 ^{GT} 23 GS	PLC
FX2 FX2c	-		RS-422	GT01-C100R4-25P(10M) GT01-C200R4-25P(20m) GT01-C300R4-25P(30m)	30m	GT15-RS4-9S	ст 27 23 GS	
						GT01-RS4-M ^{*1}	-	

*1 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*2 When using function expansion boards or function adapters, confirm the communication settings.

6.5 Precautions ■Connection to FXCPU (2)When connecting with function extension board or communication special adapter

■ When connecting to FX1S, FX1N, FX2N, FX1NC, FX2NC (RS-422 connection)

	PL	.C		Connection cable		GOT	Г	Number of
Model name	Function expansion board ^{*1*3}	Function adapter ^{*3}	Communi cation type	Cable model	Max. distance	Option device	Model	connectable
FX1s FX1N		RS-422 GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)		GT01-C10R4-8P(1m) GT01-C30R4-8P(3m)		- (Built into GOT)	ат 27 33 GS	1 GOT for 1
FX2N FX1NC FX2NC	-		30m	GT15-RS4-9S	ст 27 23 GS	port		
						GT01-RS4-M ^{*2}	-	-
FX1s	FX1s FX1N FX1N-422-BD FX2N FX2N-422-BD			GT01-C10R4-8P(1m) GT01-C30R4-8P(3m)		- (Built into GOT)	^{ст} 27 ^{ст} 23 GS	1 GOT for 1
FX1N FX2N		- RS-422	RS-422	GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)	30m	GT15-RS4-9S	GT 27 GT 23 GS	expansion board
						GT01-RS4-M ^{*2}	-	1
	*1	The function	expansion b	oard to be used differs according to	o the type o	of the FXCPU to be con	nected.	

The function expansion board to be used differs according to the type of the FXCPU to be connected. Use the applicable function expansion board shown in the following table.

When connecting to FX1N or FX1s Series When connecting to FX Series	ltem	Function expansion board to be used						
	item	When connecting to FX1N or FX1S Series	When connecting to FX Series					
422 communication FX1N-422-BD FX2N-422-BD	422 communication	FX1N-422-BD	FX _{2N} -422-BD					

*2 For details of the GOT multi-drop connection, refer to the following.

RS-

*3 When using function expansion boards or function adapters, confirm the communication settings.

6.5 Precautions Connection to FXCPU (2)When connecting with function extension board or communication special adapter

6

PLC Connection cable GOT Number of Function Communi Cable model connectable Function Model Max. expansion Model cation Connection diagram Option device equipment*3 name adapter*3 distance board^{*1*3} type number ^{бт} 27 ^{GT} 23 - (Built into GOT) GS GT01-C30R2-9S(3m) 1 GOT for 1 or FX1N-232-BD RS-232 15m ^{бт} 27 function FX2N-232-BD (User) RS232 connection expansion board diagram 1) GT15-RS2-9P GT01-RS4-M^{*2} -^{GT} 27 ^{ст} 23 - (Built into GOT) GS GT01-C30R2-9S(3m) FX1S or FX2NC FX1N RS-232 15m ^{ст} 27 -232ADP User (reparing) RS232 connection FX2N diagram 1) GT15-RS2-9P GS GT01-RS4-M*2 -FX1N-CNV-BD FX2N-CNV-BD ^{GT} 27 ^{GT} 23 - (Built into GOT) GS GT01-C30R2-25P(3m) or FXON RS-232 15m ^{GT} 27 -232ADP (User)RS232 connection diagram 2) GT15-RS2-9P GT01-RS4-M*2 1 GOT for 1 PLC built-in port ^{GT} 27 ^{ст} 23 - (Built into GOT) GS GT01-C30R2-9S(3m) FX2NC or RS-232 15m ^{ст} 27 -232ADP User (repering) RS232 connection diagram 1) GT15-RS2-9P GT01-RS4-M^{*2} FX1NC FX2NC ^{GT} 27 ^{GT} 23 - (Built into GOT) GS GT01-C30R2-25P(3m) or FXON RS-232 15m ^{ст} 27 -232ADP (User) RS232 connection diagram 2) GT15-RS2-9P GS GT01-RS4-M*2 -

■ When connecting to FX1S, FX1N, FX2N, FX1NC, FX2NC (RS-232 connection)

*1 The function expansion board to be used differs according to the type of the FXCPU. Select the function expansion board from the following table.

ltem	Function expansion board to be used					
item	When connecting to FX1N or FX1S Series	When connecting to FX Series				
RS-232 communication	FX1N-232-BD	FX2N-232-BD				
When the function adapter is used	FX1N-CNV-BD	FX2N-CNV-BD				

*2 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*3 When using function expansion boards or function adapters, confirm the communication settings.

6.5 Precautions ■Connection to FXCPU (2)When connecting with function extension board or communication special adapter

6

■ When connecting to FX3G, FX3S, FX3GE (RS-422 connection)

	PL	_C		Connection cable		GO	Г	Number of
Model name	Function expansion board ^{*3}	Function adapter ^{*3}	Communi cation type	Cable model	Max. distance	Option device	Model	connectable equipment *2
	-	-	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m)		- (Built into GOT)	ат 27 ат 23 GS	1 GOT for 1 PLC built-in port
				GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)	30m	GT15-RS4-9S	ст 27 3 GS	
FX3G						GT01-RS4-M ^{*1}	-	
FX3S FX3GE	FX3G-422-BD	D - RS-4		GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)	30m	- (Built into GOT)	ат 27 ат 23 GS	1 GOT for 1 function expansion board
			RS-422			GT15-RS4-9S	ст 27 23 GS	
						GT01-RS4-M ^{*1}	-	

*1 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*2 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*3 When using function expansion boards or function adapters, confirm the communication settings.

[→ 6.5 Precautions ■Connection to FXCPU (2)When connecting with function extension board or communication special adapter

		PLC		Connection cable		GOT		Number of	
Model name	Function expansion board ^{*3}	Function adapter ^{*3}	Communi cation type	Cable model Connection diagram number	Max. distance	Option device	Model	connectable equipment *2	
FX3G FX3S FX3G-232-B FX3GE		-			GT01-C30R2-9S(3m)		- (Built into GOT)	ет 27 6т 23 GS	1 GOT for 1
	FX3G-232-BD		RS-232	(User) (User) diagram 1)	15m	GT15-RS2-9P	ст 27 23 GS	tunction expansion board	
						GT01-RS4-M ^{*1}	-		
	FX3G-4			GT01-C30R2-9S(3m) or		- (Built into GOT)	ат 27 6т 23 GS	1 GOT for 1	
FX3G -	-	+ FX3u-232ADP	RS-232	(User) RS232 connection diagram 1)	meı	GT15-RS2-9P	ст 27 23 GS	function adapter	
						GT01-RS4-M ^{*1}	-		
				GT01-C30R2-9S(3m)		- (Built into GOT)	ет 27 6т 23 GS	1 GOT for 1	
FX3GE	-	FX3U-232ADP	RS-232	or (Jser) RS232 connection diagram 1)	15m	GT15-RS2-9P	ст 27 23 GS	function adapter	
						GT01-RS4-M ^{*1}	-		
FX3s -		FX3S-CNV-ADP		GT01-C30R2-9S(3m) or		- (Built into GOT)	ст 27 ст 23 GS	1 GOT for 1	
	-	- + FX3U-232ADP	RS-232	32 User)RS232 connection diagram 1)	15m	GT15-RS2-9P	ет 27 ст 23 СS	function adapter	
						GT01-RS4-M ^{*1}	-		

■ When connecting to FX3G, FX3S, FX3GE (RS-232 connection)

*1 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*2 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*3 When using function expansion boards or function adapters, confirm the communication settings.

[_______6.5 Precautions ■Connection to FXCPU (2)When connecting with function extension board or communication special adapter

*4 Use the RS-232 connection model.

■ When connecting to FX3GC (FX3GC-□□/D, FX3GC-□□/DSS) (RS-422 connection)

PLC	C	Connection cable		GOT		Number of	
Model name	e Communication type Cable model		Max. distance	Option device	Model	connectable equipment	
		GT01-C10R4-8P(1m) GT01-C30R4-8P(3m)		- (Built into GOT)	бт 27 6т 23 GS	- 1 GOT for 1 PLC built- in port	
FX₃gc-□□/D FX₃gc-□□/DSS	RS-422	GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)	30m	GT15-RS4-9S	ет 27 23 GS		
				GT01-RS4-M ^{*1}	-		

*1 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

■ When connecting to FX3GC (FX3GC-□□/D, FX3GC-□□/DSS) (RS-232 connection)

	PLC		Connection cable		GC	Number of		
Model name	Function adapter ^{*3}	Communication type	Cable model Max. Connection diagram number distance Option device			Model	connectable equipment*2	
FX₃cc-□□/D FX₃cc-□□/DSS	FX3u-232ADP	RS-232	GT01-C30R2-9S(3m) or	15m	- (Built into GOT)	ет 27 ст 23 GS	1 GOT for 1 function adapter	
			(User) RS232 connection diagram 1)		GT15-RS2-9P	бт 27 ст 23 GS		
					GT01-RS4-M ^{*1}	-		

*1 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*2 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

*3 When using function expansion boards or function adapters, confirm the communication settings.

[→ F 6.5 Precautions ■Connection to FXCPU (2)When connecting with function extension board or communication special adapter

	PLC			Connection cable		GOT		Number of
Model name	Function expansion board ^{*3}	Function adapter *3	Commu nication type	Cable model	Max. distance	Option device	Model	connectable equipment *2
FX3∪ FX3∪c (FX3∪c-□□-LT(-2))	-		RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)	30m	- (Built into GOT)	ат 27 ат 23 GS	1 GOT for 1 PLC built-in port
		-				GT15-RS4-9S	бт 27 23 GS	
						GT01-RS4-M ^{*1}	-	
	FX3U-422-BD	-	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)	30m	- (Built into GOT)	бт 27 6т 23 GS	1 GOT for 1 function expansion board
						GT15-RS4-9S	бт 27 3 GS	
						GT01-RS4-M ^{*1}	-	

■ When connecting to FX3U or FX3UC (FX3UC-□□-LT(-2)) (RS-422 connection)

For details of the GOT multi-drop connection, refer to the following. *1

18. GOT MULTI-DROP CONNECTION

*2 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually. *3

When using function expansion boards or function adapters, confirm the communication settings.

[3 6.5 Precautions ■Connection to FXCPU (2)When connecting with function extension board or communication special adapter

6

6. DIRECT CONNECTION TO CPU 6.2 System Configuration

■ When connecting to FX3U or FX3UC (FX3UC-□□-LT(-2)) (RS-232 connection)

	PLC			Connection cable	;	GOT	-	Number of
Model name	Function expansion board ^{*3}	Function adapter ^{*3}	Commun ication type	Cable model Connection diagram number	Max. distance	Option device	Model	connectable equipment *2
FХз∪ FХз∪с (FХз∪с-□□- LT(-2))	FX3U-232-BD	-	RS-232	GT01-C30R2-9S(3m) or (Juger) RS232 connection diagram 1)		- (Built into GOT)	бт 27 6т 23 GS	1 GOT for 1 function expansion board
					15m	GT15-RS2-9P	бт 27 23 GS	
						GT01-RS4-M ^{*1}	-	
	FX3u-422-BD FX3u-232-BD F FX3u-CNV-BD	FX3u-232ADP R		GT01-C30R2-9S(3m) or (User) RS232 connection diagram 1)	15m	- (Built into GOT)	бт 27 6т 23 GS	1 GOT for 1
			RS-232			GT15-RS2-9P	ат 27 23 GS	function adapter
						GT01-RS4-M ^{*1}	-	1

*1 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*2 When the function expansion board (communication board) and the function adapter are connected, a GOT and a peripheral such as a PC with GX Developer installed can be connected to them individually.

*3 When using function expansion boards or function adapters, confirm the communication settings.

[] 6.5 Precautions ■Connection to FXCPU (2)When connecting with function extension board or communication special adapter

■ When connecting to FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS) (RS-422 connection)

PLC		Connection cable		GOT		
Model name	Commun ication type	Cable model	Max. distance	Option device Model		Number of connectable equipment
FX₃uc-□□/D FX₃uc-□□/DS FX₃uc-□□/DSS	RS-422	GT01-C10R4-8P(1m) GT01-C30R4-8P(3m) GT01-C100R4-8P(10m) GT01-C200R4-8P(20m) GT01-C300R4-8P(30m)	30m	- (Built into GOT)	ст 27 ст 23 GS	
				GT15-RS4-9S	бт 27 33 GS	port
				GT01-RS4-M ^{*1}	-	

*1 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

■ When connecting to FX3UC (FX3UC-□□/D, FX3UC-□□/DS, FX3UC-□□/DSS) (RS-232 connection)

PLC			Connection cable		GOT		Number of
Model name	Function adapter ^{*3}	Commun ication type	Cable model Connection diagram number	Max. distance	Option device	Model	connectable equipment ^{*2}
FX₃uc-□□/D FX₃uc-□□/DS FX₃uc-□□/DSS	FX3u-232ADP	RS-232	GT01-C30R2-9S(3m) or (User) RS232 connection diagram 1)	15m	- (Built into GOT)	ет 27 6т 23 GS	1 GOT for 1 function adapter
					GT15-RS2-9P	ст 27 33 GS	
					GT01-RS4-M ^{*1}	-	

*1 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*2 A GOT and a peripheral such as a PC with GX Developer installed can be connected to the function adapter and the FXCPU individually.

*3 When using function expansion boards or function adapters, confirm the communication settings.

6.5 Precautions ■Connection to FXCPU (2)When connecting with function extension board or communication special adapter

5

6.2.6 Connecting to WSCPU



6.2.7 Connecting to the motion controller CPU



POINT,

When connecting to the motion controller CPU (Q Series) other than Q170MCPU or Q170MSCPU(-S1) A motion controller CPU (Q Series) mounted to the multiple CPU system of the QCPU (Q mode) can be monitored. The system configuration, connection conditions, and system equipment for connecting a GOT to a motion controller CPU (Q Series) are the same as those for connecting to the QCPU.

5 6.2.1 Connecting to QCPU
6.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

6.3.1 RS-232 cable

Connection diagram



For the GOT side connector, refer to the following.

1.4.1 GOT connector specifications

5

6.4 GOT Side Settings

6.4.1 Setting communication interface (Communication settings)

POINT,

GOT Multi- Drop Connection

When using the serial multi-drop connection unit, refer to the following.

18. GOT MULTI-DROP CONNECTION

Set the channel of the connected equipment.

eLSEC Q/QS, Q Manufactu	rer:	METSUBISHI		
one Controller	Type:	MELSEC-Q/QS	Q17nD/M/NC/DR, CRnD-700	•
rk/Duplex Setta uting Informatio				
way I/F:		Standard UF(R5232) Q/L/QnA/A 0PU, Q751024, L175024		
teway Serve				
Sateway Clent Decar Sat	mg			
FTP Server Ele Transfer (F	merty		Value	
dundant T	ransmission Sp	eed(BPS)	115200	
on No. Switch	etry(Times)		0	
т	imeout Time(Sec)	3	_
D	elay Time(ms).	0	- 10
	ormat		1	- 84
	ontor speed		High((Kormal)	100

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Interface to be used
 - Driver: Set either of the following according to the Controller Type to be connected.
 - Q/L/QnA/A CPU,QJ71C24,LJ71C24
 - MELSEC-FX
 - MELSEC-WS

 The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

 $\sub{F} 6.4.2 Communication detail settings \\ Click the [OK] button when settings are completed.$

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following: 1.1.2 I/F communication setting

6.4.2 Communication detail settings

Make the settings according to the usage environment.

(1) Q/L/QnA/A CPU,QJ71C24,LJ71C24

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0
Format	1
Monitor Speed	High(Normal)

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment.	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)
Format ^{*3}	Select the communication format. (Default: 1)	1, 2
Monitor Speed	Set the monitor speed of the GOT. This setting is not valid in all systems. (Default: Normal)	High(Normal) ^{*1} Middle Low ^{*2}

- *1 This is effective when collecting a large data on other than the monitor screen (logging, recipe function, etc.). However, when connecting to Q00J/Q00/Q01CPU, the sequence scan time may be influenced. If you want to avoid the influence on the sequence scan time, do not set [High(Normal)]. (High performance is hardly affected)
- *2 Set this item if you want to avoid the influence on the sequence scan time further than the [Middle] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU. However, the monitor speed may be reduced.
 *3 Set the format to "1".

(2) MELSEC-FX

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment.	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

(3) MELSEC-WS

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	5

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment.	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec

Item	Description	Range
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 5ms)	0 to 300 (ms)

POINT,

 Communication interface setting by the Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.
 For details on the Utility, refer to the following

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

(2) Precedence in communication settings When settings are made by GT Designer3 or the Utility, the latest setting is effective.



Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller. For example, faulty station that has communication timeout can be cut from the system.



For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Help

6

6.5 Precautions

Connection to FXCPU

(1) When connecting to FX₃ series When the keyword of FXCPU (FX₃ series) has been set, GOT may not be able to monitoring.Perform an I/O check again.

(→ Perform an I/O check) When the result of the I/ O check is normal, check the status of keyword registration.

(2) When connecting with function extension board or communication special adapter When a sequence program and settings that the FXCPU communicates with devices other than the GOT are set with software, including GX Developer, the FXCPU cannot communicate with the GOT.

- (a) Settings with sequence program Check the sequence program and delete the following.
- FX SERIES PROGRAMMABLE CONTROLLERS USER'S MANUAL - Data Communication Edition
 - No protocol communication (RS instruction)
 - Sequence program with the computer link, N:N network, and parallel link
 - Parameter setting
 - Set the following special registers to 0.
 Except FX3U, FX3UC: D8120
 FX3U, FX3UC: D8120, D8400, D8420
 FX3G, FX3GC, FX3GE: D8120, D8400, D8420, D8370

FX3s: D8120, D8400

(b) Settings with GX Developer Select [PLC parameter] in [Parameter], and then click the PLC system(2) tab on the FX parameter screen.

Uncheck [Operate communication setting], and then transfer the parameter to the programmable controller.After the transfer, turn off the programmable controller, and then turn on the programmable controller again.

Upsiew communication setting Call 20 values in the PUC (Read to the communication board parameters and well be a baild upon program framewill
1000	E tang re
Talk dath	10-style
50 ····································	Corridation.
Continue of the second	E Suration
THE REPORT OF ANY	entration source in the set
F test:	The second secon
E surve	The opposite of the second sec

Connection in the multiple CPU system When the GOT is connected to multiple CPU system,

the following time is taken until when the PLC runs.

- QCPU (Q mode), motion controller CPU (Q series): 10 seconds or more
- MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

Connection to LCPU

LCPU may diagnose (check file system, recovering process, etc.) the SD memory card when turning on the power or when resetting. Therefore, it takes time until the SD memory card becomes available. When the GOT starts before the SD card becomes available, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

Connection to basic model QCPU

Do not set the serial communication function of Q00UJ/ Q00U/Q01U/Q02UCPU, Q00/Q01CPU. If the function is set, the communication may not be performed.

Connection to Q170MCPU or Q170MSCPU(-S1)

Set [CPU No.] to "2" in the device setting to monitor the device of the Motion CPU area (CPU No.2).

When the CPU No. is set to "0" or "1", the device on the PLC CPU area (CPU No.1) is monitored.

When the CPU No. is set to the number other than "0" to "2", a communication error occurs and the monitoring cannot be executed.

For setting the CPU No., refer to the following manual.

GT Designer3 (GOT2000) Help

Example) Setting dialog box of the bit device

X • 0000 * 7 8 9 D E F 4 5 6 A B C 1 2 3	Information [Kind] BIT [Range] Device: 0000-3FFF
Back C. Back C. CPU No.: 0 O Other	

7

COMPUTER LINK CONNECTION

7.1	Connectable Model List 7 - 2
7.2	System Configuration
7.3	Connection Diagram 7 - 15
7.4	GOT Side Settings
7.5	PLC Side Setting 7 - 19
7.6	Precautions

7. COMPUTER LINK CONNECTION

7.1 Connectable Model List

The following table shows the connectable models.

7.1.1 PLC/Motion controller CPU

Series	Model name	Clock	Communication	Connectable model	Refer to
	Q00JCPU	0	RS-232 RS-422		
	Q00CPU ^{*1}				
	Q01CPU ^{*1}				
	Q02CPU ^{*1}			GT GT CO	
	Q02HCPU ^{*1}			27 23 ^{GS}	7.2.1 تحيي
	Q06HCPU ^{*1}				
	Q12HCPU ^{*1}				
	Q25HCPU ^{*1}				
	Q02PHCPU				
	Q06PHCPU	0	RS-232	GT GT GS	<u>→</u> 701
	Q12PHCPU		RS-422	27 23 65	7.2.1 نوا
	Q25PHCPU				
	Q12PRHCPU (Main base)	0	-	GT GT GS	-
	Q25PRHCPU (Main base)	Ŭ			
	Q12PRHCPU		RS-232 RS-422		
	(Extension base)	0		T GT GS	₹ 7.2.1
	(Extension base)				5
	Q00U.ICPU				
	Q00UCPU				
MELSEC-Q	Q01UCPU				
(Q mode)	Q02UCPU				
	Q03UDCPU	1			
	Q04UDHCPU				
	Q06UDHCPU				
	Q10UDHCPU				
	Q26UDHCPU				
	Q03UDECPU		RS-232 RS-422	CT CT	
	Q04UDEHCPU	0		27 23 GS	7.2.1
	Q06UDEHCPU				
	Q10UDEHCPU				
	Q13UDEHCPU				
	Q100UDEHCPU				
	Q03UDVCPU	1			
	Q04UDVCPU				
	Q06UDVCPU				
	Q13UDVCPU				
	Q26UDVCPU				

*1 When in multiple CPU system configuration, use CPU function version B or later.

(Continued to next page)

Series	Model name	Clock	Communication	Connectable model	Refer to
C Controller module	Q12DCCPU-V ^{*1*2} Q24DHCCPU-V ^{*2} Q24DHCCPU-LS	0	RS-232 RS-422	GT GT GS GS	7.2.1
MELSEC-QS	QS001CPU	×	-	GT GT GS	-
MELSEC-L	L02CPU L06CPU L26CPU-BT L02CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	0	RS-232 RS-422	GT GT GS	7.2.2
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	0	RS-232 RS-422	GT GT GS	7.2.3
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU	0	RS-232 RS-422	GT GT 23 GS	7.2.4
*3	Q4ARCPU	0	RS-232 RS-422	6 ^τ 27 23 GS	
MELSEC-QnA (QnASCPU) *3	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	0	RS-232 RS-422	бт бт 23 GS	7.2.5
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUP21 A2ACPUP21 A2ACPUP21-S1 A2ACPUP21-S1 A2ACPUP21-S1 A3ACPU A3ACPUP21 A3ACPUP21 A1NCPUP21 A1NCPUP21 A1NCPUP21 A2NCPUP21 A2NCPUP21-S1 A2NCPUP21-S1 A2NCPUP21-S1 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21 A3NCPUP21	0	RS-232 RS-422	GT GT GS	7.2.6

(Continued to next page)

*1 Use only modules with the upper five digits of the serial No. later than 12042.

*2 Use the serial port of a serial communication module controlled by another CPU on the multiple CPU.

*3 If the A series computer link module is applied to the QnACPU, the GOT can monitor the devices in the same range on AnACPU. However, the following devices cannot be monitored.

Devices added to QnACPU

• Latch relays (L) and step relays (S)

(In case of QnACPU, the latch relay (L) and step relay (S) are different from the internal relay. However, whichever is specified, an access is made to the internal relay.)

• File register (R)

COMPUTER LINK CONNECTION

Series	Model name	Clock	Communication	Connectable model	Refer to
	A2USCPU				
	A2USCPU-S1				
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU ^{*1}				
MELSEC-A	A2SCPU ^{*1}	0	RS-232	GT GT GS	<u>ि</u> , ₹ 7.2.7
(Anscpu)	A2SCPU-S1 ^{*1}		RS-422	21 23	
	A2SHCPU ^{*1}				
	A2SHCPU-S1*1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU ^{*1}				
	A0J2HCPU ^{*1}				
	A0J2HCPUP21 ^{*1}		RS-232 RS-422	GT GT an	
	A0J2HCPUR21*1	×		27 23 65	7.2.7
	A0J2HCPU-DC24 ^{*1}				
	A2CCPU				
MELSEC-A	A2CCPUP21	0	-	GT GT GS	-
,	A2CCPUR21				
	A2CCPUC24		RS-232	GT GT GT	
	A2CCPUC24-PRF	0	RS-422	27 23 ^{GS}	7.2.7 ہے
	A2CJCPU-S3	~	-	GT GT CC	
	A1FXCPU	0		27 23 65	-
	Q172CPU*2*3				
	Q173CPU*2*3				
	Q172CPUN*2				
	Q173CPUN*2				
	Q172HCPU				
	Q173HCPU				
	Q172DCPU		DO 000		
Motion	Q173DCPU	0	RS-232 RS-422		7.2.1
controller CPU	Q172DCPU-S1		_		
(Q Series)	Q173DCPU-S1				
	Q172DSCPU	-			
	Q173DSCPU				
	Q170MCPU ^{*4}				
	Q170MSCPU*5				
	Q170MSCPU-S1*5	1			
	MR-MQ100	0	-		-

(Continued to next page)

- The computer link module version U or later supports the A2SCPU(S1), A2SHCPU(S1), A1SHCPU, A1SJHCPU and A0J2HCPU. *1 In addition, A0J2-C214-S1 (A0J2HCPU-dedicated computer link module) cannot be used. *2
 - When using SV13, SV22, or SV43, use the motion controller CPU on which any of the following main OS version is installed.
 - SW6RN-SV13Q□: 00H or later
 - SW6RN-SV22Q□: 00H or later
 - SW6RN-SV43Q□: 00B or later
- *3 Use main modules with the following product numbers.
 - Q172CPU: Product number N******* or later
 - Q173CPU: Product number M******* or later
- *4 Only the first step can be used on the extension base unit (Q52B/Q55B).
- *5 The extension base unit (Q5□B/Q6□B) can be used.

Series	Model name	Clock	Communication	Connectable model	Refer to
	A273UCPU				
	A273UHCPU				
	A273UHCPU-S3	0	RS-232 RS-422	GT GT 23 GS	7.2.6
	A373UCPU		110-422		
	A373UCPU-S3				
	A171SCPU				
Motion	A171SCPU-S3				
controller CPU	A171SCPU-S3N				
(A Series)	A171SHCPU ^{*1}				
	A171SHCPUN*1	0	RS-232	GT GT GS	्रिं इ 7.2.7
	A172SHCPU*1		R5-422	27 23	
	A172SHCPUN ^{*1}				
	A173UHCPU				
	A173UHCPU-S1				
	WS0-CPU0			GT GT	
MELSEC-WS	WS0-CPU1	×	-	27 23 GS	-
	QJ72LP25-25				
Remote I/O	QJ72LP25G	×	RS-232	GT GT GS	<u>}</u> <u>7</u> 21
station	QJ72BR15		RS-422		2
CC-Link IE Field Network head module	LJ72GF15-T2	×	RS-232 RS-422	27 23 GS	7.2.2
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	27 GT GT GS	-
CNC C70	Q173NCCPU	0	RS-232 RS-422	27 23 GS	7.2.1
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	0	RS-232 RS-422	GT GT GS	7.2.1
	FX0				
	FX ₀ s	~			
	FX0N				
	FX1				
	FX2	~			
	FX2C	^			
	FX1s				
	FX1N	0			
MELSEC-FX	FX2N	Ŭ	-		-
	FX1NC				
	FX2NC	×			
	FX3S				
	FX3G				
	FX3GC				
	FX3GE				
	FX3U	1			
	FX3UC				

*1 For computer link connection of A171SHCPU(N) and A172SHCPU(N), use the computer link module whose software version is version U or later.

7.1.2 Serial communication module/Computer link module

CPU series	Model name ^{*1}
MELSEC-Q (Q mode)	QJ71C24 ^{*2} , QJ71C24-R2 ^{*2}
Motion controller CPU (Q Series) MELSECNET/H remote I/O station	QJ71C24N, QJ71C24N-R2, QJ71C24N-R4
CNC C70 Robot controller (CRnQ-700)	QJ71CMO ^{*3} , QJ71CMON ^{*3}
MELSEC-L	LJ71C24, LJ71C24-R2
MELSEC-O (A mode)	A1SJ71UC24-R2, A1SJ71UC24-R4, A1SJ71UC24-PRF
	A1SJ71C24-R2, A1SJ71C24-R4, A1SJ71C24-PRF
	AJ71QC24 ^{*4} , AJ71QC24-R2 ^{*4} , AJ71QC24-R4 ^{*4}
	AJ71QC24N ^{*4} , AJ71QC24N-R2 ^{*4} , AJ71QC24N-R4 ^{*4}
	A1SJ71QC24 ^{*4} , A1SJ71QC24-R2 ^{*4}
MELSEC-QnA (QnACPU)	A1SJ71QC24N ^{*4} , A1SJ71QC24N-R2 ^{*4}
MELSEC-QnA (QnASCPU)	A1SJ71QC24N1*4, A1SJ71QC24N1-R2*4
	AJ71UC24*4*6
	A1SJ71C24-R2*6, A1SJ71C24-R4*6, A1SJ71C24-PRF*6
	A1SJ71UC24-R2*6, A1SJ71UC24-R4*6, A1SJ71C24-PRF*6
	AJ71UC24 ^{*4*5}
MELSEC-A (AnCPU)	A1SJ71UC24-R2*5, A1SJ71UC24-R4*5, A1SJ71UC24-PRF*5
MELSEC-A (AnSCPU) MELSEC-A	A1SJ71C24-R2*5, A1SJ71C24-R4*5, A1SJ71C24-PRF*5
Motion controller CPU (A Series)	A1SCPUC24-R2 ^{*5}
	A2CCPUC24 ^{*4} , A2CCPUC24-PRF ^{*4}

*1 Communication cannot be performed with RS-485.

A0J2-C214-S1 cannot be used.

*2 Either CH1 or CH2 can be used for the function version A. Both CH1 and CH2 can be used together for the function version B or later.

*3 Only CH2 can be connected.

*4 Either CH1 or CH2 can be used.

*5 The computer link module version U or later supports the A2SCPU(S1), A2SHCPU(S1), A1SHCPU, A1SJHCPU and A0J2HCPU.

*6 The module operates in the device range on AnACPU.

7.2 System Configuration

7.2.1 Connecting to QCPU (Q mode)



PLC			Connection cable		GOT		Number of	
Model name	Serial communication module ^{*1}	Communi cation type	Cable model	Max. distance	Option device	Model	connectable equipment	
	QJ71C24 QJ71C24N QJ71C24-R2 QJ71C24N-R2 QJ71C24N-R2 QJ71CMO QJ71CMON		GT09-C30R2-9P(3m)		- (Built into GOT)	бт 27 6т 23 GS		
		RS-232	or (User) RS232 connection diagram 1)	15m	GT15-RS2-9P	ст 27 23 GS	2 GOTs for 1 serial communication module ^{*2} 1 GOT for 1 modem interface module	
MELSEC-Q					GT01-RS4-M ^{*3}	-		
(Q mode)	QJ71C24 QJ71C24N RS-422 QJ71C24N-R4		GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) GT09-C200R4-6C(20m) GT09-C300R4-6C(30m) or (User) RS422 connection diagram 1)	1000	- (Built into GOT)	खा 27 दा 23 GS		
		RS-422		120011	GT15-RS4-9S	ст 27 23 GS		
				500m	GT01-RS4-M*3	-		

*1 For details on the system configuration on the serial communication module side, refer to the following manual.

Q Corresponding Serial Communication Module User's Manual (Basic)

For details on the system configuration on the modem interface module side, refer to the following manual.

Modem Interface Module User's Manual *2 Two GOTs can be connected with the function ve

Two GOTs can be connected with the function version B or later of the serial communication module.

*3 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

7.2.2 Connecting to LCPU



*1 For details on the system configuration on the serial communication module side, refer to the following manual.

MELSEC-L Serial Communication Module User's Manual (Basic)

*2 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

7.2.3 Connecting to QCPU (A mode)

	QCPU (A mode)	Computer link modul	e Connection ca	able	GOT	Q/L/QnA	VA CPU, QJ71C24, LJ71C24
	PLC		Connection cable		GOT		Number of
Model name	Computer link module ^{*1}	Commun ication type	Cable model	Max. distance	Option device	Model	connectable equipment
MELSEC-Q (A mode)	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF	RS-232	GT09-C30R2-9P(3m) or (User) RS232 connection diagram 1)	15m -	- (Built into GOT)	бт 27 бт 23 GS	1 GOT for 1 computer link module
					GT15-RS2-9P	бт 27 33 GS	
	A1SJ71UC24-R4 A1SJ71C24-R4	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) GT09-C200R4-6C(20m)	500m	- (Built into GOT)	бт 27 6т 23 GS	
			or User RS422 connection diagram 1)	500m	GT15-RS4-9S	GT 27 GT 23 GS	

*1 For the system configuration on the computer link module side, refer to the following manual.

Computer Link Module (Com. link func./Print. func.) User's Manual

7.2.4 Connecting to QnACPU (QnACPU type)



	AJ71QC24 AJ71QC24N AJ71QC24-R2 AJ71QC24N-R2	RS-232	GT09-C30R2-25P(3m) or (User) RS232 connection diagram 2)		- (Built into GOT)	ет 27 ет 23 GS	
				15m	GT15-RS2-9P	ет 27 23 GS	
					GT01-RS4-M ^{*2}	-	
MELSEC-QnA (QnACPU)	AJ71QC24-R4 AJ71QC24N-R4	RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m) GT01-C200R4-25P(20m) GT01-C300R4-25P(30m)	30m	- (Built into GOT)	ет 27 ет 23 GS	1 GOT for 1 serial communication module
					GT15-RS4-9S	ст 27 3 3 3 3 3 3 3 3 3 5 5 5 5 5 5 5 5 5 5	
					GT01-RS4-M ^{*2}	-	
	AJ71QC24 AJ71QC24N AJ71QC24-R4 AJ71QC24N-R4	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) GT09-C200R4-6C(20m) GT09-C300R4-6C(30m) or (User) RS422 connection diagram 1)	1200m	- (Built into GOT)	ет 27 ет 23 GS	
					GT15-RS4-9S	ет 27 6т 23 GS	
					GT01-RS4-M ^{*2}	-	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.

Serial Communications Module User's Manual (Modem Function Additional Version)

*2 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

	PLC		Connection cable		(GOT	Number of
Model name	Computer link module ^{*1}	Commun ication type	Cable model	Max. distance	Option device	Model	connectable equipment
			GT09-C30R2-25P(3m)		- (Built into GOT)	ат 27 ат 23 GS	-
	AJ71UC24	RS-232	or (User) diagram 2)	15m	GT15-RS2-9P	ат 27 ат 23 GS	
MELSEC-QnA					GT01-RS4-M ^{*2}	-	1 GOT for 1
(QnACPU)	AJ71UC24	RS-422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) GT09-C200R4-6C(20m) GT09-C300R4-6C(30m) or (User) RS422 connection diagram 1)		- (Built into GOT)	ст 27 ст 23 GS	module
				500m	GT15-RS4-9S	ат 27 ат 23 GS	
					GT01-RS4-M ^{*2}	-	

*1 For the system configuration on the computer link module side, refer to the following manual.

Computer Link Module (Com. link func./Print. func.) User's Manual

When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

7.2.5 Connecting to QnACPU (QnASCPU type)

*2

			(When cc	Comm AJ71QC	nunication driver	Communic AJ71C2 dule) (When connecting to a	a computer link module)
QnACPU (QnACPU type) Serial communication module /Computer link module Connection cable GOT							
	PLC		Connection cable		GOT		Number of
Model name	Serial communication module ^{*1}	Commun ication type	Cable model	Max. distance	Option device	Model	connectable equipment
MELSEC-OnA	A1SJ71QC24 A1SJ71QC24N A1SJ71QC24N1		GT09-C30R2-9P(3m) or		- (Built into GOT)	ат 27 ат 23 GS	1 GOT for 1
(QnACPU)	A1SJ71QC24NT A1SJ71QC24R2 A1SJ71QC24N-R2 A1SJ71QC24N1-R2	RS-232	(User) RS232 connection diagram 1)	15m	GT15-RS2-9P	ет 27 ^{GT} 23 GS	communication module
					GT01-RS4-M ^{*2}	-	1

*1 For details on the system configuration on the serial communication module side, refer to the following manual.

Serial Communication Module User's Manual (Modem Function Additional Version)

*2 For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

	PLC		Connection cable		GOT		
Model name	Serial communication module /Computer link module ^{*1}	Commun ication type	Cable model	Max. distance	Option device	Model	Number of connectable equipment
MELSEC-QnA (QnACPU)	A1SJ71QC24		GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) GT09-C200R4-6C(20m)	1200m	- (Built into GOT)	6т 27 6т 23 GS	1 GOT for 1 serial communication module
	A1SJ71QC24N A1SJ71QC24N1	RS-422	GT09-C300R4-6C(30m) or User RS422 connection diagram 1)		GT15-RS4-9S	бт 27 6т 23 GS	
				500m	GT01-RS4-M ^{*2}	-	
	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF		GT09-C30R2-9P(3m)	15m	- (Built into GOT)	бт 27 6т 23 GS	
		RS-232	(User) (User) diagram 1)		GT15-RS2-9P	ат 27 33 GS	
MELSEC-QnA					GT01-RS4-M ^{*2}	-	1 GOT for 1
(QnACPU)	A1SJ71UC24-R4 A1SJ71C24-R4		GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) GT09-C200R4-6C(20m)		- (Built into GOT)	бт 27 6т 23 GS	module
		RS-422	GT09-C300R4-6C(30m) or (User) RS422 connection diagram 1)	500m	GT15-RS4-9S	бт 27 33 GS	
					GT01-RS4-M ^{*2}	-	

*1 For details on the system configuration on the serial communication module side, refer to the following manual.

Serial Communication Module User's Manual (Modem Function Additional Version)

For the system configuration on the computer link module side, refer to the following manual.

Computer Link Module (Com. link func./Print. func.) User's Manual

When connecting to a computer link module, set the communication driver to [AJ71C24/UC24].

For details of the GOT multi-drop connection, refer to the following.

18. GOT MULTI-DROP CONNECTION

*2

7.2.6 Connecting to ACPU (AnCPU type)

		Compr link mo	uter odule Connectio	n cable	GOT		Communication driver	
	PLC		Connection cable		GOT			
Model name	Computer link module *1	Commun ication type	Cable model	Max. distance	Option device	Model	Number of connectable equipment	
MELSEC-A (AnCPU)	AJ71UC24 RS-232	GT09-C30R2-25P(3m) or	15m	- (Built into GOT)	ст 27 ст 23 GS			
		110-202	(User) (WHY) diagram 2)	10111	GT15-RS2-9P	GT 27 GT 23 GS	1 GOT for 1 computer link	
	A 1711 IC24	DS 422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) GT09-C200R4-6C(20m) GT09-C300R4-6C(30m)	500m	- (Built into GOT)	GT 27 GT 23 GS	module	
	AUTIO24 N3-		or (User) RS422 connection diagram 1)		GT15-RS4-9S	GT 27 GT 23 GS		

Computer Link Module (Com. link func./Print. func.) User's Manual

7.2.7 Connecting to ACPU (AnSCPU type, A0J2HCPU, A2CCPUC)

ACF (An (AO	PU SPU type) J2HCPU,A2CCPUC;	Com mod	Connect	tion cable	GOT]	Communication driver
	PLC		Connection cable		GOT	-	
Model name	Computer link module *1	Commun ication type	Cable model	Max. distance	Option device	Model	Number of connectable equipment
MELSEC-A (AnSCPU) (A0J2H) (A2CCPUC)	A1SJ71UC24-R2 A1SJ71C24-R2 A1SJ71UC24-PRF A1SJ71C24-PRF A1SCPUC24-PRF A1SCPUC24-R2 A2CCPUC24 A2CCPUC24-PRF	GT09-C30R2-9P(3m) or	15m	- (Built into GOT)	ст 27 Ст 23 GS		
			(User)RS232 connection diagram 1)		GT15-RS2-9P	бт 27 6т 23 GS	1 GOT for 1 computer
	A15.J71UC24-R4	RS_422	GT09-C30R4-6C(3m) GT09-C100R4-6C(10m) GT09-C200R4-6C(20m) GT09-C300R4-6C(30m)	500m	- (Built into GOT)	бт 27 6т 23 GS	link module
	A1SJ71C24-R4		or User RS422 connection diagram 1)	00011	GT15-RS4-9S	бт 27 3 GS GS	

*1 For the system configuration on the computer link module side, refer to the following manual.

Computer Link Module (Com. link func./Print. func.) User's Manual

7.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

7.3.1 RS-232 cable

Connection diagram



(2) RS232 connection diagram 2) PLC side connector D-sub 25-pin



Precautions when preparing a cable

(1) Cable length

The length of the RS-232 cable must be 15m or less.

(2) GOT side connector

For the GOT side connector, refer to the following.

1.4.1 GOT connector specifications

7.3.2 RS-422 cable

Connection diagram

(1) RS422 connection diagram 1)



Precautions when preparing a cable

(1) Cable length

The length of the RS-422 cable must be 1200m or less.

(2) GOT side connector
 For the GOT side connector, refer to the following.
 Image: 1.4.1 GOT connector specifications

Connecting terminating resistors

(1) GOT side

Set the terminating resistor setting switch to "Disable". For the procedure to set the terminating resistor, refer to the following.

1.4.3 Terminating resistors of GOT

(2) Serial communication module or computer link module side

Connect the terminating resistors $(330 \Omega \ 1/4W \ (orange/orange/brown/\Box))$ on the serial communication module or computer link module side. For details, refer to the following manual.

User's Manual for the serial communication module or computer link module

- (a) Other than A2CCPUC24(-PRF) Connect the terminating resistors supplied with the module across RDA and RDB.
- (b) A2CCPUC24(-PRF) Set TXD and RXD on the terminating resistor setting pin to "A".

7.4 GOT Side Settings

7.4.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.



- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.

3. Set the following items.

- Manufacturer: Mitsubishi
- Controller Type: Set according to the Controller Type to be connected.
- · I/F: Interface to be used
- Driver: Set either of the following according to the Controller Type to be connected.
 - Q/L/QnA/A CPU, QJ71C24, LJ71C24
 - AJ71QC24, MELDAS C6*
 - AJ71C24/UC24
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

7.4.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

7.4.2 Communication detail settings

Make the settings according to the usage environment.

(1) A/QnA/L/Q CPU, LJ71C24, QJ71C24

Property	Value
Transmission Speed(BPS)	115200
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0
Format	1
Monitor Speed	High(Normal)

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps) When the setting exceeds the limit of the connected equipment, communication is performed at the fastest transmission speed supported by the connected equipment.	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)
Format ^{*3}	Select the communication format. (Default: 1)	1, 2
Monitor Speed (GT16 only)	Set the monitor speed of the GOT. This setting is not valid in all systems. (Default: Normal)	High (Normal) ^{*1} Middle Low ^{*2}

- *1 This is effective when collecting a large data on other than the monitor screen (logging, recipe function, etc.). However, when connecting to Q00J/Q00/Q01CPU, the sequence scan time may be influenced. If you want to avoid the influence on the sequence scan time, do not set [@@@@(??)]. (High performance is hardly affected)
- *2 Set this item if you want to avoid the influence on the sequence scan time further than the [@@@] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.
- *3 Refer to the following POINT.

POINT,

Setting [Format]

This setting is required for replacement of F900 series with GOT2000 series.

 To change the communication settings of the serial communication module which is connected to F900, set as follows.

The value of Transmission Speed can be set to 115200bps.

(a) [Intelligent function module switch setting] of PLC

Switch No.	CH1 side	CH2 side
Switch 1	0000н	-
Switch 2	0000н	-
Switch 3	-	0000н
Switch 4	-	0000н
Switch 5	0000н	0000н

7.5 PLC Side Setting

(b) GOT communication settings



(2) To maintain the communication settings of the serial communication module which is connected to F900, set the communication setting of the GOT as follows.

The value of Transmission Speed remains 38400bps.

Format	Transmission Speed
2	38400bps

(2) AJ71QC24, MELDAS C6*

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd (fixed)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

(3) AJ71C24/UC24

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd (fixed)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 (ms)

POINT.

 Communication interface setting by the Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

- GOT2000 Series User's Manual (Utility)
- (2) Precedence in communication settings When settings are made by GT Designer3 or the Utility, the latest setting is effective.



Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller. For example, faulty station that has communication timeout can be cut from the system.



For details of the setting contents of GOT internal device, refer to the following manual.

7.5 PLC Side Setting

The GOT operates under the following transmission specifications when it is connected to a Mitsubishi PLC in the computer link connection.

Transmission specifications	Setting
Data bit	8bits
Parity bit	Yes (Odd)
Stop bit	1bit
Sum check	Yes
Transmission speed (Baud rate)	Set the same transmission speed on both the GOT and the PLC.

The PLC side settings (the serial communication module, computer link module) are explained in Section 7.5.1 to Section 7.5.3.

Model			
	QJ71C24N, QJ71C24		
Serial communication module (Q Series)	QJ71C24N-R2, QJ71C24-R2	7.5.1	
	QJ71C24N-R4		
Modem interface module	QJ71CMO, QJ71CMON	7.5.1	
Serial communication module (L Series)	LJ71C24, LJ71C24-R2	7.5.1	
	AJ71QC24N, AJ71QC24		
	AJ71QC24N-R2, AJ71QC24-R2	752	
Serial communication module	AJ71QC24N-R4, AJ71QC24-R4		
(QnA Series)	A1SJ71QC24N1, A1SJ71QC24N, A1SJ71QC24		
	A1SJ71QC24N1-R2, A1SJ71QC24N-R2, A1SJ71QC24-R2		
	AJ71UC24	7.5.3	
	A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF	7.5.3	
Computer link module	A1SJ71UC24-R4, A1SJ71C24-R4	7.5.3	
	A1SCPUC24-R2	7.5.3	
	A2CCPUC24, A2CCPUC24-PRF	7.5.3	

7.5.1 Connecting serial communication module (Q, L Series)

POI	NT	

- Serial communication module (Q, L Series) For details of the serial communication module (Q, L Series), refer to the following manual.
 - Q Corresponding Serial Communication Module User's Manual (Basic)
 - MELSEC-L Serial Communication Module User's Manual (Basic)
- (2) Modem interface module For details of the modem interface module, refer to the following manual.
- Modem Interface Module User's Manual

[Intelligent function module switch setting] on GX Developer

[The intelligent function module switch setting] on GX Developer is not necessary. (When no [intelligent function module switch setting] is made, the module runs in the GX Developer connection mode.) A module can be also connected to a GOT by making the following [intelligent function module switch setting] on GX Developer.

(1) When connecting to the CH1 side

Switch setting for I/O and intelligent function module							
				Input format	HEX.		
Slot	Туре	Model nar	ne Switch 1	Switch 2 Switch 3	Switch 4 Switch 5 🔺		
1 00×-00	"LL ntelli	0.171C24(-B2)	0000	nnnn	0000		
	I	Bit					
Switch No.	Positi on	Specifi ed value	Description			Set value ^{*3}	
	b0	OFF		Operation setting			
	b1	OFF		Data Bit			
	b2	OFF	CH1 transmiss ion settings ^{*1}	Parity Bit			
	b3	OFF		Even/Odd parity			
	b4	OFF		Stop bit	(Operates		
Switch 1	b5	OFF		transmiss ion settings ^{*1}	Sum check code	according to the GOT side	0000н
	b6	OFF		Write during RUN	specificatio ns.)		
	b7	OFF		Setting modifica- tions			
	b8 to b15	_	CH1 transmission speed setting ^{*2}				
Switch 2			CH1 Communication protocol setting		GX Developer connection	0000н	
Switch 5			Station number setting		0th station	0000н	

(2) When connecting to the CH2 side

Switch setting for I/O and intelligent function module							
Input format HEX.							
Slot Type Model name Switch 1 Switch 2 Switch 3 Switch 4 Switch 5 • 0 PLC PLC PLC 0 7000 0000							
	E	Bit					
Switch No.	Positi on	Specifi ed value		Descriptior	1	Set value ^{*3}	
	b0	OFF		Operation setting			
	b1	OFF	- CH2 transmiss ion settings ^{*1}	Data bit	(Operates according to the GOT side specificatio ns.)	0000н	
	b2	OFF		Parity bit			
	b3	OFF		Even/odd parity			
	b4	OFF		Stop bit			
Switch 3	b5	OFF		Sum check code			
	b6	OFF		Write during RUN			
	b7	OFF		Setting modifica- tions			
	b8 to b15	_	CH2 transi speed sett	mission ing ^{*2}			
Switch 4	-	_	CH2 Communication protocol setting GX Developer connection 0000H			0000н	
Switch 5	-	_	Station nur	nber setting	0th station	0000н	
*1 The module operates under the following transmission							

1 The module operates under the following transmission specifications.

Transmission specifications	Setting details
Operation setting	Independent
Data bit	8bits
Parity bit	Yes
Even/odd parity	Odd
Stop bit	1bit
Sum check code	Yes

*2 The serial communication module operates at the transmission speed set on the GOT.

*3 When the value of switch setting is other than "0", the setting of [Format] and [Transmission Speed] on the GOT side are required to be changed.

7.4.2 Communication detail settings

POINT.

- When the [intelligent function module switch setting] has been set After writing PLC parameters to the PLC CPU, turn the PLC CPU OFF then back ON again, or reset the PLC CPU.
- (2) Connection of multiple GOTs To some serial communication module models, two GOTs can be connected using both CH1 and CH2.

Model	Connection of 2 GOTs			
Widden	Function version A	Function version B		
QJ71C24(-R2)	Δ	0		
QJ71C24N(-R2/R4)	-	0		
LJ71C24(-R2)	0	-		

 \bigcirc : 2 GOTs connectable, \triangle : 1 GOT connectable, -: Not applicable

(3) When connecting to the modem interface module When the modem interface module is connected, only CH2 can be used.

7.5.2 Connecting serial communication module (QnA Series)

POINT,

Serial communication module (QnA Series) For details of the serial communication module (QnA Series), refer to the following manual.

Serial Communication Module User's Manual (Modem Function Additional Version)

Switch setting on serial communication module

Set the Station number switches, the Mode setting switch for the channel used for GOT connection, and the Transmission specifications switches.

AJ71QC24N, AJ71QC24N-R2, AJ71QC24N-R4, AJ71QC24, AJ71QC24-R2, AJ71QC24-R4 A1SJ71QC24N1, A1SJ71QC24N1-R2 A1SJ71QC24N, A1SJ71QC24N-R2, A1SJ71QC24, A1SJ71QC24-R2





sw

(1) Mode setting switch

*1

Mode setting switch ^{*1}	Description	Set value
CH	Dedicated protocol (Format 5) (Binary mode)	5

The mode switch in the figure is for the AJ71QC24 (N) (-R2/ R4).

POINT,

When connecting a GOT to CH2

Set the CH1 side mode switch to any other than "0" (interlocked operation).



(2) Transmission specifications setting switch



COMPUTER LINK CONNECTION

 The following shows the layout of switches in the case of the following hardware versions for the module.
 Switch settings and switch ON/OFF directions are the same.



Target unit	Hardware version
A1SJ71QC24	Version E hardware or earlier
A1SJ71QC24-R2	Version D hardware or earlier
A1SJ71QC24N, A1SJ71QC24N-R2	Version A hardware

 (a) Transmission speed setting (SW09 to SW12) Set the transmission speed (SW09 to SW12) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Sotting	Transmission speed*1*2*3						
Switch	4800 bps	9600 bps	19200 bps	38400 bps ^{*4}	57600 bps ^{*4}	115200 bps ^{*4}	
SW09	OFF	ON	OFF	ON	OFF	ON	
SW10	OFF	OFF	ON	ON	ON	ON	
SW11	ON	ON	ON	ON	OFF	OFF	
SW12	OFF	OFF	OFF	OFF	ON	ON	

- *1 Only transmission speeds available on the GOT side are shown.
- *2 When the software version of AJ71QC24 (-R2/R4) and A1SJ71QC24 (-R2) is "L" or earlier, and when 2 devices are connected to the two interfaces individually, make the setting so that the total transmission speed of the two interfaces is within 19200bps.

When the total transmission speed of the two interfaces is within 19200bps, a controller other than GOT can be connected to the computer link module.

When only one device is connected to either of the interfaces, a maximum transmission speed of 19200bps can be set to the one where the device is connected.In this instance, set SW09 to SW12 to "OFF" on the other side.

When 3 devices are connected to the two interfaces *3 individually in the case of AJ71QC24N(-R2/R4). A1SJ71QC24N(-R2), and A1SJ71QC24N1(-R2), make the setting so that the total transmission speed of the two interfaces is within 115200bps (within 230400bps in the case of A1SJ71QC24N1(-R2)). When the total transmission speed of the two interfaces is within 115200bps (within 230400bps in the case of A1SJ71QC24N1(-R2)), a controller other than GOT can be connected to the computer link module. When only one device is connected to either of the interfaces, a maximum transmission speed of 115200bps can be set to the one where the device is connected. In this instance, set SW09 to SW12 to "OFF" on the other side. This can be set only in the case of AJ71QC24N (-R2/R4), *4 A1SJ71QC24N (-R2) or A1SJ71QC24N1 (-R2).

(3) Station number switch (for both CH1 and CH2)

Station number switch ^{*5}		ch ^{*5}	Contents	Set value
$\times 10$	$\times 1$	STATION No.	Set the station number of the serial communication module to which an access is made from the GOT.	0

*5 The station number switch in the figure is for the AJ71QC24 (N) (-R2/R4).

POINT,

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

7.5.3 Connecting computer link module

POINT,

Computer link module

For details of the computer link module, refer to the following manual.

Computer Link Module (Com. link func./Print. func.) User's Manual

Switch setting on the computer link module Set the Mode setting switch, the Transmission specifications switches and the Station number setting switches.





When the cover is open



(1) Mode setting switch

Mode setting switch	Conte	Set value	
00000000000000000000000000000000000000	Dedicated	RS-232 connection	1
	protocol type 1	RS-422 connection	5

(2) Transmission specifications switch

(a) AJ71UC24

Transmission specifications switch		Descriptio	Description		
		014/44	Main shares I a diin a	RS-232 connection	OFF
	50011	Main channel setting	RS-422 connection	ON	
	→ON	SW12	Data bit setting	8bits	ON
SW11 Image: SW12 Image: SW12 Image: SW13 Image: SW13 Image: SW14 Image: SW15 Image: SW15	SW13		(Consistent	See	
	SW14	Transmission speed setting	with the GOT side	descripti ons	
	SW15		specifications)	below.	
SW16		SW16	Parity bit setting	Set	ON
SW17 SW18 SW18		SW17	Even/odd parity setting	Odd	OFF
014/04	→ON	SW18	Stop bit setting	1bit	OFF
SW21 SW22		SW21	Sum check setting	Set	ON
SW23 SW24	SW22	Write during RUN enabled/disabled setting	Enabled	ON	
		SW23	Computer link/multi-drop selection	Computer link	ON
		SW24	Master station/Local station setting	(Setting ignored)	OFF

• Transmission speed setting (SW13 to SW15) Set the transmission speed (SW13 to SW15) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed ^{*1}				
Octaing Switch	4800bps	9600bps	19200bps		
SW13	OFF	ON	OFF		
SW14	OFF	OFF	ON		
SW15	ON	ON	ON		

*1 Only transmission speeds available on the GOT side are shown.

(b) A1SJ71UC24-R2, A1SJ71UC24-PRF, A1SJ71C24-R2, A1SJ71C24-PRF

Transmission specifications switch	Setting switch	Description		Set value
	SW03	Unused	-	OFF
SW ON← 03	SW04	Write during RUN enabled/disabled setting	Enabled	ON
04 ■ ON ← 05 ■ 07 ■ 08 ■ 09 ■ 10 ■ 11 ■ 12 ■	SW05	Transmission speed setting	(Consistent	See
	SW06		with the GOT side	descripti ons
	SW07		specifications)	below.
	SW08	Data bit setting	8bits	ON
	SW09	Parity bit setting	Set	ON
	SW10	Even/odd parity setting	Odd	OFF
	SW11	Stop bit setting	1bit	OFF
	SW12	Sum check setting	Set	ON

• Transmission speed setting (SW05 to SW07) Set the transmission speed (SW05 to SW07) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed ^{*1}				
Cotting ownon	4800bps	9600bps	19200bps		
SW05	OFF	ON	OFF		
SW06	OFF	OFF	ON		
SW07	ON	ON	ON		

*1 Only transmission speeds available on the GOT side are shown.

(c) A1SJ71UC24-R4, A1SJ71C24-R4

Transmission specifications switch	Setting switch	Descriptio	n	Set value
	SW01	Master station/Local station setting	(Setting ignored)	OFF
SW ON←	SW02	Computer link/multi-drop selection	Computer link	ON
01	SW03	Unused	_	OFF
02 — 03 — 04 —	SW04	Write during RUN enabled/disabled setting	Enabled	ON
ON←	SW05		(Consistent	See
06	SW06	Transmission speed setting	with the GOT side	descripti ons
07	SW07	_	specifications)	below.
09	SW08	Data bit setting	8bits	ON
10	SW09	Parity bit setting	Set	ON
12 🗖	SW10	Even/odd parity setting	Odd	OFF
	SW11	Stop bit setting	1bit	OFF
	SW12	Sum check setting	Set	ON

• Transmission speed setting (SW05 to SW07) Set the transmission speed (SW05 to SW07) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed ^{*1}					
Octang Switch	4800bps	9600bps	19200bps			
SW05	OFF	ON	OFF			
SW06	OFF	OFF	ON			
SW07	ON	ON	ON			

*1 Only transmission speeds available on the GOT side are shown.

(d) A1SCPUC24-R2

Transmission specifications switch	Setting switch	Description		Set value
	1	Write during RUN enabled/ disabled setting	Enabled	ON
ON← → ■ 2	2		(Consistent	
	3	Transmission speed setting	GOT side specification s)	description
3 🔳	4			s below.
5 🔳	5	Data bit setting	8bits	ON
7	6	Parity bit setting	Set	ON
9	7	Even/odd parity setting	Odd	OFF
	8	Stop bit setting	1bit	OFF
	9	Sum check setting	Set	ON

• Transmission speed setting (2 to 4) Set the transmission speed (2 to 4) as follows. The transmission speed setting must be consistent

with that of the GOT side.

Setting switch	Ti	ransmission speed	*2
Octang Switch	4800bps	9600bps	19200bps
2	OFF	ON	OFF
3	OFF	OFF	ON
4	ON	ON	ON

*2 Only transmission speeds available on the GOT side are shown.

(e) A2CCPUC24, A2CCPUC24-PRF

Transmission specifications switch	Setting switch	Descripti	on	Set value
	SW11	Transmission speed setting	(Consistent with the GOT side specifications)	See descriptio ns below.
	SW12			
	SW13			
SW	SW14	Data bit setting	8bits	ON
11 — 12 —	SW15	Parity bit setting	Set	ON
13 14 15 10 10 10 10 10 10 10 10 10 10	SW16	Even/odd parity setting	Odd	OFF
	SW17 Stop bit setting 1bit	1bit	OFF	
	SW18	Sum check setting	Set	ON
20 8 💻	SW19	Main channel setting	RS-232	OFF
	SW20	Write during RUN enabled/ disabled setting	Enabled	ON

[•] Transmission speed setting (SW11 to SW13) Set the transmission speed (SW11 to SW13) as follows.

The transmission speed setting must be consistent with that of the GOT side.

Setting switch	Transmission speed ^{*1}					
Octaing Switch	4800bps	9600bps	19200bps			
SW11	OFF	ON	OFF			
SW12	OFF	OFF	ON			
SW13	ON	ON	ON			

*1 Only transmission speeds available on the GOT side are shown.

(3) Station number setting switch

Station number switch ^{*2}	Description	Set value
STATION NO. $\begin{array}{c} & & & \\ \end{array} \right) \times 10$	Set the station number of the computer link module to which an access is made from the GOT.	0

*2 The station number setting switch in the figure is for the A1SJ71UC24-R4.

POINT,

When the switch setting has been changed Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

7.6 Precautions





8

BUS CONNECTION

8.1	Connectable Model List 8 - 2
8.2	System Configuration 8 - 7
8.3	GOT Side Settings 8 - 32
8.4	Precautions

8

8. BUS CONNECTION

8.1 Connectable Model List

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	Q00JCPU ^{*1}				
	Q00CPU ^{*2}				
	Q01CPU ^{*2}				
	Q02CPU*2				
	Q02HCPU*2			GT GT CS	
	Q06HCPU ^{*2}	0	Bus connection		
	Q12HCPU*2		200 00111001011	21 23 33	0.2.1 بوا
	Q25HCPU ^{*2}				
	Q02PHCPU				
	Q06PHCPU				
	Q12PHCPU				
	Q25PHCPU				
	Q12PRHCPU (Main base)	0			
	Q25PRHCPU (Main base)		-		-
	Q12FRHCPU (Extension base)				
					<u> </u>
	Q01UCPU				
MELSEC-Q	Q02UCPU				
(Q mode) *	Q03UDCPU				
	Q04UDHCPU	0			
	Q06UDHCPU				
	Q10UDHCPU				
	Q13UDHCPU				
	Q20UDHCPU				
	Q26UDHCPU				
	Q03UDECPU		Rus connection	GT GT CS	
			Bus connection	27 23 65	8.2.1
	Q26UDEHCPU				
	Q50UDEHCPU				
	Q100UDEHCPU				
	Q03UDVCPU				
	Q04UDVCPU				
	Q06UDVCPU				
	Q13UDVCPU				
	Q26UDVCPU				ļ
C Controller	Q12DCCPU-V ^{*3}	-	D	GT GT GT	
module	Q24DHCCPU-V	0	Bus connection	27 23 ^{GS}	8.2.1
	Q24DHCCPU-LS				
MELSEC-QS	QS001CPU	0	-		-
		-			

(Continued to next page)

*1 When using the bus extension connector box, attach it to the extension base unit. (Connecting it to the main base unit is not allowed.)

*2 For the multiple CPU system configuration, use CPU function version B or later.

*3 Use a module with the upper five digits later than 12042.

*4 When a slim base is used, a bus connection cannot be established.

Series	Model name	Clock	Communication type	Connectable model	Refer to										
	L02CPU														
	L06CPU														
	L26CPU														
	L26CPU-BT														
MELSECI	L02CPU-P	<u> </u>		GT_GT_CC											
WILLOLO-L	L06CPU-P	0	-	27 23 33	-										
	L26CPU-P														
	L26CPU-PBT														
	L02SCPU														
	L02SCPU-P														
	Q02CPU-A			· · · · · · · · · · · · · · · · · · ·											
MELSEC-Q	Q02HCPU-A	0	-	GT GT GS	_										
(A mode)	Q06HCPU-A	Ŭ		27 23 00											
	Q2ACPU				<u> </u>										
	Q2ACPU-S1														
MELSEC-QnA		~	Due connection	GT GT CO											
(QnACPU)		0	Bus connection	27 23 ^{GS}	8.2.2 کچر ا										
		-													
	Q4ARCPU '														
	Q2ASCPU														
MELSEC-QnA	Q2ASCPU-S1	0	Bus connection	GT GT GS	<u>∼</u> ⇒ 0.22										
(QnASCPU)	Q2ASHCPU	U	Bus connection	27 23 33	0.2.3 جي										
	Q2ASHCPU-S1														
	A2UCPU														
	A2UCPU-S1														
	A3UCPU														
	A4UCPU		Duranting												
	A2ACPU	-													
	A2ACPUP21			GT GT CO											
	A2ACPUR21														
	A2ACPU-S1														
	A2ACPUP21-S1														
	A2ACPUR21-S1				8.2.2										
		-													
		_													
MELSEC-A		_													
(AnCPU)	ASACEURZI	0	Bus connection	27 23 ^{GS}		Z									
		_				<u>0</u>									
		_				5									
	AINCPUR21					Ш									
	A2NCPU	_										Z			
	A2NCPUP21													Z	
	A2NCPUR21														8
	A2NCPU-S1	_													
	A2NCPUP21-S1						Š								
	A2NCPUR21-S1														
	A3NCPU														
	A3NCPUP21														
	A3NCPUR21														
	A2USCPU														
	A2USCPU-S1														
	A2USHCPU-S1														
	A1SCPU														
	A1SCPUC24-R2														
	A1SHCPU														
MELSEC-A	A2SCPU		Rus connection	GT GT CS											
(AnSCPU)	A2SCPU-S1		Bus connection	27 23 ^{GS}	8.2.3 سچ										
	A2SHCPU														
	A2SHCPU-S1	1			11										
		-													
	A15JUPU -	-													
	A1SJCPU-S3 ²	1													
	A1SJHCPU*2														
	A0J2HCPU			GT GT											
MELSEC-A	A0J2HCPUP21	×	Bus connection	27 23 ^{GS}	8.2.4										
		L		(Continued)	II to poyt page)										

(Continued to next page)

*1 *2 Bus-connect the GOT on the last redundant extension base A68RB (version B or later) for the Q4ARCPU redundant system. When an extension base unit is connected, a bus connection cannot be established.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	A0J2HCPUR21		Due connection	GT GT GT	
	A0J2HCPU-DC24	×	Bus connection	27 23 ^{GS}	≓ 8.2.4
	A2CCPU		-	GT GT	
	A2CCPUP21				
MELSEC-A	A2CCPUR21	0			
	A2CCPUC24			27 23 GS	-
	A1EXCPU				
	0172CPU*1*2				
	01720PU ^{*1*2}				
	Q173CFU				
	Q172CFUN				
	Q172DCPU				
Motion	Q173DCPU	0	Bus connection		₹ 8.2.1
controller	Q172DCPU-S1				
CPU (O Series)	Q173DCPU-S1				
(Q Series)	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU ^{*3}				
	Q170MSCPU*5				
	Q170MSCPU-S1*5				
	MR-MQ100	0	_	GT GT GS	-
		\sim		27 23 00	
	A273UCPU		Bus connection		
-		~		27 CS	
	A273UCPU	0			8.2.5 تح
	A373UCPU-S3				
	A171SCPU ^{*4}				
Motion	A171SCPU-S3 ^{*4}				
controller	A171SCPU-S3N*4				
CPU	A1718UCDU ^{*4}				
(A Series)	A1715HCPU	~	Pue connection	GT GT CC	
	A171SHCPUN	0	Bus connection	27 23 ^{GS}	8.2.6 تح
	A1/2SHCPU *				
	A172SHCPUN ⁴				
	A173UHCPU ^{^4}				
	A173UHCPU-S1*4				
MELSEC-WS	WS0-CPU0	×	-	GT GT GS	-
	WS0-CPU1	~		27 23 00	
MELSECNET/H	QJ72LP25-25			GT GT	
Remote I/O	QJ72LP25G	×	-	27 23 GS	-
	QJ72BR15				
Field Network	LJ72GF15-T2	×	-	GT GT GS	-
head module		~		27 23 83	
CC-Link IE					1
Field Network	NZ2GF-ETB9	×	-	GT GT GS	_
Ethernet				27 23 00	
				07 07	
CNC C70	Q173NCCPU	0	Bus connection	27 23 GS	₹ 8.2.1
	CRnQ-700 (Q172DRCPU)				
Robot controller	CR750-Q (Q172DRCPU)	0	Bus connection	GT GT GS GS	8.2.1
	CR751-Q (Q172DRCPU)				
	*1 When using S'	√13, SV2	2, or SV43, use the m	otion controller CPU on which any of the following main OS version	is installed.

• SW6RN-SV13Q□: 00E or later

SW6RN-SV22Q□: 00E or later

SWGRN-SV22Q∐: 00E or later
 SWGRN-SV43Q∐: 00B or later
 SWGRN-SV43Q∐: 00B or later
 Use main modules with the following product numbers.
 Q172CPU: Product number K****** or later
 Q173CPU: Product number J******* or later
 Connect Q170MCPU to QC30B directly, or to the extension base unit (Q52B/Q55B).
 When using an extension base, use the A168.
 Connect Q170MCPU to QC30P directly extends the extension base unit (Q52B/Q55B).

*5 Connect Q170MSCPU to QC30B directly, or to the extension base unit (Q5 B/Q6 B).

8. BUS CONNECTION

8.1 Connectable Model List



List of the main base or extension base available for the GOT bus connection

Main/Extension base	Model	GOT bus connection
Main base	Q3_B	0
	Q3⊡DB (Multiple CPU high speed main base unit)	0
	Q3∐BL (Large type base unit)	0
	Q3 SB (Slim type main base unit)	×
	Q38RB (Redundant power main base unit)	×
Extension base	Q5 B (Model requiring no power supply module)	0
	Q6⊟B (Model requiring a power supply module)	0
	QA1S6⊟B (Small type QA base unit)	0
	Q5 BL (Large type base unit, Model requiring no power supply module)	×
	Q6 BL (Large type base unit, Model requiring a power supply module)	0
	QA6⊟B (Large type QA base unit)	×
	QA6ADP (QA conversion adapter module) + A5 B/A6 B	×
	Q68RB (Redundant power extension base unit)	×
	Q65WRB (Redundant extension base unit)	×

• The GOT bus connection is available × The GOT bus connection is not available

8



8.2 System Configuration

POINT,

When "CONTROL BUS ERR" or "UNIT VERIFY ERR" occurs

It can be considered that noise due to a long bus connection cable causes a malfunction. Check whether a signal line such as bus cable is placed near the equipment to operate. If the line is close to the equipment, make a distance of 100mm or more from the equipment.

8.2.1 Connecting to QCPU



*1 For the extension cables, refer to the MELSEC-Q catalog (L(NA)08032).

*2 When installing the GOT 13.2m or more away from the main base unit, the bus extension connector box is required.

Attach the bus extension connector box to the extension connector of the base unit. Also, connect the connection cable to the bus extension connector box. When using no extension base unit: Attach it to the main base unit.



When using the extension base unit: Attach it to the extension base unit on the last stage.
*3 When using Q00JCPU or Q00UJCPU, attach the bus extension connector to the extension base unit. (Connecting it to the main base unit is not allowed)

*4 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function d

When 2 to 5 GOTs are connected

Main base unit	Bus extension connector box	Extension base unit	1st GOT	Intermediary GOT	GOT (Terminating station)
Extens	sion cable	Connection c	able 1)	tion cable 2) Connect	ction cable 3)

		PLC				GOT (1st)		
Main base		Extension	Ext	ension base	Connection cable 1)			
Main base	Bus extension connector box ^{*2}	cable *1	Extension base	Bus extension connector box*2	Connection capie 1)	Option device *6*7	Model	
	-	-	-	-	GT15-QC06B(0.6m) GT15-QC12B(1.2m)	GT15-75QBUS2L GT15-QBUS2	ат 27 23 GS	
Main base	-	Extension cable (13.2m or less)	Extension base	-	GT15-QC30B(3m) GT15-QC50B(5m) GT15-QC100B(10m)	GT15-75QBUS2L GT15-QBUS2	ст 27 23 GS	
	A9GT-QCNB ^{*3}	-	-	-	GT15-QC06B(0.6m) GT15-QC12B(1.2m) GT15-QC30B(3m) GT15-QC50B(5m) GT15-QC100B(10m)	GT15-75QBUS2L GT15-QBUS2	ат 27 23 GS	
	-	Extension cable (13.2m or less)	Extension base	A9GT-QCNB	GT15-QC150BS(15m) GT15-QC200BS(20m) GT15-QC250BS(25m) GT15-QC300BS(30m) GT15-QC350BS(35m)	GT15-75QBUS2L GT15-QBUS2	бт 27 6т 23 GS	

*1 For the extension cables, refer to the MELSEC-Q catalog (L(NA)08032).

*2 When installing the GOT 13.2m or more away from the main base unit, the bus extension connector box is required.

Attach the bus extension connector box to the extension connector of the base unit. When using no extension base unit: Attach it to the main base unit.



When using the extension base unit: Attach it to the extension base unit on the last stage.

Also, connect the connection cable to the bus extension connector box. Set the bus extension connector box to the same Stage No. as that of the GOT unit.

For details on the Stage No. setting, refer to the following.

8.3.1 Setting communication interface (Communication settings)

*3 When using Q00JCPU or Q00UJCPU, attach the bus extension connector to the extension base unit. (Connecting it to the main base unit is not allowed)



	GOT (intermediary) ^{*4*5}			GOT (terminal)	*4*5	
Connection cable 2)	Option device *6*7	Model	Connection cable 3)	Option device *6*7	Model	Max. distance
	GT15-75QBUS2L, GT15-QBUS2	ат 27 23 GS		GT15-75QBUSL, GT15-75QBUS2L, GT15-QBUS, GT15-QBUS2	ат 27 23 GS	Between main base and GOT (1st): 13.2m Between main base and GOT (terminal): 37m
GT15-QC06B(0.6m) GT15-QC12B(1.2m) GT15-QC30B(3m) GT15-QC50B(5m) GT15-QC100B(10m) GT15-QC150BS(15m)	GT15-75QBUS2L, GT15-QBUS2	ат 27 ат 23 GS	GT15-QC06B(0.6m) GT15-QC12B(1.2m) GT15-QC30B(3m) GT15-QC50B(5m) GT15-QC100B(10m) GT15-QC150BS(15m)	GT15-75QBUSL, GT15-75QBUS2L, GT15-QBUS, GT15-QBUS2	ат 27 6т 23 GS	Between main base and GOT (1st): 13.2m (Including the extension cable length) Between main base and GOT (terminal): 37m (Including the extension cable length)
GT15-QC200BS(20m) GT15-QC250BS(25m) GT15-QC300BS(30m) GT15-QC350BS(35m)	GT15-75QBUS2L, GT15-QBUS2	ат 27 23 GS	GT15-QC200BS(20m) GT15-QC250BS(25m) GT15-QC300BS(30m) GT15-QC350BS(35m)	GT15-75QBUSL, GT15-75QBUS2L, GT15-QBUS, GT15-QBUS2	ат 27 23 GS	Between main base and GOT (terminal): 37m
	GT15-75QBUS2L, GT15-QBUS2	ат 27 23 GS		GT15-75QBUSL, GT15-75QBUS2L, GT15-QBUS, GT15-QBUS2	бт 27 23 GS	Between main base and GOT (terminal): 37m (Including the extension cable length)

*4 When connecting 3 or more GOTs, the overall cable length is restricted.

8.4.12 When connecting multiple GOTs

*5 The connection of multiple GOTs

When connecting to multiple GOTs withGT27, GT 16, GT15 and GT11 mixed, use GT11 as a terminal. *6 The bus connection unit

GT15-75QBUSL, GT15-QBUS: Used for a terminal GOT. (Not available for an intermediary GOT) GT15-75QBUS2L, GT15-QBUS2: Used for an intermediary GOT. (Can be used for a terminal GOT)

*7 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function



8.2.2 Connecting to QnACPU or AnCPU



Between main base and

(Including the extension

Between main base and

Between main base and

conversion box: 6.6m (Including the extension cable length)

GOT: 6.6m

cable length)

GOT: 36.6m

bus connector

8

*1 For the extension cables, refer to MELSEC-A/QnA catalog (L(NA)08024).

A7GT

-CNB

*2 When installing the GOT 6.6m or more away from the main base unit, the bus connector conversion box is required.

GT15-C12NB(1.2m)

GT15-C30NB(3m)

GT15-C50NB(5m)

GT15-C100EXSS-1(10m)

GT15-C200EXSS-1(20m)

GT15-C300EXSS-1(30m)

*3 When using GT15-C EXSS-1, follow the precautions below.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

Extens

ion

base

GT15-AC06B(0.6m)

GT15-AC12B(1.2m)

GT15-AC30B(3m)

GT15-AC50B(5m)

Main

base

Extension

cable

*4 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

GT15-75ABUSL

GT15-75ABUS2L

GT15-ABUS

GT15-ABUS2

GT15-75ABUSL

GT15-75ABUS2L

GT15-ABUS

GT15-ABUS2

^{ст} 27

^{GT} 27

■ When 2 to 3 GOTs are connected



		PLC	*5			GOT (1st)*	3	
Main base	Extension cable ^{*1}	Extension base	Connection cable 1)	Bus connector conversion box ^{*2}	Connection cable 2)	Option device *6*7	Model	
Main base	-	-	_	_	GT15-C12NB(1.2m) GT15-C30NB(3m)	GT15-75ABUS2L GT		
	Extension cable	Extension base			GT15-C50NB(5m)	GT15-ABUS2	GS	
	-	-	GT15-AC06B(0.6m) GT15-AC12B(1.2m)	A7GT-CNB	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m)	GT15-75ABUS2L	दा 27 दा	
	Extension cable	Extension base	GT15-AC30B(3m) GT15-AC50B(5m)		*4	GT15-ABUS2	GS	
Main base	-	-			GT15-C12NB(1.2m)	GT15-75ABUS2L	бт 27 бт	
	Extension cable	Extension base			GT15-C50NB(5m)	GT15-ABUS2	<u>23</u> GS	

*1 For the extension cables, refer to MELSEC-A/QnA catalog (L(NA)08024).

*2 When installing the GOT 6.6m or more away from the main base unit, the bus connector conversion box is required.

*3 When connecting to multiple GOTs with GT27, GT 16, GT15 and GT11 mixed, use GT11 as a terminal.

*4 When using GT15-C \Box EXSS-1 or GT15-C \Box BS, connect as following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*5 The number of connectable GOTs is restricted according to the CPU type and the number of intelligent function modules.



	GOT (2nd) ^{*3}	3*5		GOT (3rd) [*]	3*5	_	
Connection cable 3)	Option device *6*7	Model	Connection cable 4)	Option device *6*7	Model	Max. distance	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) GT15-C300BS(30m) *4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ет 27 23 GS	-	-	-	Between main base and GOT(1st): 6.6m (Including the extension cable length) Between GOT (1st) and GOT (2nd): 30m Between main base and GOT (2nd): 36.6m (Including the extension cable length)	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ет 27 6т 23 GS	-	-	-	Between main base and bus connector conversion box: 6.6m (Including the extension cable length) Between bus connector conversion box and GOT (2nd): 30m Between main base and GOT (2nd): 36.6m (Including the extension cable length)	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *4	GT15-75ABUS2L GT15-ABUS2	ст 27 ст 23 СS	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *4	GT15-75ABUSL GT15- 75ABUS2L GT15-ABUS GT15-ABUS2	ет 27 ет 23 GS	Between main base and GOT(1st): 6.6m (Including the extension cable length) Between GOT (1st) and GOT (3rd): 30m Between main base and GOT (3rd): 36.6m (Including the extension cable length)	

*6 About the bus connection unit

*7

GT15-75ABUSL, GT15-ABUS: Used for a terminal GOT. (Not available for an intermediary GOT)

GT15-75ABUS2L, GT15-ABUS2: Used for an intermediary GOT. (Can be used for a terminal GOT)

When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used.

Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

8.2.3 Connection to QnASCPU or AnSCPU



*3

bus connector conversion

box: 5m

			PLC			GOT			
Extens ion base	Extension cable *1	Main base	Connection cable 1)	Bus connector conversion box *2	Connection cable 2)	Option device*4	Model	Max. distance	
Extens ion base	Extension cable	on Main base	-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m) GT15-A1SC50B(5m)	GT15-75ABUSL GT15- 75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between extension base and GOT: 6m (Including the extension cable length)	
			Main base	-	-	GT15-C100EXSS- 1(10m) GT15-C200EXSS- 1(20m) GT15-C300EXSS- 1(30m) *3	GT15-75ABUSL GT15- 75ABUS2L GT15-ABUS GT15-ABUS2	ат 27 23 GS	Between extension base and GOT: 36m (Including the extension cable length)
			GT15-A1SC05NB(0.45m) GT15-A1SC07NB(0.7m) GT15-A1SC30NB(3m) GT15-A1SC50NB(5m)	A7GT -CNB	GT15-C100EXSS- 1(10m) GT15-C200EXSS- 1(20m) GT15-C300EXSS- 1(30m) *3	GT15-75ABUSL GT15- 75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between extension base and GOT: 36m Between extension base and bus connector conversion box: 6m (Including the extension cable length)	

For details on the extension cables, refer to the MELSEC-A/QnA catalog (L(NA)8024).

*2 When installing the GOT 30m or more away from the main base unit, the bus connector conversion box is required.

*3 When using GT15-C EXSS-1, connect as the following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*4 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

■ When two GOTs are connected



			PLC ^{*5}		GOT (1st)*				
Extension base	Extension cable ^{*1}	Main base	Connection cable 1)	Bus connector conversion box	Connection cable 2)	Option device *6*7	Model		
-			-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m) GT15-A1SC50B(5m)	GT15-75ABUS2L	ст 27 ст		
	-	Main base	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *4		<u>23</u> GS				
			GT15-A1SC05NB(0.45m) GT15-A1SC07NB(0.7m) GT15-A1SC30NB(3m) GT15-A1SC50NB(5m)	A7GT-CNB ^{*2}	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *4	GT15-75ABUS2L	GT 27 GT		
Extension base		¹ Main base	-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m) GT15-A1SC50B(5m)	GT15-ABUS2	23 GS		
	Extension cable		Main base -		-	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *4	GT15-75ABUS2L	ст 27 ст	
			GT15-A1SC05NB(0.45m) GT15-A1SC07NB(0.7m) GT15-A1SC30NB(3m) GT15-A1SC50NB(5m)	A7GT-CNB ^{*2}	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *4	GT15-ABUS2	<u>23</u> GS		

*1 For the extension cables, refer to MELSEC-A/QnA catalog (L(NA)08024).

*2 When installing the 1st GOT 30m or more away from the main base unit, the bus connector conversion box is required.

*3 When connecting to multiple GOTs with GT27, GT 16, GT15 and GT11 mixed, use GT11 as a terminal.

*4 When using GT15-C EXSS-1 or GT15-C BS, connect as following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*5 The number of connectable GOTs is restricted according to the CPU type and the number of intelligent function modules.

		GOT (2nd) [*]	3*5	
	Connection cable 3)	Option device *6*7	Model	Max. distance
		GT15-75ABUSL	GT 27	Between main base and GOT(1st): 5m
		GT15-75ABUS2L GT15-ABUS	GT 23	Between GOT (1st) and GOT (2nd): 30m
	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) GT15-C300BS(30m)	GT15-ABUS2	GS	Between main base and GOT (2nd): 35m
		GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ат 27 ат 23 GS	Between main base and GOT (2nd): 30m
	*4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS	ст 27 ст 23	Between main base and bus connector conversion box: 5m
				Between bus connector conversion box and GOT (2nd): 30m
		GT15-ABUS2	GS	Between main base and GOT (2nd): 35m
		GT15-75ABUSL	^{G⊺} 27	Between extension base and GOT (1st): 6m (Including the extension cable length)
		GT15-75ABUS2L GT15-ABUS	^{GT} 23	Between GOT (1st) and GOT (2nd): 30m
	GT15-C07BS(0.7m)	GT15-ABUS2	GS	Between extension base and GOT (2nd): 36m (Including the extension cable length)
	GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) GT15-C300BS(30m)	GT15-75ABUSL GT15-75ABUS2L	бт 27 СТ	Between main base and GOT (2nd): 30m
		GT15-ABUS GT15-ABUS2	<u>23</u> GS	Between extension base and GOT (2nd): 36m (Including the extension cable length)
	*4	GT15-75ABUSL	^{GT} 27	Extension base and bus connector conversion box: 6m (Including extension cable length)
		GT15-75ABUS2L GT15-ABUS	21 ^{GT} 23	Between bus connector conversion box and GOT (2nd): 30m
		GT15-ABUS2	GS	Between extension base and GOT (2nd): 36m (Including the extension cable length)

*6 About the bus connection unit

GT15-75ABUSL, GT15-ABUS: Used for a terminal GOT. (Not available for an intermediary GOT) GT15-75ABUS2L, GT15-ABUS2: Used for an intermediary GOT. (Can be used for a terminal GOT) When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. *7

Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

When three GOTs are connected



			PLC ^{*3}			GOT (1st)*		
Extension base	Extension cable ^{*1}	Main base	Connection cable 1)	Bus connector conversion box	Connection cable 2)	Option device *5*6	Model	
-	-	Main base	-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m) GT15-A1SC50B(5m)	GT15-75ABUS2L GT15-ABUS2	ст 27 23 GS	
Extension base	Extension cable	Main base	-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m) GT15-A1SC50B(5m)	GT15-75ABUS2L GT15-ABUS2	ет 27 23 GS	

*1 For the extension cables, refer to MELSEC-A/QnA catalog (L(NA)08024).

*2 The connection of multiple GOTs

When connecting to multiple GOTs with GT27, GT 16, GT15 and GT11 mixed, use GT11 as a terminal.
 *3 The number of connectable GOTs is restricted according to the CPU type and the number of intelligent function modules.



	GOT (2nd) ^{*2*3}			GOT (3rd)*	2*3		
Connection cable 3)	Option device *5*6	Model	Connection cable 4)	Option device *5*6	Model	Max. distance	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *4	GT15-75ABUS2L GT15-ABUS2	ет 27 23 GS	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and GOT(1st): 5m Between GOT (1st) and GOT (3rd): 30m Between main base and GOT (3rd): 35m	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *4	GT15-75ABUS2L GT15-ABUS2	ст 27 23 GS	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 Ст 23 GS	Between extension base and GOT (1st): 6m (Including the extension cable length) Between GOT (1st) and GOT (3rd): 30m Between extension base and GOT (3rd): 36m (Including the extension cable length)	

*4 When using GT15-C \square BS, connect as following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*5 The bus connection unit

GT15-75ABUSL, GT15-ABUS: Used for a terminal GOT. (Not available for an intermediary GOT) GT15-75ABUS2L, GT15-ABUS2: Used for an intermediary GOT. (Can be used for a terminal GOT) When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used.

*6 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

8.2.4 Connection to A0J2HCPU



						1	
Model name	e Connection cable 1) Power supp module		Connection cable 2)	Option device ^{*2}	Model	Max. distance	
A0J2HCPU	A0J2C03(0.3m) A0J2C06(0.55m) A0J2C10(1m) A0J2C20(2m)	A0J2-PW	GT15-J2C10B(1m)	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 33 GS	Between PLC and GOT: 6.6m Between power supply module and GOT: 1m	

*1 The number of connectable GOTs is restricted depending on the number of intelligent function modules mounted to the A0J2HCPU.

8.4.12 When connecting multiple GOTs

*2 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

8.2.5 Connection to motion controller CPU (A273UCPU, A273UHCPU(-S3), A373UCPU(-S3))



*1 When installing the GOT 30m or more away from the main base unit, the bus connector conversion box is required. When using GT15-C EXSS-1, connect as the following precautions.

*2

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*3 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

8

BUS CONNECTION

■ When two GOTs are connected



		PLC [*]	4			GOT (1st)*			
Main base	Extension cable	Extension base	Connection cable 1)	Bus connector conversion box	Connection cable 2)	Option device ^{*5*6}	Model		
Main	Main base -		-	-	GT15-A370C12B-S1(1.2m) GT15-A370C25B-S1(2.5m)	GT15-75ABUS2L	ст 27 Ст 23 GS		
base			GT15- A370C12B(1.2m) GT15- A370C25B(2.5m)	A7GT-CNB ^{*1}	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *3	GT15-ABUS2	ат 27 ат 23 GS		
Main	GT15-A370C12B(1.2m)	Extension	-	-	GT15-C12NB(1.2m) GT15-C30NB(3m) GT15-C50NB(5m)	GT15-75ABUS2L	ст 27 GT GS		
Main base	GT15-A370C25B(2.5m)	GT15-A370C25B(2.5m) base		GT15-AC06B(0.6m) GT15-AC12B(1.2m) GT15-AC30B(3m) GT15-AC50B(5m)	A7GT-CNB ^{*1}	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *3	GT15-ABUS2	ст 27 23 GS	

*1 When installing the 1st GOT 30m or more away from the main base unit, the bus connector conversion box is required.

*2 When connecting to multiple GOTs with GT27, GT 16, GT15 and GT11 mixed, use GT11 as a terminal.

*3 When using GT15-C EXSS-1 or GT15-C BS, connect as following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*4 The number of connectable GOTs is restricted according to the CPU type and the number of intelligent function modules.

	GOT (2nd)*	2*4	
Connection cable 3)	Option device ^{*5*6}	Model	Max. distance
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) GT15-C300BS(30m) *3	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	GT 27 23 GS	Between main base and GOT(1st): 2.5m Between GOT (1st) and GOT (2nd): 30m Between main base and GOT (2nd): 32.5m
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *3	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	GT 27 23 GS	Between main base and bus connector conversion box: 2.5m Between bus connector conversion box and GOT (2nd): 30m Between main base and GOT (2nd): 32.5m
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) GT15-C300BS(30m) *3	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and GOT (1st): 6.6m (Including the extension cable length) Between GOT (1st) and GOT (2nd): 30m Between main base and GOT (2nd): 36.6m (Including the extension cable length)
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *3	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and bus connector conversion box: 6.6m (Including extension cable length) Between bus connector conversion box and GOT (2nd): 30m Between main base and GOT (2nd): 36.6m (Including the extension cable length)

*5 The bus connection unit

GT15-75ABUSL, GT15-ABUS: Used for a terminal GOT. (Not available for an intermediary GOT) GT15-75ABUS2L, GT15-ABUS2: Used for an intermediary GOT. (Can be used for a terminal GOT) When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. *6

Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

■ When 2 to 3 GOTs are connected^{*2}



		PLC ^{*2}				GOT (1st)		
Extension base	Extension cable	Main base	Connection cable 1)	Bus connector conversion box	Connection cable 2)	Option device*4*5	Model	
-	-	Main base	-	-	GT15-A370C12B-S1(1.2m) GT15-A370C25B-S1(2.5m)	GT15-75ABUS2L GT15-ABUS2	ст 27 <u>6т</u> 23 GS	
Extension base	GT15-A370C12B(1.2m) GT15-A370C25B(2.5m)	Main base	-	-	GT15-C12NB(1.2m) GT15-C30NB(3m) GT15-C50NB(5m)	GT15-75ABUS2L GT15-ABUS2	GT 27 GT 23 GS	

*1 The connection of multiple GOTs

*2

When connecting to multiple GOTs with GT 16, GT15 and GT11 mixed, use GT11 as a terminal. The number of connectable GOTs is restricted according to the CPU type and the number of intelligent function modules.



	GOT (2nd)*	2*3		GOT (3rd) ^{*2*3}			
Connection cable 3)	Option device ^{*4*5}	Model	Connection cable 4)	Option device ^{*4*5}	Model	Max. distance	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *3	GT15- 75ABUS2L GT15-ABUS2	ст 27 23 GS	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *3	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and GOT(1st): 2.5m Between GOT (1st) and GOT (3rd): 30m Between main base and GOT (3rd): 32.5m	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *3	GT15- 75ABUS2L GT15-ABUS2	ст 27 Ст 23 GS	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *3	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 6т 23 GS	Between main base and GOT(1st): 6.6m (Including the extension cable length) Between GOT (1st) and GOT (3rd): 30m Between main base and GOT (3rd): 36.6m (Including the extension cable length)	

*3 When using GT15-C BS, connect as following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*4 The bus connection unit

GT15-75ABUSL, GT15-ABUS: Used for a terminal GOT. (Not available for an intermediary GOT) GT15-75ABUS2L, GT15-ABUS2: Used for an intermediary GOT. (Can be used for a terminal GOT) When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used.

*5 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

8.2.6 Connecting to motion controller CPU (A171SCPU(-S3(N)), A171SHCPU(N), A172SHCPU(N), A173UHCPU(-S1))

	When one GOT is connected												
	Main ba	se unit	Extension base unit	Bus extension connector but different cable 1	on ox ox ox ox ox ox ox ox ox ox ox ox ox			Communication driver					
		1	PLC	Γ		GOT1000 Se	eries						
Main base	Extension cable *1	Extensi on base ^{*2}	Connection cable 1)	Bus connector conversion box	Connection cable 2)	Option device ^{*5}	Model	Max. distance					
								-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m)	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and GOT: 3m
Main								-	-	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) GT15-C300EXSS-1(30m) *4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 53 GS	Between main base and GOT: 30m
base			GT15-A1SC05NB(0.45m) GT15-A1SC07NB(0.7m) GT15-A1SC30NB(3m)	A7GT -CNB ^{*3}	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) GT15-C300EXSS-1(30m) *4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ет 27 ет 23 GS	Between main base and GOT: 33m (Including between main base and bus connector conversion box) Between main base and bus connector conversion box: 3m					

		-	PLC	_		GOT1000 Se	ries		
Main base	Extension cable *1	Extensi on base ^{*2}	Connection cable 1)	Bus connector conversion box	Connection cable 2)	Option device ^{*5}	Model	Max. distance	
					GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m)	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ат 27 ^{ат} 23 GS	Between extension base and GOT: 3m (Including the extension cable length)	
Main Extension E	Extensi	- - GT15-A1SC05NB(0.45m)	- - -	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) GT15-C300EXSS-1(30m) *4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	бт 27 ^{GT} 23 GS	Between extension base and GOT: 33m (Including the extension cable length)		
base	cable	base	GT15-A1SC07NB(0.7m) GT15-A1SC30NB(3m)	A7G1 -CNB ^{*3}	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) GT15-C300EXSS-1(30m) *4	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between extension base and GOT: 33m Between extension base and bus connector conversion box: 3m (Including the extension cable length)	

For details on the extension cables, refer to the MELSEC-A/QnA catalog (L(NA)8024).

*2 Use the A168B for the extension base unit.

*3 When installing the GOT 30m or more away from the main base unit, the bus connector conversion box is required.

*4 When using GT15-C EXSS-1, connect as the following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. *5 Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

When two GOTs are connected



			PLC ^{*5}			GOT (1st)*		
Main base	Extension cable ^{*1}	Extension base ^{*2}	Connection cable 1)	Bus connector conversion box	Connection cable 2)	Option device*7*8	Model	
Main base -			-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m)	GT15-75ABUS2L GT15-ABUS2	ат 27 ат 23 GS	
	-		-	-	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *5	GT15-75ABUS2L GT15-ABUS2	ст 27 ^{ст} 23 GS	
			GT15-A1SC05NB(0.45m) GT15-A1SC07NB(0.7m) GT15-A1SC30NB(3m)	A7GT-CNB ^{*3}	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *5	GT15-75ABUS2L GT15-ABUS2	ат 27 ^{ат} 23 GS	
Main base Extension cable			-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m)	GT15-75ABUS2L GT15-ABUS2	ат 27 ат 23 GS	
	Extension cable	sion Extension le base	-	-	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *5	GT15-75ABUS2L GT15-ABUS2	ст 27 ^{GT} 23 GS	
			GT15-A1SC05NB(0.45m) GT15-A1SC07NB(0.7m) GT15-A1SC30NB(3m)	A7GT-CNB ^{*3}	GT15-C100EXSS-1(10m) GT15-C200EXSS-1(20m) *5	GT15-75ABUS2L GT15-ABUS2	бт 27 23 GS	

For the extension cables, refer to MELSEC-A/QnA catalog (L(NA)08024). *1

*2 Use the A168B for the extension base unit.

When installing the 1st GOT 30m or more away from the main base unit, the bus connector conversion box is required. When connecting to multiple GOTs with GT27, GT 16, GT15 and GT11 mixed, use GT11 as a terminal. *3

*4

*5 When using GT15-C EXSS-1 or GT15-C BS, connect as following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*6 The number of connectable GOTs is restricted according to the CPU type and the number of intelligent function modules.

	GOT (2nd)*4*6		4*6	
	Connection cable 3)	Option device*7*8	Model	Max. distance
	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) GT15-C300BS(30m) *5	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and GOT(1st): 3m Between GOT (1st) and GOT (2nd): 30m Between main base and GOT (2nd): 33m
	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *5	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	<mark>ст 27</mark> вт 23 GS	Between main base and GOT (2nd): 30m
		GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 ст 23 GS	Between main base and bus connector conversion box: 3m Between bus connector conversion box and GOT (2nd): 30m Between main base and GOT (2nd): 33m
	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) GT15-C300BS(30m) *5	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and GOT (1st): 3m (Including the extension cable length) Between GOT (1st) and GOT (2nd): 30m Between main base and GOT (2nd): 33m (Including the extension cable length)
	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m)	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ਰਾ 27 ਰਾ 23 GS	Between main base and GOT (2nd): 30m
	GT15-C100BS(10m) GT15-C100BS(10m) GT15-C200BS(20m) *5	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and bus connector conversion box: 3m (Including extension cable length) Between bus connector conversion box and GOT (2nd): 30m Between main base and GOT (2nd): 33m (Including the extension cable length)

*7 The bus connection unit

GT15-75ABUSL, GT15-ABUS: Used for a terminal GOT. (Not available for an intermediary GOT) GT15-75ABUS2L, GT15-ABUS2: Used for an intermediary GOT. (Can be used for a terminal GOT) When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used.

*8

Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

■ When 2 to 3 GOTs are connected^{*4}



			PLC ^{*3}			GOT (1st)*		
Main base	Extension cable ^{*1}	Extension base ^{*2}	Connection cable 1)	Bus connector conversion box	Connection cable 2)	Option device ^{*6*7}	Model	
Main base	-	-	-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m)	GT15-75ABUS2L GT15-ABUS2	ет 27 23 GS	
Main base	Extension cable	Extension base	-	-	GT15-A1SC07B(0.7m) GT15-A1SC12B(1.2m) GT15-A1SC30B(3m)	GT15-75ABUS2L GT15-ABUS2	ат 27 23 GS	

*1 For the extension cables, refer to MELSEC-A/QnA catalog (L(NA)08024).

*2 Use the A168B for the extension base unit.

*3 The connection of multiple GOTs

When connecting to multiple GOTs with GT27, GT16, GT15 and GT11 mixed, use GT11 as a terminal.

*4 The number of connectable GOTs is restricted according to the CPU type and the number of intelligent function modules.



	GOT (2nd)*	3*4		GOT (3rd) ^{*3*4}			
Connection cable 3)	Option device ^{*6*7}	Model	Connection cable 4)	Option device ^{*6*7}	Model	Max. distance	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *5	GT15-75ABUS2L GT15-ABUS2	ст 27 23 GS	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *5	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and GOT(1st): 3m Between GOT (1st) and GOT (3rd): 30m Between main base and GOT (3rd): 33m	
GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *5	GT15-75ABUS2L GT15-ABUS2	ст 27 23 GS	GT15-C07BS(0.7m) GT15-C12BS(1.2m) GT15-C30BS(3m) GT15-C50BS(5m) GT15-C100BS(10m) GT15-C200BS(20m) *5	GT15-75ABUSL GT15-75ABUS2L GT15-ABUS GT15-ABUS2	ст 27 23 GS	Between main base and GOT(1st): 3m (Including the extension cable length) Between GOT (1st) and GOT (3rd): 30m Between main base and GOT (3rd): 33m (Including the extension cable length)	

*5 When using GT15-C BS, connect as following precautions.

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

*6 The bus connection unit

GT15-75ABUSL, GT15-ABUS: Used for a terminal GOT. (Not available for an intermediary GOT) GT15-75ABUS2L, GT15-ABUS2: Used for an intermediary GOT. (Can be used for a terminal GOT)

*7 When using the following functions, use GT15-QBUS(2). GT15-75QBUS(2)L cannot be used. Remote personal computer operation (Serial), video display function, multimedia function, external I/O device, RGB display function, sound output function

8.3 GOT Side Settings

8.3.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.

		and the second second second	n that war
	4 05. 017nD/M/NC/DR. CRnD-700	MELSEC-0/0	ntrole: Type:
*	lst)		
-		len:	
			tai Setting
	Value		Property
	1		Stage No.
	0 Histo (Marrani)	had	Sipt No.
	12	ne(Sec)	Trreout Tr
_			
	-		
	-		
	-		
	-		

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set the option according to the Controller Type to be connected.
 - · I/F: Interface to be used
 - Driver: Set either of the following option according to the Controller Type to be connected.
 - BUS (Q)
 - BUS (A/QnA)
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

8.3.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

8.3.2 Communication detail settings

(1) Bus(Q)

Property	Value
Stage No.	1
Slot No.	0
Monitor Speed	High(Normal)
Timeout Time(Sec)	12

Item	Description	Range	
Number of Stages	(Default: 1)	1 to 7	
Slot No.	(Default: 0)	0 to 9	
Monitor Speed	Set the monitor speed of the GOT. This setting is not valid in all systems. (Default: Normal)	High (Normal) ^{*1} / Middle/Low ^{*2}	
Timeout Time (Sec.)	Set the time period for a communication to time out. (Default: 12)	12 to 90	

*1 This range is effective when collecting a large amount of data (such as logging and recipe function) on other than the monitor screen.

However, the range may affect the sequence scan time when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.

If you want to avoid the influence on the sequence scan time, do not set [High(Normal)]. (This setting hardly affects QCPUs other than the above.)

(This setting hardly affects QCPUs other than the above.)
 *2 Set this range if you want to avoid the influence on the sequence scan time further than the [Middle] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.

However, the monitor speed may be reduced.

(2) Bus(A/QnA)

Property	Value
Stage No.	1
Slot No.	0
Timeout Time(Sec)	3

Item	Description	Range
Number of Stages	(Default: 1)	1 to 7
Slot No.	(Default: 0)	0 to 7
Timeout Time (Sec.)	Set the time period for a communication to time out. (Default: 3)	3 to 90

POINT,

 Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.
 For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

(2) Precedence in communication settings

- When settings are made by GT Designer3 or the Utility, the latest setting is effective.
- (3) When changing Stage No. and Slot No. Change these settings with the PLC CPU turned OFF, and then reapply the power to the PLC CPU and GOT.

Failure to do so may generate a system alarm (No.487).



Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller. For example, faulty station that has communication timeout can be cut from the system.



For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Help

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Setting Stage No. and Slot No.

POINT,

Before setting Stage No. and Slot No.

- The PLC CPU recognizes the GOT as follows. • QCPU (Q mode)
- : Intelligent function module of 16 I/O points
- Other than QCPU (Q mode)

: Intelligent function module of 32 I/O points At the [Detail setting], assign the GOT to an empty I/O slot on the PLC CPU.

(1) When connecting to QCPU (Q mode)
 Set an additional stage (16 points × 10 slots) for GOT connection, and assign a GOT to one of the I/O slots. (The GOT cannot be assigned to empty slots of the main base unit or extension base unit.)



POINT,

When using the bus extension connector box Set the Stage No. switch on the bus extension connector box to the same Stage No. as the GOT. For setting details, refer to the following manual:

A9GT-QCNB Bus Extension Connector Box User's Manual

POINT.

When connecting to motion controller CPU (Q Series) In the [Base Setting] on MT Developer, set "10" to the number of slots for the extension base used for GOT connection.

Example: When setting "2" to Stage No. and "0" to Slot No. in the communication interface settings, set "10" to [2nd Stage].

Basic Setting				
Base Setting Multi	ple CPU Settir	ng System Basi	c Setting	
Main Base	5	▼ slot		
Extension Base				
1st Stage	None	▼ slot		
2nd Stage	10	▼ slot		
3rd Stage	None	▼ slot		
4th Stage	None	▼ slot		
5th Stage	None	▼ slot		
6th Stage	None	▼ slot		
7th Stage	None	▼ slot		
			ОК С	Cancel

HINT

Setting unused I/O slots to empty (0 points) (only when connecting to QCPU (Q mode))

Setting unused I/O slots as empty slots (0 points) from "PC parameters" "I/O assignments" of GX Developer allows you to use I/O numbers of "16 points × number of empty slots" for other purposes.

For details on I/O assignment settings, refer to the following manual:

QnU User's Manual (Function Explanation, Program Fundamentals)

Qn(H)/QnPH/QnPRHCPU User's Manual (Function Explanation, Program Fundamentals)

Example: I/O assignment (when 16 points are assigned to each of all modules installed with the PLC CPU)



to unused I/O slots.

(2) Other than QCPU (Q mode)

Assign the GOT to an empty I/O slot on the extension base unit.

When there is no extension base unit or no empty I/O slots are left on an extension base unit, set an additional stage, and assign the GOT to one of the I/O slots.

(Assigning the GOT to an empty slot on the main base unit is not allowed.)

(a) When there is an empty I/O slot on the extension base unit



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8.4 Precautions

8.4.1 GT15-C [] EXSS-1, GT15-C [] BS

- (1) Composition of GT15-C□EXSS-1 It is composed of GT15-EXCNB (0.5m) and GT15-C□BS (10 to 30m). Calculate the cable length based on GT15-C100EXSS-1(10m), GT15-C200EXSS-1(20m) and GT15-C300EXSS-1(30m).
- (2) GT15-C□EXSS-1 connector Connect the connectors as follows: GT15-EXCNB → PLC CPU side GT15-C□BS → GOT side



(3) Grounding

(a) When using GT15-C□EXSS-1



- 1. Connect the LG and FG terminals of the terminal block on the GOT unit power and ground them with a cable.
- 2. Use the GT15-C□ BS's FG cable of 28cm or less.
- 3. Do not connect the GT15-EXCNB's FG ground cable.
- Connect the GT15-C□ BS's FG cable on the GOT side to FG of the GOT unit power's terminal block.
- Connect the GT15-C□ BS's FG cable on the PLC side to FG of the PLC's power supply module.
- Connect the LG and FG terminals of the terminal block on the PLC and ground them with a cable.

(b) When using GT15-C□BS Follow the GOT side grounding steps in (a) above for both GOTs.

8.4.2 Turning the GOT ON

- (1) System configuration
 - The PLC CPU remains in the reset status until the GOT is started. Therefore, no sequence program will run until then. The system configuration, in which the GOT is turned on from a sequence program, is not available.
- (2) Time taken until the PLC runs after power-on of the GOT

The following time is taken from when the GOT is powered on until when the PLC runs. • QCPU (Q mode), motion controller CPU (Q series): 10 seconds or more • MELDAS C70: 18 seconds or more When the GOT starts before the PLC runs, a system alarm occurs.Adjust the opening screen time in the GOT setup so that no system alarm occurs.

- GT Designer3 (GOT2000) Help
- (3) Power-up sequence for connection of 3 GOTs or more (when connecting QCPU (Q mode))
 - 8.4.10 (1)Restrictions in overall cable length to No. of GOTs
- (4) Power-up sequence for connection of the Q4ARCPU redundant system
 - 8.4.14 (2)Power-On sequence for GOT and Q4ARCPU redundant system
- (5) Power-up sequence for cases other than (3) and (4) The GOT and PLC can both be started up whichever of these devices is turned ON first. (There is no specific sequence in which they are powered ON) Note, however, that operation is as follows when the GOT is turned ON followed by the PLC: When the PLC power is OFF with the GOT turned ON, the system alarm (No.402: timeout error) is generated. Upon power-on of the PLC CPU, the GOT automatically starts monitoring. Use System Information to reset the alarm. For the System Information, refer to the following manual:

GT Designer3 (GOT2000) Help

8.4.3 Powering OFF the GOT, reapplying the power (OFF to ON)

(1) Precautions for reapplying the power to the GOT (OFF to ON)

Do not power-cycle the GOT (OFF to ON) while the PLC is ON.

Before doing so, be sure to turn off the PLC first.



Operations causing automatic reboot of the GOT2000 Series

Since the GOT2000 Series is automatically rebooted in the following cases, the power does not need to be reapplied to the GOT (OFF to ON).

- When an OS is written from GT Designer3 or a SD card
- · When utility settings have been changed
- (2) When turning OFF the GOT before display of the user creation screenWhen the GOT is turned OFF before the user creation screen is displayed on the GOT, subsequent

communications may be no longer possible. In such a case, reapply the power to the PLC CPU and

In such a case, reapply the power to the PLC CPU and GOT.

- (3) Precautions for connection of 3 GOTs or more (when connecting QCPU (Q mode))
 - 8.4.10 (1)Restrictions in overall cable length to No. of GOTs

8.4.4 Reset switch on GOT

When bus connection is used, the reset switch on the GOT does not function.

8.4.5 Powering OFF or resetting the PLC

- (1) When turning OFF or resetting the PLC during monitoring
 When turning OFF or resetting the PLC during monitoring, the system alarm (No.402: timeout error) is generated.
 When the PLC CPU is restored, the GOT automatically resumes monitoring.
 Use System Information to reset the alarm.
 For the System Information, refer to the following manual:
- (2) When turning OFF or resetting the PLC CPU before display of the user creation screen
 When the PLC CPU is turned OFF or reset before the user creation screen is displayed on the GOT, subsequent communications may be no longer possible.
 In such a case, reapply the power to the PLC CPU and
- (3) Precautions for connection of 3 GOTs or more (when connecting QCPU (Q mode))
 - 8.4.10 (1)Restrictions in overall cable length to No. of GOTs

8.4.6 Position of the GOT

GOT.

Always connect the GOT to the last base unit. Connecting a GOT between base units is not allowed.





8.4.7 When the GOT is busconnected to a PLC CPU without the communication driver written

When the GOT is bus-connected to a PLC CPU without the standard monitor OS and the communication driver for the bus connection being written onto the GOT, the PLC CPU is reset. (GX Developer cannot communicate with the PLC CPU)

In this case, disconnecting the bus connection cable from the GOT will cancel the reset status of the PLC CPU.

8.4.8 When designing the system

When the GOT is OFF, the following currents are supplied to the GOT from the PLC CPU side (the power supply module on the main base unit).(The GOT does not operate when it is OFF.)

Design the system so that the 5V DC current consumption of the modules on the main base unit and the total current consumption of the GOTs will not exceed the rated output current of 5V DC of the power supply module in use.

When connecting to	No. of GOTs	Total current consumption
	5	2200mA
	4	1760mA
OCPLL (O mode)	3	1320mA
	2	880mA
	1	440mA
	3	360mA
Other than QCPU (Q mode)	2	240mA
	1	120mA

8.4.9 When assigning GOT I/O signals

Do not use the I/O signals assigned to the PLC CPU in sequence programs, as these signals are used by the GOT system.

When these signals are used, GOT functions cannot be assured.

8.4.10 When connecting to a QCPU (Q mode)

(1) Restrictions in overall cable length to No. of GOTs The following restrictions apply when 3 of more GOTs are connected:

Number of GOTs	Overall Cable Length	Restriction	Overall Cable Length	Restriction
1 2	(No restrictions)			
3	Less than 25m		25 to 37m	Use the same power supply for
4	Less than 20m	(No restrictions)	20 to 37m	the PLC and all GOTs, and turn these devices ON and OFF simultaneously.
5	Less than 15m		15 to 37m	

(2) When using a Q00JCPU, Q00UJCPU The bus extension connector box can be connected only to the extension base unit.

(Connecting it to the main base unit is not allowed)



(3) When using a Q00J/Q00UJ/Q00/Q00U/Q01/Q01U/ Q02UCPU

When a GOT is bus-connected to a Q00JCPU or Q00UJCPU, number of extension stages including the GOT must be 2 or less.

When a GOT is bus-connected to a Q00CPU, Q00UCPU, Q01CPU, Q01UCPU or Q02UCPU, number of extension stages including the GOT must be 4 or less.





(4) When using the QA1S6□B extension base unit A GOT is physically connected to the last of all extension base units. In the Stage No. setting, however, assign the GOT as a stage next to the last Q□□B type extension base unit.

Assign the QA1S6 \square B type extension base unit as a stage next to the GOT.



8.4.11 When connecting to a QnA(S)CPU or An(S)CPU type

(1) When connecting with a QnASCPU type and an AnSCPU type

A GOT can be connected to an extension connector on only one side of the main base unit.

(Concurrently connecting GOTs to extension connectors on both sides is not allowed)



(2) In the case of Q4A(R)CPU, Q3ACPU, A3□CPU, A4UCPU

Empty I/O slots are required within the max. number of extension stages.

(3) For A0J2HCPU

Assign the GOT to the I/O slots 0 to 3 of extension stage 1.

(4) In the case of CPUs other than (2) (3) above Even if the max. number of stages are used with no empty I/O slots, when there is a free space of 32 I/O points or more, a GOT can be connected under the following communication interface setting. For the communication interface setting, refer to the following.

When connecting to	Max. stage No.	Communicat set Stage No.	tion interface ting Slot No.
A1⊟CPU/A2USCPU(-S1) /QnAS(H)CPU(-S1)	1	2	0
A2 CPU/Q2ACPU	3	4	0
A3 CPU/A4 CPU	7		
Q3ACPU/Q4ACPU	7	Cannot be used	
A0J2HCPU	1		

8.3.1 Setting communication interface (Communication settings)

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8.4.12 When connecting multiple GOTs

- System including different GOT series The GOT2000 series can be connected with GOT1000 series and GOT-A900 series in a system. When using them together, refer to the following Technical News.
 - Precautions when Replacing GOT1000 Series with GOT2000 Series (GOT-A-0061)
 - Precautions when Replacing GOT-A900 Series with GOT2000 Series (GOT-A-0062)

The GOT2000 series cannot be used with GOTs other than GOT1000 or GOT-A900 series in a system.



(2) Restrictions on No. of GOTs

The number of connectable GOTs is restricted according to the CPU type and the number of intelligent function modules.

When connecting to		Number of connectable GOTs	Total number of connectable GOTs and intelligent function modules ^{*1}
QCPU(Q mode), motion controller CPU (Q Series)		Up to 5	5 GOTs + 6 intelligent function modules ^{*2}
QCPU (A mode)		Not connectable	
QnACPU		Up to 3	6 in total
ACPU	AnUCPU, AnACPU, A2US(H)CPU	Up to 3	6 in total
	AnNCPU, AnS(H)CPU, A1SJ(H)CPU	Up to 2	2 in total
	A0J2HCPU	Up to 1	2 in total
	A1FXCPU	Not connectable	
Motion controller CPU	A273UCPU, A273UHCPU(-S3), A373UCPU(-S3), A173UHCPU(-S1)	Up to 3	6 in total
(A Series)	A171SHCPUN, A172SHCPUN	Up to 2	2 in total

Indicates the following models: AD51(S3), AD51H(S3), AD51FD(S3), AD57G(S3), AJ71C21(S1), AJ71C22(S1), AJ71C23, AJ71C24(S3/S6/ S8), AJ71UC24, AJ71E71(-S3), AJ71E71N-B2/B5/T/B5T, AJ71E71N3-T, AJ61B711 (in intelligent mode only), A1SJ71C24(-R2/PRF/R4), A1SJ71UC24(-R2/PRF/R4), A1SJ71E71-B2/B5(-S3), A1SJ71E71N-B2/B5/T/B5T, A1SJ71E71N3-T, A1SD51S, A1SJ61B711 (in intelligent mode only) Only the A1SD51S can be connected to the QCPU (Q

*2 Only the A1SD51S can be connected to the QCPU (Q Mode).

8.4.13 When using a PLC CPU in the direct mode

Note that when the I/O control mode of the PLC CPU is the direct mode, and if the 1st GOT is connected to the main or extension base unit with a 5m extension cable (GT15-AC50B, GT15-A1SC50NB), the input X of the empty I/O slot cannot be used.

No restrictions apply when the $\ensuremath{\text{I/O}}$ control mode is the refresh mode.

On PLC CPUs whose I/O control mode can be selected by a switch, set the I/O control mode to the refresh mode before use.

POINT,

In the cases where input X of an empty I/O slot is used

- (1) When input X is assigned on the MELSECNET/10 network
- (2) When input X of an empty I/O slot is turned ON/ OFF by the computer link module
- (3) When input X of the I/O slot is turned ON/OFF by the touch switch function (Bit SET/RST/Alternate/ Momentary) of GOT

*1

8.4.14 When connecting to a Q4ARCPU redundant system

(1) When the GOT is bus-connected to a Q4ARCPU redundant system

Connect the GOT to the last redundant extension base unit (A68RB) of the Q4ARCPU redundant system. For the redundant extension base units, use version B

The version can be confirmed in the DATE field of the rating plate.



POINT,

or later

Precautions for Q4ARCPU redundant system configurations

The GOT does not operate normally in the following system configurations.

- When the GOT is bus connected to the bus switching module (A6RAF) on a redundant main base unit (A32RB/A33RB)
- (2) When the GOT is bus connected to a version-A redundant main base unit (A68RB)
- (2) Power-On sequence for GOT and Q4ARCPU redundant system Apply the power to the GOT and Q4ARCPU redundant system in the following sequence.
- 1. Turn ON the GOT.
- After the monitor screen is displayed on the GOT, turn ON the Q4ARCPU redundant system. At this time, a timeout is displayed on the system alarm. Use System Information to reset the alarm. For the system alarm, refer to the following manual:

GT Designer3 (GOT2000) Help

8.4.15 When monitoring the Q170MCPU, Q170MSCPU(-S1)

Set [CPU No.] to "2" in the device setting to monitor the device of the Motion CPU area (CPU No.2).

When the CPU No. is set to "0" or "1", the device on the PLC CPU area (CPU No.1) is monitored.

When the CPU No. is set to the number other than "0" to "2", a communication error occurs and the monitoring cannot be executed.

For setting the CPU No., refer to the following manual.

Example) Setting dialog box of the bit device



8.4.16 Troubleshooting

For the troubleshooting, refer to the User's Manual for the GOT you are using.

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MELSECNET/H CONNECTION (PLC TO PLC NETWORK), MELSECNET/10 CONNECTION (PLC TO PLC NETWORK)

9.1 Connectable Model List
9.2 System Configuration
9.3 GOT Side Settings 9 - 13
9.4 PLC side setting when connecting to MELSECNET/H 9 - 16
9.5 PLC side setting when connecting to MELSEC/10 9 - 21
9.6 Precautions

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9. MELSECNET/H CONNECTION (PLC TO PLC NETWORK), MELSECNET/10 CONNECTION (PLC TO PLC NETWORK)

9.1 Connectable Model List

POINT.

(1)	Connectable network For MELSECNET/H connection, use the MNET/H mode or MNET/H extension mode with MELSECNET/H. Connect the GOT to the following network systems as an ordinary station. • MELSECNET/H network system (PLC to PLC network) optical loop system • MELSECNET/H network system (PLC to PLC network) coaxial bus system
	The GOT cannot be connected to the remote I/O network. For MELSECNET/10 connection, use the MNET/10 mode with MELSECNET/H.
	 MELSECNET/10 network system (PLC to PLC network) optical loop system MELSECNET/10 network system (PLC to PLC network) coaxial bus system The GOT cannot be connected to the remote I/O network.
(2)	MELSECNET/H network module When connecting the MELSECNET/H network module to the MELSECNET/H network system, specify the MELSECNET/H Mode or the MELSECNET/H Extended Mode as a network type. When connecting the MELSECNET/H network module to the MELSECNET/10 network system, specify the MNET/10 mode as a network type.

9.1.1 PLC/Motion controller CPU

Series	Model name	Clock	Communication type	Connectable model	Refer to						
	Q00JCPU					ี วัจ					
	Q00CPU					žŘ					
	Q01CPU					٥Ş					
	Q02CPU										
	Q02HCPU					ÿ₩					
	Q06HCPU										
	Q12HCPU	0	MELSECNET/H			7 7					
MELSEC-Q	Q25HCPU	0	MELSECNET/10	*1	9.2 کو	ц П О					
(Q mode)	Q02PHCPU					Ϋ́					
	Q06PHCPU					ပုပ္					
	Q12PHCPU									Ъ,	
	Q25PHCPU					ZZ					
	Q12PRHCPU (Main base)					⊇ 겉					
	Q25PRHCPU (Main base)					U C L					
	Q12PRHCPU (Extension base)	0	-	GT GT GS	-	ΨĽ					
	Q25PRHCPU (Extension base))		27 23 00		Z Z					
	Q00UJCPU								S S		
	Q00UCPU						¥≘				
	Q01UCPU					ΪÈ					
	Q02UCPU						빌빌				
MELSEC-O	Q03UDCPU		MELSECNET/H	CT CT		ີ ມີ ມີ					
(Q mode)	Q04UDHCPU	0	MELSECNET/10	27 23 GS	9.2	S E					
, , , , , , , , , , , , , , , , , , ,	Q06UDHCPU					Шü					
	Q10UDHCPU					ΞΞ					
	Q13UDHCPU										
	Q20UDHCPU					9					
	Q26UDHCPU										
				(Continued to	next page)						

The following table shows the connectable models.

*1 Use CPU function version B or a later version.

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC-Q (Q mode)	Q03UDECPU Q04UDEHCPU Q06UDEHCPU Q10UDEHCPU Q13UDEHCPU Q20UDEHCPU Q20UDEHCPU Q50UDEHCPU Q100UDEHCPU Q100UDEHCPU Q100UDEHCPU Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q06UDVCPU Q13UDVCPU Q14UDVCPU Q15UDVCPU Q14UDVCPU	0	MELSECNET/H MELSECNET/10	GT GT GS	9.2
C Controller module	Q12DCCPU-V ^{*1} Q24DHCCPU-V Q24DHCCPU-LS	0	MELSECNET/H MELSECNET/10	27 23 GS	9.2
MELSEC-QS	QS001CPU	0	MELSECNET/H MELSECNET/10	27 23 GS	9.2
MELSEC-L	L02CPU L06CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	0	-	27 23 GS	-
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	0	MELSECNET/10	27 23 GS	9.2
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU Q4ARCPU	0	MELSECNET/10	27 23 GS	9.2
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	0	MELSECNET/10	T 27 GS GS	9.2
	A2UCPU A2UCPU-S1 A3UCPU A4UCPU	0	MELSECNET/10	T 27 CS GS	9.2
MELSEC-A (AnCPU)	A2ACPU A2ACPUP21 A2ACPUP21 A2ACPUR21 A2ACPU-S1 A2ACPUP21-S1 A3ACPU A3ACPUP21 A3ACPUP21 A3ACPUR21 A1NCPU A1NCPUP21 A1NCPUR21 A2NCPU A2NCPUP21 A2NCPUP21 A2NCPUR21 A2NCPU-S1		-	GT GT GS	-

*1 Use a module with the upper five digits later than 12042.

(Continued to next page)

Series	Model name	Clock	Communication type	Connectable model	Refer to																		
	A2NCPUP21-S1																						
	A2NCPUR21-S1																						
	A3NCPU	0	MELSECNET/10		9.2	ćΫ																	
	A3NCPUP21					N N																	
	A3NCPUR21					.§¥																	
	A2USCPU																						
	A2USCPU-S1					۳ï																	
	A2USHCPU-S1					27																	
MELSEC-A	A1SCPU																						
(AnCPU)	A1SCPUC24-R2					ЧЧ ЧЧ																	
	A1SHCPU					22																	
	A2SCPU	0	-	27 23 GS	-	<u> </u>																	
	A2SCPU-S1					ΧÖ																	
	A2SHCPU					ĔĔ																	
	A2SHCPU-S1																						
	A1SJCPU	_				Ξź																	
	A1SJCPU-S3					õ S																	
	A1SJHCPU					· + =																	
	A0J2HCPU	_				ĒÈ																	
	A0J2HCPUP21	- ×	-	GT GT GS	-	ΖZ																	
	A0J2HCPUR21	_		27 23 00		Ш Ш Ш																	
	A0J2HCPU-DC24					L S J																	
	A2CCPU	_				ШШ																	
MELSEC-A	A2CCPUP21	_																					
	A2CCPUR21	0 -	0 -	0 -	-	-	-	-	O -		GT GT L		9										
	A2CCPUC24									27 23 GS	-												
	A2CCPUC24-PRF																						
	A2CJCPU-S3																						
	A1FXCPU						-																
	Q172CPU ^{*1*2}	_																					
	Q173CPU ^{*1*2}																						
	Q172CPUN ^{*1}																						
	Q173CPUN ^{*1}																						
	Q172HCPU																						
	Q173HCPU																						
	Q172DCPU																						
Motion	Q173DCPU	0	MELSECNET/10		9.2																		
CPU	Q172DCPU-S1																						
(Q Series)	Q173DCPU-S1																						
	Q172DSCPU																						
	Q173DSCPU																						
	Q170MCPU ^{*3}																						
	Q170MSCPU*4																						
	Q170MSCPU-S1*4					<u>.</u>																	
	MR-MQ100	0	-	27 23 GS	-																		

(Continued to next page)

- *1 When using SV13, SV22, or SV43, use the motion controller CPU on which any of the following main OS version is installed.
 - SW6RN-SV13Q□: 00H or later
 - SW6RN-SV22Q : 00H or later
 - SW6RN-SV43Q□: 00B or later
- *2 Use main modules with the following product numbers.
 - Q172CPU: Product number N******* or later
- Q173CPU: Product number M****** or later
- *3 Only the first step can be used on the extension base unit (Q52B/Q55B).
- *4 The extension base unit $(Q5\square B/Q6\square B)$ can be used.

Series	Model name	Clock	Communication type	Connectable model	Refer to																				
	A273UCPU					·																			
	A273UHCPU			GT GT CO																					
	A273UHCPU-S3	0	MELOEONEI/10	27 23 ^{GS}	9.2 ج	άŶ																			
	A373UCPU					R R																			
	A373UCPU-S3					S N																			
Motion	A171SCPU					Ξ'n																			
controller	A171SCPU-S3					۳ z																			
CPU	A171SCPU-S3N			GT GT GT		υĽ																			
(A Series)	A171SHCPU	0	-	27 23 ^{GS}		E C																			
	A171SHCPUN					P F																			
	A172SHCPU					υĽ																			
	A172SHCPUN					<u></u> []																			
	A173UHCPU			GT GT GT		ZO																			
	A173UHCPU-S1	0	MELSECNE1/10	27 23 ^{GS}	9.2	E E																			
	WS0-CPU0			GT GT		С Ш Ш																			
MELSEC-WS	WS0-CPU1	×	-	27 23 ^{GS}	-	ZZ																			
MELSECNET/H	QJ72LP25-25					NÖ																			
Remote I/O	QJ72LP25G	×	-	GT CT CS	-	<u> </u>																			
station	QJ72BR15			21 25		TH TH																			
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	27 23 GS	-	SECNE'																			
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	27 23 GS	-	MELS																			
CNC C70	Q173NCCPU	0	MELSECNET/H MELSECNET/10	27 23 GS	9.2																				
Robot controller	CRnQ-700 (Q172DRCPU)	0	MELSECNET/H MELSECNET/10	T 23 GS	Jm 9.2																				
	FX0																								
	FXos	~																							
	FXON	Â																							
	FX1																								
	FX2	~																							
	FX2C	^																							
	FX1s																								
	FX1N	0																							
MELSEC-FX	FX _{2N}	0	-		-																				
	FX1NC																								
	FX2NC	×																							
	FX38																								
	FX3G	1																							
	FX3GC																								
	FX3GE								0)	C														
	FX3U	1																							
_	FX3UC																								

9.1.2 MELSECNET/H network module

CPULsorias	Model name			
GF 0 selles	Optical loop	Coaxial bus		
MELSEC-Q (Q mode) ^{*1} MELSEC-QS Motion controller CPU (Q Series) CNC C70 Robot controller (CRnQ-700)	QJ71LP21 QJ71LP21-25 QJ71LP21S-25	QJ71BR11 ^{*1}		
C Controller module	QJ71LP21-25 QJ71LP21S-25	QJ71BR11 ^{*1}		

*1 Use function version B or later of the MELSECNET/H network module and CPU.

9.1.3 MELSECNET/H (NET/10 mode), MELSECNET/10 network module

CPULacrica	Model name				
CrU selles	Optical loop	Coaxial bus			
MELSEC-Q (Q mode) ^{*1} MELSEC-QS Motion controller CPU (Q Series) CNC C70 Robot controller (CRnQ-700)	QJ71LP21, QJ71LP21-25 QJ71LP21S-25	QJ71BR11 ^{*1}			
C Controller module	QJ71LP21-25, QJ71LP21S-25	QJ71BR11 ^{*1}			
MELSEC-QnA	AJ71QLP21,AJ71QLP21S A1SJ71QLP21,A1SJ71QLP21S	AJ71QBR11 A1SJ71QBR11			
MELSEC-Q (A mode) MELSEC-A Motion controller CPU (A Series)	AJ71LP21 A1SJ71LP21	AJ71BR11 A1SJ71BR11			

*1 Use function version B or later of the MELSECNET/H network module and CPU.

9.2 System Configuration

9.2.1 Connecting to optical loop system

	QCPU MEL netv	SECNET/H vork module SECNET/10 vork module	Connection ca	ble	GOT	M	ELSECNET/H
	PLC		Connection cab	le	GOT		Number of
Model name	MELSECNET/H network module *1	Communication type	Cable model	Max. distance	Option device	Model	connectable equipment
	QJ71LP21	MELSECNET/H	Optical fiber cable ^{*2}	*3	GT15-J71LP23-25	ст 27 ст 23 GS	
MELSEC-Q	QJ71LP21-25 QJ71LP21S-25	MELSECNET/10	Optical fiber cable*2	*3	GT15-J71LP23-25 *4	бт 27 23 GS	
C Controller	QJ71LP21-25	MELSECNET/H	Optical fiber cable*2	*3	GT15-J71LP23-25	ат 27 33 GS	
module	QJ71LP21S-25	MELSECNET/10	Optical fiber cable*2	*3	GT15-J71LP23-25 *4	ат 27 23 GS	62 0010
	QJ71LP21	MELSECNET/H	Optical fiber cable ^{*2}	*3	GT15-J71LP23-25	ат 27 33 GS	03 00 15
MELSEC-QS	QJ71LP21S-25	MELSECNET/10	Optical fiber cable ^{*2}	*3	GT15-J71LP23-25 *4	ст 27 23 GS	
MELSEC-QnA	AJ71QLP21 AJ71QLP21S A1SJ71QLP21 A1SJ71QLP21S	MELSECNET/10	Optical fiber cable*2	*3	GT15-J71LP23-25 *4	ст 27 23 GS	
MELSEC-A	AJ71LP21 A1SJ71LP21	MELSECNET/10	Optical fiber cable*2	*3	GT15-J71LP23-25 *4	ст 27 23 GS	

*1 For the system configuration of the MELSECNET/H network module, refer to the following manual.

Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

For QnA/Q4AR MELSECNET/10 Network System Reference Manual

For AnU MELSECNET/10 Network System Reference Manual (PLC to PLC network)

- *2 For the optical fiber cable, refer to the following manual.
 - Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network) For QnA/Q4AR MELSECNET/10 Network System Reference Manual
 - For AnU MELSECNET/10 Network System Reference Manual (PLC to PLC network)
- *3 The overall extension cable length and the length between stations vary depending on the cable type to be used and the total number of stations.

For details, refer to the following manual.

- C orresponding MELSECNET/H Network System Reference Manual (PLC to PLC network) For QnA/Q4AR MELSECNET/10 Network System Reference Manual For AnU MELSECNET/10 Network System Reference Manual (PLC to PLC network)
- *4 Set the MELSECNET/10 mode in the communication settings. For the setting, refer to the following.
 - 9.3.1 Setting communication interface (Communication settings)

9.2.2 Connecting to the coaxial bus system

		LSECNET/H work module	Connection ca	ible	GOT		INTERSECTION DESCRIPTION
	PLC		Connection cab	le	GOT		
Model name	MELSECNET/H network module *2	Communication type	Cable model	Max. distance	Option device	Model	connectable equipment
	QJ71BR11	MELSECNET/H	Optical fiber cable *3	*4	GT15-J71BR13	ат 27 23 GS	
MELSEC-Q	QJ71BR11	MELSECNET/10	Optical fiber cable *3	*4	GT15-J71BR13 *5	ат 27 23 GS	
C Controller	QJ71BR11	MELSECNET/H	Optical fiber cable	*4	GT15-J71BR13	ат 27 23 GS	
module	QJ71BR11	MELSECNET/10	Optical fiber cable *3	*4	GT15-J71BR13 *5	ат 27 23 GS	
	QJ71BR11	MELSECNET/H	Optical fiber cable *3	*4	GT15-J71BR13	ат 27 23 GS	- 31 GO Is
MELSEC-QS	QJ71BR11	MELSECNET/10	Optical fiber cable *3	*4	GT15-J71BR13 *5	ат 27 23 GS	
MELSEC-QnA	AJ71QBR11 A1SJ71QBR11	MELSECNET/10	Optical fiber cable *3	*4	GT15-J71BR13 *5	ст 27 23 GS	
MELSEC-A	AJ71BR11 A1SJ71BR11	MELSECNET/10	Optical fiber cable *3	*4	GT15-J71BR13 *5	ст 27 23 GS	

*1 Use a PLC CPU of function version B or a later version. *2

For the system configuration of the MELSECNET/H network module, refer to the following manual.

Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network) For QnA/Q4AR MELSECNET/10 Network System Reference Manual

For AnU MELSECNET/10 Network System Reference Manual (PLC to PLC network)

Use a MELSECNET/H network module of function version B or a later version.

- *3 For the coaxial cable, refer to the following manual.
 - CF Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network) For QnA/Q4AR MELSECNET/10 Network System Reference Manual For AnU MELSECNET/10 Network System Reference Manual (PLC to PLC network)
 - For the coaxial cable connector connection method, refer to the following.
 - 1.4.2 Coaxial cableconnector connection method
- *4 The overall extension cable length and the length between stations vary depending on the cable type to be used and the total number of stations.

For details, refer to the following manual.

*5

- Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network) For QnA/Q4AR MELSECNET/10 Network System Reference Manual For AnU MELSECNET/10 Network System Reference Manual (PLC to PLC network)
- Set the MELSECNET/10 mode in the communication settings. For the setting, refer to the following.

9.3.1 Setting communication interface (Communication settings)

9

9.3 GOT Side Settings

9.3.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.

I3:None H:None	A 497 100 100 100 100 100 1	MITSUBISHI		
	Controller Typg:	MELSEC-Q/Q5,	Q17nD/M/NC/OR, CRnD-700	-
Routing Informatio		provide states		
steway Communication	JVF:	Extend 2/F(1st)	1	
ateway Serva	Driver:	MELSECNET/H		<u> </u>
lateway Client Itali	Detai Setting			
FTP Server	(manufactor)		Make a	
dundant	Hetwork T	una	MUET/H mode	-
in No. Switch	Network N	0.	1	
	Station No.		1	
	Group No.		0	
	Mode Setti	ng	Online(Auto Reconnect)	
	Transmissio	n Speed(Mbps)	25	
	Refresh Int	erval(Times)	1	
	Retry(Time	e)	3	
	Timeout Ti	me(Sec)	3	
	Delay Time	(ms)	0	

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Interface to be used
 - Driver: MELSECNET/H
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.
 - [3.3.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT.

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following:

1.1.2 I/F communication setting

9.3.2 Communication detail settings

Make the settings according to the usage environment.

Property	Value
Network Type	MNET/H mode
Network No.	1
Station No.	1
Group No.	0
Mode Setting	Online(Auto Reconnect)
Transmission Speed(Mbps)	25
Refresh Interval(Times)	1
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Network Type	Set the network type. (Default: MNET/H mode)	MNET/H mode MNET/10 mode MNET/H Extended mode ^{*1}
Network No.	Set the network No. (Default: 1)	1 to 239
Station No.	Set the station No. of the GOT. (Default: 1)	1 to 64
Mode Setting	Set the operation mode of the GOT. (Default: Online (auto. reconnection))	 Online (auto. reconnection) Offline Test between slave station^{*2} Self-loopback test^{*2} Internal self- loopback test^{*2} H/W test^{*2}
Transmission Speed	Set the communication transmission speed. (Default: 25Mbps) When specifying [MNET/10 mode] as The network type, only 10mbps can be set applicable.	10Mbps/25Mbps
Refresh Interval	Set the number of refreshes to secure the send/receive data in station units during communication. (Default: 1time) Valid when [Secured data send/ Secured data receive] Is marked by the control station side network parameters of the melsecnet/h network system.	1 to 1000times

Item	Description	Range	
Retry	Set the number of retries to be performed when a communication timeout occurs. When no response is received after retries, a communication times out. (Default: 3times)	0 to 5times	
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec	
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 300ms	
*1 T v n L *2 F	o monitor the redundant QCPU syste ersion D or later of QCPU, whose firs umber are 07102 or later. Ise version 8.29F or later of GX Deve or details, refer to the following manu	m, use function t 5 digits of the serial eloper. ial. T/H Network System	
Ŀ	Reference Manual (PLC to PL	C network)	
ſ	For QnA/Q4AR MELSECNET Reference Manual	/10 Network System	
ŀ	For AnU MELSECNET/10 Net Reference Manual (PLC to PL	twork System .C network)	

POINT,

- (1) When connecting to the MELSECNET/10 network When connecting to the MELSECNET/10 network using the MELSECNET/H communication module, set [MNET/10 mode] in [Network Type].
- (2) Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the RS-422 conversion unit and the GOT utility, refer to the following manual:

GOT2000 Series User's Manual (Utility)

(3) Precedence in communication settings When settings are made by GT Designer3 or the Utility, the latest setting is effective.

9.3.3 Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

POINT.

Routing parameter setting

When communicating within the host network, routing parameter setting is unnecessary.

For details of routing parameters, refer to the following manual.

Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)



Item	Range
Transfer Network No.	1 to 239
Relay Network No.	1 to 239
Relay Station No.	1 to 64

POINT,

 Routing parameter setting of relay station Routing parameter setting is also necessary for the relay station.

For the setting, refer to the following.

- 9.4 PLC side setting when connecting to MELSECNET/H
- (2) Parameter reflection function of MELSOFT Navigator
 - (a) The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator.
 - (b) When the settings of Transfer network No., Relay network No. or Relay station No. are reflected to the parameter from the MELSOFT Navigator, those settings are added. Items set in advance are not deleted. However, if the target network No. overlaps, the item set in advance is overwritten.
 - (c) The routing information is used manually by the user when the data is created. Therefore, after changing the network configuration by MELSOFT Navigator, create a routing information again. For details of the creation of the routing information, refer to the MELSOFT Navigator help.

9.4 PLC side setting when connecting to MELSECNET/H

This section describes the settings of the GOT and MELSECNET/H network module in the case of system configuration shown as 9.4.1.

When connecting the MELSECNET/H network module to the MELSECNET/H network system, specify the MELSECNET/H Mode or the MELSECNET/H Extended Mode as a network type.

POINT.

MELSECNET/H network module

For details of the MELSECNET/H network module, refer to the following manual.

Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

9.4.1 System configuration





- *1 The MELSECNET/H network module is mounted at slot 0 of the base unit. The start I/O No. of the MELSECNET/H network module is
- set at "0". *2 The network type must be set according to the number of
- assignment of send points for each station. When the number of assignment is 2000 bytes or less: MELSECNET/H mode When the number of assignment is 2000 bytes or more: MELSECNET/H Extended Mode

POINT,

When connecting to Q170MCPU or Q170MSCPU(-S1) When connected to Q170MCPU or Q170MSCPU(-S1), the start I/O No. of the MELSECNET/H network module is set to "70".

9.4.2 Switch setting of **MELSECNET/H** network module

Set the station number setting switch and mode setting switch.







MELSECNET/H CONNECTION (PLC TO PLC NETWORK), MELSECNET/10 CONNECTION (PLC TO PLC NETWORK)

9

(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. X10 $\begin{array}{c} & & & \\$	Station number setting (Station No.1) ^{*1}	1	0

O: Necessary △: As necessary ×: Not necessary *1 Do not set the same station No. as that of the GOT.

(2) Mode setting switch

Mode setting switch	Description	Set value	Setting necessity at GOT connection
MODE (1)	Mode setting (Online: 10Mbps) ^{*2}	0	0

O: Necessary △: As necessary ×: Not necessary *2 Set the same mode setting and transmission speed as those of the GOT.

POINT.

When the switch setting has been changed Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

9.4.3 Parameter setting

Connecting to MELSEC-Q or QS series

(1) [Network parameter] of GX Developer

(a) Network parameter Network parameters Setting the number of MNET/10H Ethernet cards

	Module 1		Module 2	
Network type	MNET/H mode (Control station)	-	None	•
Starting I/O No.	00	000		
Network No.		1		
Total stations		2		
Group No.		0		
Station No.				
Mode	On line	-		•
	Network range assignment	Ï		
	Refresh parameters			
	Interrupt settings			
	Return as control station	-		
4				

Item	Set value	Setting necessity at GOT connection
Network type	MNET/H mode (Control station) (fixed)	0
Starting I/O No.*1	0000н	0
Network No.*2	1	0
Total stations	2	0
Group No.	0 (fixed)	0
Mode ^{*3}	Online	0
Network range assignment	Refer to (b).	Δ
Refresh parameters		Δ
Interrupt settings		×
Control station return setting	(Use default value)	Δ
Redundant settings*4	, , , , , , , , , , , , , , , , , , ,	Δ
Interlink transmission parameters		×
Routing parameters	Refer to (c).	Δ

 $\bigcirc: \mathsf{Necessary} \ \bigtriangleup: \mathsf{As necessary} \ \times: \mathsf{Not necessary}$

When using Q170MCPU or Q170MSCPU(-S1), set it according to the system configuration.

Specify the same network No. as that of the GOT.

*1

*2 *3 *4 Set the same mode setting as that of the GOT.

Set it when the MELSECNET/H network module is used in the redundant QnPRHCPU system.

(b) Network range assignment

tssignment method I [™] Points/Start I [®] Start/End		Monifori Total sta stations	ng tame 2	00 ×1	Jima	Peramete Switch ec	name name	BAW rat	lings	-			
	Sendia	ange Tot es	ach station	Sendra	ange for es	ach station	6						
Difinitet?	-	L3			LW	Lowes a	17	1 26.2	Crown I	The Note	24.10	17/6530	Paing
51	256	0000	COFF	256	0000	COT	PODS.	368	103	Polisi	2141.	tral	Disable
2	236	0100	CIFF	256	0100	OFF		and the			1		Disebie
fundt Alman Abri		ne ly rese	vied station	- Ec	30 31 55 5 57 2	net	ldertos accipi	lpoint j		Points			

Item				Set value	Setting necessity at GOT connection	
Monitorin	g time			200	Δ	
	Send	Station	Start	0000н	Δ	
	range	No.1	End	00FFн	Δ	
	station	Station	Start	0100н	Δ	
	(LB)	No.2	End	01FFн	Δ	
LB/LW setting ^{*1}	Send range for station	Station	Start	0000н	Δ	
ootang		No.1	End	00FFн	Δ	
		station	station	Station	Start	0100н
	(LW)	No.2	End	01FFн	Δ	
	Pairing	setting*2		Disable	Δ	
LX/LY set	ting ^{*1}			No setting	Δ	
Specify I/	O maste	r station ^{*1}		No setting	Δ	
Specify re	served s	station		No setting	Δ	
Suppleme	entary se	etting		(Lise default value)	Δ	
Station in	herent p	arameters			Δ	

 $\bigcirc: \mathsf{Necessary} \ \bigtriangleup: \mathsf{As necessary} \ \times: \mathsf{Not necessary}$

*1 Be sure to set the setting to perform the cyclic transmission.
 *2 Set it when the MELSECNET/H network module is used in

the redundant QnPRHCPU system.

POINT.

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

(c) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times). Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

Netv	vork pa	rameters S	Setting the	MELSECNE	т/Е 🔳 🗖 🔀 🕽
		Target network No.	Relay network No.	Relay station No.	▲
	1	2	1	2	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				•
	-	1			
	Llear	Cheo	°K [End	Cancel

Item	Range
Target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 64

POINT.

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

9.3.3 Routing parameter setting

Connecting to C Controller module Use SW3PVC-CCPU-E Ver.3.05F or later for the MELSECNET/H utility.

(1) Connection settings

*1

		<u>T</u> est
Target module	[192.168.3.3(Default)	Clear history
Write au	thority	Detailed setting
User name	target	-
Password	******	-
	,	

Item	Set value	Setting necessity at GOT connection
Target module ^{*1}	192.168.3.3 (Default)	0
Write authority	Mark the checkbox	0
User name ^{*2}	target	0
Password ^{*2}	password	0
Detailed settings	-	Δ

O: Necessary △: As necessary ×: Not necessary

If the IP address of the C Controller module has been

changed, input the changed IP address or host name.

*2 If the account of the C Controller module has been changed, input the changed user name and password.

(2) MELSECNET/H Utility's [Parameter Settings](a) Parameter settings

🕌 MELSECNET/H utility(192.168.3.3(Defa mation | Error history monitoring | Other station monitoring | Online operation Param er settings | Target settings Blank : No setting Link device refresh cycle odules [Bouting parameter Target module 1 - Slot 0000 Channel No. 51 💌 Start I/O No. Refresh parameters Check Default Operation setting 1+ Group No. 0 Online Mode * Network No. Return Return as control station MNET/H mode (Control station) --Network type Network range Monitoring time 200 * 10ms Switch screens LB/LW settings Assignment method C Points/Start C Start/End Total stations 2 -Send range for each sta LB I Start End F Low speed LW Points Start End Points 0000 00FF 256 0000 00FF 0100 01FF 256 0100 01FF Sta. Specify reserved Sta. Egual assignment Supplementary settings Clear nection settings Load File Save File Help E⊻it CPU type:Q12DCCPU-V

ltem	Set value	Setting necessity at GOT connection
Number of modules	1	0
Link device refresh cycle	(Use default value)	Δ
Routing parameter	Refer to (b).	Δ
Target module	1	0
Start I/O No.	0000н	0
Channel No.	(Use default value)	0

		ltem			Set value	Setting necessity at GOT connection	
gs	Networ	k type			MNET/H mode (Control station)	0	ξŶ
settin	Networ	k No. ^{*1}			1	0	NOR NOR
ation	Group	No.			0	0	Ň Ň
Oper	Mode ^{*2}	!			Online	0	μË
	Return				(Use default value)	Δ	, С С С
Refre	esh para	meters			(Use default value)	Δ	
	resh parameters (I Total stations	2	0	с Ч С Ч			
	Assigni	ment me	ethod		Start/End	0	25
		for LB	Sta.	Start	0000н	Δ	
		ange t ation	No.1	End	00FFн	Δ	
÷	Js*3	end ra Ich sta	Sta.	Start	0100н	Δ	
men	ettinç	ea ea	No.2	End	01FFн	Δ	
assign	/LW s	for LW	Sta.	Start	0000н	Δ	ក្តស
nge a	LB	ange . ation	No.1	End	00FFн	Δ	19 H
ork ra		end ra ch sta	Sta.	Start	0100н	Δ	
Netwo		S. ea	No.2	End	01FFн	Δ	
_	(LX/LY)) setting	s ^{*3}		No setting	Δ	N N
	Monito	ring time	•		(Use default value)	Δ	
	Specify	I/O ma	ster Sta.	*3	No setting	Δ	
	Specify	reserve	ed Sta.		No setting	Δ	J
	Supple	mentary	setting	S	(Use default value)	Δ	

O: Necessary △: As necessary ×: Not necessary

*1 Specify the same network No. as that of the GOT.

Set the same node setting as that of the GOT.
Be sure to set the setting to perform the cyclic transmission.

POINT

When changing the network parameter

After writing the network parameter to the C Controller module, either turn the C Controller module OFF and then ON or reset it.

(b) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times). Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

Transfer I network	target No.	Relay network I	No.	Relay station No.	-
2	3		2	2	
8 14			8		1
ē. (
	33				
6)			_		
8					
)					
1	9		1		
2					
3			_		
4			-		4 1
3					
5					T
ax. size of trans	ient tran	smission via oth	ier net	twork No.	
Channel No.51:	C	960 Words	æ	480 Words	
Channel No.52:	С	960 Words	F	480 Words	
Channel No.53:	C	960 Words	۲	480 Words	
Channel No.54:	С	960 Words	œ	480 Words	
960 words can b rget station, wh sed.	e selecte lich perfo	ed only when Mi rm transient tra	ELSEC	≻Q Series relay sta sion via other netwi	ition and ork No., an

Item	Range
Transfer target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 120

POINT,

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

9.3.3 Routing parameter setting

9.4.4 [Controller Setting] of GT Designer3

Item	Set value
Network Type	MNET/H mode
Network No.	1: Network No.1
Station No.	2: Station No.2
Mode Setting	Online (auto. reconnection)
Retry count	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0sec (Use default value)
Refresh Interval	1time (Use default value)
Monitor Speed	10Mbs

POINT,

[Controller Setting] of GT Designer3

For [Controller Setting], of GT Designer3, refer to the following.

9.3.1 Setting communication interface (Communication settings)

PLC side setting when connecting to MELSEC/10 9.5

Model nam	e	Reference
MELSECNET/H network module	QJ71LP21, QJ71LP21-25, QJ71LP21S-25, QJ71BR11	9.5.1
MELSECNET/10 network module (QnA Series)	AJ71QLP21, AJ71QLP21S, AJ71QBR11, A1SJ71QLP21, A1SJ71QLP21S, A1SJ71QBR11	9.5.2
MELSECNET/10 network module (A Series)	AJ71LP21, AJ71BR11, A1SJ71LP21, A1SJ71BR1	9.5.3

9.5.1 Connecting to MELSECNET/H network module

This section describes the settings of the GOT and MELSECNET/H network module in the following case of system configuration.

When connecting the MELSECNET/H network module to the MELSECNET/10 network system, specify the MELSECNET/10 Mode as a network type.

POINT

MELSECNET/H network module

For details of the MELSECNET/H network module, refer to the following manual.

Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)



the base unit. The start I/O No. of the MELSECNET/H network module is set at "0".

POINT.

When connecting to Q170MCPU or Q170MSCPU(-S1) When connected to Q170MCPU or Q170MSCPU(-S1), the start I/O No. of the MELSECNET/H network module is set to "70".

Switch setting of MELSECNET/H network module

Set the station number setting switch and mode setting switch.





9



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. X10 $\begin{array}{c} & & & \\ & & & & \\ & & & \\ & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ &$	Station number setting (Station No.1) ^{*1}	1	0

(2) Mode setting switch

Mode setting switch	Description	Set value	Setting necessity at GOT connection
	Mode setting (Online: 10Mbps)	0 (fixed)	0

O: Necessary △: As necessary ×: Not necessary

POINT,

When the switch setting has been changed Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

- Parameter setting (when connecting to MELSEC-Q or QS series)
- (1) [Network parameter] of GX Developer(a) Network parameter

	Module 1	Module 2
Network type	MNET/10 mode (Control station)	None 👻
Starting I/O No.	0000	
Network No.	1	
Total stations	2	
Group No.	0	
Station No.		
Mode	On line 👻	-
	Network range assignment	
	Refresh parameters	
	Interrupt settings	
	Return as control station 👻	
Necessary setting(No setting	1 / Alreadurent) Setifitis needu	ad No setting / Alreadu set)
Interlink transmission parameters	rt I/O No. : ase input the starting I/O No. of the modu	Valid module during other le in HEX(16 bit) form
Acknowledge XY assignment Rou	uting parameters Assignment image	Group Settings Check

ltem	Set value	Setting necessity at GOT connection
Network type	MNET/10 mode (Control station) (fixed)	0
Starting I/O No.*1	0000н	0
Network No.*2	1	0
Total stations	2	0
Group No.	0 (fixed)	0
Mode	Online (fixed)	0
Network range assignment	Refer to (b)	Δ
Refresh parameters		Δ
Interrupt settings		×
Control station return setting	(Use default value)	Δ
Redundant settings*3	, , , , , , , , , , , , , , , , , , ,	Δ
Interlink transmission parameters		×
Routing parameters	Refer to (c)	Δ

O: Necessary \triangle : As necessary \times : Not necessary

*1 When using Q170MCPU, set it according to the system configuration.

 Specify the same network No. as that of the GOT.
 Set it when the MELSECNET/H network module is used in the redundant QnPRHCPU system.

(b) Network range assignment

tssignment methor I≏ Points/Start I‴ Start/End		Monitori Total star stations	ng time 2 Viii [00 ×1	Dres	Paramete Switch e	n nerre Sisena]	B/LW rel	lin js	-			
	Sendra	inge foi ea	ach scallion	Sendira	inge tor es	ach static	n j						
Sielicniko.	Field	Stat	Frid	Fauls	Stat	End	Ponte	Stat	Fed	Pointe	Stat	Frid	Pang
31.	256	0000	COFF	250	0000	007F					2000		Direble
2	236	D100.	CIFF	256	0100	017F	Sec. 1	41-1-12		1	a		Disebie

Item				Set value	Setting necessity at GOT connection
Monitoring time				200	Δ
	Send	Station	Start	0000н	Δ
	range	No.1	End	00FFн	Δ
	station	Station	Start	0100н	Δ
LB/LW setting ^{*1}	(LB)	No.2	End	01FFн	Δ
	Send range for station (LW)	Station No.1 Station No.2	Start	0000н	Δ
			End	00FFн	Δ
			Start	0100н	Δ
			End	01FFн	Δ
	Pairing setting ^{*2}			Disable	Δ
LX/LY setting ^{*1}				No setting	Δ
Specify I/O master station*1				No setting	Δ
Specify reserved station				No setting	Δ
Supplementary setting					Δ
Station inherent parameters					Δ

O: Necessary \triangle : As necessary \times : Not necessary

Be sure to set it to perform the cyclic transmission.

*1 *2 Set it when the MELSECNET/H network module is used in the redundant QnPRHCPU system.

POINT.

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

(c) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times). Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.



Item	Range
Target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 64

POINT.

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

9.3.3 Routing parameter setting

Parameter setting (when connecting to C Controller module) Use SW3PVC-CCPU-E Ver.3.05F or later for the MELSECNET/H utility.

(1) Connection settings

*1



ltem	Set value	Setting necessity at GOT connection	
Target module ^{*1}	192.168.3.3 (Default)	0	
Write authority	Mark the checkbox	0	
User name ^{*2}	target	0	
Password ^{*2}	password	0	
Detailed settings	-	Δ	

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

If the IP address of the C Controller module has been

changed, input the changed IP address or host name. *2 If the account of the C Controller module has been changed,

input the changed user name and password.

(2) MELSECNET/H Utility's [Parameter Settings](a) Parameter settings



Item	Set value	Setting necessity at GOT connection
Number of modules	1	0
Link device refresh cycle	(Use default value)	Δ
Routing parameter	Refer to (b).	Δ
Target module	1	0
Start I/O No.	0000н	0
Channel No.	(Use default value)	0

ltem		Set value	Setting necessity at GOT connection			
gs	Network type		work type MNET/10 mode (Control station)		0	
settin	Networ	k No. ^{*1}			1	0
ation	Group I	No.			0	0
Oper	Mode				Online	0
	Return				(Use default value)	Δ
Refre	esh para	meters			(Use default value)	Δ
	Total st	ations			2	0
	Assigni	ment me	ethod		Start/End	0
t gs* ² end range for		ange for ation LB	Sta. No.1	Start	0000н	Δ
				End	00FFн	Δ
	end re ch sta	Sta.	Start	0100н	Δ	
ment	etting	Se ea	No.2	End	01FFн	Δ
ssign	LW s	or _W	Sta.	Start	0000н	Δ
nge a	LB/	inge f ition I	No.1	End	00FFн	Δ
ork ra		end re ch sta	Sta.	Start	0100н	Δ
S.oN ea Co		End	01FFн	Δ		
2	(LX/LY)	setting	s*2		No setting	Δ
Monitoring time		(Use default value)	Δ			
Specify I/O master Sta.*2		No setting	Δ			
	Specify	reserve	ed Sta.		No setting	Δ
	Supple	mentary	setting	6	(Use default value)	Δ

O: Necessary △: As necessary ×: Not necessary

*1 Specify the same network No. as that of the GOT.

*2 Be sure to set the setting to perform the cyclic transmission.

POINT,

When changing the network parameter

After writing the network parameter to the C Controller module, either turn the C Controller module OFF and then ON or reset it.

9

(b) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times). Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

Transfer network	target No.	Relay network	No.	Relay station No.	-
	3		2	2	
2				8	
3	3				
P. at					
i .	-3			-	
i					
2					
3					- 1
3					-
0					4 1
1	8		-		4
2		-		5	4
3				-	4
4		-	-	é	-
0	÷		-	÷	-
ax. size of tran:	sient tran	smission via o	ther ne	twork No.	
Channel No.51:	C	960 Words	æ	480 Words	
Dhannel No.52:	С	960 Words	¢	480 Words	
Channel No.53:	C	960 Words	۲	480 Words	
Channel No.54:	C	960 Words	•	480 Words	
960 words can l arget station, wł sed.	be selecti hich perfo	ed only when N Irm transient tr	1ELSEC ansmis	≻Q Series relay sta sion via other netw	ation and ork No., ar

Item	Range
Transfer target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 120

POINT.

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

9.3.3 Routing parameter setting

[Controller Setting] of GT Designer3

Item	Set value (Use default)	
Retry	3times	
Timeout Time	3sec	

POINT

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

9.3.1 Setting communication interface (Communication settings)

Setting of the MELSECNET/10 communication unit

Item	Set value
Network number setting switch	1: Network No.1
Group number setting switch	0: No group setting (fixed)
Station number setting switch	2: Station No.2
Mode setting switch	0: Online (fixed)

POINT.

Setting of the MELSECNET/10 communication unit For the setting method of the MELSECNET/10 communication unit, refer to the following.

 9.3.1 Setting communication interface (Communication settings)

9.5.2 Connecting to MELSECNET/ 10 network module (QnA Series)

This section describes the settings of the GOT and MELSECNET/10 network module (QnA series) in the following case of system configuration.

In this section, the network parameter (common parameter) of GX Developer is taken as an example to provide explanations.

POINT.

MELSECNET/10 network module (QnA Series) For details of the MELSECNET/10 network module (QnA Series), refer to the following manual.

For QnA/Q4AR MELSECNET/10 Network System Reference Manual

System configuration



*1 The MELSECNET/10 network module is mounted at slot 0 of the base unit. The start I/O No. of the MELSECNET/10 network module is set at "0".

Switch setting of MELSECNET/10 network module

Set for each setting switch.







9 - 26

(1) Network number setting switch

Network number setting switch	Description	Set value	Setting necessity at GOT connection
NETWORK NO. X100 $X100$ $X10$ X	Network No. setting (Network No.1) ^{*1}	1	0

O: Necessary △: As necessary ×: Not necessary *1 Specify the same network No. as that of the GOT.

(2) Group number setting switch



O: Necessary △: As necessary ×: Not necessary

(3) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION.NO. X10	Station number setting (Station No.1) ^{*2}	1	0

O: Necessary △: As necessary ×: Not necessary *2 Do not set the same station No. as that of the GOT.

(4) LED indication select switch

LED indication select switch	Description	Set value	Setting necessity at GOT connection
DISPLAY L D R (F.L) R (R.L.)	LED indication select	L (F.L.)	Δ

O: Necessary △: As necessary ×: Not necessary

(5) Mode setting switch

Mode setting s	Description	Set value	Setting necessity at GOT connection	Ċ,	
MODE 0 : ONLINE(A.R) 2 : OFFLINE	0189 01189 01189 011 011 011 011 011 011 011 01	Mode setting (Online)	0 (fixed)	0	NETWOR
(6) Condition set	O: Necess	ary ∆: As nec	essary ×	: Not necessary	TO PLC
Condition setting switches	Setting switch	Description	Set value	Setting necessity at GOT connection	. OLU (PLC
	SW1	Network type (PLC to PLC net-work (PC))	OFF (fixed)	0	NNECTIC
OFF ON SW	SW2	Station type (Control station (MNG))	ON (fixed)	0	ET/H CO
2 3 4 5 6	SW3	Parameter for using ^{*1} (common parameter (PRM))	OFF (fixed)	0	MELSECN
7	SW4	No. of	OFF	×	
8	SW5	stations '	(fixed)		
	SW7	Total BW points ^{*1}	OFF (fixed)	×	
	SW8	Not used	OFF (fixed)	×	

O: Necessary \triangle : As necessary \times : Not necessary The MELSECNET/10 network module can be communicated

by default parameters. For details, refer to the following manual.

For QnA/Q4AR MELSECNET/10 Network System **Reference Manual**

POINT

*1

When the switch setting (other than the LED indication select switch) is changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

9

■ [Network parameter] of GX Developer

(1) Network parameter

	Module 1	Module 2
Network type	MNET/10 mode (Control station)	None ·
Starting I/O No.	000	
Network No.		1
Total stations		2
Group No.		
Station No.		
Mode	On line 👻	
	Network range assignment	
	Refresh parameters	
	Interrupt settings	
	Return as control station	•
•		

Acknowledge XY assignment Routing parameters Assignment image Group Settings Check

ltem	Set value	Setting necessity at GOT connection
Network type	MNET/10 (Control station) (fixed)	0
Start I/O No.	0000н	0
Network No.*1	1	0
Total stations	2	0
Network range assignment	Refer to (2)	Δ
Refresh parameters		Δ
Interlink transmission parameters	(Use default value)	×
Routing parameters	Refer to (3)	Δ

O: Necessary \triangle : As necessary \times : Not necessary

*1 Specify the same network No. as that of the network number setting switch of the MELSECNET/10 network module.

(2) Network range assignment

	Network parame	ters As	signmer	it the Mi	NET/10(H) netw	ork rang	e. Modu	le No.:	1.				
	Setup common ar	nd station	inherent pa	rameters.										
ſ	Assignment method Points/Start Start/End		Monitorir Total sla	gtime ∕e [200 × 1	Oms	Parameter Switch sci	r name	(W settin	q	-			
			stations		0	(1.1.1	,		-	_			
	StationNo	Senar	ange ror ea R	icn station	Senar	ange for e	ach station				<u> </u>			Ĥ
	orddorarto.	Points	Start	End	Points	Start	End	Points	Start	End	Points	Start	End	
	1	256	0000	OOFF	256	0000	OOFF							
	2	256	0100	01FF	256	0100	01FF							-
Ŀ													•	
	Specify I/O master station	Sp	ecify reser	ved station	n E	qual assign	nment	Identical assignn	point nent		Points			
	Supplementary setting	Stal	ion inherer	it parameti	91S	Clear		Chec	k.	E	nd	C	ancel	

Monitoring time 200 △ Send Station Start 0000H △	tion
Send Station Start 0000H	
Oldion	
for No.1 End 00FFH △	
each Station Start 0100н △	
BW (LB) No.2 End 01FFH \triangle	
setting ^{*1} Send Start 0000H	
for No.1 End 00FFH △	
each Station Start 0100н △	
(LW) No.2 End 01FFH \triangle	
XY setting ^{*1} No setting △	
Specify I/O master station*1 No setting	
Specify reserved station No setting \triangle	
Supplementary setting	
Station inherent parameters	

 $O: \text{Necessary } \triangle: \text{As necessary } \times: \text{Not necessary} \\ ^*1 \qquad \text{Be sure to set it to perform the cyclic transmission.}$

POINT,

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

9

(3) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

🔲 Network pa	rameters S	Setting the	MELSECNE	т/е 🔳 🗖 🔀
	Target network No.	Relay network No.	Relay station No.	▲
1	2	1	2	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				▼
Clear	Cheo	x [End	Cancel

Item	Range
Target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 64

POINT,

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

9.3.3 Routing parameter setting

[Controller Setting] of GT Designer3

Item	Set value (Use default)
Retry	3times
Timeout Time	3sec

POINT

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

9.3.1 Setting communication interface (Communication settings)

Setting of the MELSECNET/10 communication unit

Item	Set value
Network number setting switch	1: Network No.1
Group number setting switch	0: No group setting (fixed)
Station number setting switch	2: Station No.2
Mode setting switch	0: Online (fixed)

POINT,

Setting of the MELSECNET/10 communication unit For the setting method of the MELSECNET/10 communication unit, refer to the following.

 9.3.1 Setting communication interface (Communication settings)

9.5.3 Connecting to MELSECNET/ 10 network module (A Series)

This section describes the settings of the GOT and MELSECNET/10 network module (A Series) in the following case of system configuration.

In this section, the network parameter (common parameter) of GX Developer is taken as an example to provide explanations.

POINT,

MELSECNET/10 network module (A Series) For details of the MELSECNET/10 network module (A Series), refer to the following manual.

Type MELSECNET/10 Network system (PLC to PLC network) Reference Manual

System configuration



[Network parameter] of GX Developer

*1 The MELSECNET/10 network module is mounted at slot 0 of the base unit. The start I/O No. of the MELSECNET/10 network module is set at "0". Switch setting of MELSECNET/10 network module

Set for each setting switch.



(1) Network number setting switch

Network number setting switch	Description	Set value	Setting necessity at GOT connection
NETWORK NO. X100 X100 X10 X10 X10 X1	Network No. setting (Network No.1)*1*2	1	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

*1 Specify the same network No. as that of the GOT.
*2 Do not specify a number between 240 and 255.

(2) Group number setting switch

Group number setting switch	Description	Set value	Setting necessity at GOT connection
GROUP.NO.	Group No. setting (No group setting)	0 (fixed)	0

O: Necessary △: As necessary ×: Not necessary

(3) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION.NO. X10 X10 x X1 x z z z z z z z z z z	Station number setting (Station No.1) ^{*3}	1	0

O: Necessary \triangle : As necessary \times : Not necessary Do not set the same station No. as that of the GOT.

(4) LED indication select switch

*3

LED indication select switch	Description	Set value	Setting necessity at GOT connection
DISPLAY L D R (F.L) (R.L.)	LED indication select	L (F.L.)	Δ

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(5) Mode setting switch

Mode setting switch	Description	Set value	Setting necessity at GOT connection	Ċ,
MODE 0:ONLINE(A.R)	Mode setting (Online)	0 (fixed)	0	-C NETWOR

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(6) Condition setting switches

Condition setting switches	Setting switch	Description	Set value	Setting necessity at GOT connection	TION (PL
	SW1	Network type (PLC to PLC net-work (PC))	OFF (fixed)	0	CONNEC
OFF ON SW	SW2	Station type (Control station (MNG))	ON (fixed)	0	CNET/H
	SW3	Parameter for using ^{*1} (common parameter (PRM))	OFF (fixed)	0	MELSE
	SW4	No. of	OFF	~	
	SW5	stations*1	(fixed)	^	
	SW6	Total B/W	OFF	×	
	SW7	points*1	(fixed)		
	SW8	Not used	OFF (fixed)	×	

O: Necessary △: As necessary ×: Not necessary

The MELSECNET/10 network module can be communicated by default parameters.

For details, refer to the following manual.

Type MELSECNET/10 Network system (PLC to PLC network) Reference Manual

POINT

*1

When the switch setting (other than the LED indication select switch) is changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

9

■ [Network parameter] of GX Developer

(1) Network parameter

Network parameters	Setting the number of MNET (II)	MNET/10(H) Ethernet cards.
	Network parameter	capacity 2 KB
	Module No.1	Module No.2
Network type	MNET/10(Controlling station) 🗸	None
Start I/O No.	0000	
Network No.	1	
Total stations	2	
Group No.		
Station No.		
	Network range assignment	
	Refresh parameters	
4		
Necessary setting(Nosetting / Alreadyset) Set if it is ne Start I/ONo.: Input the start I/ONo. installed in th	eded(<u>Nosetting</u> / Alreadyset) Valid module during other stat ne module in 16-point unit.
Acknowledge XY assignme	nt Routing parameters Ch	eck End

ltem	Set value	Setting necessity at GOT connection
Network type	MNET/10 (Control station) (fixed)	0
Start I/O No.	0000н	0
Network No.*1	1	0
Total stations	2	0
Network range assignment	Refer to (2)	Δ
Refresh parameters		Δ
Interlink transmission parameters	(Use default value)	×
Routing parameters	Refer to (3)	Δ

O: Necessary △: As necessary ×: Not necessary *1 Specify the same network No. as that of the network number setting switch of the MELSECNET/10 network module.

(2) Network range assignment

ssignment method C Points/Start C Start/End		Monitorio Total dar stations	ng time 2	CC ×1	Qms	Parameter Switch sci	nama neens L	BALW set	lings	¥		
Constantia	Sendia	inge for ea	sch station	Senda	ange lot e	ach station	-	_	_		_	
SIGUATIO.	Paris	Stat	End	Points	Start	End	Ports	Start	End	Punts	Start	End
1	256	0000	OOFF	256	0000	COFF	liewwood i		Constant of			ipace.
_												
				1 -			- Libert Keyd			2.24%		

	Ite	m		Set value	Setting necessity at GOT connection			
Monitoring	g time			200	Δ			
	Send	Station	Start	0000н	Δ			
	range for	No.1	End	00FFн	Δ			
	each	Station No.2	Start	0100н	Δ			
LB/LW	(LB)		End	01FFн	Δ			
setting*1	Send	Station	Start	0000н	Δ			
	range for	range for	range for	range for	No.1	End	00FFн	Δ
	each	Station	Start	0100н	Δ			
	(LW)	No.2	End	01FFн	Δ			
LX/LY set	ting ^{*1}			No setting	Δ			
Specify I/	O maste	r station*1		No setting	Δ			
Specify re	served	station		No setting	Δ			
Suppleme	entary se	etting		(Lise default value)	Δ			
Station in	herent p	arameters			Δ			

O: Necessary △: As necessary ×: Not necessary *1 Be sure to set it to perform the cyclic transmission.

POINT.

When changing the network parameter After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

9

(3) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

🔲 Network pa	rameters S	etting the	MELSECNE	T/E 🔳 🗖 🔀
	Target network No.	Relay network No.	Relay station No.	▲
1	2	1	2	
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				T
Clear	Cheo	sk 🗌 🦲	End	Cancel

Item	Range
Target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 64

POINT,

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

9.3.3 Routing parameter setting

[Controller Setting] of GT Designer3

Item	Set value (Use default)
Retry	3times
Timeout Time	3sec

POINT

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

9.3.1 Setting communication interface (Communication settings)

Setting of the MELSECNET/10 communication unit

Item	Set value
Network number setting switch	1: Network No.1
Group number setting switch	0: No group setting (fixed)
Station number setting switch	2: Station No.2
Mode setting switch	0: Online (fixed)

POINT.

Setting of the MELSECNET/10 communication unit For the setting method of the MELSECNET/10 communication unit, refer to the following.

 9.3.1 Setting communication interface (Communication settings)

96 Precautions

Network configuration

Use MELSECNET/H connection (PLC to PLC network), MELSECNET/H connection (PLC to PLC network) in the MNET/10 mode, or MELSECNET/10 connection (PLC to PLC network) to configure a network including the GOT.

The following networks including the GOT cannot be configured.

- MELSECNET/H (Remote I/O network)
- MELSECNET/10 (Remote I/O network)

Network type setting

- · Specify all the network modules on the same network as the same network type. (MELSECNET/H Mode and MELSECNET/H
- Extended Mode cannot be mixed.) · When connecting to MELSECNET/H in the QCPU redundant system, [MELSECNET/H Extended Mode] cannot be specified as the network type.

Monitoring range

Only PLC CPU of the same networks No. can be monitored in GOT.

For details, refer to the following manual.

GT Designer3 (GOT2000) Help

GOT startup in the MELSECNET/H or **MELSECNET/10** connection

In the MELSECNET/H or MELSECNET/10 connection, the data link is started approximately 10 seconds after the GOT startup.

When a network error occurs in the system alarm

In the MELSECNET/H or MELSECNET/10 connection. when a network error occurs in the system alarm, the system alarm message cannot be canceled even though the causes are removed.

To cancel the system alarm display, restart the GOT.

MELSECNET/H network module version For version restrictions of the MELSECNET/H network module, refer to the following manual.



Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

Connection in the multiple CPU system When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

QCPU (Q mode), motion controller CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

Connection to QCPU (Q mode)

Use function version B or later of the MELSECNET/H network module and QCPU (Q mode).

Connection to Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, or CRnQ-700 The Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, and CRnQ-700 are applicable to the MELSECNET/H connection (PLC to PLC network) only. For connecting the GOT to the MELSECNET/10 network system (PLC to PLC network), set the MELSECNET/H network system (PLC to PLC network) to the MELSECNET/10 mode.

Connection to QSCPU

The GOT can only read device data and sequence programs by the ladder monitor function in the QSCPU.

The GOT cannot write any data to the QSCPU.

Connection to Q170MCPU or Q170MSCPU(-S1)

Set [CPU No.] to "2" in the device setting to monitor the device of the Motion CPU area (CPU No.2).

When the CPU No. is set to "0" or "1", the device on the PLC CPU area (CPU No.1) is monitored.

When the CPU No. is set to the number other than "0" to "2", a communication error occurs and the monitoring cannot be executed.

For setting the CPU No., refer to the following manual.



X • 0000 • 7 8 9 D E F 4 5 6 A B C 1 2 3 0 Back CL	[Kind] BIT [Range] Device: 0000-3FFF
Network CPU No.: 0 (m) (m) Host (C) Other	
Host O Other	



10

CC-Link IE CONTROLLER NETWORK CONNECTION

10.1	Connectable Model List	10 - 2
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10.3	GOT side settings	. 10 - 9
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10. CC-Link IE CONTROLLER NETWORK CONNECTION

10.1 Connectable Model List

10.1.1 PLC/Motion controller CPU

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	Q00JCPU				
	Q00CPU ^{*1}				
	Q01CPU ^{*1}				
	Q02CPU ^{*1}	-			
	Q02HCPU ^{*1}				
	Q06HCPU ^{*1}				
	Q12HCPU ^{*1}	0	CC-Link IE	GT GT GS	<u>∫</u>] 10 2
	Q25HCPU ^{*1}	-			
	Q02PHCPU				
	Q06PHCPU				
	Q12PHCPU				
	Q25PHCPU				
	Q12PRHCPU (Main base)				
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)	0	-	27 CT CS	
MELSEC-Q (Q mode)	Q25PRHCPU				-
	(Extension base)				
, , , , , , , , , , , , , , , , , , ,	Q00UJCPU				
		-			
				GT 27 23 GS	<u>کی</u> 10.2
	Q13UDHCPU				
	Q20UDHCPU	0	CC-Link IE		
	Q26UDHCPU				
	Q03UDECPU				
	Q04UDEHCPU				
	Q06UDEHCPU				
	Q10UDEHCPU				
	Q13UDEHCPU				
	Q20UDEHCPU				
	Q26UDEHCPU				

*1 When in multiple CPU system configuration, use CPU function version B or later.

(Continued to next page)

Series	Model name	Clock	Communication type	Connectable model	Refer to	
MELSEC-Q (Q mode)	Q50UDEHCPU Q100UDEHCPU Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU	0	CC-Link IE	ст ат 23 GS	<u>ن</u> 10.2	
C Controller module	Q12DCCPU-V ^{*1} Q24DHCCPU-V Q24DHCCPU-LS	0	CC-Link IE	T GS GS	<u>المجمع</u> 10.2	7
MELSEC-QS	QS001CPU	0	CC-Link IE	27 GT GS	10.2	NOIT
MELSEC-L	L02CPU L06CPU L26CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	0	-	GT GT GS	-	NETWORK CONNEC
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	0	-	27 CT CS	-	LLER
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU Q4ARCPU	0	-		-	E CONTRO
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	0	-	27 CS	-	C-Link IE
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUP21 A2ACPUP21 A2ACPUP21-S1 A2ACPUP21-S1 A3ACPU A3ACPUP21 A3ACPUP21 A1NCPU A1NCPUP21 A1NCPUP21 A2NCPUP21	0	-	GT GT GS	-	ō 10

Use a module with the upper five digits later than 12042.

*1

Series	Model name	Clock	Communicati on type	Connectable model	Refer to
	A2NCPUP21				
	A2NCPUR21				
	A2NCPU-S1				
MELSEC-A (AnCPU)	A2NCPUP21-S1		_	GT GT GS	
	A2NCPUR21-S1	0	_	27 23 33	
	A3NCPU				
	A3NCPUP21				
	A3NCPUR21				
	A2USCPU				
	A2USCPU-S1				
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2	0			
	A1SHCPU		-	GT GT GS	
MELSEC-A (AnSCPU)	A2SCPU				-
	A2SCPU-S1				
	A2SHCPU				
	A2SHCPU-S1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
	A0J2HCPU				
	A0J2HCPUP21			GI_ GI_ CS	
	A0J2HCPUR21	×	-	27 23 ^{GS}	-
	A0J2HCPU-DC24				
	A2CCPU				
MELSEC-A	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24	0	-	T GT GS GS	-
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				

Series	Model name	Clock	Communicati on type	Connectable model	Refer to
	Q172CPU				
	Q173CPU				
	Q172CPUN			GTGTCC	
	Q173CPUN	0	-	27 23 33	-
	Q172HCPU				
Q1 ¹ Q1 ¹ Motion Q1 ¹ controller Q1 ¹	Q173HCPU				
	Q172DCPU	0			
	Q173DCPU			GT GT GS	
	Q172DCPU-S1		CC-Link IE		
(Q Series)	Q173DCPU-S1				
	Q172DSCPU				्रिङ्ग 10.2
	Q173DSCPU				5
	Q170MCPU ^{*1}				
	Q170MSCPU*2				
	Q170MSCPU-S1*2				
	MR-MQ100	0	-	27 CT CS	-

(Continued to next page)

*1 Only the first step can be used on the extension base unit (Q52B/Q55B).

*2 The extension base unit (Q5 \square B/Q6 \square B) can be used.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	A273UCPU				
	A273UHCPU				
	A273UHCPU-S3				
	A373UCPU				
	A373UCPU-S3				
Motion	A171SCPU				
controller	A171SCPU-S3		_	GT_GT_GS	_
CPU	A171SCPU-S3N		_	27 23 33	
(A Series)	A171SHCPU				
	A171SHCPUN				
	A172SHCPU				
	A172SHCPUN				
	A173UHCPU				
	A173UHCPU-S1				
	WS0-CPU0			GT GT CC	
MELSEC-WS	WS0-CPU1	×	×	27 23 33	-
MELSECNET/H	QJ72LP25-25				
Remote I/O	QJ72LP25G	×	-		-
station	QJ72BR15				
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	T GT GT GS	-
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	27 GS	-
CNC C70	Q173NCCPU	0	CC-Link IE	27 GS	10.2
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	0	CC-Link IE	GT GT GS GS	f 10.2
	FX0				
	FXos	- ×			
	FXon				
	FX1				
	FX2				
	FX2C				
	FX1s				
	FX1N				
MELSEC-FX	FX2N		-		-
	FX1NC				
	FX2NC	×			
	FX3S				
	FX3G	1			
	FX3GC				
	FX3GE	0			
	FX3U				
	FX3UC				

10.1.2 CC-Link IE Controller Network communication unit

CPU series	CC-Link IE Controller Network communication unit*1
MELSEC-Q (Q mode)	
C Controller module	
MELSEC-QS	QJ71GP21-SX
Motion controller CPU (Q Series)	QJ71GP21S-SX
CNC C70	
Robot controller (CRnQ-700)	

*1 When the CC-Link IE Controller Network is in the extended mode, use a unit with the upper five digits of the serial No. 12052 or later.

10.2 System Configuration

10.2.1 Connecting to optical loop system



	PLC		Connection cable	е	GOT		Number of
Model name ^{*5}	CC-Link IE controller network communication unit*1	Communication type	Cable model	Max. distance	Option device	Model	connectable equipment
MELSEC-Q C Controller module MELSEC-QS	QJ71GP21-SX QJ71GP21S-SX	CC-Link IE	Optical fiber cable *2	*3	GT15-J71GP23-SX ^{*6}	бт 27 23 GS	119 GOTs ^{*4}

*1 When the CC-Link IE Controller Network is in the extended mode, use a unit with the upper five digits of the serial No. 12052 or later.

For the system configuration on the CC-Link IE Controller Network module side, refer to the following manual.

- CC-Link IE Controller Network Reference Manual
- *2 For the optical fiber cable, refer to the following manual.

CC-Link IE Controller Network Reference Manual

*3 The overall extension cable length and the length between stations vary depending on the cable type to be used and the total number of stations.

For details, refer to the following manual.

CC-Link IE Controller Network Reference Manual

- *4 When Universal model QCPUs is a control station, up to 119 GOTs can be connected.
 - When a QCPU other than Universal model QCPU is the control station, the number of connectable GOTs is 63 units (at most). Basic model QCPU and the QSCPU cannot be used as the control station.
- *5 When the CC-Link IE Controller Network is in the extended mode, only MELSEC-Q series Universal model QCPU can be used.
- *6 When the CC-Link IE Controller Network is in the extended mode, use a module with the serial No. 02910908****** or later.

10.3 GOT side settings

10.3.1 Setting communication interface (Communication settings)

Set the channel of connecting equipment.

Adath Ad	Manufacturer	METSUBISHI		-
In meter Inclusive Inclusive C Clants C C Clants C C Clants C C Clants C C C Clants C C Clants C C C Clants C C C Clants C C C C Clants C C C Clants C C C C C Clants C C C C C Clants C C C C C C C C C C C C C C C C C C C	Controller Typ	MELSEC-Q/QS	i, Q1/nD/M/NC/DR, CknD-700	-
Incluse CCClins XE Controller Network of Clent Weited Setting Property Network Trype CC Econtrol Network Trype CC Econtrol Network Trype CC E Control Network Trype CC E Control Network No. 1 Staten No. 1 CC E Control Network No. 1 Staten Vo. 1 Staten	ormatio	Extend 1/F(1)	#5	
Official Setting Value ar ar ar ar bit bit bit bit bit bit bit bit bit bit	Cation Driver:	CC-Link JE Co	ntroller Network	-
r (F r (F) NRC(1) N	Jont Oetal Setting			
Import Page 1 SwRCh Page 2 SwRCh SwRCh SwRCh I Status I Status I Status I Grave No. I Status Inime(Auto Reconnect) Transmissory Speak (Etps) I Refeet Initra (mis) I Status(Trans) 3 Transwitting Speak (Etps) J Ubby Trans(Trans) 3 Obsymbol U Montar Speak High(Name)	erver		hote	
Switch Instrume Composition Switch 1 Composition Group No. 0 Instrume Mode Setting Online(Auto Recennect) Transmission Space(Rps) Transmission Space(Rps) 1 Refresh Interven(Trans) Trimeout Transfer 3 Transmission Space Montar Space High(Normal) Intervention)	dant Prop	arty	Value	
Include: 1 Status Ra. 1 C(Vax No. 1 G(Vax No. 0 Hold Setting 0 Hold Setting 0 Hold Setting 0 Refeat Intervations) 1 Retro(Tmas) 3 Trineout Time(Set) 3 Debr Time(m) 0 Montar Speed High/Normal)	Switch	onk type nuk tio	C. Je Control	
Croup No. 0 Mode Setting Online(Auto Reconnect) Transmission Spean(Chips) 1 Refresh Inicroa(risp) 3 Timeout Time(Sec) 3 Doing Time(mic) 0 Montari Spean(High(Name))	State	in No.	1	
Value Status Delho Delho 1 Restrict Autor Restringe Autor Restrict Autor Restrict Autor Restringe Autor	Grou	No.	0	
Transmisson Spead (chps) 1 Retired Intervatives 1 Retired Intervatives 3 TimevoLTime(Sec) 3 Doby Time(mc) 0 Montar Spead High(Normal)	Mode	Setting	Online(Auto Reconnect)	
Refeat http://staging 1 Rato(Tmac) 3 Trime(or Tma(Sec) 3 Data 0 Data 0 Montar Speed High(Normal)	Tran	mission Speed(Gbps)	1	
Bathy(Time) 3 Threeout Time(Get) 3 Oelse Time(mo) U Montar Speed High(Namel)	Refre	sh Interva(ms)	1	
Trineout. Trine(Sec) 3 Deby Trine(Tring) U Hostor (Speed High(Normal)	Reto	(Times)	3	
Delay Time(ma) U Monitor Speed High(Normal)	Time	out Time(Sec)	3	
Montor Speed High(Normal)	Delay	Time(ms)	U	
	Hone	or Speed	High(Normal)	_
	Mon	or Speed	(High(Normal)	

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Interface to be used
 - Driver: CC-Link IE Controller Network
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.
 - 10.3.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT.

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

10.3.2 Communication detail settings

Make the settings according to the usage environment.

Property	Value
Network Type	CC IE Control
Network No.	1
Station No.	1
Group No.	0
Mode Setting	Online(Auto Reconnect)
Transmission Speed(Gbps)	1
Refresh Interval(ms)	1
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	0
Monitor Speed	High(Normal)

Item	Description	Range
Network Type ^{*4}	Set the network Type (Default: CC IE Control)	CC IE Control CC IE Control extended mode
Network No.	Set the network No. (Default: 1)	1 to 239
Station No.	Set the station No. of the GOT. (Default: 1)	1 to 120
Group No.	-	0 (fixed)
Mode Setting	Set the operation mode of the GOT. (Default: Online (auto. reconnection))	 Online (auto. reconnection) Offline Test station^{*1} Self-loopback test^{*1} Internal self- loopback test^{*1} Line test^{*1} H/W test^{*1}
Transmission Speed	-	1 Gbps (fixed)
Refresh Interval	Set the number of refreshes to secure the send/receive data in station units during communication. (Default: 1ms) Valid when [Block data assurance per station is available.] is checked by the control station side network parameters of the CC-Link IE Controller Network.	1 to 1000ms
Retry	Set the number of retries to be performed when a communication timeout occurs. When no response is received after retries, a communication times out. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 300ms

Item	Description	Range
Monitor Speed	Set the monitor speed for the CC- Link IE controller network. This setting is not valid in all systems. (Default: High)	High(Norton) ^{*2} / Middle/Low ^{*3}

*1 For details, refer to the following manual.

CC-Link IE Controller Network Reference Manual
 This range is effective when collecting a large amount of data (such as logging and recipe function) on other than the monitor screen.
 However, the range may affect the sequence scan time when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.
 If you want to avoid the influence on the sequence scan time, do not set [High(Normal)].

- (This setting hardly affects QCPUs other than the above.)
 *3 Set this item if you want to avoid the influence on the sequence scan time further than the [Middle] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU or Q00J/Q00/Q01CPU.
- However, the monitor speed may be reduced.
- *4 When the CC-Link IE Controller Network is in the extended mode, set to [CC IE Control extended mode]. The extended mode can be used in GT Designer3 version 1.22Y or later.

POINT

- Switch setting example For the switch setting example, refer to the following.
- 10.4 PLC Side Setting
- (2) Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

- GOT2000 Series User's Manual (Utility)
- (3) Precedence in communication settings When settings are made by GT Designer3 or the Utility, the latest setting is effective.

(4) Network type Be sure to set the same network types for the CPU side and the GOT side. If the net work types of the CPU side and the GOT side are different, an error is displayed in the system alarm of the GOT side.

10.3.3 Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

POINT,

Routing parameter setting

When communicating within the host network, routing parameter setting is unnecessary.

For details of routing parameters, refer to the following manual.

CC-Link IE Controller Network Reference Manual



	Item					
Transfer Netwo	ork No.	1 to 239				
Relay Network	1 to 239					
	Universal model QCPU	1 to 120				
No.	QCPU other than Universal model QCPU ^{*1}	1 to 64				

*1 Basic model QCPU and the QSCPU are not included.

POINT,

 Routing parameter setting of relay station Routing parameter setting is also necessary for the relay station.

For the setting, refer to the following.

10.4 PLC Side Setting

- (2) Parameter reflection function of MELSOFT Navigator
 - (a) The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator.

- (b) When the settings of Transfer network No., Relay network No. or Relay station No. are reflected to the parameter from the MELSOFT Navigator, those settings are added. Items set in advance are not deleted. However, if the target network No. overlaps, the item set in advance is overwritten.
- (c) The routing information is used manually by the user when the data is created. Therefore, after changing the network configuration by MELSOFT Navigator, create a routing information again. For details of the creation of the routing information, refer to the MELSOFT Navigator help.

10.4 PLC Side Setting

This section describes the settings of the GOT and CC-Link IE controller network module in the following case of system configuration.

POINT,

CC-Link IE Controller Network module For details of the CC-Link IE Controller Network module, refer to the following manual.

CC-Link IE Controller Network Reference Manual

System configuration1 (Network Type: CC IE Control)



[J] Intwork parameter] of GX Developer

*1 The CC-Link IE Controller Network module is mounted on slot 0 of the base unit. The start I/O No. of the CC-Link IE Controller Network module is set at [0].

POINT,

When connecting to Q170MCPU or Q170MSCPU(-S1) When connected to Q170MCPU or Q170MSCPU(-S1), the start I/O No. of the CC-Link IE Controller Network module is set to "70".

System configuration2

(Network Type: CC IE Control extended mode)



- *1 The CC-Link IE Controller Network module is mounted on slot 0 of the base unit. The start I/O No. of the CC-Link IE Controller Network module is set at [0].
- Parameter settings (Connection to MELSEC-Q, QS series) of System configuration1 (Network Type: CC IE Control)
- (1) [Network parameter] of GX Developer(a) Network parameter

Network parameters Setting the number of Ethernet/CC IE/MELSECNET cards.							
	Module 1	Module 2					
Network type	CC IE Control(Control station)	None 👻					
Starting I/O No.	0000						
Network No.	1						
Total stations	2						
Group No.	0						
Station No.	1						
Mode	On line 👻	•					
	Network range assignment						
	Refresh parameters						
	Interrupt settings						
	Specify station No. by parameter. 🛛 👻						
Necessary setting(No setting	/ Alreadyset) Set if it is need	ed[Nosetting / Alreadyset]					
Sta	tt 1/0 No. :	Valid module					
Interlink transmission parameters	ase input the starting I/O No. of the modu	le in HEX(16 bit) form					
Acknowledge XY assignment Rou	ting parameters Assignment image	Group Settings Check					

ltem	Set value	Setting necessity at GOT connection
Network type	CC IE Control (Control station) (fixed)	0
Starting I/O No.*1	0000н	0
Network No. ^{*2}	1	0
Total stations	2	0
Group No.	0 (fixed)	0
Station No.	1	0
Mode ^{*3}	Online	0
Network range assignment	Refer to (b)	Δ
Refresh parameters		Δ
Interrupt settings	(Use default value)	×
Interlink transmission parameters		×
Routing parameters	Refer to (c)	Δ

O: Necessary △: As necessary ×: Not necessary

- When using Q170MCPU or Q170MSCPU(-S1), set it according to the system configuration.
- *2 Specify the same network No. as that of the GOT.

*3 Set the same mode setting as that of the GOT.

*1

(b) Network range assignment

sgoment method Richts Start - Dast/End	System configuration of the co	ding [200] p ng [200] o [2	с р 5	'araneter renv Wilch scrupte	[104/~ ce	ngs (1)	I			
	1	SAW attract	ų				1	_		
Stakon No.	Frind State 1	Tell File	EW Stat	5 - F	-947 Stat	1.200	Prints 1	ut I t	Feerp.	Shared
(\$)	256 .000	JUH 25	000.0	000-4					Diate +	
· 6: /	256 0100	01FF 25	00100	00177	5.8				Doc -	
1									****	
an Kheena I				lidenice	pont		Hep-Sa	Dennit	Shows group	
an formu	Specity recorded	19100.		identice	port	Fraints	Haip - Sa Satis	Donark	The weighter and	

Item				Set value	Setting necessity at GOT connection
Monitoring	time			2000	Δ
LB/LW setting(1)		Station	Start	0000н	Δ
	ID	No.1	End	00FFн	Δ
	LD	Station	Start	0100н	Δ
		No.2	End	01FFн	Δ
	LW	Station	Start	00000н	Δ
		No.1	End	000FFн	Δ
		Station	Start	00100н	Δ
		No.2	End	001FFн	Δ
LX/LY sett	ing ^{*1}			No setting	Δ
Specify I/C) maste	r station*	1	No setting	Δ
Specify res	served s	station		No setting	Δ
Suppleme	ntary se	tting		(Use default value)	Δ

O: Necessary △: As necessary ×: Not necessary *1 Be sure to set it to perform the cyclic transmission.

POINT,

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

(c) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times). Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.



Item	Range
Target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 120

POINT,

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

10.3.3 Routing parameter setting

Parameter setting (when connecting to C Controller module)

Use SW3PVC-CCPU-E Ver.3.05F or later for the CC IE Control utility.

(1) Connection settings between personal computer and C controller module

192.168.3.3(Default)	Clear history
nority	Detailed setting
target	

	target *******

ltem	Set value	Setting necessity at GOT connection
Target module ^{*1}	192.168.3.3 (Default)	0
Write authority	Mark the checkbox	0
User name ^{*2}	target	0
Password ^{*2}	password	0
Detailed settings	-	Δ

O: Necessary ∆: As necessary ×: Not necessary

- If the IP address of the C Controller module has been
- *1 changed, input the changed IP address or host name. If the account of the C Controller module has been changed,
- *2 input the changed user name and password.

(2) CC IE Control Utility's [Parameter Settings] (a) Parameter settings

Number of modules 1	➡ Blank : No Slot	setting Link device refresh cycl	e 🔽 100 🛨 r	ns <u>B</u> outing pa	rameter
Start I/O No. 0000	Operation settin	gs		Defau	lt
Channel No. 151 -	Network type	CC IE Control (Control :	station)	Chec	<u>k</u>
	Mode	Online		Refresh par	ameters
	Network No.			Network range	assignment
	Station No.	1 2 3			
		1 2			
		1	1		-
onnection settings		Load File	Save File	Help	E <u>×</u> it

Item		Set value	Setting necessity at GOT connection	
Numb	er of modules	1	0	
Link d	evice refresh cycle	(Use default value)	Δ	
Routing parameter		Refer to (c)	Δ	
Target module		1	0	
Start I/O No.		0000н	0	
Channel No.		151	0	
ß	Network type	CC IE Control (Control station)	0	
settin	Mode ^{*1}	Online	0	
ation	Network No.*2	1	0	
Oper	Group No.	0	0	
	Station No.	1	0	
Refree	sh parameters	(Use default value)	Δ	
Netwo assigr	ork range iment	Refer to (b)	Δ	

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

Set the same mode setting as that of the GOT. Specify the same network No. as that of the GOT. *1 *2

(b) Network range assignment

tal stations 2	•	- A	saienne C Pairc	nt metho is/Start	d (∓ S	lari/End		Monito Souten	orine tin screen		2000 0/10/s	ns ettings (1)	
1000-000-000	-		19/1W	settings (1	¥	_			_		_	_	
Station No.	Direct	LB	C.c.	Dist	LW	1 6 3	0.000			Dia		-	
1	1 250	0000	Ling .	256	00000	LING CODEE	1 DEVIC	2030	Lrd	POPUS	51810	710	
	7 755	0000	DIFE	27.6	0.000	COLEE			_		0		
									-				

Item				Set value	Setting necessity at GOT connection
Total static	ons			2	0
		Station	Start	0000н	Δ
LB/LW settings (1)	IB	No.1	End	00FFн	Δ
	LD	Station	Start	0100н	Δ
		No.2	End	01FFн	Δ
	LW	Station	Start	00000н	Δ
		No.1	End	000FFн	Δ
		Station	Start	00100н	Δ
		No.2	End	001FFн	Δ
LX/LY sett	ings ^{*1}			No setting	Δ
Monitoring	time			(Use default value)	Δ
Specify I/C) maste	r station [*]	1	No setting	Δ
Specify rea	served s	station		No setting	Δ
Suppleme	ntary se	ettings		(Use default value)	Δ

 $\bigcirc: {\sf Necessary} \ \bigtriangleup: {\sf As necessary} \ \times: {\sf Not necessary} \\ {\sf Be sure to set it to perform the cyclic transmission.} \\$

POINT

*1

When changing the network parameter

After writing the network parameter to the C Controller module, either turn the C Controller module OFF and then ON or reset it.

(c) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times). Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

Transfer ta network 1	arget No.	Relay network	No.	Relay station No.	-
1	3		2		2
2					
3					
4			-	1	
5			-	-	
6			-		
7			-	(
8			-	-	
3			-	5	-
10	3		-		-
12			-		-
13			-		
14			-		
15					
16	8				-
Max. size of transi Channel No.151: Channel No.152: Channel No.153: Channel No.154: #960 words can be areet station whi	ent tran: C C C e selecte	smission via of 960 Words 960 Words 960 Words 960 Words ed only when M rm transient tr	iher ne	twork No. 480 Words 480 Words 480 Words 480 Words 3-Q Series relay s sion via other net	tation and
ised.					

Item	Range
Transfer target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	1 to 120

POINT,

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

[3 10.3.3 Routing parameter setting

 GT Designer3 [Communication settings] of System configuration1 (Network Type: CC IE Control)

Item	Set value
Network Type	CC IE Control
Network No.	1: Network No.1
Station No.	2: Station No.2
@@@	0 (fixed)
Mode Setting	Online (auto. reconnection)
000	1 Gbps (fixed)
Refresh Interval	1ms (Use default value)
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)
Monitor Speed	High (@@@) (Use default value)

POINT,

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

10.3.1 Setting communication interface (Communication settings)

- Parameter settings (Connection to Universal model QCPU) of System configuration2 (Network Type: Extended mode)
- (1) [Network parameter] of GX Works2
 - (a) Network parameter

	Module 1		Module 2
Network Type	OC IE Control Ext. Mode(Control Statio	υ	None 👻
Start I/O No.		0000	
Network No.		1	
Total Stations		2	2
Group No.		0	
Station No.		1	
Mode	Online	-	•
	Network Range Assignment		
	Refresh Parameters		
	Interrupt Setting		
	Specify Station No. by Parameter	-	

Item	Set value	Setting necessity at GOT connection
Network Type	CC IE Control Ext. Mode (Control station) (fixed)	0
Start I/O No.*1	0000н	0
Network No.*2	1	0
Total Stations	2	0
Group No.	0 (Fixed)	0
Station No.	1	0
Mode ^{*3}	Online	0
Network Range Assignment	Same as the following setting [[Network parameter] of GX Developer	Δ
Refresh Parameters		Δ
Interrupt Setting	(Use default value)	×
Interlink transmission parameters		×
Routing parameters	Same as the following setting	Δ

O: Necessary \triangle : As necessary \times : Not necessary

(2) [Controller Setting] of GT Designer3

Item	Set value
Network type	CC IE Control extended mode
Network No.	1: Network No.1
Station No.	2: Station No.2
@@@	0 (Fixed)
Mode	Online (auto. reconnection)
Refresh Interval	High (Use default value)
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	1ms (Use default value)
Monitor Speed	High (@@@) (Use default value)

POINT.

- Network type of the GOT side When the network is in the extended mode, be sure to set the network type of the GOT side to [CC IE Control extended mode].
 For [Controller Setting], of GT Designer3, refer to the following.
- 10.3.1 Setting communication interface (Communication settings)
- (2) Network type of the PLC side Only GX Works2 can set [CC IE Control extended mode (control station)] or [CC IE Control extended mode (ordinary station)]. The CPU which is compatible with the extended mode is Universal model QCPU only.

10.5 Precautions

 GOT startup in CC-Link IE Controller Network connection

For the CC-Link IE Controller Network connection, the data link is started approximately 13 seconds after the GOT startup.

When a network error occurs in the system alarm

In the CC-Link IE Controller Network connection, when a network error occurs in the system alarm, the system alarm display cannot be canceled even though the causes are removed.

To cancel the system alarm display, restart the GOT.

 Connection in the multiple CPU system When the GOT is connected to multiple CPU system,

the following time is taken until when the PLC runs.

QCPU (Q mode), motion controller CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

 CC-Link IE Controller Network module version

For version restrictions of the CC-Link IE Controller Network module, refer to the following manual.

CC-Link IE Controller Network Reference Manual

Connection to QSCPU

The GOT can only read device data and sequence programs by the ladder monitor function in the QSCPU.

The GOT cannot write any data to the QSCPU.

Connection to Q170MCPU or Q170MSCPU(-S1)

Set [CPU No.] to "2" in the device setting to monitor the device of the Motion CPU area (CPU No.2).

When the CPU No. is set to "0" or "1", the device on the PLC CPU area (CPU No.1) is monitored.

When the CPU No. is set to the number other than "0" to "2", a communication error occurs and the monitoring cannot be executed.

For setting the CPU No., refer to the following manual.

GT Designer3 (GOT2000) Help

Example)	Setting	dialog	box	of the	bit	device
/						

X • 0000 • 7 8 9 D E F 4 5 6 A B C 1 2 3 0 Back CL	Information [Kind] BIT [Range] Device: 0000-3FFF
Network CPU No.: 0 🚖 (i) Host (ii) Other	1

11

CC-Link IE FIELD NETWORK CONNECTION

11.1	Connectable Model List	11	- 2
11.2	System Configuration	11	- 8
11.3	GOT side settings	11	- 9
11.4	PLC Side Setting	. 11 -	11
11.5	Precautions	. 11 -	14

11. CC-Link IE FIELD NETWORK CONNECTION

11.1 Connectable Model List

11.1.1 PLC/Motion controller CPU

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	Q00JCPU				
	Q00CPU ^{*1}				
	Q01CPU ^{*1}				
	Q02CPU ^{*1}				
	Q02HCPU ^{*1}				
	Q06HCPU ^{*1}				
	Q12HCPU ^{*1}	0	-	GT GT GS	-
	Q25HCPU ^{*1}	_		27 23	
	Q02PHCPU				
	Q06PHCPU				
	Q12PHCPU	-			
	Q25PHCPU				
	Q12PRHCPU(Main base)				
	Q25PRHCPU(Main base)				
	Q12PRHCPU(Extension base)	0	-	27 GT GS	
	Q25PRHCPU(Extension base)				-
MELSEC-Q	Q00UJCPU				
(& mode)	Q00UCPU				
	Q01UCPU				
	Q02UCPU			GT GT	لَّنْ مَنْ 11.2 إِنْ عَنْ 11.2
	Q03UDCPU				
	Q04UDHCPU				
	Q06UDHCPU				
	Q10UDHCPU				
	Q13UDHCPU		CC-Link IE		
	Q20UDHCPU	0	NETWORK	27 23 33	
	Q26UDHCPU				
	Q03UDECPU				
	Q04UDEHCPU				
	Q06UDEHCPU				
	Q10UDEHCPU				
	Q13UDEHCPU				
	Q20UDEHCPU				
	Q26UDEHCPU				

(Continued to next page)

Series	Model name	Clock	Communication type	Connectable model	Refer to
MELSEC-Q (Q mode)	Q50UDEHCPU Q100UDEHCPU Q03UDVCPU Q04UDVCPU Q06UDVCPU Q13UDVCPU Q26UDVCPU	0	CC-Link IE FIELD NETWORK	27 GS	J 11.2
C Controller module	Q12DCCPU-V ^{*1} Q24DHCCPU-V Q24DHCCPU-LS	0	CC-Link IE FIELD NETWORK	27 CT GS	J 11.2
MELSEC-QS	QS001CPU ^{*3}	0	CC-Link IE FIELD NETWORK	GT GT 27 23 GS	11.2
MELSEC-L	L02CPU ^{*2} L06CPU L26CPU-BT ^{*2} L02CPU-P ^{*2} L06CPU-P L26CPU-P L26CPU-P L26CPU-PBT ^{*2} L02SCPU L02SCPU-P	0	CC-Link IE FIELD NETWORK	^{GT} 27 GS	[, 11.2
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	0	-	27 CS	-
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU Q4ARCPU	0	-	27 CT CT CS	-
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	0	-	ат ат аз GS	-
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUP21 A2ACPUP21-S1 A2ACPUP21-S1 A2ACPUP21-S1 A3ACPU A3ACPUP21 A3ACPUP21 A1NCPU A1NCPUP21 A1NCPUR21 A2NCPU	0	-	T GT GT 23 GS	-

(Continued to next page)

*1 Use a module with the upper five digits later than 12042.

*2 Use a module with the upper five digits later than 13012.

*3 Use a module with the upper five digits later than "13042". Use GX Developer of Version 8.98C or later.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	A2NCPUP21	0	-		-
	A2NCPUR21				
	A2NCPU-S1				
MELSEC-A (AnCPU)	A2NCPUP21-S1			GT_GT_CC	
	A2NCPUR21-S1			27 23 33	
	A3NCPU				
	A3NCPUP21				
	A3NCPUR21				
	A2USCPU				
	A2USCPU-S1		-		-
	A2USHCPU-S1				
	A1SCPU	-			
	A1SCPUC24-R2			GT GT GS	
	A1SHCPU				
MELSEC-A (AnSCPU)	A2SCPU	0			
(**********)	A2SCPU-S1				
	A2SHCPU				
	A2SHCPU-S1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
	A0J2HCPU			27 GT GT GS	-
	A0J2HCPUP21				
	A0J2HCPUR21	×	-		
	A0J2HCPU-DC24				
	A2CCPU				
MELSEC-A	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24	0	-		-
	A2CCPUC24-PRF				
	A2CJCPU-S3	1			
	A1FXCPU				

Series	Model name	Clock	Communication type	Connectable model	Refer to					
	Q172CPU		-							
	Q173CPU									
	Q172CPUN			GT_GT_CC						
Motion	Q173CPUN	0		27 23 33	-					
	Q172HCPU									
	Q173HCPU									
	Q172DCPU		CC-Link IE FIELD NETWORK							
	Q173DCPU									
(Q Series)	Q172DCPU-S1			GT_GT_CS						
	Q173DCPU-S1			27 23 33 0						
	Q172DSCPU	0								
	Q173DSCPU									
	Q170MCPU ^{*1}			at at a constant and a constant at constant at a constant at constant at a constant at con						
	Q170MSCPU*3				11.2					
	Q170MSCPU-S1*3									*2

(Continued to next page)

*1 Only the first step can be used on the extension base unit (Q52B/Q55B).

*2 For the PLC CPU area, use a module with the upper five digits later than 12012. Only the PLC CPU area can be monitored.

*3 The extension base unit (Q5 \square B/Q6 \square B) can be used.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	A273UCPU				
	A273UHCPU				
	A273UHCPU-S3				
	A373UCPU				
	A373UCPU-S3				
	A171SCPU				
controller	A171SCPU-S3	_		GT GT CO	
CPU	A171SCPU-S3N	0	-	27 23 ^{GS}	-
(A Series)	A171SHCPU				
	A171SHCPUN				
	A172SHCPU				
	A172SHCPUN				
	A173UHCPU				
	A173UHCPU-S1				
	WS0-CPU0			CT CT	
MELSEC-WS	WS0-CPU1	×	-	27 23 GS	-
	QJ72LP25-25				
Remote I/O	QJ72LP25G	×	-	GT GT GS	-
station	QJ72BR15			27 23 00	
CC-Link IE Field Network head module	LJ72GF15-T2	×	CC-Link IE FIELD NETWORK	27 GS	<u>المجمعة</u> 11.2
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	CC-Link IE FIELD NETWORK	27 GS	َ 11.2
CNC C70	Q173NCCPU	0	CC-Link IE FIELD NETWORK	T BT GT GS	<i>[]</i> 11.2
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	0	CC-Link IE FIELD NETWORK	27 GS	<u>المجمع</u> 11.2
	FX0				
	FX ₀ s				
	FXon	×			
	FX1				
	FX2				
	FX2C	×			
	FX _{1S}				
	FX1N				
MELSEC-FX	SEC-FX FX _{2N} -	-		-	
	FX1NC				
	FX2NC	×			
	FX3S				
	FX3G				
	FX3GC	0			
	FX3GE				
	FX3U				
	FX3UC				

11.1.2 CC-Link IE Field Network communication unit

CPU series	CC-Link IE Field Network communication unit
MELSEC-Q(Universal model)	QJ71GF11-T2, QD77GF16
MELSEC-L	LJ71GF11-T2
MELSEC-QS	QS0J71GF11-T2

11.2 System Configuration

11.2.1 Connecting to CC-Link IE Field Network communication unit

		nk IE Network unit	Connection cable	G	от сс-ь	Communicat	ion driver
	PLC		Connection cable	_	GOT		
Model name	CC-Link IE Field Network communication unit	Communicatio n type	Cable model ^{*2}	Max distance ^{*1}	option device	Model	Number of connectable equipment
MELSEC-Q (Universal model) Q170MCPU C Controller module	QJ71GF11-T2 QD77GF16 ^{*3}		Ethernet cable that meets the			GT	
MELSEC-QS	QS0J71GF11-T2	CC-Link IE	1000BASE-T standard:	12100m GT1		27	
MELSEC-L	LJ71GF11-T2	Field Network	Category 5e or higher, (double-shielded, STP)		GT15-J71GF13-T2	23	120 GOTs
CC-Link IE Field Network head module	-		straight cable.			GS	
Ethernet adapter module	-						

*1 The overall extension cable length and the length between stations vary depending on the connection method (line, star or ring), the system configuration, etc.

For details, refer to the following manual.

*2

*3

CC-Link IE Field Network Master/Local Module User's Manual

Use hubs that satisfy the following conditions.

• Compliance with the IEEE802.3 (1000BASE-T)

Supporting the auto MDI/MDI-X function

Supporting the auto-negotiation function

• Switching hub (A repeater hub is not available.) Recommended switching hub (Mitsubishi electric products)

	····· •····· •····· •·····)
Туре	Model name
Industrial switching hub	NZ2EHG-T8

For details, refer to the following manual.

CC-Link IE Field Network Master/Local Module User's Manual

When connecting to the QD77GF16, refer to the following manual.

MELSEC-Q QD77GF Simple Motion Module User's Manual

11.3 GOT side settings

11.3.1 Setting communication interface (Communication settings)

Set the channel of connecting equipment.

ne Man	ufacturer:	METSUBISHI		-)	
Con	troller Type:	MELSEC-D/OS.	017nD/M/NC/DR. CRnD 700	-	
Secor		[conservation and and		·	
Intebo		Extend 1/H(1st)	-	
cation Driv	ad:	CC-Unk JE Red	Network	-1	
Client Det	Setting				
nver					
iransfer (F	Property		Value	<u>+</u>	
witch	Network T	ype .	CC IE Field		
100000	Network N	0.	1		
	Station No.		1		
	Group No.		0		
	Transmission	ng o Foood(Shoo)	Chine		
	Rafrash Int	to observice has	105		
	Input for F	m Sta	Clear		
	Retry Time	sì	3		
	Timeout T	me(Sec)	3		
	Delay Time	(ms)	0		
	Montor Sp	ood	High(Normal)		

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Interface to be used
 - Driver: CC-Link IE Field Network
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.
 - 11.3.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following. $\boxed{3}$ 1.1.2 I/F communication setting

11.3.2 Communication detail settings

Make the settings according to the usage environment.

Property		Value		
Network Typ	e	CC IE Field		
Network No.		1		
Station No.		1		
Group No.		0		
Group No.		0		
Mode Setting		Online		
Transmission	Speed(Gbps)	1		
Refresh Inter	val(ms)	25		
Input for Err.	Sta.	Clear		
Retry(Times)		3		
Timeout Time	e(Sec)	3		
Delay Time(m	ne)	0		
Monitor Coop	d.	Uigh(Normal)		
Monicor Spee	a	High(Normal)		
Item	Descripti	on	Range	
Network Type ^{*4}	Set the network Type		CC IE Field	
Network No.	Set the network No. c (Default: 1)	of the GOT.	1 to 239	
Station No.	Set the station No. of (Default: 1)	the GOT.	1 to 120	
Group No.	-		0 (fixed)	
Mode Setting (Default: Online (auto. reconnect		de of the GOT. ection))	 Online Offline H/W test^{*1} Self-loopback test^{*1} 	
Tramsmissio	-		1 Gbps (fixed)	
n Speed				
Reflesh	secure the send/recei	ive data in	1 to 1000ms	
	(Default: 25ms)			
Input for Error Station	Set the hold/clear of input from the station where the data link is faulty due to some reason such as turning the power OFF.		Clear/Hold	
Retry	Set the number of ret performed when a co timeout occurs. When receiving no re retries, the communic out. (Default: 3times)	0 to 5times		
Timeout Time	Set the time period fo communication to tim (Default: 3sec)	r a e out.	3 to 90sec	
Delay Time	Set the delay time for load of the network/de (Default: 0ms)	reducing the estination PLC.	0 to 300ms	
Monitor Speed	Set the monitor speed Link IE field network. This setting is not vali systems.	High(Normal) ^{*2} / Middle/Low ^{*3}		

- *1 For details, refer to the following manual
 - CC-Link IE Field Network Master/Local Module User's Manual
- *2 This range is effective when collecting a large amount of data (such as logging and recipe function) on other than the monitor screen. However, the range may affect the sequence scan time when connecting to Q00UJ/Q00U/Q01U/Q02UCPU. If you want to avoid the influence on the sequence scan time, do not set [High(Normal)]. (This setting hardly affects QCPUs other than the above.)
- *3 Set this range if you want to avoid the influence on the sequence scan time further than the [Middle] setting when connecting to Q00UJ/Q00U/Q01U/Q02UCPU. However, the monitor speed may be reduced.

POINT,

- Switch setting example For the switch setting example, refer to the following.
- 11.4 PLC Side Setting
- (2) Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

- GOT2000 Series User's Manual (Utility)
- (3) Precedence in communication settings When settings are made by GT Designer3 or the Utility, the latest setting is effective.
- (4) Network type Be sure to set the same network types for the CPU side and the GOT side. If the network types of the CPU side and the GOT side are different, an error is displayed in the system alarm of the GOT side.

11.3.3 Routing parameter setting

Up to 64 [Transfer Network No.]s can be set.

However, the same transfer network number cannot be set twice or more (multiple times).

Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

POINT,

Routing parameter setting

When communicating within the host network, routing parameter setting is unnecessary.

For details of routing parameters, refer to the following manual.

CC-Link IE Field Network Master/Local Module User's Manual



	Range	
Transfer Netwo	1 to 239	
Relay Network	1 to 239	
Relay Station No.	MELSEC-Q (Universal model) Q170MCPU, Q170MSCPU(-S1) C Controller Module	0 to 120

*1 Basic model QCPU and the QSCPU are not included.

POINT

- Routing parameter setting of relay station Routing parameter setting is also necessary for the relay station.
 For the setting, refer to the following.
- 11.4 PLC Side Setting
- (2) Parameter reflection function of MELSOFT Navigator
 - (a) The color of the cells for the items which are reflected to GT Designer3 from MELSOFT Navigator changes to green. Set items, which are displayed in green cells, from the MELSOFT Navigator.
 - (b) When the settings of Transfer network No., Relay network No. or Relay station No. are reflected to the parameter from the MELSOFT Navigator, those settings are added. Items set in advance are not deleted. However, if the target network No. overlaps, the item set in advance is overwritten.
 - (c) The routing information is used manually by the user when the data is created. Therefore, after changing the network configuration by MELSOFT Navigator, create a routing information again. For details of the creation of the routing information, refer to the MELSOFT Navigator help.

11.4 PLC Side Setting

This section describes the settings of the GOT and CC-Link IE controller network module in the following case of system configuration.

POINT_

CC-Link IE Field Network Module

For details of the CC-Link IE Field Network module, refer to the following manual.

CC-Link IE Field Network Master/Local Module User's Manual

System configuration (Network Type: CC IE Field)



[] ■ [Network parameter] of GX Works2

The CC-Link IE Field Network module is mounted on slot 0 *1 of the base unit The start I/O No. of the CC-Link IE Field Network module is set at [0].

POINT.

When connecting to Q170MCPU or Q170MSCPU(-S1) When connected to Q170MCPU or Q170MSCPU(-S1), the start I/O No. of the CC-Link IE Field Network communication unit is set to "70".

- Parameter settings (Connection to MELSEC-Q, QS series) of System configuration (Network Type: CC IE Field)
- (1) Network parameter] of GX Works2 Use GX Works2 of Version 1.31H or later. (a) Network parameter



ltem	Set value	Setting necessity at GOT connection
Network type	CC IE Field (Master station) (fixed)	0
Starting I/O No.*1	0000н	0
Network No.*2	1	0
Total stations	1	0
Station No.	0 (fixed)	0
Mode ^{*3}	Online (Normal mode)	0
Network Configuration Settings	Refer to (b)	Δ
Refresh parameters		Δ
Interrupt settings	(Use default value)	×
Interlink transmission parameters		×
Routing parameters	Refer to (c)	Δ

O: Necessary △: As necessary ×: Not necessary When using Q170MCPU or Q170MSCPU(-S1), set it

according to the system configuration.

*2 *3 Specify the same network No. as that of the GOT.

Set the same mode setting as that of the GOT.

*1

(b) Network Configuration Settings



	Item			Set value	Setting necessity at GOT connection
Rx/RY,	Rx/RY setting	Station No.1	Start	0000н	Δ
			End	00FFH	Δ
setting(1)*1	RWw/RWr	Station	Start	00000н	Δ
	setting	No.1	End	000FFн	Δ
Reserved/Error Invalid Station				No setting	^

 $\bigcirc: \text{Necessary } \triangle: \text{As necessary } \times : \text{Not necessary } Be \text{ sure to set it to perform the cyclic transmission.}$

POINT,

*1

- When changing the network parameter After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.
- (2) GOT station type Set the GOT as an intelligent device station.

(c) Routing parameter setting

Up to 64 [Transfer Network No.]s can be set. However, the same transfer network number cannot be set twice or more (multiple times). Therefore, the one that can access to other station from the request source host GOT is 64 kinds of [Transfer Network No.]s.

🖁 Network Parameter Setting the Ethernet/CC IE/M 🔳 🗖 🔀					
		Target Network No.	Relay Network No.	Relay Z	
	1	3	2	3	
	2				
	3				
	4				
	5				-
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				<u>-</u>
(Ilear	Check	End		Iancel
	l	tem		Range	9

Item	Range
Transfer target network No.	1 to 239
Relay network No.	1 to 239
Relay station No.	0 to 120

POINT,

Routing parameter setting of request source

Routing parameter setting is also necessary for the request source GOT.

For the setting, refer to the following.

11.3.3 Routing parameter setting

 GT Designer3 [Communication settings] of System configuration (Network Type: CC IE Field)

Item	Set value
Network Type	CC IE Field
Network No.	1: Network No.1
Station No.	1: Station No.1
Group No.	0 (fixed)
Mode Setting	Online
Refresh Interval	25ms (Use default value)
Input for Err. Sta.	Clear (Use default value)
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)
Monitor Speed	High(Normal) (Use default value)

POINT

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

11.3.1 Setting communication interface (Communication settings)

11.5 Precautions



Set the GOT to hold the input from the data link faulty

stations in the communication setting. Set "Input for

11.3.2 Communication detail settings

Error Station" to "Hold".

OK Cancel

Switch to the device comment dialog

12

CC-Link CONNECTION (INTELLIGENT DEVICE STATION)

12.1	Connectable Model List	. 12 - 2
12.2	System Configuration	. 12 - 7
12.3	GOT Side Settings	12 - 10
12.4	PLC Side Setting	12 - 12
12.5	Precautions	12 - 39

12. CC-Link CONNECTION (INTELLIGENT DEVICE STATION)

12.1 Connectable Model List

12.1.1 PLC/Motion controller CPU

The following table shows the connectable models.

Series	Model name	Clock	type	Connectable model	Refer to
MELSEC-Q (Q mode)	Q00JCPU Q00CPU*1 Q01CPU*1 Q02CPU*1 Q02HCPU*1 Q06HCPU*1 Q12HCPU*1 Q25HCPU Q02PHCPU Q06PHCPU Q12PRHCPU (Main base) Q12PRHCPU (Extension base) Q25PRHCPU (Extension base) Q00UCPU Q00UCPU Q00UCPU Q01UCPU Q03UDCPU Q03UDCPU Q04UDHCPU Q13UDCPU Q10UDHCPU Q13UDECPU Q04UDHCPU Q13UDECPU Q13UDECPU Q13UDEHCPU Q20UDEHCPU Q10UDEHCPU Q10UDEHCPU Q10UDEHCPU Q10UDEHCPU Q03UDVCPU	0	CC-Link(ID)	errentiation and the second se	12.2
C Controller module	Q12DCCPU-V ^{*2} Q24DHCCPU-V Q24DHCCPU-LS	0	CC-Link(ID)	27 23 GS	12.2

(Continued to next page)

*1 When in multiple CPU system configuration, use CPU function version B or later.

*2 Use a module with the upper five digits later than 12042.

Series	Model name	Clock	Communicati on type	Connectable model	Refer to	
MELSEC-QS	QS001CPU	0	-	27 CT 23 CS	-	
-	L02CPU					
	L06CPU					
	L26CPU					
	L26CPU-B		CC-Link(ID)		J 12.2.2	
	L02CPU-P			27 23 GS		
MELSEC-L	L06CPU-P	0				
	L26CPU-P					
	L26CPU-PBT	-				
	L02SCPU					
	L02SCPU-P					
MELSEC O	Q02CPU-A					
(A mode)	Q02HCPU-A	0	CC-Link(ID)	27 23 GS	12.2.1	
(/(110000)	Q06HCPU-A					
	Q2ACPU					
MELSEC-OnA	Q2ACPU-S1			CT CT	∫ 12.2.1	Z
(QnACPU)	Q3ACPU	0	CC-Link(ID)	27 23 GS		ATIC
(0	Q4ACPU					
	Q4ARCPU					ST ST
	Q2ASCPU		CC-Link(ID)		j 12.2.1	ш
MELSEC-QnA	Q2ASCPU-S1			27 GS		VIC
(QnASCPU)	Q2ASHCPU	Ŭ				
	Q2ASHCPU-S1					삥
	A2UCPU				12.2.1	긑
	A2UCPU-S1					z
	A3UCPU	_				Щ.
	A4UCPU	_				Ĕ
	A2ACPU	-				
	A2ACPUP21					벁
	A2ACPUR21					Ž
	A2ACPU-51					
						ð
	A3ACPU	_				Ē
	A3ACPUP21					С С
MELSEC-A	A3ACPUR21	0	CC-Link(ID)	T 23 GS		ž
(AnCPU)	AINCPU		00 2(.2)			Z
	A1NCPUP21					<u> </u>
	A1NCPUR21					¥
	A2NCPU					<u>.</u>
	A2NCPUP21					I
	A2NCPUR21	-				No
	A2NCPU-S1					Ŭ
	A2NCPUP21-S1					12
	A2NCPUR21-S1					
	A3NCPU					
	A3NCPUP21					
	A3NCPUR21					
	A2USCPU					
	A2USCPU-S1	0	CC-Link(ID)	27 23 GS	j₹ 12.2.1	
	A2USHCPU-S1					
	A1SCPU					
	A1SCPUC24-R2					
MELSEC-A	A1SHCPU					
(AnSCPU)	A2SCPU					
(10010)	AZSUPU-S1					
	A2SHCPU	4				
	A19 ICDU	-				
	A1SJHCPU					
		L	I	(Continued	to next nade)	

Series	Model name	Clock	Communication type	Connectable model	Refer to
	A0J2HCPU	- ×	CC-Link(ID)		
	A0J2HCPUP21			27 23 GS	<u>►</u> 10.0.1
	A0J2HCPUR21				الاريم المراجع
	A0J2HCPU-DC24				
	A2CCPU		-		
MELSEC-A	A2CCPUP21				-
	A2CCPUR21				
	A2CCPUC24	0		^{G1} 27 ^{G1} 23 GS	
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
	Q172CPU ^{*1*2}		CC-Link(ID)	GT 27 23 GS	
	Q173CPU ^{*1*2}				<u></u> <u>−</u> 12.2
	Q172CPUN ^{*1}				
	Q173CPUN ^{*1}				
	Q172HCPU				
	Q173HCPU				
	Q172DCPU				
Motion	Q173DCPU				
CPU	Q172DCPU-S1				
(Q Series)	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU				
	Q170MCPU ^{*3}				
	Q170MSCPU*4				
	Q170MSCPU-S1*4				
	MR-MQ100	0	-	27 23 GS	-

(Continued to next page)

When using SV13, SV22, or SV43, use the motion controller CPU on which any of the following main OS version is installed. *1 SW6RN-SV13Q□: 00H or later

• SW6RN-SV22Q□: 00H or later

SW6RN-SV43Q□: 00B or later

*2 Use main modules with the following product numbers.

Q172CPU: Product number N****** or later
 Q173CPU: Product number M****** or later

*3 Only the first step can be used on the extension base unit (Q52B/Q55B).

*4 The extension base unit $(Q5 \square B/Q6 \square B)$ can be used.
Series	Model name	Clock	Communication type	Connectable model	Refer to
	A273UCPU				
	A273UHCPU				
	A273UHCPU-S3				
	A373UCPU				
	A373UCPU-S3				
Motion	A171SCPU				
controller	A171SCPU-S3		CC Link(ID)	GT GT CC	
CPU	A171SCPU-S3N	0	CC-LINK(ID)	27 23 ^{GS}	12.2.1 تح
(A Series)	A171SHCPU				
	A171SHCPUN				
	A172SHCPU				
	A172SHCPUN				
	A173UHCPU				
	A173UHCPU-S1				
	WS0-CPU0			GT GT CO	
MELSEC-WS	WS0-CPU1	×	×	27 23 ^{GS}	-
MELSECNET/H	QJ72LP25-25				
Remote I/O	QJ72LP25G	×	-		-
station	QJ72BR15			21 20	
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	27 CS	-
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	27 CS	-
CNC C70	Q173NCCPU	0	CC-Link(ID)	T 27 CS	12.2
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	0	CC-Link(ID)	27 CS	f 12.2
	FX0		-		
	FX _{0S}	×			
	FXON				
	FX1				
	FX2	~	_		
	FX _{2C}		-		
	FX1S				
	FX1N		_		
MELSEC-FX	FX _{2N}		-		-
	FX1NC]			
	FX2NC	×	-		
	FX3S				
	FX3G	1			
	FX3GC				
	FX3GE	0	-		
	FX3U	1			
	FX3UC	1			

12.1.2 CC-Link module

CPU series	CC-Link module
MELSEC-Q (Q mode) C Controller module Motion controller CPU (Q Series) CNC C70 Robot controller (CRnQ-700)	QJ61BT11 QJ61BT11N
MELSEC-L	LJ61BT11
MELSEC-QnA	AJ61QBT11 ^{*1} A1SJ61QBT11 ^{*1}
MELSEC-Q (A mode) MELSEC-A Motion controller CPU (A Series)	AJ61BT11 ^{*1} A1SJ61BT11 ^{*1}

*1 Transient communication can be performed to only CC-Link modules of function version B or later and software version J or later.

12.2 System Configuration

12.2.1 Connecting with CC-Link Ver.1 compatible ĭ**'∠**IIII CC-Link PLC GOT module CC-Link Ver2(ID) Connection cable GOT PI C Connection cable Number of connectable Communication Max. CC-Link module Model name Cable model Option device Model equipment distance type *1 QJ61BT11 MELSEC-Q QJ61BT11N C Controller QJ61BT11 module QJ61BT11N ^{GT} 27 MELSEC-L LJ61BT11 CC-Link dedicated GT15-J61BT13 *3 CC-Link (Ver.1) 26 GOTs MELSEC-L cable *5 *2 (L26CPU-BT) GS AJ61QBT11 MELSEC-QnA A1SJ61QBT11*4 AJ61BT11 MELSEC-A A1SJ61BT11*4 *1

For the system configuration of the CC-Link module, refer to the following manuals.

CC-Link System Master/Local Module User's Manual QJ61BT11N

Control & Communication Link System Master/Local Module Type AJ61QBT11/A1SJ61QBT11 User's Manual Control & Communication Link System Master/Local Module Type AJ61BT11/A1SJ61BT11 User's Manual MELSEC-L CC-Link System Master/Local Module User's Manual

- *2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.
 - CC-Link Partner Association's home page: http://www.cc-link.org/
- *3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.

For details, refer to the following manual.

- 7 CC-Link System Master/Local Module User's Manual QJ61BT11N
 - Control & Communication Link System Master/Local Module Type AJ61QBT11/A1SJ61QBT11 User's Manual Control & Communication Link System Master/Local Module Type AJ61BT11/A1SJ61BT11 User's Manual MELSEC-L CC-Link System Master/Local Module User's Manual
- *4 Transient transmission can be performed to only CC-Link modules of function version B or later and software version J or later.
- *5 Specify Ver.1 as the mode setting in the Communication Settings to use it. For details of the settings, refer to the following the manual.
 - 12.3.1 Setting communication interface (Communication settings)

12 - 7

12.2.2 Connecting with CC-Link Ver.2 compatible



Model name	*1	type	Cable model	distance	Option device	Model	equipment
MELSEC-Q C Controller module	QJ61BT11N		CC-Link dedicated			^{ст} 27	
MELSEC-L	LJ61BT11	CC-Link (Ver.2)	cable	*3	GT15-J61BT13 *4	^{GT} 23	26 GOTs
MELSEC-L (L26CPU-BT) (L26CPU-PBT)	-		*2			GS	

*1 For the system configuration of the CC-Link module, refer to the following manual.

CC-Link System Master/Local Module User's Manual QJ61BT11N MELSEC-L CC-Link System Master/Local Module User's Manual

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.

CC-Link Partner Association's home page: http://www.cc-link.org/
 *3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.

For details, refer to the following manual.

CC-Link System Master/Local Module User's Manual QJ61BT11N MELSEC-L CC-Link System Master/Local Module User's Manual

*4 Specify Ver.2 as the mode setting in the Communication Settings to use it. For details of the settings, refer to the following the manual.

12.3.1 Setting communication interface (Communication settings)

12.2.3 Connecting with CC-Link Ver.1/Ver.2 compatibles mixed

		CC-Link module	Connection ca	ble	GOT		Communication driver
	PLC		Connection cab	le	GOT		Number of
Model name	CC-Link module *1	Communication type	Cable model	Max. distance	Option device	Model	connectable equipment
MELSEC-O	O I61BT11N	CC-Link (Ver.2)	CC-Link dedicated cable *2	*3	GT15-J61BT13 *4	ст 27 ст 23 GS	
WELGEG-Q	GOIDTIN	CC-Link (Ver.1)	CC-Link dedicated cable *2	*3	GT15-J61BT13 *5	ст 27 ст 23 GS	26 0010
C Controller	0.618711N	CC-Link (Ver.2)	CC-Link dedicated cable *2	*3	GT15-J61BT13 *4	ст 27 ст 23 GS	20 00 18
module	QJOIDTTIN	CC-Link (Ver.1)	CC-Link dedicated cable *2	*3	GT15-J61BT13 *5	бт 27 23 GS	
	*1 For the *2 For the *3 The ma the tran	system configuration CC-Link System Ma specifications and ir CC-Link Partner As ximum overall exten smission speed.	n of the CC-Link module, aster/Local Module User's nquiries of the CC-Link de sociation's home page: ht ision cable length and the	refer to the Manual QJ dicated cab tp://www.cc length betw	following manual. 161BT11N .le, refer to the following. :-link.org/ veen stations vary depend	ling on the cab	le type to be used and

For details, refer to the following manual.

CC-Link System Master/Local Module User's Manual QJ61BT11N

*4 Specify Ver.2 as the mode setting in the Communication Settings to use it. For details of the settings, refer to the following the manual.

*5 Specify Ver.1 as the mode setting in the Communication Settings to use it.

For details of the settings, refer to the following the manual.

12.3.1 Setting communication interface (Communication settings)

12.3 GOT Side Settings

12.3.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.

Oxfore enveryforger fyrg: Instance (ryGS, GUTPOINTING/DS, CRD.700) Ovrifuelwr Tyrg: Instance (ryGS, GUTPOINTING/DS, CRD.700) YP: Eaberd 4/(1at) Satorny Store Instance (ryGS, GUTPOINTING/DS, CRD.700) YP: Eaberd 4/(1at) Proc: (CoLink Ver.2)D) Optial SetCing Threatmentsion Threatmentsion Threatmentsion Threatmentsion Threatmentsion Threatmentsion Threatmentsion Double for	Shore Intersection Shore Controller Type: Marchar Marchart PR: Statum Stratus PR: Statum Status PR: Status Prescription Prescription Value Status Prescription Prescription Value	Zhone	lan darturen	Introducer	()	
Commandato C	Acting a formula Proceeding and the second device and the	3:None 6	Controller Typer	MELSEC.0/0	5 017nD/M/NC/DR (BnD.700	
March Jong VP: Extend U(Stat) Sectory V/Sectory Sectory (CLink Ver.2(D)) PERSON (CLink Ver.2(D))	Madeu jardina PF: Extend UF(1s1) Standard Street Processing Standard Street Processing PFIS Standard Processing Processing Processing Processing Processing Processing Processing Processing Processing Processing Value Processing Value Processing Processing Processing Value Processing Processing	Work Duplex Seto	100	Common Mich		
Communities Constraints Constrain	Communities Construintee Co	Gateway	/F:	Extend I/F(1	sL)	
22 Status 22 Status 23 Status 25 Status 26 Status 27 Status 20 Status <t< td=""><td>22 Status 22 Status 23 Status 24 Status 25 Status 26 Status 27 Status 28 Status 29 Status 20 Status <t< td=""><td>Gateway Serve</td><td>Qriver:</td><td>CO-Link Ver.J</td><td>2(10)</td><td>-</td></t<></td></t<>	22 Status 22 Status 23 Status 24 Status 25 Status 26 Status 27 Status 28 Status 29 Status 20 Status <t< td=""><td>Gateway Serve</td><td>Qriver:</td><td>CO-Link Ver.J</td><td>2(10)</td><td>-</td></t<>	Gateway Serve	Qriver:	CO-Link Ver.J	2(10)	-
The Tonater (F The Tonater (F Declarified (F Declarified (F) Declarified (Subton 1) Documed Subton 1)	The Service of t	22 Gateway Clent	oetan setting			
Tigs Re Transfer (F) Vision Station No. 0 Station No. 0 Station No. 0 Station No. 0 Dosmidati No. 0 Station No. 0 Dosmidati No. 0 Dosmidati No. 0 Dosmidati Orick Single Ocuped Station 1 station Docuped Station 1 station Data Phytime(ins) 3 Timeout Imm(sc) 3 Delay Time(ins) 0	Tigrafe Transfer (F) Viske Station No. 1 Station No. 0 Station No. 0 Transmission Rule 0.0 Note 0.0 Distance (F) 0.0 Proving Station No. 0.0 Distance (F) 0.0	ETP Server	20220000000000000000000000000000000000			
I greenings Sation No. Sekd1 Torent son Rale Ochrier 15% Ups Decomposition Rale Vice Vice 1 Decomposition Rale Vice	I greenings: Sakton Ko. Svid-1 Transmon Kale Ochreit-155klps Mode Ver.1 Polander Orck Single Doug for firm Station Territy (Tras) 1 Imodu / Imo(Sec) 3 Daby Trac(ms) 8	rg File Transfer (F	Property		Value	
Note 0:01mt258dps Note 0:01mt258dps Distanded Octo Single Ocupated Subm 1:46km Dout for time Staton Cker Retry Time (ms) 3 Date Time (ms) 0	Noce 0:0:hits:15x0ps Noce 0:0:1 Exanded Occk Single Ocupaed Subm 1:stokin Dout for sime Station Cker Retry(Tme) 3 Immodifiering(sc) 2 Daxy Tme(ms) 0	Q Redundant Station No. Switch	Station No.		- Lawrence -	
Notes Ver.1 Distanded Oytic Single Occupied Subion 1 station Incode Fire revisation Clear Retry(Time) 3 Immode Time(sist) 3 Daiby Time(ms) 0	Noce Vic: Single Occupied Subion 1 station Incode fire revisation Care Retry(Thins) 3 Introdu Time(sic) 3 Deby Time(ms) 0		Transmissio	n Rate	0:Cnine:155kbps	
Couper Station 1 station Pout for Error Station Clar Retry (Trins) 3 Timpout Time(Stat) 2 Deby Time(ms) 0	Couper Station 1 station Pour for Error Station Clar Retry (Trins) 3 Deby Time(Stat) 2 Deby Time(ms) 0		Node		Ver.1	
Couper Saloh Inou, fer errorstation Retry(Timer) 3 Innou fine (ms) 3 Daby Time(ms) 0	Couper Saloh Pour fer enrestation Retry(Timer) 3 Timeout Time(Sec) 3 Deby(Time(ms) 0		Expanded	oyele:	Single	
Imposition Station Retry(Trms(Stst)) 3 Timeout Time(Stst) Daby J	Image: Time(Star) Star Retry(Time(Star) 3 Timeod: Time(Star) 3 Date: Time(ms) 0		Occupied S	cauon	1 SCOOM	
Trinsol Trins(Sec) 3 Delay Trins(Iris) 0	Timeout Time(Sec) 3 Delay Time(ms) 0		Ratrul Time	c)	3	
	Dater Tree(red) 0		Internet In	rue(Ser)	3	
			Deby Tree	(ms)	0	
			04 - 00 - 00	- WI		
						L L
	- · ·				(Constraint)	
- · ·	- · · ·				OK	Cancel Apply

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Interface to be used
 - Driver:CC-Link Ver2 (ID)
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

12.3.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

12.3.2 Communication detail settings

Make the settings according to the usage environment.

Property	Value
Station No.	1
Transmission Rate	0:Online:156kbps
Mode	Ver.1
Expanded Cyclic	Single
Occupied Station	1 station
Input for Error Station	Clear
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Station No.	Set the station No. of the GOT. (Default: 1)	1 to 64
Transmission Rate ^{*1}	Set the transmission speed and the mode of the GOT. (Default: 0)	0 to E
Mode	Set the mode of CC-Link. (Default: Ver.1)	Ver.1/Ver.2/ Additional/Offline
Expanded Cyclic	Set the cyclic point expansion. (Default: Single)	Single/Double/ Quadruple/Octuple
Occupied Station	Set the number of stations occupied by the GOT. (Default: 1 Station)	1 Station/4 Stations
Input for Error Station	Set Clear/Hold at an error occurrence. (Default: Clear)	Clear/Hold
Retry	Set the number of retries to be performed when a communication timeout occurs. When no response is received after retries, a communication times out. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 300 (ms)

*1 Transmission speed settings

The following lists the transmission speed settings of the CC-Link communication.

Set value	Description
0	Online: 156kbps
1	Online: 625kbps
2	Online: 2.5Mbps
3	Online: 5Mbps
4	Online: 10Mbps
5	Line test: 156kbps
6	Line test: 625kbps
7	Line test: 2.5Mbps
8	Line test: 5Mbps
9	Line test: 10Mbps
А	Hardware test: 156kbps
В	Hardware test: 625kbps
С	Hardware test: 2.5Mbps
D	Hardware test: 5Mbps
E	Hardware test: 10Mbps

For details of the hardware test, refer to the following manual.

CC-Link System Master/Local Module User's Manual for CC-Link module to be used

POINT,

 Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

(2) Precedence in communication settingsWhen settings are made by GT Designer3 or the Utility, the latest setting is effective.

12.4 PLC Side Setting

The GOT operates as the stations of which are shown below in the CC-Link system.

Station data	Description
Station type	Intelligent device station, Ver.1 intelligent device station or Ver.2 intelligent device station
Number of stations occupied	Station 1 or Station 4

The switch settings and parameter settings of the PLC side (CC-Link module) are described in 12.4.1 to 12.4.7.

	Model name	9	Refer to
	Connecting with Ver.1 compatible	QJ61BT11, QJ61BT11N	12.4.1
CC-Link module (Q Series)	Connecting with Ver.2 compatible	QJ61BT11N	12.4.2
	Connecting with Ver.1/ Ver.2 compatibles mixed	QJ61BT11N	12.4.3
CC-Link module (QnA Series)		AJ61QBT11, A1SJ61QBT11	12.4.6
CC-Link module (A Series)		AJ61BT11, A1SJ61BT11	12.4.7



Number of stations occupied

The number of stations occupied is setting for determining number of link device points (RX/RY/ RWw/RWr) used by the GOT.

To use multiple numbers of link device points in the case of cyclic transmission between the GOT and CC-Link module, set the number of stations occupied as the exclusive station 4.

The number of link device points at the exclusive station 1 and 4 is shown below.

CC-	l ink	Ver	2
00-		vei	. –

	Expanded cyclic setting							
	Single		Double		Quadruple		Octuple	
Link device	Exclu sive statio n 1	Exclu sive statio n 4						
Remote input (RX)	32 points	128 points	32 points	224 points	64 points	448 points	128 points	896 points
Remote output (RY)	32 points	128 points	32 points	224 points	64 points	448 points	128 points	896 points
Remote register (RWw)	4 points	16 points	8 points	32 points	16 points	64 points	32 points	128 points
Remote register (RWr)	4 points	16 points	8 points	32 points	16 points	64 points	32 points	128 points

CC-Link Ver.1

Link device	Number of stations occupied		
	Exclusive station	Exclusive station 4	
Remote input (RX)	32 points	128 points	
Remote output (RY)	32 points	128 points	
Remote register (RWw)	4 points	16 points	
Remote register (RWr)	4 points	16 points	

12.4.1 Connecting to CC-Link module (Q Series) with Ver.1 compatible

This section describes the settings of the GOT and the CC-Link module (Q Series) with Ver.1 compatible in the following system configuration.

POINT CC-Link module (Q Series) For details of the CC-Link module (Q Series), refer to the following manual. CC-Link System Master/Local Module User's Manual QJ61BT11N System configuration [_____ ■ [Controller Setting] of GT Designer3 Setting of the CC-Link communication unit <GOT> (Use the default value for settings other than the following.) Station type Intelligent device station : Station No.1 Station No. Number of : Exclusive station 1 stations occupied Transmission speed : 156kbps <CC-Link module> ^{*1} (Use the default value for the settings other than the following.) Master station Туре Station No. Station No.0 Mode Remote net (Ver.1 mode) All connect count : 1 Transmission speed : 156kbps

Switch setting of CC-Link module (Q Series) [Network parameter] of GX Developer

> *1 The CC-Link module is mounted on the base unit slot 0. The Start I/O No. of the CC-Link module is set to "0"

Switch setting of CC-Link module (Q Series) Set the station number setting switch, transmission speed / mode setting switch.



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. X10 x_{10} y_{10} $y_{$	Station number setting (master station)	0 (fixed)	0

O: Necessary △: As necessary ×: Not necessary

(2) Transmission rate/mode setting switch

Transmission rate/mode setting	Description	Set value	Setting necessity at GOT connection
MODE	Transmission rate/ mode setting (Online: 156kbps) ^{*1}	0	0

O: Necessary △: As necessary ×: Not necessary

*1 Specify the same transmission speed as that of the GOT.

POINT

When the switch setting is changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

- Parameter setting (when connecting to MELSEC-Q or QS series)
- (1) [Network parameter] of GX Developer (a) Network parameter

ĺ	Network parameters Setting the CC-Link list.			
	No. of boa	rds in module 🚺 💌 Boards 🛛 E	3lank: no setting.	
			1	
Start I/O No		Start I/O No	(000
	Operational setting		Operational settings	
		Туре	Master station	-
		Master station data link type	PLC parameter auto start	
		Mode	Remote net(Ver.1 mode)	-
		All connect count		
		Remote input(RX)	> >	<40
		Remote output(RY)) N	740
		Remote register(RWr)	C)30
		Remote register(RWw)	C	20
		Ver.2 Remote input(RX)		
		Ver.2 Remote output(RY)		
		Ver.2 Remote register(RWr)		
		Ver.2 Remote register(RWw)		
		Special relay(SB)		SB
		Special register(SW)	9	5W
		Retry count		
		Automatic reconnection station count		
		Stand by master station No.		
		PLC down select	Stop	
		Scan mode setting	Asynchronous	
		Delay infomation setting		
I		Station information setting	Station information	
I		Remote device station initial setting	Initial settings	
1			In the second section of the second	

Item	Set value	Setting necessity at GOT connection
No. of boards in module	1	0
Start I/O No.	0000н	0
Operation setting	(Use default value)	Δ
Туре	Master station (fixed)	0
Mode	Remote net (Ver.1 mode)	0
All connect count	1	0
Remote input (RX)	X400	Δ
Remote output (RY)	Y400	Δ
Remote register (RWr)	D300	Δ
Remote register (RWw)	D200	Δ
Special relay (SB)	SB0	Δ
Special register (SW)	SW0	Δ
Retry count		Δ
Automatic reconnection station count		Δ
Stand by master station No.	(Use default value)	×
PLC down select		Δ
Scan mode setting		Δ
Delay information setting		Δ
Station information setting	Refer to (b).	0
Remote device station initial settings	(Use default value)	×
Interrupt setting		×

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(b) Station information setting

Item ^{*1}	Set value	necessity at GOT connection
Station type	Intelligent device station (fixed)	0
Exclusive station count ^{*2}	Exclusive station 1	0
Reserve/invalid station select	No setting	0
Intelligent buffer select (word)	(Use default value)	×

 $\bigcirc:$ Necessary $\ \bigtriangleup:$ As necessary $\ \times:$ Not necessary

*1 When the [Mode] of the CC-Link module is set at [Remote

net - (Ver. 1 mode)], [Remote station points] cannot be set. Set the same number of occupied stations as that on the *2 GOT.

POINT

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

Parameter setting (when connecting to C Controller module)

Use SW3PVC-CCPU-E Ver.3.05F or later for the CC-Link utility.

(1) Connection settings

*1

<u></u>		<u>T</u> est
Target module	192.168.3.3 (Default)	Clear history
Write a	uthority	Detailed setting
User name	target	
Password	*****	-

ltem	Set value	Setting necessity at GOT connection
Target module ^{*1}	192.168.3.3 (Default)	0
Write authority	Mark the checkbox	0
User name ^{*2}	target	0
Password ^{*2}	password	0
Detailed settings	-	Δ

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

If the IP address of the C Controller module has been

changed, input the changed IP address or host name.*2 If the account of the C Controller module has been changed, input the changed user name and password.

(2) CC-Link Utility's [Parameter Settings](a) Parameter settings

			Default	Check
Start I/O No.	Operation settings Type Master sta	ation 👱	Error event: input data sta C Hold ⓒ Clear	atus
Channel No.	Mode Remote no Expanded cyclic setting	et(Ver.1 mode) 💌	CPU stop: data link statu:	s ompulsorily
	Occupied number	Exclusive station 1 🛛 💆	Qther se	ettings
Station inform All connect	nation settings count 1 💌			Clear
No./Sta. No.	Station Type	Expanded cyclic Oc setting	cupied number	
1/1	Intelligent device station	Single Excluse	sive station 1 💌 32 poir	
			*	

Item ^{*1}		Set value	Setting necessity at GOT connection	
Num	ber of modules		1	0
Targ	et module		1	0
Start	I/O No.		0000н	0
Char	nnel No.		(Use default value)	0
	Туре		Master station (fixed)	0
s	Mode		Remote net (Ver.1 mode)	0
etting	Expanded cyclic settin	g	Single	Δ
ion se	Occupied number		Exclusive station 1	Δ
Operat	Error event: input data status		Clear	Δ
	CPU stop: data link sta	itus	Refresh	Δ
	Other settings		(Use default value)	Δ
	All connect count		1	0
settings	Station Type	Sta. No.1	Intelligent device station	0
ion information s	Occupied number*2	Sta. No.1	Exclusive station 1	0
	Reserve/invalid station select	Sta. No.1	No setting	0
Sta	Intelligent buffer select (word)		(Use default value)	×

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

*1 When the [Mode] of the CC-Link module is set at [Remote

net - (Ver. 1 mode)], [Remote station points] cannot be set. *2 Set the same number of occupied stations as that on the GOT.

POINT,

When changing the network parameter

After writing the network parameter to the C Controller module, either turn the C Controller module OFF and then ON or reset it.

[Controller Setting] of GT Designer3

Item	Set value
Station No.	1: Station No.1
Transmission Rate	0: Online 156kbps
Mode	Ver.1: Remote net (Ver.1 mode)
Expanded Cyclic	Single (Use default value)
Number of stations occupied	1 Station
Input for Error Station	0: Clear
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)

POINT.

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

² 12.3.1 Setting communication interface × 3 (Communication settings)

12.4.2 Connecting to CC-Link module (Q Series) with Ver.2 compatible

This section describes the settings of the GOT and CC-Link module (Q Series) in the following case of system configuration.

POINT.

CC-Link module (Q Series)

For details of the CC-Link module (Q Series), refer to the following manual.

CC-Link System Master/Local Module User's Manual QJ61BT11N

System configuration





<GOT> (Use the default value for settings other than the following.) Station type : Intelligent device station Station No. Station No.1 Expanded cyclic setting : Single Number of : Exclusive station 1 stations occupied : 156kbps Transmission speed

<CC-Link module> *1 (Use the default value for the settings other than the following.)

Master station Station No.0

Type Station No. Mode Remote net (Ver.2 mode)

All connect count

Transmission speed : 156kbps

Switch setting of CC-Link module (Q Series) [Network parameter] of GX Developer

*1 The CC-Link module is mounted on the base unit slot 0. The Start I/O No. of the CC-Link module is set to "0'

POINT

When connecting to Q170MCPU or Q170MSCPU(-S1) When connected to Q170MCPU or Q170MSCPU(-S1), the start I/O No. of the CC-Link module is set to "70".

12

Switch setting of CC-Link module (Q Series) Set the station number setting switch, transmission speed / mode setting switch.



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. X10 X10 $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 &$	Station number setting (master station)	0 (fixed)	0

O: Necessary △: As necessary ×: Not necessary

(2) Transmission rate/mode setting switch

Transmission rate/mode setting switch	Description	Set value	Setting necessity at GOT connection
MODE	Transmission rate/mode setting (Online: 156kbps) ^{*1}	0	0

 $\bigcirc: \mathsf{Necessary} \ \bigtriangleup: \mathsf{As necessary} \ \times: \mathsf{Not necessary}$

*1 Specify the same transmission speed as that of the GOT.

POINT

When the switch setting has been changed Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

- Parameter setting (when connecting to MELSEC-Q or QS series)
- (1) [Network parameter] of GX Developer
 - (a) Network parameter

Network parameters Setting the CC-Link list.					
No. of boa	rds in module 1 💌 Boards E	lank: no setting.			
		1			
	Start I/O No		0000		
	Operational setting	Operational settings			
	Туре	Master station			
	Master station data link type	PLC parameter auto start	-		
	Mode	Remote net(Ver.2 mode)	-		
	All connect count		1		
	Remote input(RX)		X400		
	Remote output(RY)		Y400		
	Remote register(RWr)		D300		
	Remote register(RWw)		D200		
	Ver.2 Remote input(RX)				
	Ver.2 Remote output(RY)				
	Ver.2 Remote register(RWr)				
	Ver.2 Remote register(RWw)				
	Special relay(SB)		SBO		
	Special register(SW)		SW0		
	Retry count		3		
	Automatic reconnection station count		1		
	Stand by master station No.				
	PLC down select	Stop	-		
	Scan mode setting	Asynchronous	-		
	Delay infomation setting		0		
	Station information setting	Station information			
	Remote device station initial setting	Initial settings			
	Interrupt setting	Interrupt settings			

Item	Set value	necessity at GOT connection
No. of boards in module	1	0
Start I/O No.*1	0000н	0
Operation setting	(Use default value)	Δ
Туре	Master station	0
Mode	Remote net (Ver.2 mode)	0
All connect count	1	0
Remote input (RX)	X400	Δ
Remote output (RY)	Y400	Δ
Remote register (RWr)	D300	Δ
Remote register (RWw)	D200	Δ
Special relay (SB)	SB0	Δ
Special register (SW)	SW0	Δ
Retry count		Δ
Automatic reconnection station count		Δ
Stand by master station No.	(Use default value)	×
PLC down select		Δ
Scan mode setting	1	Δ
Delay information setting		Δ
Station information setting	Refer to (b)	0
Remote device station initial setting	(Use default value)	×
Interrupt setting]	×

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

*1 When using Q170MCPU, Q170MSCPU(-S1), set it according to the system configuration.

12. CC-Link CONNECTION (INTELLIGENT DEVICE STATION) 12.4 PLC Side Setting

(b) Station information setting

CC-Unk stat	ion Information. Modul	o 1							8
Station No.	Station type	Expanded cyclic setting	Exclusive stellan	Fiencle station points	Reserver invalid station calast	I veligen Sørd	buliersele Receive	oliword /accristic	•
1/1 Vet	2 Mel gent device station 👻	ange 👻	Exclusive station 1 +	32 points -	No setting 🐳	64	64	128	
	Dda. d		hack	Entral		_			
	Item ^{*1}			Set value	9	ne	Sett ecess GC onne	ing sity a)T ction	it 1
			Ve	r 2 intelligent	device				-

Station type	station (fixed)	0
Expanded cyclic setting ^{*2}	Single	0
Exclusive station count ^{*2}	Exclusive station 1	0
Remote station points	32 points (fixed)	0
Reserve/invalid station select	No setting	0
Intelligent buffer select (word)	(Use default value)	×

O: Necessary \triangle : As necessary \times : Not necessary

*1 When the [Mode] of the CC-Link module is set at [Remote net - (Ver. 2 mode)], [Remote station points] can be set. [Remote station points] is a setting for the remote I/O station. The default value (32 points) must be used on the GOT.

*2 Set the same setting as that of the GOT.

POINT,

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

Parameter setting (when connecting to C Controller module) Use SW3PVC-CCPU-E Ver.3.05F or later for the CC-

(1) Connection settings

Link utility.

		<u>T</u> est
Target module	[192.168.3.3(Default)	Clear history
Write au	uthority	Detailed setting:
User name	target	
Password	*******	

ltem	Set value	Setting necessity at GOT connection
Target module ^{*1}	192.168.3.3 (Default)	0
Write authority	Mark the checkbox	0
User name ^{*2}	target	0
Password ^{*2}	password	0
Detailed settings	-	Δ

O: Necessary △: As necessary ×: Not necessary

If the IP address of the C Controller module has been

changed, input the changed IP address or host name.
*2 If the account of the C Controller module has been changed, input the changed user name and password.

(2) CC-Link Utility's [Parameter Settings]

(a) Parameter settings

*1



Item ^{*1}	Set value	Setting necessity at GOT connection
Number of modules	1	0
Target module	1	0
Start I/O No.	0000н	0
Channel No.	(Use default value)	0

	Item ^{*1}		Set value	Setting necessity at GOT connection
	Туре		Master station	0
s	Mode	Remote net (Ver.2 mode)		0
etting	Expanded cyclic settin	g	Single	Δ
ion se	Occupied number		Exclusive station 1	Δ
Operati	Error event: input data status		Clear	Δ
	CPU stop: data link status		Refresh	Δ
	Other settings		(Use default value)	Δ
	All connect count		1	0
	Station Type	Sta. No.1	Ver.2 intelligent device station	0
settings	Expanded cyclic setting ^{*2}	Sta. No.1	Single	0
Station information	Occupied number ^{*2}	Sta. No.1	Exclusive station 1	0
	Remote station points	Sta. No.1	32 points	0
	Reserve/invalidSta.station selectNo.1		No setting	0
	Intelligent buffer select (word)		(Use default value)	×

O: Necessary △: As necessary ×: Not necessary

*1 When the [Mode] of the CC-Link module is set at [Remote net - (Ver. 2 mode)], [Remote station points] can be set. [Remote station points] is a setting for the remote I/O station. The default value (32 points) must be used on the GOT.

*2 Set the same setting as that of the GOT.

POINT,

When changing the network parameter

After writing the network parameter to the C Controller module, either turn the C Controller module OFF and then ON or reset it.

[Communication settings] of GT Designer3

Item	Set value
Station No.	1: Station No.1
Transmission Rate	0: Online 156kbps
Mode	Ver.2: Remote net (Ver.2 mode)
Expanded Cyclic	Single
Number of stations occupied	1 Station
Input for Error Station	Clear
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)

POINT

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

[12.3.1 Setting communication interface (Communication settings)

12.4.3 Connecting to CC-Link module (Q Series) with Ver.1/Ver.2 compatibles mixed

This section describes the setting of the GOT and CC-Link module (Q Series) with Ver.1/Ver.2 compatibles mixed in the following system configuration.

POINT.

CC-Link module (Q Series)

For details of the CC-Link module (Q Series), refer to the following manual.

CC-Link System Master/Local Module User's Manual QJ61BT11N

System configuration





1 The CC-Link module is mounted on the base unit slot 0. The Start I/O No. of the CC-Link module is set to "0"

POINT.

When connecting to Q170MCPU or Q170MSCPU(-S1) When connected to Q170MCPU or Q170MSCPU(-S1), the start I/O No. of the CC-Link module is set to "70".

Switch setting of CC-Link module (Q Series) Set the station number setting switch, transmission speed / mode setting switch.



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. $X10 \qquad \begin{array}{c} 1 & \theta & \varphi \\ \varphi & \varphi & \varphi \\ \varphi & \varphi & \varphi \\ \varphi & \varphi & \varphi$	Station number setting (master station)	0 (fixed)	0

O: Necessary △: As necessary ×: Not necessary

(2) Transmission rate/mode setting switch

Transmission rate/mode setting switch	Description	Set value	Setting necessity at GOT connection
MODE	Transmission rate/ mode setting (Online: 156kbps) ^{*1}	0	0

O: Necessary △: As necessary ×: Not necessary

Specify the same transmission speed as that of the GOT.

POINT,

*1

When the switch setting has been changed Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

- Parameter setting (when connecting to MELSEC-Q or QS series)
- (1) [Network parameter] of GX Developer (a) Network parameter

Network parameters Setting the CC-Link list.			
No. of boards in module 1 💌 Boards g	Blank: no setting,		
	1		
Start I/O No	0000		
Operational setting	Operational settings		
Туре	Master station 📃 💌		
Master station data link type	PLC parameter auto start 📃 💌		
Mode	Remote net(Ver.2 mode)		
All connect count	2		
Remote input(RX)	×400		
Remote output(RY)	Y400		
Remote register(RWr)	D300		
Remote register(RWw)	D200		
Ver.2 Remote input(RX)			
Ver.2 Remote output(RY)			
Ver.2 Remote register(RWr)			
Ver.2 Remote register(RWw)			
Special relay(SB)	SBO		
Special register(SW)	SW0		
Retry count	3		
Automatic reconnection station count	1		
Stand by master station No.			
PLC down select	Stop 💌		
Scan mode setting	Asynchronous 🗾 👻		
Delay infomation setting	0		
Station information setting	Station information		
Remote device station initial setting	Initial settings		
Interrupt setting	Interrunt settings		

ltem	Set value	Setting necessity at GOT connection
No. of boards in module	1	0
Start I/O No.*1	0000н	0
Operation setting	(Use default value)	Δ
Туре	Master station (fixed)	0
Mode	Remote net (Ver.2 mode)	0
All connect count	2	0
Remote input (RX)	X400	Δ
Remote output (RY)	Y400	Δ
Remote register (RWr)	D300	Δ
Remote register (RWw)	D200	Δ
Special relay (SB)	SB0	Δ
Special register (SW)	SW0	Δ
Retry count		Δ
Automatic reconnection station count		Δ
Stand by master station No.	(Use default value)	×
PLC down select		Δ
Scan mode setting		Δ
Delay information setting		Δ
Station information setting	Refer to (b)	0
Remote device station initial setting	(Use default value)	×
Interrupt setting		×

O: Necessary △: As necessary ×: Not necessary

When using Q170MCPU or Q170MSCPU(-S1), set it *1 according to the system configuration.

(b) Station information setting

Station bloc	Stelion type	Expanded excloration	Exclusive station social	Remote station	1	lecene árw. dei missie	efec 1	Intelligent Siend	buffer celec Bacaixes	disord) Automatic
1/1 Ve	et 1 intelligent device station 👻	argle 👻	Explusive station 1 👻	C2 points	+ No	setting		- 64	64	120
212 Ve	n 2 intelligent device station 💌	single 📼	Exclusive station 1 💌	32 points	* 110	ec/ang	*	64	64	128

Station information setting of station No.1 (GOT)

ltem ^{*1}	Set value	Setting necessity at GOT connection
Station type	Ver.1 intelligent device station (fixed)	0
Exclusive station count ^{*2}	Exclusive station 1	0
Reserve/invalid station select	No setting	0
Intelligent buffer select (word)	(Use default value)	×

O: Necessary △: As necessary ×: Not necessary

Station information setting of station No.2 (GOT)

Item ^{*1}	Set value	Setting necessity at GOT connection
Station type	Ver.2 intelligent device station (fixed)	0
Expanded cyclic setting ^{*2}	Single	0
Exclusive station count ^{*2}	Exclusive station 1	0
Reserve/invalid station select	No setting	0
Intelligent buffer select (word)	(Use default value)	×

 $\bigcirc: \mathsf{Necessary} \ \bigtriangleup: \mathsf{As necessary} \ \times: \mathsf{Not necessary}$

When the [Mode] of the CC-Link module is set at [Remote *1 net - (Ver. 2 mode)], [Remote station points] can be set. [Remote station points] is a setting for the remote I/O station. The default value (32 points) must be used on the GOT. Set the same setting as that of the GOT. *2

POINT

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

12

Parameter setting (when connecting to C Controller module)

Use SW3PVC-CCPU-E Ver.3.05F or later for the CC-Link utility.

(1) Connection settings



ltem	Set value	Setting necessity at GOT connection
Target module ^{*1}	192.168.3.3 (Default)	0
Write authority	Mark the checkbox	0
User name ^{*2}	target	0
Password ^{*2}	password	0
Detailed settings	-	Δ

O: Necessary \triangle : As necessary \times : Not necessary

*1 If the IP address of the C Controller module has been

changed, input the changed IP address or host name.*2 If the account of the C Controller module has been changed, input the changed user name and password.

(2) CC-Link Utility's [Parameter Settings](a) Parameter settings



Item ^{*1}		Set value	Setting necessity at GOT connection	
Number of modules		1	0	
Target module		1	0	
Start I/O No.		0000н	0	
Channel No.		(Use default value)	0	
Туре		Master station	0	
s	Mode		Remote net (Ver.2 mode)	0
etting	Expanded cyclic setting	g	Single	Δ
tion s	Occupied number		Exclusive station 1	Δ
Operat	Error event: input data status		Clear	Δ
	CPU stop: data link status		Refresh	Δ
Other settings		(Use default value)	Δ	
All connect count		2	0	
	Station Tune	Sta. No.1	Ver.1 intelligent device station	0
		Sta. No.2	Ver.2 intelligent device station	0
settings	Expanded cyclic	Sta. No.1	Single	Δ
rmation	setting*2	Sta. No.2	Single	0
tion info	Coccupied number*2	Sta. No.1	Exclusive station 1	0
Sta		Sta. No.2	Exclusive station 1	0
	Demote station a state	Sta. No.1	32 points	0
		Sta. No.2	32 points	0

	Item ^{*1}		Set value	Setting necessity at GOT connection
settings	s ttjudg Reserve/invalid	Sta. No.1	No setting	0
mation \$	station select	Sta. No.2	No setting	0
Station infor	Intelligent buffer select (word)	t	(Use default value)	×

O: Necessary △: As necessary ×: Not necessary

- *1 When the [Mode] of the CC-Link module is set at [Remote net - (Ver. 2 mode)], [Remote station points] can be set. [Remote station points] is a setting for the remote I/O station. The default value (32 points) must be used on the GOT.
- *2 Set the same setting as that of the GOT.

POINT

When changing the network parameter

After writing the network parameter to the C Controller module, either turn the C Controller module OFF and then ON or reset it

■ [Controller Setting] of GT Designer3

(1) Communication Settings of station No.1 (GOT)

Item	Set value
Station No.	1: Station No.1
Transmission Rate	0: Online 156kbps
Mode	Ver.1: Remote net (Ver.1 mode)
Expanded Cyclic	Single (Use default value)
Number of stations occupied	1 Station
Input for Error Station	0: Clear
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)

(2) Communication Settings of station No.2 (GOT)

Item	Set value (Use default value)
Station No.	2: Station No.2
Transmission Rate	0: Online 156kbps
Mode	Ver.2: Remote net (Ver.2 mode)
Expanded Cyclic	Single
Number of stations occupied	1 Station
Input for Error Station	0: Clear
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)

12.4.4 Connecting to MELSEC-L series with CC-Link Ver.1 compatible

This section describes the settings of the GOT and MELSEC-L in the following case of the system configuration.

POINT,

- (1) CC-Link module (L Series)
- For details of the CC-Link module (L Series), refer to the following manual.
- MELSEC-L CC-Link System Master/Local Module User's Manual
- (2) CC-Link function built-in CPU For details on the CC-Link function built-in CPU, refer to the following manual.
- MELSEC-L CC-Link System Master/Local Module User's Manual

System configuration

(Example when using CC-Link module (L Series))

Controller Setting] of GT Designer3



(Use the default value for the settings other than the following.)

Туре	:	Master station
Station No.	:	Station No.0
Mode	:	Remote net (Ver.1 mode)
All connect count	:	1
Transmission speed	: b	156kbps
- [Notwo	el e r	arameterl of CV Developer

[] ■ [Network parameter] of GX Developer

12. CC-Link CONNECTION (INTELLIGENT DEVICE STATION) 12.4 PLC Side Setting

[Network parameter] of GX Developer

(1) Network parameter

Networ	Network parameters Setting the CC-Link list.				
No. of boa	rds in module 🚺 💌 Boards 🛛 E	lank: no setting.			
		1			
	Start I/O No		0000		
	Operational setting	Operational settings			
	Туре	Master station	-		
	Master station data link type	PLC parameter auto start	-		
	Mode	Remote net(Ver.1 mode)	-		
	All connect count		1		
	Remote input(RX)		×400		
	Remote output(RY)		Y400		
	Remote register(RWr)		D300		
	Remote register(RWw)		D200		
	Ver.2 Remote input(RX)				
	Ver.2 Remote output(RY)				
	Ver.2 Remote register(RWr)				
	Ver.2 Remote register(RWw)				
	Special relay(SB)		SBO		
	Special register(SW)		SW0		
	Retry count		3		
	Automatic reconnection station count		1		
	Stand by master station No.				
	PLC down select	Stop	-		
	Scan mode setting	Asynchronous	-		
	Delay infomation setting		0		
	Station information setting	Station information			
	Remote device station initial setting	Initial settings			
	Interrupt setting	Interrupt settings			

ltem	Set value	Setting necessity at GOT connection
No. of boards in module	1	0
Start I/O No.*1	0000н	0
Operation setting	(Use default value)	Δ
Туре	Master station (fixed)	0
Mode	Remote net (Ver.1 mode)	0
All connect count	1	0
Remote input (RX)	X400	Δ
Remote output (RY)	Y400	Δ
Remote register (RWr)	D300	Δ
Remote register (RWw)	D200	Δ
Special relay (SB)	SB0	Δ
Special register (SW)	SW0	Δ
Retry count		Δ
Automatic reconnection station count		Δ
Stand by master station No.	(Use default value)	×
PLC down select		Δ
Scan mode setting		Δ
Delay information setting		Δ
Station information setting	Refer to (2)	0
Remote device station initial setting	(Use default value)	×
Interrupt setting		×

O: Necessary △: As necessary ×: Not necessary

Set the Start I/O No. of the CC-Link module according to the *1 system configuration.

(2) Station information setting

		Copended	Explusive station	Remote stel or	Deserve/invalid	l risiani	t pulfer se e	ctiverel 🔺
Station No	Station type	card c setting	coursi .	z	rister select	Send	Bacaive	Automeis
	Dido #	7 0	aet 1	ind Concel				
	Duck							

		connection
Station type	Intelligent device station (fixed)	0
Exclusive station count ^{*2}	Exclusive station 1	0
Reserve/invalid station select	No setting	0
Intelligent buffer select (word)	(Use default value)	×

O: Necessary △: As necessary ×: Not necessary

When the [Mode] of the CC-Link module is set at [Remote *1 net - (Ver. 1 mode)], [Remote station points] cannot be set. Set the same setting as that of the GOT.

*2

POINT

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

[Controller Setting] of GT Designer3

Item	Set value
Station No.	1: Station No.1
Transmission Rate	0: Online 156kbps
Mode	Ver.1: Remote net (Ver.1 mode)
Expanded Cyclic	Single (Use default value)
Number of stations occupied	1 Station
Input for Error Station	0: Clear
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)

POINT

[Controller Setting] of GT Designer3 For the setting method of [Controller Setting] of GT Designer3, refer to the following.

12.3.1 Setting communication interface (Communication settings)

12

12.4.5 Connecting to MELSEC-L series with CC-Link Ver.2 compatible

This section describes the settings of the GOT and MELSEC-L in the following case of the system configuration.

POINT,

- CC-Link module (L Series) For details of the CC-Link module (L Series), refer to the following manual.
- MELSEC-L CC-Link System Master/Local Module User's Manual
- (2) CC-Link function built-in CPU For details on the CC-Link function built-in CPU, refer to the following manual.
- MELSEC-L CC-Link System Master/Local Module User's Manual

System configuration

(Example when using CC-Link module (L Series))

[Controller Setting] of GT Designer3



■ [Network parameter] of GX Developer

- [Network parameter] of GX Developer
- (1) Network parameter

Networ	Network parameters Setting the CC-Link list.				
No. of boa	rds in module 🚺 💌 Boards 🛛 E	Blank: no setting.			
		1			
	Start I/O No	0	000		
	Operational setting	Operational settings			
	Туре	Master station	•		
	Master station data link type	PLC parameter auto start	•		
	Mode	Remote net(Ver.2 mode)	•		
	All connect count		1		
	Remote input(RX)	×	400		
	Remote output(RY)	Y400			
	Remote register(RWr)	D	300		
	Remote register(RWw)	D	200		
	Ver.2 Remote input(RX)				
	Ver.2 Remote output(RY)				
	Ver.2 Remote register(RWr)				
	Ver.2 Remote register(RWw)				
	Special relay(SB)		SBO		
	Special register(SW)	9	W0		
	Retry count		3		
	Automatic reconnection station count		1		
	Stand by master station No.				
	PLC down select	Stop	•		
	Scan mode setting	Asynchronous	•		
	Delay infomation setting		0		
	Station information setting	Station information			
	Remote device station initial setting	Initial settings			
		and the second sec	_		

ltem	Set value	Setting necessity at GOT connection
No. of boards in module	1	0
Start I/O No.*1	0000н	0
Operation setting	(Use default value)	Δ
Туре	Master station (fixed)	0
Mode	Remote net (Ver.2 mode)	0
All connect count	1	0
Remote input (RX)	X400	Δ
Remote output (RY)	Y400	Δ
Remote register (RWr)	D300	Δ
Remote register (RWw)	D200	Δ
Special relay (SB)	SB0	Δ
Special register (SW)	SW0	Δ
Retry count		Δ
Automatic reconnection station count		Δ
Stand by master station No.	(Use default value)	×
PLC down select		Δ
Scan mode setting		Δ
Delay information setting		Δ
Station information setting	Refer to (2)	0
Remote device station initial setting	(Use default value)	×
Interrupt setting		×

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

Set the Start I/O No. of the CC-Link module according to the system configuration.

*1

(2) Station information setting



Item ^{*1}	Set value	Setting necessity at GOT connection
Station type	Ver.2 intelligent device station (fixed)	0
Expanded cyclic setting ^{*2}	Single	0
Exclusive station count*2	Exclusive station 1	0
Remote station points	32 points (fixed)	0
Reserve/invalid station select	No setting	0
Intelligent buffer select (word)	(Use default value)	×

O: Necessary △: As necessary ×: Not necessary

- When the [Mode] of the CC-Link module is set at [Remote *1 net - (Ver. 2 mode)], [Remote station points] can be set. [Remote station points] is a setting for the remote I/O station. The default value (32 points) must be used on the GOT. Set the same setting as that of the GOT.
- *2

POINT.

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU either turning OFF and then ON or resetting.

[Controller Setting] of GT Designer3

Item	Set value
Station No.	1: Station No.1
Transmission Rate	0: Online 156kbps
Mode	Ver.2: Remote net (Ver.2 mode)
Expanded Cyclic	Single
Number of stations occupied	1 Station
Input for Error Station	0: Clear
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)

POINT.

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

12.3.1 Setting communication interface (Communication settings)

12.4.6 Connecting to CC-Link module (QnA Series)

This section describes the settings of the GOT and CC-Link module (QnA Series) in the following case of system configuration.

POINT.

CC-Link module (QnA Series)

For details of the CC-Link module (QnA Series), refer to the following manual.

Control & Communication Link System Master/ Local Module Type AJ61QBT11/A1SJ61QBT11 User's Manual

System configuration

[Controller Setting] of GT Designer3



(Use the default value for settings other than the following.)

Station type	: Master station
Station No.	: Station No.0
Mode setting	: Remote net mode
All connect count	:1

Transmission speed : 156kbps

Switch settings of CC-Link module (QnA Series)

- Parameter setting
 - The CC-Link module is mounted on the base unit slot 0. The Start I/O No. of the CC-Link module is set to "0"



Set for each setting switch.



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
x 10 x 10 x 1 x 10 x 1 x 10 x 1 x 10 x 10	Station number setting (master station)	0 (fixed)	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(2) Mode setting switch

Mode setting switch	Description	Set value	Setting necessity at GOT connection
MODE	Mode setting (Online: Remote net mode)	0 (fixed)	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(3) Transmission speed setting switch



O: Necessary △: As necessary ×: Not necessary

Specify the same transmission speed as that of the GOT.

(4) Condition setting switches

*1

Condition setting switches	Setting switch	Description	Set value	Setting necessity at GOT connection
1 O 1 M/L 1 M/L 3 - 3 - 4 CL 5 12 34 6 6 14 7 - 8 -	SW1	Station type (Master station/Local station)	OFF (fixed)	0
	SW2	Notused	OFF	×
	SW3	Not used	(fixed)	
	SW4	Input data status of the data link error station (clear)	OFF	Δ
	SW5	Number of	OFF	
	SW6	stations occupied ^{*2}	(fixed)	×
	SW7	Notused	OFF	×
	SW8	Not used	(fixed)	^

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

*2 Will be valid when the CC-Link module is the local station. In the case of the master station, turn off it.

POINT .

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

12

Parameter setting

There are two methods for the parameter setting: perform the setting from [Network parameter] of GX Developer and the sequence program.

Performing it from the [Network parameter] of the GX Developer can be set only when the PLC CPU and the CC-Link module use the function version B or later.

(1) Setting from [Network parameter] of GX Developer

(a) Network parameter

Network parameters Setting	the CC-Link list.			
No. of boards in module 1 Value Boards Blank: no				
	1			
Start I/O No.	0000			
Туре	Master station 🛛 👻			
All connect count	1			
Remote input(RX)	×400			
Remote output(RY)	Y400			
Remote register(RWr)	D300			
Remote register(RWw)	D200			
Special relay(SB)	BO			
Special register(SW)	W0			
Retry count	3			
Automatic reconnection station count	1			
Wait master station No.	0			
PLC down select	Stop 💌			
Scan mode setting	Asynchronously 💌			
Delay information setting	0			
Station information setting	Station information			

ltem	Set value	Setting necessity at GOT connection
No. of boards in module	1	0
Start I/O No.	0000н	0
Туре	Master station (fixed)	0
All connect count	1	0
Remote input (RX)	X400	Δ
Remote output (RY)	Y400	Δ
Remote register (RWr)	D300	Δ
Remote register (RWw)	D200	Δ
Special relay (SB)	В0	Δ
Special register (SW)	W0	Δ
Retry count		Δ
Automatic reconnection station count		Δ
Wait master station No.	(Use default value)	×
PLC down select		Δ
Scan mode setting		Δ
Delay information setting		Δ
Station information setting	Refer to (2)	0

 $\bigcirc: \mathsf{Necessary} \ \bigtriangleup: \mathsf{As necessary} \ \times: \mathsf{Not necessary}$

(b) Station information setting

			Exclusive station	1	Reserve/invalid		Intelligent	buffer sele	ct(word)
StationNo.	Station type		count		station select	Ì	Send	Receive	Automatic
1/1	Intelligent device station	-	Exclusive station 1	•	No setting	•	64	64	128
	Detroit		Charles 1		n.a. 1		Control	1	
	I Default		Lheck		End		Lancel		

Item	Set value	Setting necessity at GOT connection
Station type	Intelligent device station (fixed)	0
Exclusive station count ^{*1}	Exclusive station 1	0
Reserve/invalid station select	No setting	0
Intelligent buffer select (word)	(Use default value)	×

O: Necessary △: As necessary ×: Not necessary

*1 Specify the same number of occupied stations as that of the GOT.

POINT

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

(2) Setting from sequence program

The parameter is written to the buffer memory, and the data link is automatically started when PLC CPU status changes from STOP to RUN.

- (a) I/O signal of CC-Link module
- Control & Communication Link System Master/ Local Module Type AJ61QBT11/A1SJ61QBT11 User's Manual
- (b) Device used by user

Device	Application
M100, M101	Flag for parameter setting
M102, M103	Flag for data link startup
D0	Number of connected modules
D1	Number of retry
D2	Automatic reconnection station count
D3	Operation specification in the case of CPU failure
D4	Reserved station specification (Station No. 1 to Station No. 16)
D5	Error invalid station specification (Station No. 1 to Station No. 16)
D6	Station data (first module)
D400	Error code in the case of data link startup failure

(c) Buffer memory settings used in the present example

Buffer memory address	Item	Set value		
Decimal (Hex)				
1(11 (1н)	Number of connected modules	1 (1 module)		
2(22 (2н)	Number of retry	3 (3times)		
3(33 (3н)	Automatic reconnection station count	1 (1 station)		
6(66 (6н)	Operation specification in the case of CPU failure	0 (stop)		
16(1016 (10н)	Reserved station specification (Station No. 1 to Station No. 16)	0 (No specification)		
20(1420 (14н)	Error invalid station specification (Station No. 1 to Station No. 16)	0 (No specification)		
32(2032 (20н)	Station data (first module) ^{*1}	2101н		
*1 Details for the station data are shown below. For 1) and 2), set the same station No. and number of station				

occupied as those of the GOT. For 3), the setting is fixed.

 to
 b12
 b11
 to
 b8
 b7
 to
 b0

 3)
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1) Station No. (Set the same station No. as that of the GOT) 01H to 40H: Station No. 1 to Station No. 64

- 2) Number of stations occupied (Set the number of station occupied as that of the GOT)
 - 1н: Exclusive station 1

b15

- 2H: Exclusive station 2
- 3H: Exclusive station 3
- 4H: Exclusive station 4
- 3) Station type (2H: Set it to intelligent device station)
 - 0н: Remote I/O station 1н: Remote device station
 - 2н: Intelligent device station (Incl. local station)

(d) Example of sequence program



POINT.

When changing the sequence program

After writing the sequence program to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

[Controller Setting] of GT Designer3

Item	Set value
Station No.	1: Station No.1
Transmission Rate	0: Online 156kbps
Mode	Ver.1: Remote net (Ver.1 mode)
Expanded Cyclic	Single (Use default value)
Number of stations occupied	1 Station
Input for Error Station	0: Clear
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)

POINT,

[Controller Setting] of GT Designer3

For the setting method of [Controller Setting] of GT Designer3, refer to the following.

12.3.1 Setting communication interface (Communication settings)

12.4.7 Connecting to CC-Link module (A Series)

This section describes the settings of the GOT and CC-Link module (A Series) in the following case of system configuration.

POINT,

CC-Link module (A Series)

For details of the CC-Link module (A Series), refer to the following manual.

Control & Communication Link System Master/ Local Module Type AJ61BT11/A1SJ61BT11 User's Manual

System configuration

[] ■ [Controller Setting] of GT Designer3



- Sequence program
 - *1 The CC-Link module is mounted on the base unit slot 0. The Start I/O No. of the CC-Link module is set to "0"

Settings of CC-Link module (A Series) Set for each setting switch.



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. x $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 &$	Station number setting (master station)	0 (fixed)	0
	O: Necessary △: A	s necessary	×: Not necessary

(2) Mode setting switch

Mode setting switch	Description	Set value	Setting necessity at GOT connection
MODE	Mode setting (Online: Remote net mode)	0 (fixed)	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(3) Transmission speed setting switch

Transmission speed setting switch	Description	Set value	Setting necessity at GOT connection
B RATE 0 150K 1 625K 2 2.5M 3 5M 4 10M	Transmission speed setting (156kbps) ^{*1}	0	0

O: Necessary \bigtriangleup : As necessary \times : Not necessary Specify the same transmission speed as that of the GOT.

(4) Condition setting switches

*1

Condition setting switches	Setting switch	Description	Set value	Setting necessity at GOT connection
	SW1	Station type (Master station/Local station)	OFF (fixed)	0
	SW2	Notucod	OFF	~
	SW3	Not used	~	
→ □2 N □ 2 SW OFF ON 1 M/L S.M 2 3 4 □ 4 CLR HLD 5 - R OFF	SW4	Input data status of the data link error station (clear)	OFF	Δ
• ☐ • ☐ ☐ • ☐ ☐ ↓ ☐ ☐ ☐	SW5	Number of	OFF	
	SW6	occupied ^{*2} (fixed)		×
	SW7	Not used	OFF (fixed)	×
	SW8	Module mode (Intelligent mode)	OFF (fixed)	0

O: Necessary △: As necessary ×: Not necessary

*2 Will be valid when the CC-Link module is a local station. In the case of the master station, turn off it.

POINT

When the switch setting has been changed Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

Sequence program

The parameter setting and the sequence program of the data link startup request is required.

(1) Programming condition (with CC-Link dedicated instructions)

The program sets the network parameter and automatic refresh parameter when PLC CPU status changes from STOP to RUN, and automatically starts the data link with CC-Link dedicated instructions.

- (a) I/O signal of CC-Link module
 - Control & Communication Link System Master/ Local Module Type AJ61BT11/A1SJ61BT11 User's Manual
- (b) Device used by user

Device	Application	
M0	RLPA instruction normal completion flag	
M1	RLPA instruction error completion flag	
M100	Network parameter setting flag	
M101	Automatic refresh parameter setting flag	
D0	Synchronous mode valid/invalid	
D1	Number of connected modules	
D2	Station data	
D3	Send buffer size	
D4	Receive buffer size	
D5	Automatic update buffer size	
D400	Error code in the case of error completion of RLPA instruction	
D100 to D103	Automatic refresh setting (RX)	
D104 to D107	Automatic refresh setting (RY)	
D108 to D111	Automatic refresh setting (RW)	
D112 to D115	Automatic refresh setting (SB)	
D116 to D119	Automatic refresh setting (SW)	

(c) Example of sequence program (CC-Link dedicated instruction)

* Setting of network parameter with dedicated RLPA instruction



(Continued to next page)

M101	EMOV	НО	D100	
	TWOA	ΠU	D100 .	Head No. of RX (RX0)
	-[mov	H1	D101	RX refresh destination (X)
	-[mov	H400	D102	RX refresh destination device head No. (400)
	-[mov	K32	D103	No. of refresh points (32)
	-[mov	HO	D104	RY head number (RY0)
	-[mov	H2	D105	RY refresh destination (Y)
	-[mov	H400	D106	RY refresh destination device head No. (400)
	-[mov	K32	D107	No. of refresh points (32)
	-[mov	HO	D108	RW head No. (RW0)
	-[mov	H7	D109	RW refresh destination (D)
	-[mov	K200	D110	RW refresh destination device head No. (200)
	-[mov	K260	D111	No. of refresh points (260)
	-[mov	HO	D112	BB head No. (SB0)
	-[mov	H4	D113	SB refresh destination (B)
	-[mov	HO	D114	SB refresh destination device head number (0)
	-[mov	K512	D115	No. of refresh points (512)
	-[mov	HO	D116	SW head number (SW0)
	-[mov	H8	D117	SW refresh destination (W)
	-[mov	HO	D118	SW refresh destination device head No. (0)
	-[mov	K512	D119	No. of refresh points (512)
		-[LEDA	RRPA	Dedicated instruction (RRPA)
		-[sub	HO	CC-Link module head I/O No. (0000н)
		-[LEDC	D100	Parameter storage head device (D100)
			[LEDR]

POINT,

When changing the sequence program

After writing the sequence program to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

- (2) Program condition (for FROM/TO instruction) This program writes parameters to the buffer memory when PLC CPU status changes from STOP to RUN and automatically starts the data link with FROM/TO instruction.
 - (a) I/O signal of CC-Link module
 - Control & Communication Link System Master/ Local Module Type AJ61BT11/A1SJ61BT11 User's Manual
 - (b) Devices used by user

Device	Application
M100, M101	Flag for parameter setting
M102, M103	Flag for data link startup
D0	Number of connected modules
D1	Number of retry
D2	Automatic reconnection station count
D3	Operation specification in the case of CPU failure
D4	Reserved station specification (Station No. 1 to Station No. 16)
D5	Error invalid station specification (Station No. 1 to Station No. 16)
D6	Station data (first module)
D400	Error code in the case of data link startup failure

(c) Buffer memory settings used in the present example

Buffer memory address Decimal (Hex)	ltem	Set value
1 (1н)	Number of connected modules	1 (1 module)
2 (2н)	Number of retry	3 (3times)
3 (Зн)	Automatic reconnection station count	1 (1 station)
6 (6н)	Operation specification in the case of CPU failure	0 (stop)
16 (10н)	Reserved station specification (Station No. 1 to Station No. 16)	0 (No specification)
20 (14н)	Error invalid station specification (Station No. 1 to Station No. 16)	0 (No specification)
32 (20н)	Station data (first module) ^{*1}	2101н

 *1
 Details for the station data are shown below. For 1) and 2), set the same station No. and number of station occupied settings as those of the GOT. For 3), the setting is fixed.

 b15
 to
 b12
 b11
 to
 b8
 b7
 to
 b0

 3)
 2)
 1)

- Station No. (Set the same station No. as that of the GOT.) 01H to 40H: Station No. 1 to Station No. 64
 Number of stations occupied (Set the same setting of the
 - number of station occupied as that of the GOT.)
 - 1H: Exclusive station 1
 - 2H: Exclusive station 2
 - 3H: Exclusive station 3
 - 4н: Exclusive station 4
- Station type (2H: Set it to intelligent device station.)
 0H: Remote I/O station
 - 1H: Remote device station
 - 2H: Intelligent device station (Incl. local station)

(d) Example of sequence program (FROM/TO instruction)

* Parameter setting



CC-Link CONNECTION (INTELLIGENT DEVICE STATION)

12

POINT.

When changing the sequence program

After writing the sequence program to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

■ [Controller Setting] of GT Designer3

Item	Set value
Station No.	1: Station No.1
Transmission Rate	0: Online 156kbps
Mode	Ver.1: Remote net (Ver.1 mode)
Expanded Cyclic	Single (Use default value)
Number of stations occupied	1 Station
Input for Error Station	0: Clear
Retry	3times (Use default value)
Timeout Time	3sec (Use default value)
Delay Time	0ms (Use default value)

POINT,

[Controller Setting] of GT Designer3 For the setting method of [Controller Setting] of GT Designer3, refer to the following.

12.3.1 Setting communication interface (Communication settings)

12.5 Precautions

Using cyclic transmission

(1) I/O signal for master station

Do not turn on the reserved output signals in the output signals (remote output: RY) to the GOT from the master station.

When the reserved output signal is turned on, the PLC system may be malfunctioned.

For the assignment of I/O signals in the GOT, refer to the following manual.

MODEL GT15-J61BT13 CC-Link communication unit User's Manual

GT15 CC-Link communication unit User's Manual

(2) Access range that can be monitored

The monitoring range of remote I/O (RX and RY) and that of the remote registers (RWr and RWw) vary according to the mode in the master station of the CC-Link system.

	Applicable c	f monitoring	
Mode of master station	Data for each station compatible with CC-Link ver.1	Data for each station compatible with CC-Link ver.2	
Remote net mode	0	-	
Remote net ver.1 mode	0	-	
Remote net ver.2 mode	0	O ^{*1}	
Remote net additional mode	0	O ^{*1}	

O: Applicable X: N/A(All "0") -: N/A of system configuration

*1 Monitoring is applicable only when MODEL GT15-J61BT13 CC-Link communication unit is used.

(3) When GOT malfunctions, the cyclic output status remains the same as before becoming faulty.

For transient transmission

(1) CC-Link module of target station

Mount the CC-Link module of function version B or later and software version J or later to the PLC CPU when performing the following CC-Link modules and transient transmission.

Only cyclic transmission can be communicated with the CC-Link module of function version A or before and software version I or before.

- AJ61BT11
- A1SJ61BT11
- AJ61QBT11
- A1SJ61QBT11

(2) Access range that can be monitored The GOT can access to the PLC CPU mounting the master and local station of the CC-Link System. It cannot access another network via the CC-Link module.

GOT startup in the CC-Link connection (intelligent device station)

For CC-Link connection (intelligent device station), the data link is started approximately 10 seconds after the GOT startup.

When a network error occurs in the system alarm

In the CC-Link connection (intelligent device station), when a network error occurs in the system alarm, the system alarm display cannot be canceled even though the causes are removed.

To cancel the system alarm display, restart the GOT.

Connection in the multiple CPU system When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

QCPU (Q mode), motion controller CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

Connection to LCPU

LCPU may diagnose (check file system, execute recovering process, etc.) the SD memory card when turning on the power or when resetting. Therefore, it takes time until the SD memory card becomes available. When the GOT starts before the SD card becomes available, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

Connection to Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, or CRnQ-700 The Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, and CRnQ-700 are applicable to CC-Link Ver.2 only.

For connecting to the CC-Link (ID) network system, set the CC-Link (ID) network system to the CC-Link Ver.2 mode.

Connection to Q170MCPU or Q170MSCPU(-
S1)

Set [CPU No.] to "2" in the device setting to monitor the device of the Motion CPU area (CPU No.2).

When the CPU No. is set to "0" or "1", the device on the PLC CPU area (CPU No.1) is monitored.

When the CPU No. is set to the number other than "0" to "2", a communication error occurs and the monitoring cannot be executed.

For setting the CPU No., refer to the following manual.

GT Designer3 (GOT2000) Help

Example) Setting dialog box of the bit device

X • 0000 ÷	[Kind]
7 8 9 D E F	BIT
4 5 6 A B C	[Range]
1 2 3	Device:
0 Back CL	0000-3FFF
Network CPU No.: 0 🚖 (i) Host (ii) Other	
13

CC-Link CONNECTION (Via G4)

13.1	Connectable Model List 13 - 2	2
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13.3	Connection Diagram 13 -	9
13.4	GOT Side Settings 13 - 1	0
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13. CC-Link CONNECTION (Via G4)

13.1 Connectable Model List

13.1.1 PLC/Motion controller CPU

The following table shows the connectable models.

Series	Model name	Clock	Communication type	Connectable model	Refer to
	Q00JCPU				
	Q00CPU ^{*1}				
	Q01CPU ^{*1}				
	Q02CPU ^{*1}	0	CC-Link	GT GT GS	
	Q02HCPU ^{*1}	0	(G4)	27 23 00	
	Q06HCPU ^{*1}				
	Q12HCPU ^{*1}				
	Q25HCPU ^{*1}				
	Q02PHCPU				
	Q12PHCPU Q25PHCPU		001111		
	Q12PRHCPU (Main base)	0	(G4)		
	Q25PRHCPU (Main base)	(0.)	(01)		
	Q12PRHCPU (Extension base)				
	Q25PRHCPU (Extension base)				
	Q00UJCPU				
	Q00UCPU				
MELSEC-Q	Q01UCPU				<u>}</u> 13 2 1
(Q mode)					L-3 10.2.1
	Q04UDHCPU				
	Q06UDHCPU				
	Q10UDHCPU				
	Q13UDHCPU				
	Q20UDHCPU				
		-			
		0	CC-Link	GT GT GS	
	Q06UDEHCPU	Ŭ	(G4)	27 23 00	
	Q10UDEHCPU				
	Q13UDEHCPU				
	Q20UDEHCPU				
	Q26UDEHCPU				
	Q50UDEHCPU				
	Q100UDEHCPU				
	Q03UDVCPU				
					1
	Q26UDVCPU				

(Continued to next page)

*1 When in multiple CPU system configuration, use CPU function version B or later.

Series	Model name	Clock	Communication type	Connectable model	Refer to
C Controller module	Q12DCCPU-V ^{*1} Q24DHCCPU-V Q24DHCCPU-LS	0	CC-Link(G4)	27 23 GS	13.2.1
MELSEC-QS	QS001CPU	0	-	27 23 GS	-
MELSEC-L	L02CPU L06CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	0	CC-Link(G4)	ат 27 ат 33 GS	J 37 13.2.2
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	0	-	27 23 GS	-
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU Q4ARCPU	0	-	27 CS	-
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	0	-	27 CT CS	-
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPUP21 A2ACPUP21 A2ACPUP21 A2ACPUP21 A2ACPUP21 A2ACPUP21 A2ACPUP21 A2ACPUP21-S1 A2ACPUR21-S1 A3ACPUP21 A3ACPUP21 A3ACPUR21 A1NCPU A1NCPUP21 A2NCPUP21 A2NCPUR21 A2NCPUR21 A2NCPUR21-S1 A3NCPU A3NCPU21	0	-	GT GT GS	-

Use only modules with the upper five digits of the serial No. later than 12042.

*1

(Continued to next page)

CC-Link CONNECTION (Via G4)

Series	Model name	Clock	Communication type	Connectable model	Refer to
	A2USCPU				
	A2USCPU-S1				
	A2USHCPU-S1				
	A1SCPU				
	A1SCPUC24-R2				
	A1SHCPU				
MELSEC-A	A2SCPU	0	-	OT OT OS	-
	A2SCPU-S1				
	A2SHCPU				
	A2SHCPU-S1				
	A1SJCPU				
	A1SJCPU-S3				
	A1SJHCPU				
	A0J2HCPU				
	A0J2HCPUP21			GT GT CC	
	A0J2HCPUR21	×	-	27 23 ^{GS}	-
	A0J2HCPU-DC24				
	A2CCPU				
MELSEC-A	A2CCPUP21				
	A2CCPUR21				
	A2CCPUC24	0	-		-
	A2CCPUC24-PRF				
	A2CJCPU-S3				
	A1FXCPU				
	Q172CPU ^{*1*2}				
	Q173CPU ^{*1*2}				
	Q172CPUN ^{*1}				
	Q173CPUN ^{*1}				
	Q172HCPU				
	Q173HCPU				
	Q172DCPU				
Motion	Q173DCPU	0	CC-Link (G4)		J 13.2.1
CPU	Q172DCPU-S1				
(Q Series)	Q173DCPU-S1				
	Q172DSCPU				
	Q173DSCPU	1			
	Q170MCPU ^{*3}	1			
	Q170MSCPU*4]			
	Q170MSCPU-S1*4				
	MR-MQ100	0	-	27 23 GS	-

(Continued to next page)

*1 When using SV13, SV22, or SV43, use the motion controller CPU on which any of the following main OS version is installed. SW6RN-SV13Q□: 00H or later

• SW6RN-SV22Q□: 00H or later

• SW6RN-SV43Q□: 00B or later

*2 Use main modules with the following product numbers. • Q172CPU: Product number N******* or later

Q173CPU: Product number M****** or later

Only the first step can be used on the extension base unit (Q52B/Q55B).

*4 The extension base unit (Q5□B/Q6□B) can be used.

*3

Series	Model name	Clock	Communication type	Connectable model	Refer to			
	A273UCPU							
	A273UHCPU				1			
	A273UHCPU-S3				1			
	A373UCPU				1			
	A373UCPU-S3				1			
Motion	A171SCPU				1			
controller	A171SCPU-S3		_	GT GT GS				
CPU	A171SCPU-S3N	0		27 23 63	1			
(A Series)	A171SHCPU				1			
	A171SHCPUN				1			
	A172SHCPU				1			
	A172SHCPUN				1			
	A173UHCPU				1			
	A173UHCPU-S1							
MELSEC-WS	WS0-CPU0	v		GT GT GS				
MELOEO WO	WS0-CPU1	^		27 23 63	1			
MELSECNET/H	QJ72LP25-25							
Remote I/O	QJ72LP25G	×	-		-			
station	QJ72BR15							
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	27 23 GS	-			
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	27 23 GS	-			
CNC C70	Q173NCCPU	0	CC-Link (G4)	GT GT GS	13.2.1			
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	0	CC-Link (G4)	GT GT GS	13.2.1			
	FX ₀							
	FXos	×	×		1			
	FXON				1			
	FX1					_	-	
	FX2	×						
	FX2C	~			1			
	FX1s				1			
	FX1N	0			1			
MELSEC-FX	FX2N	Ŭ	-	27 23 GS	- 1			
	FX1NC				1			
	FX2NC	×			1			
	FX3S				1			
	FX3G				1			
	FX3GC	0						
	FX3GE							
	FX3U							
	FX3UC				1			

13.1.2 CC-Link module/peripheral module

CPI L series	Model name			
GF 0 selles	CC-Link module	Peripheral module		
MELSEC-Q (Q mode) C Controller module Motion controller CPU (Q Series) CNC C70 Robot controller (CRnQ-700)	QJ61BT11 QJ61BT11N	AJ65BT-G4-S3 AJ65BT-R2N		
MELSEC-L	LJ61BT11			

13.2 System Configuration

13.2.1 Connecting to QCPU (Q mode)



13.2.2 Connecting to LCPU



*1 For the system configuration of the CC-Link module, refer to the following manual.

MELSEC-L CC-Link System Master/Local Module User's Manual

*2 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.

CC-Link Partner Association's home page: http://www.cc-link.org/

*3 The maximum overall extension cable length and the length between stations vary depending on the cable type to be used and the transmission speed.

For details, refer to the following manual.

MELSEC-L CC-Link System Master/Local Module User's Manual

13.3 Connection Diagram

The following diagram shows the connection between the GOT and the PLC.

13.3.1 RS-232 cable

Connection diagram



Precautions when preparing a cable

(2) Cable length

The length of the RS-232 cable must be 15m or less.

(3) GOT side connector

For the GOT side connector, refer to the following.

[3 1.4.1 GOT connector specifications

13.4 GOT Side Settings

13.4.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.

inne Mone Moral Park Controller Tryge: Mexandraf Controller Tryge: Mex	Alter Control Affortate Second affortate Seco
No Guipes Sector Control Con	vorv(Upper Sette vorv(Upper Sette Commission Geneva Sent Geneva Se
Corrun, Corrunnishing Goeway Gets Goeway Gets Fer Tasser Fer T	Satovay United Cardinal Cardin
Gaceway Server Unref (CLINE(S4)) • Red Fill Sector Sector Sector Red Fill Sector Value • Piperiz Value • • Red Retrainfort(Piperiz) • • Stanta • • • Joint No. Sector Stanta • • Daby Time(sc) 3 • •	GReevy Gene Codeway Gene Hall Set The Server Field Tasks (FP Refunction No. Server) Code Set Setting Image: Set Setting Property Refunction No. Server) Property Transmission Speed(BPS) Geno Between Tenero(Sec) 0 Statum Tenero(Sec) 3 Timeout, Time(Sec) 3 Daay Time(mt) 0 Setum Tenero(Sec) 3
Mail FIF Server FIF Se	Verify Verify Control Control Setting Property Retronoffer (F) Retronoffer (F) Retronoffer (F) Setting Property Retronoffer (F) Setting Property Retronoffer (F) Setting Property Setting Prop
FI P Senor Value Value Tinacrikish Speci(PSS) O Senor Startup Time(Sec) Startup Time(Sec) Senor Davy Time(ms) O Senor Senor	PFIP Server Redundance Redundance Autom Nov. Service Transmission Speed(SPS) Section Return(Time) 0 Startup Time(Sec) 3 Timeout Time(Sec) 3 Delay Time(me) 0
Redundanc duon No. Swbon Strano Tracoversion Speec(BSS) Strano Trac(Sec) Daay Time(me) 0	Redundanc Transversess Speec(SPS) Octo0 Ration No. SinkCrit 0 0 Starmap Trans(Sec) 3 0 Daay Trans(re) 0 0
Con Inc. SMUD	(con no. swot) Recty(Inne) U Stanuo Twn(Sec) I Timeost Twn(Sec) Desy Tmn(mt) 0
(Struto Time(Sec) 3 Deay Time(me) 0	(struno Time(sec) 3 Timeoti Time(sec) 2 Daay Time(me) 0

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Interface to be used
 - Driver: CC-Link (G4)
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.
 - 3.4.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following:

1.1.2 I/F communication setting

13.4.2 Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Retry(Times)	0
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission	Set this item when change the transmission speed used for	9600bps, 19200bps,
Speed	communication with the connected equipment. (Default: 9600bps)	38400bps 57600bps 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out.(Default: 3sec)	1 to 30sec
Delay time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms

POINT

 Communication interface setting by the Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

- GOT2000 Series User's Manual (Utility)
- Precedence in communication settings
 When settings are made by GT Designer3 or the Utility, the latest setting is effective.



Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller. For example, faulty station that has communication timeout can be cut from the system.



GT Designer3 (GOT2000) Help

13.5 PLC Side Settings

Mode	Model		
Peripheral connection	AJ65BT-G4-S3	13.5.1	
module	AJ65BT-R2N	13.5.2	

13.5.1 Connecting AJ65BT-G4-S3

This section describes the settings of the GOT and peripheral connection module in the following case of the system configuration.

POINT,

- Peripheral connection module For details of the peripheral connection module, refer to the following manual.
- G4-S3 User's Manual (detail volume)
- (2) CC-Link module For details of the CC-Link module, refer to the following manual.
- CC-Link System Master/Local Module User's Manual QJ61BT11N
- MELSEC-L CC-Link System Master/Local Module User's Manual
- (3) CC-Link function built-in CPU For details on the CC-Link function built-in CPU, refer to the following manual.
- MELSEC-L CC-Link System Master/Local Module User's Manual

System configuration

[37] 13.5.3 Switch setting of CC-Link module (Q series) 13.5.4 [Network parameter] of GX Developer <CC-Link module> *1 Setting example : Master station Station type Station No. Station No. 0 Remote net (Ver.1 mode) Mode All connect count 156kbps Transmission speed 13.5.6 [Controller Setting] of GT Designer3 <GOT>Setting example Transmission speed: 9600bps <AJ65BT-G4-S3> Setting example Station type Intelligent device station Station No Station No. 1 Exclusive station 1 156kbps Number of stations occ Transmission speed Switch setting of peripheral connection module

1 The Start I/O No. of the CC-Link module is set to "0"

Switch setting of peripheral connection module

Set the station number setting switch, data link transmission speed setting switch, and operation setting DIP switch.



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
$\begin{array}{c} \text{STATION NO.} \\ \times 10 & \times 1 \\ \bullet 0 & 1 & 9 & 0 \\ \bullet & 1 & 3 & 7 & 3 \\ \bullet & 3 & 7 & 6 & 5 & 4 \end{array}$	AJ65BT-G4-S3 station number setting	1 to 64	0

O: Necessary △: As necessary ×: Not necessary

(2) Data link transmission speed setting switch

Data link transmission speed setting switch	Description	Set value	Setting necessity at GOT connection
B RATE • 0 1 • 12 • 3 • 4	Data link transmission speed setting	0: 156kbps 1: 625kbps 2: 2.5Mbps 3: 5Mbps 4: 10Mbps	0

O: Necessary △: As necessary ×: Not necessary

(3) Operation setting DIP switch

Operation setting DIP switch	Setting Switch	Description	Set value	Setting necessity at GOT connection
	SW1, SW6	Operation mode	SW1 = OFF SW6 = ON (fixed) (Q mode)	0
	SW2	Peripheral transmissi OFF (fixed) on speed ^{*1}		
SW 12345678	SW3		OFF (fixed)	×
▋▋▋▋▋▋▋▋	SW4			
	SW5 No	Not used	ed OFF (fixed)	×
	SW7			
	SW8	Test mode	OFF (fixed) (Online mode)	0

O: Necessary △: As necessary ×: Not necessary
 *1 The peripheral connection module operates with the baud rate set in the GOT.

3 13.5.6 [Controller Setting] of GT Designer3

POINT.

Ľ

Operation mode of peripheral connection module Be sure to set the "Q mode" as an operation mode of the peripheral connection module.

13.5.2 Connecting AJ65BT-R2N

This section describes the settings of the GOT and peripheral connection module in the following case of the system configuration.

POINT,

- Peripheral connection module For details of the peripheral connection module, refer to the following manual.
- Peripheral Connection Module Type AJ65BT-R2N User's Manual
- (2) CC-Link module For details of the CC-Link module, refer to the following manual.
- CC-Link System Master/Local Module User's Manual QJ61BT11N
- (3) CC-Link built-in CPU For details on the CC-Link function built-in CPU, refer to the following manual.
- MELSEC-L CC-Link System Master/Local Module User's Manual

System configuration

13.5.3 Switch setting of CC-Link module (Q series) 13.5.4 [Network parameter] of GX Developer



13

*1 The Start I/O No. of the CC-Link module is set to "0"

Switch setting of peripheral connection module

Set the station number setting switch, data link transmission speed setting switch, and operation setting DIP switch.



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. $\times 10 \times 1$ $\circ 0 1 2 8 0 1 2 3 6 5 4 3 7 6 5 4 3 3 7 6 5 4 3 3 7 6 5 4 3 3 7 6 5 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3$	AJ65BT-R2N station number setting	1 to 64	0

 $\bigcirc:$ Necessary $\ \bigtriangleup:$ As necessary $\ \times:$ Not necessary

(2) Data link transmission speed setting switch

Data link transmission speed setting switch	Description	Set value	Setting necessity at GOT connection
B RATE	Data link transmission speed setting	0: 156kbps 1: 625kbps 2: 2.5Mbps 3: 5Mbps 4: 10Mbps	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(3) Mode setting switch

Mode setting switch	Description	Set value	Setting necessity at GOT connection
MODE	Mode setting	5 (fixed) (MELSOFT/ connection mode)	0

O: Necessary △: As necessary ×: Not necessary

(4) RS-232 transmission setting switch

RS-232 transmission setting switch	Setting switch	Description	Set value	Setting necessity at GOT connection
	SW1			
	SW2	Peripheral transmission	OFF	0
	SW3	speed ^{*1}	(fixed)	0
SW	SW4			
	SW5	Data bit length	OFF (fixed)	0
<u> </u>	SW6	Parity bit	OFF	0
	SW7	length	(fixed)	0
	SW8	Stop bit length	OFF (fixed)	0

 $\bigcirc: \mathsf{Necessary} \ \bigtriangleup: \mathsf{As necessary} \ \times: \mathsf{Not necessary} \\ \mathsf{The peripheral connection module operates with the baud}$

rate set in the GOT.

13.5.6 [Controller Setting] of GT Designer3

POINT,

*1

Precautions when setting peripheral connection module

- mode setting switch Be sure to set the Operation mode setting switch to "5" (MELSOFT/connection mode).
- (2) RS-232 transmission setting switch Turn OFF SW1 through SW8 of the RS-232 transmission setting switch.
 If any switch of SW1 through SW8 is ON, setting error will occur (RUN LED turns off).

13.5.3 Switch setting of CC-Link module (Q series)

Set the station number setting switch, transmission speed / mode setting switch.



(1) Station number setting switch

Station number setting switch	Description	Set value	Setting necessity at GOT connection
STATION NO. $\begin{array}{c} 1 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$	Station number setting (master station)	0 (fixed)	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

(2) Transmission rate/mode setting switch

Transmission rate/ mode setting switch	Description	Set value	Setting necessity at GOT connection
MODE	Transmission rate/mode setting	0: 156kbps 1: 625kbps 2: 2.5Mbps 3: 5Mbps 4: 10Mbps	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

POINT

When the switch setting has been changed

Turn the PLC CPU OFF then ON again, or reset the PLC CPU.

13.5.4 [Network parameter] of GX Developer

(1) Network parameter

Network parameters Setting the CC-Link list.			
No. of boa	rds in module 1 💌 Boards g	lank: no setting.	
		1	
	Start I/O No		0000
	Operational setting	Operational settings	
	Туре	Master station	-
	Master station data link type	PLC parameter auto start	•
	Mode	Remote net(Ver.1 mode)	-
	All connect count		1
	Remote input(RX)		X400
	Remote output(RY)		Y400
	Remote register(RWr)		D300
	Remote register(RWw)		D200
	Ver.2 Remote input(RX)		
	Ver.2 Remote output(RY)		
	Ver.2 Remote register(RWr)		
	Ver.2 Remote register(RWw)		
	Special relay(SB)		SBO
	Special register(SW)		SW0
	Retry count		3
	Automatic reconnection station count		1
	Stand by master station No.		
	PLC down select	Stop	-
	Scan mode setting	Asynchronous	-
	Delay infomation setting		0
	Station information setting	Station information	
	Remote device station initial setting	Initial settings	
	Interrupt setting	Interrupt settings	

Item	Set value	Setting necessity at GOT connection
No. of boards in module	1	0
Start I/O No.	0000н	0
Operation setting	(Use default value)	Δ
Туре	Master station (fixed)	0
Mode	Remote net (Ver.1 mode)	0
All connect count	1	0
Remote input (RX)	X400	Δ
Remote output (RY)	Y400	Δ
Remote register (RWr)	D300	Δ
Remote register (RWw)	D200	Δ
Special relay (SB)	SB0	Δ
Special register (SW)	SW0	Δ
Retry count		Δ
Automatic reconnection station count		Δ
Stand by master station No.	(Use default value)	×
PLC down select		Δ
Scan mode setting		Δ
Delay information setting		Δ
Station information setting	Refer to (2)	0
Remote device station initial setting	(Use default value)	×
Interrupt setting		×

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

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(2) Station information setting



Item ^{*1}	Set value	Setting necessity at GOT connection
Station type ^{*2}	Intelligent device station (fixed)	0
Number of stations occupied	Exclusive station 1 (fixed)	0
Reserve/invalid station select	No setting	0
Intelligent buffer select (word)	(Use default value)	×

O: Necessary \triangle : As necessary \times : Not necessary

*1 When the [Mode] of the CC-Link module is set at [Remote net - (Ver. 2 mode)], [Remote station points] can be set. [Remote station points] is a setting for the remote I/O station. The default value (32 points) must be used on the GOT. When the [Mode] of the CC-Link module is set at [Remote

*2 net - (Ver. 2 mode)] or [Remote net - Additional mode], set to [Ver. 1 Intelligent device station].

POINT,

When changing the network parameter

After writing the network parameter to the PLC CPU, operate the PLC CPU ether turning OFF and then ON or resetting.

(3) Completion confirmation

After initial communications of CC-Link are completed, the L RUN LED of AJ65BT-G4-S3 turns on. The GOT starts to monitor after the L-RUN LED of AJ65BT-G4-S3 turns on.

It does not monitor while the L RUN LED turns off.



13.5.5 Parameter setting (when connecting to C Controller module)

Use SW3PVC-CCPU-E Ver.3.05F or later for the C Controller module setting utility.

(1) Connection settings

		Test
Target module	192.168.3.3(Default)	Clear history
₩rite au	thority	Detailed settings
Password	*******	

ltem	Set value	Setting necessity at GOT connection
Target module ^{*1}	192.168.3.3	0
Write authority	Mark the checkbox	0
User name ^{*2}	target	0
Password ^{*2}	password	0
Detailed settings	-	Δ

O: Necessary △: As necessary ×: Not necessary

- If the IP address of the C Controller module has been *1
- changed, input the changed IP address or host name.
- *2 If the account of the C Controller module has been changed, input the changed user name and password.

(2) [Parameter Setting] of CC-Link utility (a) Network parameter

Start I/O No.	Operation settings					- Error event	Defaul <u>t</u> input data st	Check_
Channel No.	Mode Remote	net(Vi Sing	er.1 mode) Ie		•	C Hold CPU stop: (Refresh	(⊂ Clear data link statu (⊂ Clear co	s ompulsorily
Station infor All connect	Occupied number nation settings count 1 💽	Excl	Expanded cy	clic	Uccu	upied number	Qther s	ettings Clgar
No./Sta. No. 1/1	Station Type Intelligent device station	Ŧ	setting Single	•	Exclusive	e station 1 🔄	32 poir	

	ltem	Set value	Setting necessity at GOT connection
Number of	of modules	1	0
Target module		1	0
Start I/O No.		0000н	0
Channel No.		(Use default value)	0
type		Master station(fixed)	0
	Mode ^{*1}	Remote net (Ver.1 mode)	0
Operation setting	Expanded cyclic station	Single(fixed)	Δ
	Occupied number	Exclusive station 1 (fixed)	Δ
	Error event : input data status	Clear	Δ
	CPU stop: data link status	Refresh	Δ
	Other settings	(Use default value)	Δ
	All connect count	1	0
	Station type	Ver.1 Intelligent device station(fixed)	0
Station	Expanded cyclic station	Single	Δ
information	Occupied number*2	Exclusive station 1	×
settings	Remote station points	32 points	0
	Reserve/invalid station select	No setting	0
	Intelligent buffer select (word)	(Use default value)	×

O: Necessary △: As necessary ×: Not necessary

If the CC-Link module [Mode] is [Remote net -Ver.1 mode], [Remote station points] cannot be set. Set the same setting as that of the GOT. *1

*2

POINT

When changing the network parameter

After writing the network parameter to the C Controller module, either turn the C Controller module OFF and then ON or reset it.

13.5.6 [Controller Setting] of GT Designer3

Item	Set value
Transmission Speed	9600bps 19200bps 38400bps 57600bps 115200bps
Retry Count	0 to 5times
Timeout Time	3 to 30sec
Delay Time	0 to 300ms

POINT

[Controller Setting] of GT Designer3 For [Controller Setting], of GT Designer3, refer to the following.

3.4.1 Setting communication interface (Communication settings)

13.6 Precautions

Connection in the multiple CPU system

When the GOT is connected to multiple CPU system, the following time is taken until when the PLC runs.

QCPU (Q mode), motion controller CPU (Q series): 10 seconds or more

MELDAS C70: 18 seconds or more

When the GOT starts before the PLC runs, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

Connection to LCPU

LCPU may diagnose (check file system, execute recovering process, etc.) the SD memory card when turning on the power or when resetting. Therefore, it takes time until the SD memory card becomes available. When the GOT starts before the SD card becomes available, a system alarm occurs. Adjust the opening screen time in the GOT setup so that no system alarm occurs.

GT Designer3 (GOT2000) Help

Connection to Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, or CRnQ-700 The Q17nDCPU, Q170MCPU, Q170MSCPU(-S1), CNC C70, and CRnQ-700 are applicable to CC-Link Ver.2 only.

For connecting to the CC-Link (Via G4) network system, set the CC-Link (G4) network system to the CC-Link Ver.2 mode.

Connection to Q170MCPU or Q170MSCPU(-S1)

Set [CPU No.] to "2" in the device setting to monitor the device of the Motion CPU area (CPU No.2).

When the CPU No. is set to "0" or "1", the device on the PLC CPU area (CPU No.1) is monitored.

When the CPU No. is set to the number other than "0" to "2", a communication error occurs and the monitoring cannot be executed.

For setting the CPU No., refer to the following manual.

GT Designer3 (GOT2000) Help

Example) Setting dialog box of the bit device

X • 0000 *	[Kind]
7 8 9 D E F	BIT
4 5 6 A B C	[Range]
1 2 3	Device:
0 Back CL	0000-3FFF
Network CPU No.: 0 🚖 ® Host © Other	

MITSUBISHI FA DEVICE CONNECTIONS

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15.	SERVO AMPLIFIER CONNECTION	15 - 1
16.	ROBOT CONTROLLER CONNECTION	16 - 1
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INVERTER CONNECTION

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14. INVERTER CONNECTION

14.1 Connectable Model List

The following table shows the connecta	ble models.
--	-------------

Series	Model name	Clock	Communication type	Connectable model	Refer to
	FREQROL-A500/A500L				
	FREQROL-F500/F500L	×	RS-485		J 14.2.1
	FREQROL-V500/V500L				
	FREQROL-E500				
	FREQROL-S500/S500E				
	FREQROL-F500J	×	RS-485		J 14.2.2
	FREQROL-D700				
FREQROL	FREQROL-F700PJ				
	FREQROL-E700	×	RS-485	27 23 GS	14.2.3
	FREQROL-A700				
	FREQROL-F700				
	FREQROL-F700P	×	RS-485		14.2.4
	FREQROL-A800				
	FREQROL-F800				
Sensorless servo	FREQROL-E700EX	×	RS-485	27 23 GS	14.2.3
MELIPM	MD-CX522-□□K(-A0)	×	RS-485	27 23 GS	14.2.5

14.2 System Configuration

14.2.1 Connecting to FREQROL-A500/A500L/F500/F500L/V500/V500L

When connecting to one inverter



	Inverter		Connection cab	le	GOT		
Model name	Computer link option	Communi cation type	Connection diagram number	Max. distance	Option device	Model	Number of connectable equipment
FREQROL- A500/A500L		DS 485	(Jser) (jestie) RS485	500m	- (Built into GOT)	ат 27 ат 23 GS	
V500/V500L *1	-	N3-405	connection diagram 1)	nection diagram 1)	GT15-RS4-9S	ат 27 33 GS	1 COT for 1 invotor
FREQROL- A500/A500L		DS 485	(Jser) (jestig) RS485	500m	- (Built into GOT)	ет 27 ет 23 GS	
F500/F500L V500/V500L		110-400	connection diagram 2)	50011	GT15-RS4-9S	ат 27 ат 23 GS	

*1 Connect to the PU port of the inverter.

When connecting to multiple inverters (Max. 31) (Using the distributor)



*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD. For details, contact HAKKO ELECTRIC CO., LTD.

When connecting to multiple inverters (Max. 31) (Using the computer link option)



	Inverter		Connection cable	GOT			Number of
Model name	Computer link option	Communi cation type	Connection diagram number	Option device	Model	Max. distance	connectable equipment
FREQROL- A500/A500L		DS 485	(User) (Tream) RS485 connection	- (Built into GOT)	ет 27 ет 23 GS	500m	31 inverters for
F500/F500L V500/V500L	TRASIK	N3-405	diagram 4)	GT15-RS4-9S	ат 27 33 GS	50011	one GOT

Connecting to FREQROL-E500/S500/S500E/F500J/D700/F700PJ 14.2.2



Connect to the PU port of the inverter.

When connecting to multiple inverters (Max. 31) (Using the distributor)



*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD. For details, contact HAKKO ELECTRIC CO., LTD.

14.2.3 Connecting to FREQROL-E700/sensorless servo (FREQROL-E700EX)

■ When connecting to one inverter

Inverter Sensorless servo	Control terminal option	Connection cable	GOT	Communication driver

Inverter			Connection cable		GO.			
Model name	Control terminal option	Commun ication type	Connection diagram number	Max. distance	Option device	Model	Number of connectable equipment	
FREQROL-E700/ sensorless servo (FREQROL-E700EX) *2		RS-485	(User) RS485 connection diagram 1)	500m	- (Built into GOT)	ат 27 ат 23 GS		
	-				GT15-RS4-9S	ат 27 23 GS	1 COT for 1 invotor	
FREQROL-E700/ sensorless servo (FREQROL-E700EX) *3	ED 5770*3	5*3 DC 495	(User) (Woorr) RS485	500m	- (Built into GOT)	ат 27 ат 23 GS		
	FR-E7TR ³ RS-485		connection diagram 7)	50011	GT15-RS4-9S	GT 27 33 GS		

*2 Connect to the PU port of the inverter.

*3 The control terminal option and the PU port cannot be used at the same time.

When connecting to multiple inverters (Max. 31) (Using the distributor)



Inverter		Torminating	Connection cableDistributorConnection cable1)*22)		GOT		Мох	Number of					
Model name	Commun ication type	cable	Connection diagram number	Model name	Connection diagram number	Option device Model		distance	connectable equipment				
FREQROL- E700/ sensorless servo (FREQROL- E700EX) ^{*1}	DC 495	DS 485	RS-485	RS-485	RS-485	RS485 connection	RS485 connection	BMJ-8	RS485 connection	- (Built into GOT)	ат 27 33 GS	500	31inverters
	KO-400	diagram 9) User rearing	diagram 3)	ended)	diagram 1)	GT15-RS4-9S	ст 27 23 GS	50011	GOT ^{*4}				

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD. For details, contact HAKKO ELECTRIC CO., LTD.





*1 The control terminal option and the PU port cannot be used at the same time.

14.2.4 Connecting to FREQROL-A700/F700/700P/A800/F800

	verter	Connection cable		GOT FR	0, S SERVO Communication driver		
Inverter		Connection cable		GOT			
Model name	Communi cation type	Connection diagram number	Max. distance	Option device	Model	Number of connectable equipment	
FREQROL- A700/F700/F700P/ A800/F800 (PU port)	PS-485	(User) RS485 connection diagram 1)	500m	- (Built into GOT)			
				GT15-RS4-9S	GT 23 GS		
FREQROL- A700/F700/F700P/ A800/F800 (Built-in RS485 terminal block)	DS 495	(User) (Jean) RS485 connection	500	- (Built into GOT)	ат 27 ат 23 GS		
	RS-485 diagram 5)		50011	GT15-RS4-9S	GT 27 GT 23 GS		

When connecting to one inverter

When connecting to multiple inverters (Max. 31) (Using the distributor)



The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD. For details, contact HAKKO ELECTRIC CO., LTD.

*1

■ When connecting to multiple inverters (Max. 31) (Using the built-in RS485 terminal block)

Inverter	[Inverter Conne	ction cable	Communicat FREQROL SE	ion driver), SERVO (For automatic connection)	
Inverter		Connection cable	GOT	GOT			
Model name	Communi cation type	Connection diagram number	Option device	Model	Max. distance	Number of connectable equipment	
FREQROL- A700/F700/F700P/	DS 485	(User) (rearre) (Treame) RS485 connection	- (Built into GOT)	ат 27 ат 23 GS	500m	24 investors for one COT	
(Built-in RS485 terminal block)	113-403	diagram 6)	GT15-RS4-9S	ат 27 23 GS	30011	31 inverters for one GUT	

14.2.5 Connecting to MD-CX522-□□K(-A0)



When connecting to one inverter

*1 Connect to the PU port of the inverter.

When connecting to multiple inverters (Max. 31) (Using the distributor)



Model name	Commu nication	Terminating cable	Connection diagram number	Model name	Connection diagram number	Option device	Model	Max. distance	connectable Model name equipment
MD-CX522	CX522	RS485 connection	RS485 connection	BMJ-8	RS485 connection	- (Built into GOT)	ст 27 ст 23 GS		31 inverters
-□□K(-A0) *2	N3-400	diagram 9)	diagram 3)	ended)	diagram 1)	GT15-RS4-9S	ст 27 33 GS	2011	for one GOT

*1 Connect to the PU port of the inverter.

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD. For details, contact HAKKO ELECTRIC CO., LTD.

14.3 Connection Diagram

The following diagram shows the connection between the GOT and the inverter.

14.3.1 RS-485 cable

Connection diagram

(1) RS485 connection diagram 1)





(3) RS485 connection diagram 3)


(4) RS485 connection diagram 4)



- *1 Connect a terminating resistor jumper to RDB and RDR which are assigned in the FR-A5NR of the inverter located farthest from the GOT.
- The terminating resister jumper is packed together with the FR-A5NR. *2 Set the terminating resistor of GOT side, which will be a terminal, to "Enable".
 - 1.4.3 Terminating resistors of GOT

(5) RS485 connection diagram 5)



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(6) RS485 connection diagram 6)



*1 Set the terminator switch built in the farthest inverter from the GOT to ON (100 Ω).
 *2 Set the terminating resistor of GOT side, which will be a terminal, to "Enable"

1.4.3 Terminating resistors of GOT

(7) RS485 connection diagram 7)



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(8) RS485 connection diagram 8)



*1 Turn ON (100 Ω) the terminator switch for the most distant FR-E7TR from the GOT.

*2 Set the terminating resistor of GOT side, which will be a terminal, to "Enable"

1.4.3 Terminating resistors of GOT

(9) RS485 connection diagram 9)



Precautions when preparing a cable

(1) Cable length

The length of the RS-485 cable must be 500m or less.

- (2) GOT side connector
 For the GOT side connector, refer to the following.
 Image: 1.4.1 GOT connector specifications
- (3) Inverter connector specifications
 - (a) Pin layout in the PU port

When seen from the front of the inverter (receptacle side)



Modular jack

Pin No.	Signal name	Remark
1	GND (SG)	
2	(P5S)	Not used
3	RXD+ (RDA)	
4	TXD- (SDB)	
5	TXD+ (SDA)	
6	RXD- (RDB)	
7	GND (SG)	
8	(P5S)	Not used

The contents inside () indicate symbols described in the inverter manual.

The pins number 2 and 8 (P5S) are connected to the power supply for an operation panel or a parameter unit.

Do not use them in RS-485 communication.

(b) Connector of cable between FREQROL Series inverters Use the commercial connectors and cables shown

in the table below or the comparable products.(Refer to the manual for the inverter.)

Name	Model name	Specifications	Manufacturer	
Connector	5-554720-3	RJ45 connector	Tyco International, Ltd	
Modular ceiling rosette (Distributor)	BMJ-8	-	HAKKO ELECTRIC CO.,LTD. TEL(03)-3806-9171	
Cable	SGLPEV 0.5mm × 4P	Cable conforming to EIA568 (such as cable 10BASE-T)	MITSUBISHI CABLE INDUSTRIES, LTD.	

(4) Terminal block layout in the FR-A5NR computer link option

Attach this option to the A500, F500 and V500 Series.



Connected to the GOT

(5) Terminal block layout in the FR-E7TR control terminal option Mount the FR-E7TR to the E700 series and the

sensorless servo (FREQROL-E700EX series).





(1) GOT side

When connecting a PLC to the GOT, a terminating resistor must be connected to the GOT.Set the terminating resistor setting switch. For the procedure to set the terminating resistor, refer to the following.

1.4.3 Terminating resistors of GOT

14.4 GOT Side Settings

14.4.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.



- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Interface to be used
 - Driver:
 <When connecting the GOT to one or more FREQROL 500/700/800 series and sensorless servos>
 [FREQROL 500/700/800, SENSORLESS SERVO]
 <When connecting the GOT to one or more FREQROL 800 series>
 [FREQROL 800]
 <When automatically connecting the GOT to FREQROL 800 series, or using the PLC function of the RFREQROL 800 series>
 [FREQROL 800]
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

14.4.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

14.4.2 Communication detail settings

Make the settings according to the usage environment.

(1) FREQROL 500/700/800, SENSORLESS SERVO

Property	Value
Transmission Speed(BPS)	19200
Data Bit	7 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	10

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 7bits)	7bits/8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit/2bits
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	None Even Odd
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 10ms)	0 to 300ms

(2) FREQROL 800

(For automatic connection)

Property	Value
Transmission Speed(BPS)	115200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	10
Negotiation Time(Sec)	5
Initialization Wait Time(Sec)	3
Automatioc Negotiation	Yes

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps)	9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bits)	8bits
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Host Address	Specify the station number of the inverter in the system configuration. (Default: 0)	0 to 31
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 10ms)	0 to 300ms
Negotiation Time	Set the time period that the GOT side communication setting is sent to the inverter. (Default: 5sec)	1 to 10sec
Initialization Wait Time	Set the wait time from when the communication setting is changed until when the communication starts. (Default: 3sec)	1 to 10sec
Automatioc Negotiation	Set whether to use the automatic connection. (Default: Yes)	Yes No

POINT.

(3) Communication interface setting by the Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manuals.

GOT2000 Series User's Manual (Utility)

 (4) Precedence in communication settings
 When settings are made by GT Designer3 or the Utility, the latest setting is effective.



Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller. For example, faulty station that has communication timeout can be cut from the system. For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Help

14.5 FREQROL Series Inverter Side Settings

For details of the inverter, refer to the manual of each series.

14.5.1 Connecting FREQROL-S500, S500E, F500J series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
RS-485 port	Pr.79, n1 to n7, n10 to n12

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit). Set Pr.30 (Extended function selection) to 1 [With display] before making the parameter settings.

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item ^{*1}	Parameter No.*4	Set value	Contents of setting	
Communication station number	n1 (331)	0 to 31	لَّتَ 14.5.14 Station number setting	
Communication speed ^{*2}	n2 (332)	192 ^{*3}	19200bps	
Stop bit length ^{*2}	n3 (333)	10	Data length: 7bit Stop bit length: 1bit	
Parity check presence/absence*2	n4 (334)	1	Odd	
Number of communication retries	n retries n5 (335)		The inverter will not come to an alarm stop.	
Communication check time interval	Communication check time interval n6 (336)		Communication check suspension	
Wait time setting	n7 (337)	0	0ms	
CRLF selection	n11 (341)	1 ^{*3}	With CR, without LF	
Protocol selection ^{*5}	-	-	-	
Operation mode selection	Pr.79	0 ^{*3}	External operation mode at power on	
Link start mode selection	n10 (340)	1	Computer link operation	
E ² PROM write selection	n12 (342)	0*3	Written to RAM and EEPROM	

*1 Setting items are parameter names described in the manual of FREQROL-S500, S500E, and F500J series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

When being monitored from the GOT, the parameter n1 through n7 correspond with Pr.331 through Pr.337, and the parameter *4 n10 through n12 correspond with Pr.340 through Pr.342.

Numbers in brackets show the parameter number when the parameter unit is in use.

14.5.2 Connecting FREQROL-E500 series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.146, Pr.342

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item ^{*1}	Parameter No.	Set value	Contents of setting
Communication station number	Pr.117	0 to 31	14.5.14 Station number setting
Communication speed ^{*2}	Pr.118	192 ^{*3}	19200bps
Stop bit length ^{*2}	Pr.119	10	Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	Pr.120	1	Odd
Number of communication retries	Pr.121	9999 (65535)	The inverter will not come to an alarm stop.
Communication check time interval	Pr.122	9999	Communication check suspension
Wait time setting	Pr.123	0	0ms
CRLF presence/ absence selection	Pr.124	1 ^{*3}	With CR, without LF
Protocol selection ^{*4}	-	-	-
Operation mode selection	Pr.79	1 ^{*3}	PU operation mode
Communication startup mode selection*4	-	-	-
E ² PROM write selection	Pr.342	0 ^{*3}	Written to RAM and EEPROM
Frequency setting command selection ^{*5}	Pr.146	9999	Built-in frequency setting potentiometer invalid

*1 Setting items are parameter names described in the manual of FREQROL-E500 series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

*4 There is no Protocol selection setting on the inverter side.

*5 The setting is required for Frequency setting command selection.

14.5.3 Connecting FREQROL-F500, F500L series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124
FR-A5NR (Option unit)	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit). Set Pr.160 (user group read selection) to 0 [All parameters can be accessed for reading and writing.] before making the parameter settings. Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

o	Parameter No.		Sot volue		Contents of potting
Setting item '	PU connector	FR-A5NR	Set value		Contents of setting
Communication station number	Pr.117	Pr.331	0 to 31		14.5.14 Station number setting
Communication speed ^{*2}	Pr.118	Pr.332	192 ^{*4}		19200bps
Stop bit length/data length Stop bit length ^{*2}	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	Pr.120	Pr.334	1		Odd
Number of communication retries	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.
Communication check time interval	Pr.122	Pr.336	9999		Communication check suspension
Wait time setting	Pr.123	Pr.337	0		0ms
CRLF presence/ absence selection	Pr.124	Pr.341	1 ^{*3}		With CR, without LF
Protocol selection ^{*5}	-	-	-		-
Operation mode colortion	Pr.79		PU connector	1	PU operation mode
			FR-A5NR	0 ^{*3}	External operation mode at power on
Link start mode selection ^{*6}	-	Pr.340 1			Computer link operation
E ² PROM write selection ^{*6}	-	Pr.342	0*3		Written to RAM and EEPROM

*1 Setting items are parameter names described in the manual of FREQROL-F500 and F500L series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.342
FR-A5NR (Option unit)	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit). Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

o	Parameter No.		Saturalua		Contents of patting	
Setting item '	PU connector	FR-A5NR	Set value		Contents of setting	
Communication station number	Pr.117	Pr.331	0 to 31		∫ 14.5.14 Station number setting	
Communication speed ^{*2}	Pr.118	Pr.332	192 ^{*4}		19200bps	
Stop bit length ^{*2}	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit	
Parity check presence/absence*2	Pr.120	Pr.334	1		Odd	
Number of communication retries	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.	
Communication check time interval	Pr.122	Pr.336	9999		Communication check suspension	
Wait time setting	Pr.123	Pr.337	0		0ms	
CRLF presence/ absence selection	Pr.124	Pr.341	1 ^{*3}		With CR, without LF	
Protocol selection ^{*5}	-	-	-		-	
Operation mode colortion	Pr.79		PU connector	1	PU operation mode	
			FR-A5NR	0 ^{*3}	External operation mode at power on	
Link start mode selection ^{*6}	- Pr.340		1		Computer link operation	
E ² PROM write selection	Pr.342		0*3		Written to RAM and EEPROM	

*1 Setting items are parameter names described in the manual of FREQROL-A500 and A500L series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

14.5.5 Connecting FREQROL-V500, V500L series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.342
FR-A5NR (Option unit)	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit). Set Pr.160 (Extended function display selection) to 1 [All parameters can be accessed for reading and writing.] before making the parameter settings. Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Parameter No.		eter No.	Sotivaluo		Contonto of potting	
Setting Item '	PU connector	FR-A5NR	Set value			
Communication station number	Pr.117	Pr.331	0 to 31		∫ 14.5.14 Station number setting	
Communication speed ^{*2}	Pr.118	Pr.332	192 ^{*4}		19200bps	
Stop bit length/data length Stop bit length ^{*2}	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit	
Parity check presence/absence*2	Pr.120	Pr.334	1		Odd	
Number of communication retries	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.	
Communication check time interval	Pr.122	Pr.336	9999		Communication check suspension	
Wait time setting	Pr.123	Pr.337	0		0ms	
CRLF presence/ absence selection	Pr.124	Pr.341	1 ^{*3}		With CR, without LF	
Protocol selection ^{*5}	-				-	
Operation mode coloction	Pr.79 -		PU connector	1	PU operation mode	
			FR-A5NR	0 ^{*3}	External operation mode at power on	
Link start mode selection ^{*6}	- Pr.340		1		Computer link operation	
E ² PROM write selection	Pr.342		0 ^{*3}		Written to RAM and EEPROM	

*1 Setting items are parameter names described in the manual of FREQROL-V500 and V500L series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*5 There is no Protocol selection setting on the inverter side.

*6 The setting is required on the inverter side when FR-A5NR is used.

14.5.6 Connecting FREQROL-E700 series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	
FR-E7TR (RS-485 terminal block)	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item ^{*1}	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	14.5.14 Station number setting
PU communication speed ^{*2}	Pr.118	192 ^{*3}	19200bps
PU communication stop bit length ^{*2}	Pr.119	10	Data length: 7bit Stop bit length: 1bit
PU communication parity check ^{*2}	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999	Communication check suspension
PU communication wait time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1 ^{*3}	With CR, without LF
Protocol selection	Pr.549	0 ^{*3}	Mitsubishi inverter protocol
Operation mode selection	Pr.79	0 ^{*3}	PU operation mode
Communication startup mode selection	Pr.340	1	Network operation mode.
Communication EEPROM write selection	Pr.342	0 ^{*3}	Written to RAM and EEPROM

*1 Setting items are parameter names described in the manual of FREQROL-E700 series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

14.5.7 Connecting FREQROL-D700 series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit). Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended mode parameters are displayed. Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item ^{*1}	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	14.5.14 Station number setting
PU communication speed ^{*2}	Pr.118	192 ^{*3}	19200bps
PU communication stop bit length*2	Pr.119	10	Data length: 7bit Stop bit length: 1bit
PU communication parity check*2	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999	Communication check suspension
PU communication wait time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1 ^{*3}	With CR, without LF
Protocol selection	Pr.549	0 ^{*3}	Mitsubishi inverter protocol
Operation mode selection	Pr.79	0 ^{*3}	PU operation mode
Communication startup mode selection	Pr.340	1	Network operation mode.
Communication EEPROM write selection	Pr.342	0*3	Written to RAM and EEPROM

*1 Setting items are parameter names described in the manual of FREQROL-D700 series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

14.5.8 Connecting FREQROL-F700/700P series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342
RS-485 terminal	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.549

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit). Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended mode parameters are displayed. Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

*1	Parameter No.		Setvalue		Contents of patting	
Setting item '	PU connector	RS-485	Set value		Contents of Setting	
PU communication station number/RS-485 communication station number	Pr.117	Pr.331	0 to 31		14.5.14 Station number setting	
PU communication speed/RS-485 communication speed*2	Pr.118	Pr.332	192 ^{*4}		19200bps	
PU communication stop bit length/ RS-485 communication stop bit length ^{*2}	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit	
PU communication parity check/ RS-485 communication parity check ^{*2}	Pr.120	Pr.334	1		Odd	
Number of PU communication retries/ RS-485 communication retry count	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.	
PU communication check time interval/ RS-485 communication check time interval	Pr.122	Pr.336	9999 ^{*4}		Communication check suspension	
PU communication waiting time setting/ RS-485 communication waiting time setting	Pr.123	Pr.337	0		0ms	
PU communication CR/LF selection/ RS-485 communication CR/LF selection	Pr.124	Pr.124 Pr.341 1 ^{*3}			With CR, without LF	
Protocol selection	-	Pr.549	0 ^{*3}		Mitsubishi inverter protocol	
Operation mode selection	Pr.79 -		PU connector	1	PU operation mode	
			RS-485	0*3	External operation mode at power on	
Communication startup mode selection	Pr.340		PU connector	0*3	Refer to Pr.79 settings.	
			RS-485	1	Network operation mode.	
Communication EEPROM write selection	Pr.342		0 ^{*3}		Written to RAM and EEPROM	

Setting items are parameter names described in the manual of FREQROL-F700 series. *1

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3

- Inverter default values (No need to change)
- Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side. *4



Automatic setting with Pr.999 (FREQROL-F700P series only)

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

Parameter No.	Set value	Description	Operation in parameter setting mode	
	10	GOT Initial settings (PU connector)	[AUTO]→[GOT]→[1]Write	
Pr.999 ^{*1}	11	GOTInitial settings (RS-485 terminal)	-	
*1 When monitoring the value of Pr.999, 9999 is always monitored.				

14.5.9 Connecting FREQROL-F700PJ series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit). Before setting the parameters, set Pr.160 (Extended function display selection) to 0 so that simple mode + extended mode parameters are displayed. Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item ^{*1}	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	14.5.14 Station number setting
PU communication speed ^{*2}	Pr.118	192 ^{*3}	19200bps
PU communication stop bit length	Pr.119	10	Data length: 7bit Stop bit length: 1bit
PU communication parity check ^{*2}	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999	Communication check suspension
PU communication waiting time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1 ^{*3}	With CR, without LF
Protocol selection	Pr.549	0 ^{*3}	Mitsubishi inverter protocol
Operation mode selection	Pr.79	0 ^{*3}	External operation mode at power on
Communication startup mode selection	Pr.340	1	Network operation mode.
Communication EEPROM write selection	Pr.342	0*3	Written to RAM and EEPROM

*1 Setting items are parameter names described in the manual of FREQROL-F700 series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. Inverter default values (No need to change)



Automatic setting with Pr.999

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

Ρ	arameter No.	Set value	Description	Operation in parameter setting mode	
	Pr.999 ^{*1}	10	GOT Initial settings (PU connector)	$[AUTO] \rightarrow [GOT] \rightarrow [1]Write$	
	*1 When monitoring the value of Pr.999, 9999 is always monitored.				

14.5.10 Connecting FREQROL-A700 series

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342
RS-485 terminal	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.549

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit).

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

o	Parameter No.		Set value		Contents of setting	
Setting Item	PU connector RS-485		ie.			
PU communication station number/ RS-485 communication station number	Pr.117	Pr.331	0 to 31	I	Setting 14.5.14 Station number	
PU communication speed/ RS-485 communication speed ^{*2}	Pr.118	Pr.332	192 ^{*4}		19200bps	
PU communication stop bit length/ RS-485 communication stop bit length ^{*2}	Pr.119	Pr.333	10		Data length: 7bit Stop bit length: 1bit	
PU communication parity check/ RS-485 communication parity check ^{*2}	Pr.120	Pr.334	1		Odd	
Number of PU communication retries/ RS-485 communication retry count	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.	
PU communication check time interval/ RS-485 communication check time interval	Pr.122	Pr.336	9999 ^{*2}	ļ	Communication check suspension	
PU communication waiting time setting/ RS-485 communication waiting time setting	Pr.123	Pr.337	0		0ms	
PU communication CR/LF selection/ RS-485 communication CR/LF selection	Pr.124	Pr.341	1 ^{*3}		With CR, without LF	
Protocol selection	-	Pr.549	0 ^{*3}		Mitsubishi inverter protocol	
Operation mode coloction	Dr	70	PU connector	1	PU operation mode	
Operation mode selection	PT.79		RS-485	0 ^{*3}	External operation mode at power on	
Communication startup mode selection	Pr.340		PU connector	0*3	Refer to Pr.79 settings.	
			RS-485	1	Network operation mode.	
Communication EEPROM write selection	Pr.:	342	0*3		Written to RAM and EEPROM	

*1 Setting items are parameter names described in the manual of FREQROL-A700 series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

*4 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.



(1) Automatic setting with Pr.999

If Pr.999 is set as the following, the communication settings other than [PU communication station number] and [Communication EEPROM write selection] can be automatically set in a batch to the default communication settings of the GOT side.

Parameter No.	Set value	Description	Operation in parameter setting mode
Pr.999 ^{*1}	10	GOT Initial settings (PU connector)	$[AUTO] \rightarrow [GOT] \rightarrow [1]Write$
	11	GOT Initial settings (RS-485)	-

*1 When monitoring the value of Pr.999, 9999 is always monitored.

(2) Inverters available for automatic batch setting Parameters are not automatically set in a batch depending on the SERIAL (production number) symbol of the inverter to be used. For details, contact your local distributor.

14.5.11 Connecting FREQROL-A800, F800 series

Communication settings

Configure the inverter communication settings by one of the following three methods. To automatically reconfigure the GOT side communication settings to the inverter side communication settings in batches and to perform the automatic connection, refer to the following.

(2) Communication settings of inverter (Automatic connection)

To automatically reconfigure the GOT side default communication settings to the inverter side communication settings in batches, refer to the following.

(3) Automatic setting with Pr.999

To manually reconfigure the GOT side communication settings to the inverter communication settings, refer to the following.

(4) Communication settings of inverter (Manual setting)

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter	
PU connector	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.414	
RS-485 terminal	Pr.79, Pr.331 to Pr.337, Pr.340 to Pr.342, Pr.414, Pr.549	

(2) Communication settings of inverter (Automatic connection)

When [Automatic Negotiation] is set to [Yes] in the GOT communication settings, the inverter parameters are reconfigured to the GOT communication settings.

Set the station number settings (Pr.117 and Pr.331) and the protocol selection (Pr.549) in advance.

To use the PLC function, set the PLC function operation selection (Pr.414) in advance.

Before performing the automatic connection, connect all the GOTs and the inverters.

After the automatic connection is performed, if a station is added or changed, or the communication settings are not reconfigured normally, change the settings with the automatic batch parameter setting (Pr.999) separately. If the inverter power turns off while the automatic connection is executed, execute the automatic connection on the GOT again.

If the automatic connection fails, a communication timeout error occurs.

If the automatic connection succeeds, the GOT normally starts communicating with each station.

0-#10*1	Parameter No.		
Setting item	PU connector	RS-485	
PU communication speed/ RS-485 communication speed	Pr.118	Pr.332	
PU communication stop bit length/ RS-485 communication stop bit length	Pr.119	Pr.333	
PU communication parity check/ RS-485 communication parity check	Pr.120	Pr.334	
Number of PU communication retries/ RS-485 communication retry count	Pr.121	Pr.335	
PU communication check time interval/ RS-485 communication check time interval	Pr.122	Pr.336	
PU communication waiting time setting/ RS-485 communication waiting time setting	Pr.123	Pr.337	
PU communication CR/LF selection/ RS-485 communication CR/LF selection	Pr.124	Pr.341	

The following shows the parameters to be reconfigured by the automatic connection.

(3) Automatic setting with Pr.999

Setting Pr.999 as shown below automatically configures the communication settings to the default communication settings of the GOT side collectively.

Parameter No.	Set value	Description	Operation in parameter setting mode
	10	GOT (FREQROL 500/700/800, SENSORLESS SERVO) initial settings (PU connector)	$[AUTO] \rightarrow [GOT] \rightarrow [1]Write$
Pr.999 ^{*1}	11	GOT (FREQROL 500/700/800, SENSORLESS SERVO) initial settings (RS-485)	-
	12	GOT (FREQROL 800) initial settings (PU connector)	$[AUTO] \rightarrow [GOT] \rightarrow [2] Write$
	13	GOT (FREQROL 800) initial settings (RS-485)	-
*4	13	GOT (FREQROL 800) initial settings (RS-485)	-

*1 When monitoring the value of Pr.999, 9999 is always monitored.

The following shows the values to be automatically set in batches when the above values are set for Pr.999.

(a) Pr.999=10

Pr.No.	Setting item	Set value
79	Operation mode selection	1
118	PU communication speed	192
119	PU communication stop bit length	10
120	PU communication parity check	1
121	Number of PU communication retries	9999
122	PU communication check time interval	9999
123	PU communication waiting time setting	0ms
124	PU communication CR/LF selection	1
340	Communication startup mode selection	0

(b) Pr.999=11

Pr.No.	Setting item	Set value
79	Operation mode selection	0
332	RS-485 communication speed	192
333	RS-485 communication stop bit length	10
334	RS-485 communication parity check	1
335	RS-485 communication retry count	9999
336	RS-485 communication check time interval	9999
337	RS-485 communication waiting time setting	0ms
340	Communication startup mode selection	1
341	RS-485 communication CR/LF selection	1
549	Protocol selection	0

(c) Pr.999=12

Pr.No.	Setting item	Set value
79	Operation mode selection	1
118	PU communication speed	1152
119	PU communication stop bit length	0
120	PU communication parity check	1
121	Number of PU communication retries	9999
122	PU communication check time interval	9999
123	PU communication waiting time setting	0ms
124	PU communication CR/LF selection	1
340	Communication startup mode selection	0
414	PLC function operation selection	2 ^{*1}

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

(d) Pr.999=13

Pr.No.	Setting item	Set value
79	Operation mode selection	0
332	RS-485 communication speed	1152
333	RS-485 communication stop bit length	0
334	RS-485 communication parity check	1
335	RS-485 communication retry count	9999
336	RS-485 communication check time interval	9999
337	RS-485 communication waiting time setting	0ms
340	Communication startup mode selection	1
341	RS-485 communication CR/LF selection	1
414	PLC function operation selection	2 ^{*1}
549	Protocol selection	0

*1 Before configuring the automatic batch setting, if Pr.414 is set to 1, the setting is not changed.

(4) Communication settings of inverter (Manual setting)

Set the following parameters using the PU (operation panel or parameter unit). Before setting the parameters, set Pr.160 (User group read selection) to 0 so that simple mode + extended parameters are displayed. (The default value of FREQROL-F800 is 9999.)

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

- *1	Parameter No.		Setvolue		Contonto of potting
Setting item '	PU connector	RS-485	Set value		Contents of setting
PU communication station number/ RS-485 communication station number	Pr.117	Pr.331	0 to 31		14.5.14 Station number setting
PU communication speed/ RS-485 communication speed ^{*2}	Pr.118	Pr.332	192 ^{*3}		19200bps
PU communication stop bit length/data length/ RS-485 communication stop bit length/data length ^{*2}	Pr.119	Pr.333	10 ^{*4}		Data length: 7bit Stop bit length: 1bit
PU communication parity check/ RS-485 communication parity check ^{*2}	Pr.120	Pr.334	1		Odd
Number of PU communication retries/ RS-485 communication retry count	Pr.121	Pr.335	9999		The inverter will not come to an alarm stop.
PU communication check time interval/ RS-485 communication check time interval	Pr.122	Pr.336	9999 ^{*3}		Communication check suspension
PU communication waiting time setting/ RS-485 communication waiting time setting	Pr.123	Pr.337	0		0ms
PU communication CR/LF selection/ RS-485 communication CR/LF selection	Pr.124	Pr.341	1 ^{*5}		With CR, without LF
Protocol selection	-	Pr.549	0 ^{*5}		Mitsubishi inverter protocol
Operation mode collection	Pr.79		PU connector	1	PU operation mode
			RS-485	0 ^{*5}	External operation mode at power on
Communication startup mode selection	Pr.340		PU connector	0 ^{*5}	Refer to Pr.79 settings.
			RS-485	1	Network operation mode.
Communication EEPROM write selection	Pr.3	342	0*5		Written to RAM and EEPROM
PLC function operation selection*6	Pr.414		1, 2		Enabled with 1 and 2.

*1 Setting items are parameter names described in the manual of FREQROL-A800, F800 series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings.

*3 Since the value has been set as a default, no setting is required when connecting to the PU connector on the inverter side.

*4 To use the FREQROL 800 driver, set 0.

*5 Inverter default values (No need to change).

*6 The inverter side setting defaults to 0 (invalid).

To use the PLC function, set 1 or 2.

14.5.12 Connecting a sensorless servo (FREQROL-E700EX series)

Communication settings

Make the communication settings of the sensorless servo (FREQROL-E700EX series). Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	
FR-E7TR (RS-485 terminal block)	Pr.79, Pr.117 to Pr.124, Pr.340, Pr.342, Pr.549

(2) Communication settings of sensorless servo

Set the following parameters using the PU (operation panel or parameter unit). Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item ^{*1}	Parameter No.	Set value	Contents of setting
PU communication station number	Pr.117	0 to 31	14.5.14 Station number setting
PU communication speed ^{*2}	Pr.118	192 ^{*3}	19200bps
PU communication stop bit length*2	Pr.119	10	Data length: 7bit Stop bit length: 1bit
PU communication parity check*2	Pr.120	1	Odd
Number of PU communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
PU communication check time interval	Pr.122	9999	Communication check suspension
PU communication wait time setting	Pr.123	0	0ms
PU communication CR/LF selection	Pr.124	1 ^{*3}	With CR, without LF
Protocol selection	Pr.549	0 ^{*3}	Mitsubishi inverter protocol
Operation mode selection	Pr.79	0 ^{*3}	PU operation mode
Communication startup mode selection	Pr.340	1	Network operation mode.
Communication EEPROM write selection	Pr.342	0*3	Written to RAM and EEPROM

*1 Setting items are parameter names described in the manual of sensorless servo (FREQROL-E700EX series).

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Sensorless servo (FREQROL-E700EX series) default values (No need to change)

14.5.13 Connecting MD-CX522-DDK(-A0)

Communication settings

Make the communication settings of the inverter.

Be sure to perform the inverter reset after updating each parameter.

(1) Communication port and corresponding parameters

GOT connection destination	Parameters corresponding to inverter
PU connector	Pr.79, Pr.117 to Pr.124

(2) Communication settings of inverter

Set the following parameters using the PU (parameter unit).

After setting the parameters for the communication settings, reset the inverter.

Do not change these parameters, even though they can be monitored from the GOT. If they are changed, communication with the GOT is disabled.

Setting item ^{*1}	Parameter No.	Set value	Contents of setting
Communication station number	Pr.117	0 to 31	14.5.14 Station number setting
Communication speed ^{*2}	Pr.118	192 ^{*3}	19200bps
Stop bit length/data length*2	Pr.119	10	Data length: 7bit Stop bit length: 1bit
Parity check presence/absence*2	Pr.120	1	Odd
Number of communication retries	Pr.121	9999	The inverter will not come to an alarm stop.
Communication check time interval	Pr.122	9999	Communication check suspension
Wait time setting	Pr.123	0	0ms
CRLF presence/absence selection	Pr.124	1 ^{*3}	With CR, without LF

*1 Setting items are parameter names described in the manual of MELIPM series.

*2 Settings on the GOT can be changed.

When changing the settings on the GOT, be sure to change the parameters on the inverter to correspond with the GOT settings. *3 Inverter default values (No need to change)

14

14.5.14 Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order. There is no problem even if station numbers are not consecutive.



(1) Direct specification

When setting the device, specify the station number of the inverter of which data is to be changed.



(2) Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 155 on GT Designer3, the value of GD10 to GD25 compatible to the station No. specification will be the station No. of the inverter.

Specification station NO.	Compatible device	Setting range
100	GD10	
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	0 to 21
107	GD17	For the setting other than the above, error (dedicated device is out of range
108	GD18	
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

14.6 Device Range that Can Be Set

The device ranges of controller that can be used for GOT are as follows.

Note that the device ranges in the following tables are the maximum values that can be set in GT Designer3.

The device specifications of controllers may differ depending on the models, even though belonging to the same series.

Please make the setting according to the specifications of the controller actually used.

When a non-existent device or a device number outside the range is set, other objects with correct device settings may not be monitored.

Setting item



Item	Description			
	Set the device name, device number, and bit number. The bit number can be set only by specifying the bit of word device.			
Device	Station s No. 1 tr	Monitors the inverter of the specified station No. 0 to 31: To monitor the inverter of the specified station No. 100 to 115: To specify the station No. of the inverter to be monitored by the value of GOT data register (GD). ^{*1}		
Information	Displays the device type and setting range which are selected in [Device].			
*1	The following shows the relation between the inverter station numbers and the GOT data register.			
	Station No.	GOT data register (GD)	Setting range	
	100	GD10	0 to 31	
	101	GD11	(If setting a value	

GD24

GD25

114

115

outside the range above, a

device range

error occurs)

(1) Setting the device by inputting directly from the keyboard

When setting the device by inputting directly from the keyboard, set the items as follows.

Basic Settings Device/Style Te	Advand Extended	ced Settings Trigger Script
Lamp <u>T</u> ype: <u>D</u> evice:	Bit 0- <u>31 RS15</u>	🔘 Word
		- Device numbe

Inverter (FREQROL 500/700/800 series), sensorless servo (FREQROL-E700EX)

	Device name	Setting range			Device No. represen tation
evice	Inverter status monitor (RS) ^{*3}	0-0 RS0 0-100 RS0	to to	0-31 RS15 0-115 RS15	Decimal
Bit d	Run command (WS) *4*5	0-0 WS0 0-100 WS0	to to	0-31 WS15 0-115 WS15	
	Alarm definition (A) *2*3	0-0 A0 0-100 A0	to to	0-31 A7 0-115 A7	
/ice	Parameter (Pr) *1*2	0-0 Pr0 0-100 Pr0	to to	0-31 Pr1500 0-115 Pr1500	
Word dev	Programmed operation (PG) ^{*1*2}	0-0 PG0 0-100 PG0	to to	0-31 PG89 0-115 PG89	Decimal
	Special parameter (SP) ^{*2*4}	0-0 SP108 0-100 SP108	to to	0-31 SP127 0-115 SP127	

When creating the screen, designate only either of programmed operation (PG) device or parameter (Pr) *1 device

Do no designate both PG (PG0 to PG89) and Pr (Pr900 to Pr905) devices.

- *2 *3 *4 Only 16-bit (1-word) designation is possible.
 - Only reading is possible. When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the multi-speed operation (W3 to W7, SP121, SP122) cannot be used. For using the multi-speed operation, follow either of the operations as below.
 - Connect the GOT to the RS-485 terminal and set the operation mode to the NET operation mode (Computer link operation mode), and then operate the inverter.
 - Change the motor speed with the set frequency (SP109. SP110), and then operate the inverter with the forward or reverse rotation (WS1, WS2, SP121, SP122).

Only writing is possible for WS devices. More than one WS cannot turn on at once (Except the turned on WS device, the other WS devices turn off.)

Bits of SP122 (word device) and SP121 (word device) are assigned to WS0 to WS7 and WS8 to WS15 respectively. When more than one WS turns on at once, convert the values for the bit devices that are assigned to the word device into values for the word device. Write the converted values into SP122 or SP121.

 Setting High speed operation command (WS5), Middle speed operation command (WS4), and Low speed operation command (WS3)

When setting High speed operation command (WS5), Middle speed operation command (WS4), and Low speed operation command (WS3), write numerical values to device SP122 as necessary

As the following figure shows, each operation mode is assigned to device SP122.

The following shows an example for Forward rotation command (WS1) and Low speed operation command (WS3).



Write [1] to each bit corresponding to Forward rotation command (WS1) and Low speed operation command (WS3) of device SP122. The value will be 000AH in this example. When writing the value to device SP122 actually, convert 000AH to decimal number and write the value [10].

When using a WS device, [Alternate] of a bit switch cannot be used.

Use [Momentary], [Set], and [Reset] for bit switch actions.

The following shows correspondences between virtual inverter devices used in the GOT and data of the inverter.

(2) Inverter status monitor

An example with FREQROL-A700 series is shown helow

For the setting items of other than the FREQROL-A700 series, refer to the following manual.

User's Manual of the used inverter _∃ (communication function (setting item and set data))

Device name	Description*1
RS0	Inverter running (RUN)
RS1	Forward rotation (STF)
RS2	Reverse rotation (STR)
RS3	Up to frequency (SU)
RS4	Overload (OL)
RS5	Instantaneous power failure (IPF)
RS6	Frequency detection (FU)
RS7	Fault (ABC1)
RS8	ABC2
RS9	-
RS10	-
RS11	-
RS12	-
RS13	-
RS14	-
RS15	Fault occurrence

The description (function of input terminal) may be changed *1 by the parameter of the inverter side. Check the function of the inverter used

> Inverter User's Manual (Application) Communication operation and setting

*5

(3) Run command

An example with FREQROL-A700 series is shown below. For the setting items of other than the FREQROL-A700 series, refer to the following manual.

User's Manual of the used inverter (Communication function (Setting item and set data))

Device name	Description ^{*1}
WS0	Current input selection (AU)
WS1	Forward rotation command (STF)
WS2	Reverse rotation command (STR)
WS3	Low speed operation command (RL)
WS4	Middle speed operation command (RM)
WS5	High speed operation command (RH)
WS6	Second function selection (RT)
WS7	Output stop (MRS)
WS8	Jog operation (JOG)
WS9	Selection of automatic restart after instantaneous power failure (CS)
WS10	Start self-holding (STOP)
WS11	Reset (RES)
WS12	-
WS13	-
WS14	-
WS15	-

The data (function of input terminal) may be changed by the parameter of the inverter side. Check the function of the inverter used.



Inverter User's Manual (Application) Communication operation and setting

(4) Alarm definition

*1

Description
Second alarm in past
Latest alarm
Fourth alarm in past
Third alarm in past
Sixth alarm in past
Fifth alarm in past
Eighth alarm in past
Seventh alarm in past

*1 Only reading is possible for A0 to A7. These devices cannot be used for a write object (numerical input etc.).

(5) Parameter

The numbers of virtual devices for inverter (parameter (Pr)), used by GOT, correspond to the inverter parameter numbers.

For the inverter parameters, refer to the following.

Manual of the inverter being used

POINT,

 Monitoring Pr.37 GOT cannot monitor the parameter (Pr.37) of FREQROL-E500/S500(E)/F500J/D700/F700PJ/ E700.

 When setting "8888" or "9999" to inverter parameter (Pr) "8888" and "9999" designate special function. To set these numbers from GOT, designate a number as shown below.

Set value of inverter side	Value specified by GOT
8888	65520
9999	65535

(3) Precautions for setting calibration parameter (Pr900 to Pr905)

When setting a calibration parameter (Pr900 to Pr905), it is necessary to set the value below for extension second parameter (SP108), depending on the device number to be used and the inverter model.

Value to be set to extension second parameter (SP108)	Description
H00	Offset/gain
H01	Analog
H02	Analog value at terminal

(6) Programmed operation

The devices below correspond to the parameters (Pr.201 to Pr.230) of FREQROL-A500 series.

Device name			Description	
PG0	to	PG9	Program set 1 (running frequency)	
PG10	to	PG19 ^{*1}	Program set 1 (time)	
PG20	to	PG29	Program set 1 (rotation direction)	
PG30	to	PG39	Program set 2 (running frequency)	
PG40	to	PG49 ^{*1}	Program set 2 (time)	
PG50	to	PG59	Program set 2 (rotation direction)	
PG60	to	PG69	Program set 3 (running frequency)	
PG70	to	PG79 ^{*1}	Program set 3 (time)	
PG80	to	PG89	Program set 3 (rotation direction)	
*1 To set the start time (PG10 to PG19, PG40 to PG49, PG70 to PG79), set hour or minute in the upper 8bits, and minute or second in the lower 8bits.				

Example) To set 13 hour 35 minute

Time to be set	13H	35M	Remark
Convert "hour" and "minute" into hexadecimal.	H0D	H23	HEX
Combine upper and lower 8- bit values.	Input H0D2	23 or 3363.	-

(7) Special parameter

The numbers of the inverter's virtual devices (SP) used for the GOT correspond to instruction codes of the inverter communication function.

For instruction details, and values to be read and written, refer to the following,

Manual of the inverter used

Device	Description	Instru co	iction de
name			
SP108	Second parameter changing	6Сн	ЕСн
SP109 ^{*1}	Set frequency (RAM)	6Dн	EDн
SP110 ^{*1}	Set frequency (RAM, E ² PROM)	6Ен	ЕЕн
SP111*1*2	Output frequency	6Fн	-
SP112 ^{*2}	Output current	70н	-
SP113 ^{*2}	Output voltage	71н	-
SP114 ^{*2}	Special monitor	72н	-
SP115	Special monitor selection No.	73н	F3н
SP116	Alarm definition all clear	-	F4н
51 110	Latest alarm, second alarm in past	74н	-
SP117	Third alarm in past, fourth alarm in past	75н	-
SP118	Fifth alarm in past, sixth alarm in past	76н	-
SP119	Seventh alarm in past, eights alarm in past	77н	-
00101	Inverter status monitor (extended)	70	FOU
58121	Run command (extend)	79H	гэн
00400	Inverter status monitor	7Ан	-
3F122	Run command	-	FАн
SP123	Communication mode	7Вн	FBн
SP124 ^{*3}	All parameter clear	-	FСн
SP125 ^{*3}	Inverter reset	-	FDн
SP127	Link parameter extended setting	7Fн	FFн

*1 GOT cannot monitor SP109 to SP111 if the conditions below are satisfied at the same time. (Only FREQROL-E500/S500(E)/F500J/D700/F700PJ/E700

series) • $Pr37 \neq 0$

• SP127 = 1

*2 Only reading is possible for SP111 to SP114. These devices cannot be used for a write object (numerical input etc.).

*3 Only writing is possible for SP124 and SP125. These devices cannot be used for read object.

Inverter (FREQROL 800 series) (Automatic connection)

Device name		Se	Device No. represen tation		
	Inverter status monitor (RS) ^{*2}	0-0 RS0 0-100 RS0	to to	0-31 RS15 0-115 RS15	Decimal
	Run command (WS) ^{*3*4}	0-0 WS0 0-100 WS0	to to	0-31 WS15 0-115 WS15	
	Input (X)	0-0 X00 0-100 X00	to to	0-31 X7F 0-115 X7F	Hexadec
	Output (Y)	0-0 Y00 0-100 Y00	to to	0-31 Y7F 0-115 Y7F	imal
	Internal relay (M)	0-0 M0 0-100 M0	to to	0-31 M127 0-115 M127	
Bit device	Timer Coil (TC)	0-0 TC0 0-100 TC0	to to	0-31 TC15 0-115 TC15	
	Timer Contact (TT)	0-0 TT0 0-100 TT0	to to	0-31 TT15 0-115 TT15	
	Counter Coil (CC)	0-0 CC0 0-100 CC0	to to	0-31 CC15 0-115 CC15	Decimal
	Counter Contact (CT)	0-0 CT0 0-100 CT0	to to	0-31 CT15 0-115 CT15	Decima
	Retentive timer Coil (SC)	0-0 SC0 0-100 SC0	to to	0-31 SC15 0-115 SC15	
	Retentive timer Contact (SS)	0-0 SS0 0-100 SS0	to to	0-31 SS15 0-115 SS15	
	Special relay (SM) ^{*5}	0-0 SM0 0-100 SM0	to to	0-31 SM2047 0-115 SM2047	
	Alarm definition (A) *1*2	0-0 A0 0-100 A0	to to	0-31 A7 0-115 A7	
	Parameter (Pr) *1	0-0 Pr0 0-100 Pr0	to to	0-31 Pr1500 0-115 Pr1500	
	Special parameter (SP) ^{*1*3}	0-0 SP108 0-100 SP108	to to	0-31 SP127 0-115 SP127	
device	Timer current value (TN)	0-0 TN0 0-100 TN0	to to	0-31 TN15 0-115 TN15	Decimal
Word	Counter current value (CN)	0-0 CN0 0-100 CN0	to to	0-31 CN15 0-115 CN15	Decima
	Retentive timer current value (SN)	0-0 SN0 0-100 SN0	to to	0-31 SN15 0-115 SN15	
	Data register (D)	0-0 D0 0-100 D0	to to	0-31 D255 0-115 D255	
	Special data register (SD)	0-0 SD0 0-100 SD0	to to	0-31 SD2047 0-115 SD2047	

*1 Only 16-bit (1-word) designation is possible.

*2 Only reading is possible. *3 When the GOT is connecte

When the GOT is connected to the PU connector and the operation mode is set to the PU operation mode, the multi-speed operation (W3 to W7, SP121, SP122) cannot be used. For using the multi-speed operation, follow either of the operations as below.

- Connect the GOT to the RS-485 terminal and set the operation mode to the NET operation mode (Computer link operation mode), and then operate the inverter.
- Change the motor speed with the set frequency (SP109, SP110), and then operate the inverter with the forward or reverse rotation (WS1, WS2, SP121, SP122).

*4 Only writing is possible for WS devices.

More than one WS cannot turn on at once. (Except the turned on WS device, the other WS devices turn off.)

Bits of SP122 (word device) and SP121 (word device) are assigned to WS0 to WS7 and WS8 to WS15 respectively. When more than one WS turns on at once, convert the values for the bit devices that are assigned to the word device into values for the word device. Write the converted values into SP122 or SP121.

 Setting High speed operation command (WS5), Middle speed operation command (WS4), and Low speed operation command (WS3)

When setting High speed operation command (WS5), Middle speed operation command (WS4), and Low speed operation command (WS3), write numerical values to device SP122 as necessary.

As the following figure shows, each operation mode is assigned to device SP122.

- The following shows an example for Forward rotation command (WS1) and Low speed operation command (WS3).
- *5 The SM device cannot be specified as a word device. For the applicable SM devices, refer to the following.

A800 PLC FUNCTION PROGRAMMING MANUAL



Write [1] to each bit corresponding to Forward rotation command (WS1) and Low speed operation command (WS3) of device SP122. The value will be 000AH in this example. When writing the value to device SP122 actually, convert 000AH to decimal number and write the value [10].

When using a WS device, [Alternate] of a bit switch cannot be used.

Use [Momentary], [Set], and [Reset] for bit switch actions.

For the correspondences between the virtual inverter devices used in the GOT and the data of the inverter, refer to the following.

User's Manual of the used inverter (communication function (setting item and set data))

POINT,

If the automatic connection fails

When [Automatic Negotiation] is set to [Yes] in the GOT communication settings, the inverter parameters are reconfigured within the user-specified negotiation time.

If the automatic connection fails, set the longer negotiation time with GT Designer3 or the utility.

14.7 Precautions

Station No. of inverter system

Make sure to establish inverter system with No.0 station.

Number of inverter

Up to 31 inverters can be connected.

Parameter setting

- (1) Communication parameter change
 Do not make any change for each communication
 parameter of the inverter side from GOT.
 If changed, the communication to the inverter cannot
 be made.
- (2) When setting "8888" or "9999" to inverter parameter (Pr)

"8888" and "9999" designate special function. When specifying from the GOT, it will be as follows.

Set value of inverter side	Value specified by GOT
8888	65520
9999	65535

Screen switching devices, system information devices

Make sure to use GD for screen switching devices and system information devices when the GOT is connected to only the inverter.

GOT clock setting

The clock function is enabled or disabled depending on the driver selected.

- When selecting [FREQROL 500/700/800, SENSORLESS SERVO]
 The clock function is disabled even though [Adjust] or [Broadcast] is set by the GOT clock setting.
- When selecting [FREQROL 800] The clock function is enabled by using the PLC function of the FREQROL 800 series.

Settable driver

The following shows the settable drivers according to the models used.

 When connecting the GOT to one or more FREQROL 500/700/800 series and sensorless servos

[FREQROL 500/700/800, SENSORLESS SERVO]

- When connecting the GOT to one or more FREQROL 800 series [FREQROL 800]
- When automatically connecting the GOT to FREQROL 800 series, or using the PLC function of the RFREQROL 800 series [FREQROL 800]

Automatic connection of FREQROL 800 series

The automatic connection requires the user-specified negotiation time and the initialization wait time. By monitoring the Notify Automatic Connection Status (GS277), you can check the completion of the automatic connection.

For details, refer to the following.

GT Designer3 (GOT2000) Help

15

SERVO AMPLIFIER CONNECTION

15.1	Connectable Model List	15 -	- 2
15.2	System Configuration	15	- 3
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15. SERVO AMPLIFIER CONNECTION

15.1 Connectable Model List

Series	Model name	Clock	Communication type	Connectable model	Refer to
	MR-J2S-⊟A				
MELSERVO-J2-Super	MR-J2S-□CP	×	RS-232 RS-422		5.2.1
	MR-J2S-⊟CL				
	MR-J2M-P8A	~	RS-232	GT GT GS	<u>∼</u> 15 0 0
MELSERVO-J2M	MR-J2M-□DU	^	RS-422	27 23 33	15.2.2
	MR-J3-⊟A	~	RS-232	GT GT GS	
MELGERVO-00	MR-J3-□T	^	RS-422	27 23 33	<u>√</u> → 15.2.2
MELSERVO-J4 ^{*1}	MR-J4-⊟A	×	RS-232 RS-422	27 CS	15.2.5 ٿي_ا
MELSERVO-JE	MR-JE-∏A	×	RS-422	^{бт} 27 23 GS	15.2.4

The following table shows the connectable models.

*1 For the RS-422 communication, use MELSERVO-J4 of software version A3 or a later version.

15.2 System Configuration

15.2.1 Connecting to the MELSERVO-J2-Super Series

■ When connecting via RS-232 communication





Servo am	plifier	Connection cable			ОТ	Number of
Series name	Commun ication type	Cable model Connection diagram number	Max. distance	Option device	Model	connectable equipment
MELSERVO-	RS-232	MR-CPCATCBL3M(3m)		- (Built into GOT)	ет 27 6т 23 GS	1 GOT for
J2-Super ^{*1}	RS-232 User) (User) RS232 connection diagram 1)		Tom	GT15-RS2-9P	ст 27 33 GS	amplifier

*1 Connect the connector of the servo amplifier to CN3.

When connecting via RS-422 communication



Servo amplifier		Connection cable	GOT	GOT			
Series name	Communi cation type	Connection diagram number	Option device Model		Max. distance	Number of connectable equipment	
MELSERVO-J2-Super *1	RS-422	User) RS422 connection diagram 1)	- (Built into GOT)	ਰਾ 27 ਰਾ 23 GS	30m	Up to 32 axes for 1 GOT	
			GT15-RS4-9S	бт 27 ат 23 GS	- 3011	communication)	
**	1 Connect	the connector of the servo an	nplifier to CN3.				

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15.2.2 Connecting to the MELSERVO-J2M Series





Servo amplifier		Connection cable		G			
Series name	Commun ication type	Cable model Connection diagram number	Max. distance	Option device	Model	connectable equipment	
MELSERVO -J2M *1	RS-232	MR-CPCATCBL3M(3m) or	15m	- (Built into GOT)	ат 27 ат 23 GS	1 GOT for 1 servo amplifier	
				GT15-RS2-9P	21 GT 23 GS		

*1 Connect the connector of the servo amplifier to CN3.

■ When connecting via RS-422 communication



Series nameCommunic ation typeConnection diagram numberMax. distanceOption deviceModelconnectable equipmentMELSERVO-J2M '1RS-422RS-422connection diagram 1)30m- (Built into GOT)Connectable Connectable0 to 31 stations for 1 GOTMELSERVO-J2M '1RS-422GT15-RS4-9SConnectable Connectable0 to 31 stations for 1 GOT	Servo amplifier		Connection cable		GOT		Number of
MELSERVO-J2M *1 RS-422 RS-422 connection diagram 1) 30m GT15-RS4-9S GT GT15-RS4-9S GT GT GT15-RS4-9S GT GT GT GT GT GT GT GT GT GT GT GT GT G	Series name	Communic ation type	Connection diagram number	Max. distance	Option device	Model	connectable equipment
*1 diagram 1) for 1 GOT GT15-RS4-9S	MELSERVO-J2M	DS 422	(User) (Vser) RS422 connection	20m	- (Built into GOT)	GT 27 GT 23 GS	0 to 31 stations
	*1	K3-422	diagram 1)	30m -	GT15-RS4-9S	GT 27 GT 23 GS	for 1 GOT

Connect the connector of the servo amplifier to CN3.
15.2.3 Connecting to the MELSERVO-J4, J3 Series





Servo amplifier			Connection cable		GOT			
Series name	RS-422/232 interface converter RS-422/232 conversion cable	Commun ication type	Cable model Connection diagram number	Max. distance	Option device	Model	Number of connectable equipment	
MELSERVO- J4*1, J3*1	DSV-CABV(1.5m)*2	DS 333		15m	- (Built into GOT)	^{ст} 27 ^{ст} 23 GS		
	FA-T-RS40VS ^{*3}	N3-232	2 -		GT15-RS2-9P	ст 27 23 GS	1 GOT for	
	DS 422	User RS422 connection	20m	- (Built into GOT)	^{ст} 27 ^{ст} 23 GS	1 servo amplifier		
	-	113-422	diagram 2)	30m	GT15-RS4-9S	ст 27 23 GS		

*1 Connect the connector of the servo amplifier to CN3.

*2 DSV-CABV is a product manufactured by Diatrend Corporation. For details, contact Diatrend Corporation.

*3 FA-T-RS40VS is a product manufactured by MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED. For details, contact MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED.

The cables (RS-PCATCBL-0.5M(0.5m), RS-422SCBL-2M(2m)) are packed together. Use the provided cables to connect devices.

■ When connecting to multiple servo amplifiers (RS-422 connection)



*1 Connect the connector of the servo amplifier to CN3.

User

User

User

*2 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD. For details, contact HAKKO ELECTRIC CO., LTD.

User

GT15-RS4-9S

■ When connecting to multiple servo amplifiers (RS-232 connection)



Servo amplifier	Terminating cable	Connection cable 1)	Distributor *3	Connection cable 2)	Distributor *3	RS-42 interface o	22/232 converter ^{*2}	Connection cable 3)	GOT		Max.	Number of
Series name	Connecti on diagram number	Connectio n diagram number	Model name	Connectio n diagram number	Model name	Model name	Commun ication type	Connection diagram number	Option device	Model	dista nce	e equipment
MELSER c VO-J4*1, n J3*1	RS422 RS422 connectio n diagram 5) 4) Unserver RS422 connectio n diagram 5) 4) Recom mended) RS422 connectio n diagram mended) Recom 3) Recom solution solution So	RS422 RS422 RS422 onnectio connectio BMJ-8 connectio BMJ-8 diagram n diagram (Recom n diagram (Recom 1	FA-T-	FA-T- RS-232		- (Built into GOT)	ат 27 ат 23 GS	30m	Up to 32			
		RS40VS	, RS-232		GT15-RS2- 9P	бт 27 ^{бт} 23 GS	3011	1 GOT				

*1 Connect the connector of the servo amplifier to CN3.

*2 FA-T-RS40VS is a product manufactured by MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED. For detail of this product, contact MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED. The cables (RS-PCATCBL-0.5M(0.5m), RS-422SCBL-2M(2m)) are packed together.

Use the cables packed together to connect.

*3 The distributor is a product manufactured by HAKKO ELECTRIC CO., LTD. For details, contact HAKKO ELECTRIC CO., LTD.

15.2.4 Connecting to the MELSERVO-JE Series



■ When connecting via RS-422 communication

Connect the connector of the servo amplifier to CN1.

15.3 Connection Diagram

The following diagram shows the connection between the GOT and the servo amplifier.

15.3.1 RS-232 cable

Connection diagram



Precautions when preparing cable

(2) Cable length

The length of the cable RS-232 must be 15m or less.

(3) GOT side connector

For the GOT side connector, refer to the following.

[3 1.4.1 GOT connector specifications

15.3.2 RS-422 cable

Connection diagram

(1) RS422 connection diagram 1)



*1 At the last axis, connect TRE to RDN.



(3) RS422 connection diagram 3)



(4) RS422 connection diagram 4)



*1Make the wiring between the distributor and servo amplifier as short as possible.

(5) RS422 connection diagram 5)

Distributor side



*1

Perform terminal processing on the part between RDP (3pin) and RDN (6-pin) with a 150 Ω resistor.

(6) RS422 connection diagram 6)



*1 At the last axis, connect TRE to RDN

Precautions when preparing cable

(1) Cable length

The length of the RS-422 cable must be 30m or less.

(2) GOT side connector

For the GOT side connector, refer to the following.

- 1.4.1 GOT connector specifications
- (3) Servo amplifier connector

Use the connector compatible with the servo amplifier. For details, refer to the following.

- See the technical data of the servo amplifier to be used.
- (a) Servo amplifier connector specifications
 - Pin layout in the Modular connector

When seen from the front of the servo amplifier (receptacle side)



Modular jack

Pin No.	Signal name	Remark
1	LG	
2	P5D	
3	RDP	
4	SDN	
5	SDP	
6	RDN	
7	LG	
8	NC	

 Connector of cable between MELSERVO Series servo amplifiers

Name	Model name	Specifications	Manufacturer
Connector	TM10P-88P (Plug)	RJ45 connector	HIROSE ELECTRIC CO.,LTD.
Modular ceiling rosette (Distributor)	BMJ-8	-	HAKKO ELECTRIC CO.,LTD. TEL(03)-3806-9171
Cable	-	Cable conforming to EIA568 (such as cable 10BASE-T)	-

• Use the commercial connectors and cables shown in the table below or the comparable products.

(Refer to the manual for the servo amplifier.)

Connecting terminating resistors

(1) GOT side

Set the terminating resistor setting switch to "Disable". For the procedure to set the terminating resistor, refer to the following.

1.4.3 Terminating resistors of GOT

15.4 GOT Side Settings

15.4.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.



- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- **3.** Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Interface to be used
 - Driver: MELSERVO-J4, J3, J2S/M, JE
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

15.4.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

15.4.2 Communication detail settings

Make the settings according to the usage environment.

Property	Value
Transmission Speed(BPS)	9600
Data Bit	8 bit
Stop Bit	1 bit
Parity	Even
Retry(Times)	3
Timeout Time(Sec)	3
Host Address	0
Delay Time(ms)	0
Station No. Selection	Yes

Item	Description	Range	
	Set this item when change the	9600bps,	
Transmission	transmission speed used for	19200bps,	
Spood	communication with the connected	38400bps,	
Speed	equipment.	57600bps	
	(Default: 9600bps)	115200bps	
	Set this item when change the data length		
Data Bit	used for communication with the	Shit (fixed)	
Data Dit	connected equipment.	obit (lixed)	
	(Default: 8bit)		
	Specify the stop bit length for		
Stop Bit	communications.	1bit (fixed)	
	(Default: 1bit)		
	Specify whether or not to perform a parity		
Parity	check, and how it is performed during	Even (fixed)	
Failty	communication.		
	(Default: Even)		
	Set the number of retries to be performed		
Retry	when a communication timeout occurs.	0 to 5times	
	(Default: 3times)		
	Set the time period for a communication to		
Timeout Time	time out.	1 to 30sec	
	(Default: 3sec)		
	Specify the station number of the servo		
Host Address	amplifier in the system configuration.	0 to 31	
	(Default: 0)		
	Set this item to adjust the transmission		
Delay Time	timing of the communication request from	0 to 300 (ms)	
Delay Time	the GOT.	0 10 300 (115)	
	(Default: 0ms)		
	Specify whether to use the station No.		
Station No	during communication.		
Selection	If [Yes] is selected, the station No. is fixed	Yes/No	
00,000,001	to "0."		
	(Default: Yes)		

POINT,

 Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

 Precedence in communication settings
 When settings are made by GT Designer3 or the Utility, the latest setting is effective.



Cutting the portion of multiple connection of the controller

By setting GOT internal device, GOT can cut the portion of multiple connection of the controller. For example, faulty station that has communication timeout can be cut from the system. For details of the setting contents of GOT internal device, refer to the following manual.

GT Designer3 (GOT2000) Help

15.5 Setting on Servo Amplifier Side

Model name	Refer to
MELSERVO-J2-Super Series	15.5.1
MELSERVO-J2M Series	15.5.2
MELSERVO-J4, J3, JE Series	15.5.3

15.5.1 Connecting to the MELSERVO-J2-Super Series

POINT,

MELSERVO-J2-Super Series

For details of the MELSERVO-J2-Super Series, refer to the following manual.

MELSERVO-J2-Super Series Servo Amplifier Instruction Manual

Parameters of MELSERVO-J2-Super Series Enter the parameters of the MELSERVO-J2-Super

Series.

Item	Set value
Basic parameter No. 15	Station number setting: 0 to 31 (Default: 0) ^{*1}
Basic parameter No. 16	Serial communication function selection (Default: 0000) Basic parameter No. 16 (3)(2)0(1) (1) Serial communication baud rate selection* ² 0: 9600bps 1: 19200bps 2: 38400bps 3: 57600bps (2) Serial communication I/F selection 0: RS-232 1: RS-422 (3) Communication response delay time selection 0: Invalid 1: Valid (Response after 800 µs or longer delay)
In case of MR-J2S-: Expansion parameter 2 No. 53 In case of MR-J2S-CP: Expansion parameter 2 No. 57 In case of MR-J2S-CL: Expansion parameter 2 No. 57	Function selection 8 (Default: 0000) ^{*3} Expansion parameter 2 No. 53 or No. 57 0 (1) 0 0 (1) Station No. selection for protocol 0: With station No. 1: Without station No.
 *1 Avoid duplicat axes. *2 Specify the sa For the transm the following. I I 5.4.1 (Com *3 To change the No. 19. 	ion of the station No. with any of the other me transmission speed as that of the GOT. hission speed setting on the GOT side, refer to Setting communication interface munication settings) set value, enter "000E" to basic parameter
15 - 14 15. S 15.5	SERVO AMPLIFIER CONNECTION Setting on Servo Amplifier Side

POINT.

 Parameter setting Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.



Pushbutton switch provided on the operation section of the servo amplifier

(2) When changing the parameter Turn off then on the servo amplifier to be effective the new parameter.

15.5.2 Connecting to the MELSERVO-J2M Series

POINT.

MELSERVO-J2M Series

For details of the MELSERVO-J2M Series, refer to the following manual.

MELSERVO-J2M Series Servo Amplifier Instruction Manual

Parameter of MELSERVO-J2M Series

Enter the parameters of the MELSERVO-J2M Series.

Item	Set value
Basic IFU parameter No. 0	Serial communication function selection (Default: 0000) Basic IFU parameter No. 0 (3)(2) 0 (1) (1) Serial communication baud rate selection ^{*1} 0: 9600bps 1: 19200bps 2: 38400bps 3: 57600bps (2) Serial communication I/F selection 0: RS-232 1: RS-422 (3) Communication response delay time selection 0: Invalid 1: Valid (Response after 800 µs or longer delay)
Basic IFU parameter No. 10	Interface unit serial communication station No. selection: 0 to 31 (Default: 0) ^{*2}
Basic IFU parameter No. 11	Slot 1 serial communication station No. selection: 0 to 31 (Default: 1) ^{*2}
Basic IFU parameter No. 12	Slot 2 serial communication station No. selection: 0 to 31 (Default: 2) ^{*2}
Basic IFU parameter No. 13	Slot 3 serial communication station No. selection: 0 to 31 (Default: 3) ^{*2}
Basic IFU parameter No. 14	Slot 4 serial communication station No. selection: 0 to 31 (Default: 4) ^{*2}
Basic IFU parameter No. 15	Slot 5 serial communication station No. selection: 0 to 31 (Default: 5) ^{*2}
Basic IFU parameter No. 16	Slot 6 serial communication station No. selection: 0 to 31 (Default: 6) ^{*2}
Basic IFU parameter No. 17	Slot 7 serial communication station No. selection: 0 to 31 (Default: 7) ^{*2}
Basic IFU parameter No. 18	Slot 8 serial communication station No. selection: 0 to 31 (Default: 8) ^{*2}

*1 Specify the same transmission speed as that of the GOT. For the transmission speed setting on the GOT side, refer to the following.

15.4.1 Setting communication interface (Communication settings)

1

*2 Avoid duplication of the station No. with any of the other units.

POINT.

 Parameter setting Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.



Pushbutton switch provided on the operation section of the servo amplifier

(2) When changing the parameter Turn off then on the servo amplifier to be effective the new parameter.

15.5.3 Connecting to the MELSERVO-J4,J3, JE Series

POINT

MELSERVO-J4, J3, JE Series

For details of the MELSERVO-J4, J3, JE Series, refer to the following manual.

MELSERVO-J4, J3, JE Series Servo Amplifier Instruction Manual

Parameters of MELSERVO-J4, J3, JE Series Enter the parameters of the MELSERVO-J4, J3, JE Series.

Item	Set value		
Basic parameter	Station number setting: 0 to 31		
No. PC20	(Default: 0) ^{*1}		
Basic parameter No. PC21	Serial communication function selection (Default: 0000) Basic parameter No. PC21 (2) (1) (1) Serial communication baud rate selection ^{*2} 0: 9600bps 1: 19200bps 2: 38400bps 3: 57600bps 4: 115200bps (2) Communication response delay time selection 0: Invalid 1: Valid (Response after 800 µs or longer delay)		
*1 Avoid duplication of the station No, with any of the other			

 Avoid duplication of the station No. with any of the other axes.
 Specify the same transmission speed as that of the GOT

Specify the same transmission speed as that of the GOT. For the transmission speed setting on the GOT side, refer to the following.

15.4.1 Setting communication interface (Communication settings)



 Parameter setting Set the parameter at the pushbutton switch provided on the operation section of the servo amplifier or setup software.



Pushbutton switch provided on the operation section of the servo amplifier

(2) When changing the parameter Turn off then on the servo amplifier to be effective the new parameter.

15.5.4 Station number setting

Set each station number so that no station number overlaps.

The station number can be set without regard to the cable connection order. There is no problem even if station numbers are not consecutive.



Examples of station number setting

(1) Direct specification

When setting the device, specify the station number of the servo amplifier of which data is to be changed.

Specification	
range	
0 to 31	

(2) Indirect specification

When setting the device, indirectly specify the station number of the inverter of which data is to be changed using the 16-bit GOT internal data register (GD10 to GD25).

When specifying the station No. from 100 to 115 on GT Designer3, the value of GD10 to GD25 compatible to the station No.specification will be the station No.of the servo amplifier.

Specification station NO.	Compatible device	Setting range
100	GD10	
101	GD11	
102	GD12	
103	GD13	
104	GD14	
105	GD15	
106	GD16	1
107	GD17	0 to 31
108	GD18	communication timeout error will occur.
109	GD19	
110	GD20	
111	GD21	
112	GD22	
113	GD23	
114	GD24	
115	GD25	

(3) All station specification

Target station differs depending on write-in operation or read-out operation.

- For write-in operation, all station will be a target.
- For read-out operation, only one station will be a target.

15.6 Device Range that Can Be Set

The device ranges of controller that can be used for GOT are as follows.

Note that the device ranges in the following tables are the maximum values that can be set in GT Designer3.

The device specifications of controllers may differ depending on the models, even though belonging to the same series.

Please make the setting according to the specifications of the controller actually used.

When a non-existent device or a device number outside the range is set, other objects with correct device settings may not be monitored.

(1) Servo amplifier



	0 to 31:
Selection	The servo amplifier of the Station No. specified will
	be monitored.
	100 to 115:
	Specify the Station No. of the servo amplifier to be
	monitored with a GOT data register (GD). ^{*1}

Switch	Clicking the button displays the dialog box indicating the
to the	correspondence between the GOT virtual device for a servo
device	amplifier and the definition of servo amplifier.
define	If selecting an item on the displayed dialog box, remember that
dialog	the servo amplifier definition is displayed in the text box below.

For details of *1, refer to the following

Station No.	GOT data register (GD)	Setting range
100	GD10	04.04
101	GD11	0 to 31
:	:	of the range above a
114	GD24	timeout error occurs.)
115	GD25	,

(a) Device Definition dialog box

When setting a device on the Device dialog box and click the [Device Definition...] button, the correspondence between the GOT virtual device for a servo amplifier and the definition of the servo amplifier is displayed.

Eunction	Name Soarch	
 Text Se 	arch Device O-FF PRM0	Search
Device	Definition	Symbol
	Serial communication function selection, alarm history clear	*BPS
0-0 PRM1	Regenerative brake option selection	*REG
0-0 PRM2	Function selection 1	*OP1
0-0 PRM3	Analog monitor 1 output	MD1
0-0 PRM4	Analog monitor 2 output	MD2
0-0 PRM5	Analog monitor 3 output	MD3
0-0 PRM6	Analog monitor 1 offset	MO1
0-0 PRM7	Analog monitor 2 offset	MO2
0-0 PRM8	Analog monitor 3 offset	MO3

The device can be searched with the servo definition or other items on this dialog box to set a device.

- Select a key item for searching. Function Name Search: Select this item when searching a device with the function name. Text Search: Select this item when searching a device with the character string.
- 2. Select and input a key item for searching.
- 3. Click the [Search] button.
- The items that matches to the specified condition are displayed.
 - The display contents are as follows.
 - Device : The GOT virtual device for a servo amplifier is displayed. Definition : The definition of the servo amplifier is
 - displayed. Symbol : The abbreviated name for the servo amplifier is displayed.
- 5. Select a device to be set.
- 6. Clicking the [OK] button reflects the device selected by step 4 to the Device dialog box.

15

15. SERVO AMPLIFIER CONNECTION 15.6 Device Range that Can Be Set

POINT,

 When selecting [All] in the Network setting The network No. 0 and Station No. FF are displayed on Device List and when printing.

(Device List screen)



(2) Monitoring servo amplifier Carefully read the manual of servo amplifier to be connected and fully understand the operating

procedures before monitoring. Before operation, check the parameter settings.

Improper settings may cause some machines to perform unexpected operation.

The parameter settings must not be changed excessively. Operation will be insatiable.

- (3) Parameters with * in front of it's abbreviated name For the parameter with * in front of it's abbreviated name, powering off the servo amplifier after setting then on makes the parameter valid.
- (4) Data length for setting virtual devices for servo amplifier

Set the following data length for setting devices.

• PRM, ST, AL, PA, PB, PC, PD, POS, SPD, ACT, DCT, DWL, AUX

: 16bits or 32bits (depends on the data of servo amplifier)

• DI, DO, TMI, TMO, TMD: 32bits

If the above data length was not set, data would not be set to the servo amplifier correctly or the GOT can not monitor normally.

- (a) Monitoring
 - When the 16-bit data is handled as 32-bit data, the upper 16bits are displayed as 0.
 - When the 32-bit data is handled as 16-bit data, the lower 16bits only are displayed as 0.
- (b) Writing

The GOT writes within the range of data length set. Note that the servo amplifier responds correctly while the written data is invalid in the servo amplifier side when the written data is outside the range of values which can be set by the servo amplifier.

- (5) Memory area for writing parameters Parameters are written to RAM or E²PROM of servo amplifier.
 - (a) When written to RAM Remember that written parameters are cleared when power supply to the servo amplifier is turned off.
 - (b) When written to E²PROM Written parameters are not cleared even when power supply to the servo amplifier is turned off.However, there are limits in the number of writing to E²PROM.

If the data is frequently updated (more than once in an hour), write the parameters to the RAM.

For details, refer to the manual of the servo amplifier used.

(2) MELSERVO-J2M-P8A

Device name ^{*2}		Setting	ı range	e available	Device No. represent ation
evice	Servo amplifier request (SP)	SP1	to	SP2	
Bit de	Operation mode selection (OM)	OM0	to	OM4	
	Basic parameter Expansion parameter (PRM) ^{*1}	PRM0 PRM1000	to to	PRM29 PRM1029	
	Status display (ST)	ST0	to	ST2	
Word device	Alarm (AL)	AL0 AL11 AL200 AL210 AL230	to to to to	AL13 AL205 AL215 AL235	Decimal
	External input (DI)*3	D10	to	DI2	
	External output (DO)	DO0	to	DO1	
	Forced output of signal pin (for test operation) (TMO)	ТМОО			

*1 Use PRM0 to PRM29 when writing parameters to the servo amplifier RAM. PRM1000 to PRM1029 are used when writing parameters to

 E^2 PROM of the servo amplifier.

- *2 The GOT cannot read or write data from/to consecutive devices.
- *3 Only reading is possible.

POINT

Precautions for SP, OM, and TMO devices

- For bit devices
 Only writing is possible.
 [Alternate] of a bit switch cannot be used.
 Use [Set], [Reset], and [Momentary] of a bit switch.
- (2) For word devices
 Only writing is possible.
 Numerical input cannot be used.
 When writing, use [Word Set] of a data set switch.

(a) Servo amplifier request

Device name	Item	Symbol
SP1	Current alarm clear	—
SP2	Alarm history clear	

(b) Operation mode selection

Device name	Item	Symbol
ОМ0	Normal mode (not test operation mode)	_
OM4	Output signal (DO) forced output	_

(c) Basic parameter/expansion parameter

Device name	Item	Symbol ^{*2}
PRM0, PRM1000	Serial communication function selection, alarm history clear	*BPS
PRM1, PRM1001	Regenerative brake option selection	*REG
PRM2, PRM1002	Function selection 1	*0P1
PRM3, PRM1003	Analog monitor 1 output	MD1
PRM4, PRM1004	Analog monitor 2 output	MD2
PRM5, PRM1005	Analog monitor 3 output	MD3
PRM6, PRM1006	Analog monitor 1 offset	MO1
PRM7, PRM1007	Analog monitor 2 offset	MO2
PRM8, PRM1008	Analog monitor 3 offset	MO3
PRM9, PRM1009	Function selection 2	*OP2
PRM10, PRM1010	Interface unit serial communication station No. selection	*ISN
PRM11, PRM1011	Slot 1 serial communication station No. selection	*DSN1
PRM12, PRM1012	Slot 2 serial communication station No. selection	*DSM2
PRM13, PRM1013	Slot 3 serial communication station No. selection	*DSM3
PRM14, PRM1014	Slot 4 serial communication station No. selection	*DSN4
PRM15, PRM1015	Slot 5 serial communication station No. selection	*DSN5
PRM16, PRM1016	Slot 6 serial communication station No. selection	*DSN6
PRM17, PRM1017	Slot 7 serial communication station No. selection	*DSN7
PRM18, PRM1018	Slot 8 serial communication station No. selection	*DSN8
PRM19, PRM1019	Parameter write inhibit	*BLK
PRM20, PRM1020	Serial communication time-out selection	SIC
PRM21 to PRM29 PRM1021 to PRM1029	For manufacturer setting	_

2 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(d) Status display

Device name	Item	Symbol
ST0	Regenerative load ratio	_
ST1	Bus voltage	_
ST2	Peak bus voltage	—

15. SERVO AMPLIFIER CONNECTION 15.6 Device Range that Can Be Set 15

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(e) Alarm

Device name	Item	Symbol
AL0	Current alarm number	—
AL11	Servo status when alarm occurs regenerative load factor	_
AL12	Servo status when alarm occurs bus voltage	_
AL13	Servo status when alarm occurs peak bus voltage	-
AL200	Alarm number from alarm history most recent alarm	-
AL201	Alarm number from alarm history first alarm in past	-
AL202	Alarm number from alarm history second alarm in past	_
AL203	Alarm number from alarm history third alarm in past	-
AL204	Alarm number from alarm history fourth alarm in past	_
AL205	Alarm number from alarm history fifth alarm in past	_
AL210	Alarm occurrence time in alarm history most recent alarm	
AL211	Alarm occurrence time in alarm history first alarm in past	
AL212	Alarm occurrence time in alarm history second alarm in past	_
AL213	Alarm occurrence time in alarm history third alarm in past	-
AL214	Alarm occurrence time in alarm history fourth alarm in past	-
AL215	Alarm occurrence time in alarm history fifth alarm in past	_
AL230	Detailed alarm from alarm history most recent alarm	
AL231	Detailed alarm from alarm history first alarm in past	-
AL232	Detailed alarm from alarm history second alarm in past	_
AL233	Detailed alarm from alarm history third alarm in past	_
AL234	Detailed alarm from alarm history fourth alarm in past	_
AL235	Detailed alarm from alarm history fifth alarm in past	_

(f) External I/O signal

Device name	Item	Symbol
D10	External input pin statuses CN1A/CN1B	_
DI1	External input pin statuses CN5	_
DI2	External input pin statuses CN4A/CN4B	_
DO0	External output pin statuses CN1A/CN1B	_
DO1	External output pin statuses CN1A/CN1B	_

(g) Forced output of signal pin (for test operation)

Device name	ltem	Symbol
TMO0	Forced output of signal pin	_

(3) MELSERVO-J2M-*DU

Device name ^{*2}		Setting range		Device No. represent ation	
е	Servo amplifier request (SP)	SP0	to	SP6	
it devic	Operation mode selection (OM)	OM0	to	OM4	
В	Instruction demand (for test operation) (TMB)	TMB0	to	TMB1	
	Basic parameter Expansion parameter (PRM) ^{*1}	PRM0 PRM1000	to to	PRM84 PRM1084	
	Status display (ST)	ST0	to	ST10	
Word device	Alarm (AL)	AL0 AL11 AL200 AL210 AL230	to to to	AL21 AL205 AL215 AL235	Decimal
	Input signal for test operation (for test operation) (TMI)	ТМІО			
	Forced output of signal pin (for test operation) (TMO)	ТМО0			
	Set data (for test operation) (TMD)	TMD0	to	TMD2	

*1 Use PRM0 to PRM84 when writing parameters to the servo amplifier RAM. PRM1000 to PRM1084 are used when writing parameters to

 E^2 PROM of the servo amplifier.

*2 The GOT cannot read or write data from/to consecutive devices.

POINT

Precautions for SP, OM, TMB, TMI, TMO, and TMD devices $% \left({{\left[{{T_{\rm{A}}} \right]_{\rm{A}}}} \right)$

For bit devices
 Only writing is possible.
 [Alternate] of a bit switch cannot be used.
 Use [Set], [Reset], and [Momentary] of a bit switch.

(2) For word devices
 Only writing is possible.
 Numerical input cannot be used.
 When writing, use [Word Set] of a data set switch.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

(a) Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	—
SP1	Current alarm clear	_
SP2	Alarm history clear	-
SP3	External input signal prohibited	_
SP4	External output signal prohibited	_
SP5	External input signal resumed	_
SP6	External output signal resumed	_

(b) Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	—
OM1	JOG operation	—
OM2	Positioning operation	—
OM3	Motorless operation	_
OM4	Output signal (DO) forced output	—

(c) Instruction demand (for test operation)

Device name	Item	Symbol
	Clears acceleration/	
TMB0	deceleration time constant	—
	(test mode)	
	Temporary stop command	
	(test mode)	_

(d) Basic parameter/expansion parameter

Device name	Item	Symbol*1	
PRM0, PRM1000	For manufacturer setting	—	
PRM1, PRM1001	Function selection 1	*OP1	
PRM2, PRM1002	Auto tuning	ATU	
PRM3, PRM1003	CMX Electronic gear numerator (Command pulse multiplying factor numerator)	СМХ	
PRM4, PRM1004	Electronic gear denominator (Command pulse multiplying factor denominator)	CDV	
PRM5, PRM1005	In-position range	INP	
PRM6, PRM1006	Position loop gain 1	PG1	
PRM7, PRM1007	Position command acceleration/deceleration time constant (position smoothing)	PST	
PRM8 to PRM15, PRM1008 to PRM1015	For manufacturer setting	_	
PRM16, PRM1016	Alarm history clear	*BPS	
PRM17 to PRM18, PRM1017 to PRM1018	For manufacturer setting	_	
PRM19, PRM1019	DRU parameter block	*BLK	
PRM20, PRM1020	Function selection 2	*OP2	
PRM21, PRM1021	Function selection 3 (Command pulse selection)	*OP3	
PRM22, PRM1022	Function selection 4	*OP4	
PRM23, PRM1023	Feed forward gain	FFC	
(Continued to next page)			

Device name	Item	Symbol ^{*1}
PRM24, PRM1024	Zero speed	ZSP
PRM25 to PRM26,	For manufacturer setting	
PRM1025 to PRM1026	T of manufacturer setting	
PRM27, PRM1027	Encoder output pulses	*ENR
PRM28, PRM1028	Internal torque limit 1	TL1
PRM29 to PRM32,	For manufacturer setting	
PRM1029 to PRM1032	i ol manalaotalor ootting	
PRM33, PRM1033	Electromagnetic brake	MBR
	Sequence oulput	
PRM34 PRM1034	to servo motor inertia	GD2
1 1(10)-4, 1 1(10)-4	moment	002
PRM35_PRM1035	Position loop gain 2	PG2
PRM36_PRM1036	Speed loop gain 1	VG1
PRM37_PRM1037	Speed loop gain 7	VG2
	Speed integral	102
PRM38, PRM1038	compensation	VIC
	Speed differential	
PRM39, PRM1039	compensation	VDC
PRM40 to PRM41		
PRM1040 to PRM1041	For manufacturer setting	_
PRM42, PRM1042	Input signal selection 1	*DI1
PRM43 to PRM50,	For monufacturer acting	
PRM1043 to PRM1050	For manufacturer setting	_
PRM51, PRM1051	Function selection 6	*OP6
PRM52 to PRM53,	For manufacturer setting	
PRM1052 to PRM1053	For manufacturer setting	_
PRM54, PRM1054	Function selection 9	*OP9
PRM55, PRM1055	Function selection A	*OPA
PRM56 to PRM57,	For monufacturar actting	
PRM1056 to PRM1057	For manufacturer setting	_
PRM58, PRM1058	Machine resonance suppression filter 1	NH1
	Machine resonance	NUIO
PRM59, PRM1059	suppression filter 2	NH2
	Low-pass filter,	
PRM60, PRM1060	adaptive vibration	LPF
	suppression control	
	Ratio of load inertia moment	
PRM61, PRM1061	to servo motor inertia	GD2B
	moment 2	
PRM62, PRM1062	Position control gain 2	PG2B
	changing ratio	
PRM63, PRM1063	Speed control gain 2	VG2B
	Changing ratio	
PRM64, PRM1064	changing ratio	VICB
PRM65, PRM1065	Gain changing selection	*CDP
PRM66_PRM1066	Gain changing condition	CDS
PRM67_PRM1067	Gain changing time constant	CDT
PRM68_PRM1068	For manufacturer setting	
	Command pulse multiplying	
PRM69, PRM1069	factor numerator 2	CMX2
PRM70, PRM1070	Command pulse multiplying factor numerator 3	CMX3
	Command pulse multiplying	0.04
PRM71, PRM1071	factor numerator 4	CMX4
PRM72 to PRM75,	For manufacturer setting	_
PRM1072 to PRM1075	i or manufacturer setting	_
PRM76, PRM1076	Internal torque limit 2	TL2
PRM77 to PRM84,	For manufacturer setting	_
- AWTO / 10 - KWI1004		

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

15. SERVO AMPLIFIER CONNECTION 15.6 Device Range that Can Be Set

(e) Status display

Device name	Item	Symbol
ST0	Cumulative feedback pulses	—
ST1	Servo motor speed	_
ST2	Droop pulses	_
ST3	Cumulative command pulses	_
ST4	Command pulse frequency	—
ST5	Effective load ratio	—
ST6	Peak load ratio	—
ST7	Instantaneous torque	—
ST8	Within one-revolution position	—
ST9	ABS counter	—
ST10	Load inertia moment ratio	_

(f) Alarm

Device name	Item	Symbol
AL0	Current alarm number	—
AL11	Servo status when alarm occurs cumulative feedback pulses	_
AL12	Servo status when alarm occurs servo motor speed	_
AL13	Servo status when alarm occurs droop pulses	_
AL14	Servo status when alarm occurs cumulative command pulses	_
AL15	Servo status when alarm occurs command pulse frequency	_
AL16	Servo status when alarm occurs effective load ratio	_
AL17	Servo status when alarm occurs peak load ratio	_
AL18	Servo status when alarm occurs instantaneous torque	_
AL19	Servo status when alarm occurs within one- revolution position	_
AL20	Servo status when alarm occurs ABS counter	_
AL21	Servo status when alarm occurs load inertia moment ratio	_
AL200	Alarm number from alarm history most recent alarm	_
AL201	Alarm number from alarm history first alarm in past	_
AL202	Alarm number from alarm history second alarm in past	_
AL203	Alarm number from alarm history third alarm in past	_
AL204	Alarm number from alarm history fourth alarm in past	_
AL205	Alarm number from alarm history fifth alarm in past	_
AL210	Alarm occurrence time in alarm history most recent alarm	_
AL211	Alarm occurrence time in alarm history first alarm in past	_
AL212	Alarm occurrence time in alarm history second alarm in past	_
AL213	Alarm occurrence time in alarm history third alarm in past	_
AL214	Alarm occurrence time in alarm history fourth alarm in past	_

Device name	Item	Symbol
AL215	Alarm occurrence time in alarm history fifth alarm in past	_
AL230	Detailed alarm from alarm history most recent alarm	_
AL231	Detailed alarm from alarm history first alarm in past	_
AL232	Detailed alarm from alarm history second alarm in past	-
AL233	Detailed alarm from alarm history third alarm in past	_
AL234	Detailed alarm from alarm history fourth alarm in past	_
AL235	Detailed alarm from alarm history fifth alarm in past	_

(g) Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal for test operation	—

(h) Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	_

(i) Set data (for test operation)

Device		
name	Item	Symbol
TMD0	Writes the speed (test mode)	_
TMD1	Writes the acceleration/deceleration time constant (test mode)	_
TMD2	Writes the moving distance in pulses (test mode)	_

(4) MELSERVO-J2S-*A

Device name ^{*2}		Setting range		Device No. represent ation	
Ð	Servo amplifier request (SP)	SP0	to	SP6	
Bit device	Operation mode selection (OM)	OM0	to	OM4	
	Instruction demand (for test operation) (TMB)	ТМВ0	to	TMB1	
evice	Basic parameter /expansion parameter (PRM) ^{*1}	PRM0 PRM1000	to to	PRM84 PRM1084	
	Status display (ST)	ST0	to	ST14	
	Alarm (AL)	AL0 AL11 AL200 AL210 AL230	to to to to to	AL1 AL25 AL205 AL215 AL235	Decimal
ord d	External input (DI) ^{*3}	DI0			
Ň	External output (DO)	DO0			
	Input signal for test operation (for test operation) (TMI)	ТМІО			
	Forced output of signal pin (for test operation) (TMO)	тмоо			
	Set data (for test operation) (TMD)	TMD0	to	TMD2	
	*1 Use PRM0 to PRM84 when writing parameters to the servo				

Use PRM0 to PRM84 when writing parameters to the servo amplifier RAM. PRM1000 to PRM1084 are used when writing parameters to

- E²PROM of the servo amplifier.
 *2 The GOT cannot read or write data from/to consecutive
- devices. *3 Only reading is possible.

POINT,

Precautions for SP, OM, TMB, TMI, TMO, and TMD devices $% \left({{\left[{{T_{\rm{A}}} \right]_{\rm{A}}}} \right)$

- For bit devices Only writing is possible.
 [Alternate] of a bit switch cannot be used.
 Use [Set], [Reset], and [Momentary] of a bit switch.
- (2) For word devices
 Only writing is possible.
 Numerical input cannot be used.
 When writing, use [Word Set] of a data set switch.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

(a) Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	—
SP1	Current alarm clear	_
SP2	Alarm history clear	_
SP3	External input signal prohibited	-
SP4	External output signal prohibited	_
SP5	External input signal resumed	_
SP6	External output signal resumed	—

(b) Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	-
OM2	Positioning operation	_
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	—

(c) Instruction demand (for test operation)

Device name	Item	Symbol
TMB0	Clears acceleration/ deceleration time constant	_
TMB1	Temporary stop command	

(d) Basic parameter/expansion parameter

Device name	Item	Symbol ^{*1}
PRM0, PRM1000	Control mode, regenerative brake option selection	*STY
PRM1, PRM1001	Function selection 1	*OP1
PRM2, PRM1002	Auto tuning	ATU
PRM3, PRM1003	Electronic gear numerator (Command pulse multiplying factor numerator)	СМХ
PRM4, PRM1004	Electronic gear denominator (Command pulse multiplying factor denominator)	CDV
PRM5, PRM1005	In-position range	INP
PRM6, PRM1006	Position loop gain 1	PG1
PRM7, PRM1007	Position command acceleration/deceleration time constant	PST
PRM8, PRM1008	Internal speed command1/limit1	SC1
PRM9, PRM1009	Internal speed command2/limit2	SC2
PRM10, PRM1010	Internal speed command3/limit3	SC3
PRM11, PRM1011	Acceleration time constant	STA
PRM12, PRM1012	Deceleration time constant	STB
PRM13, PRM1013	S-pattern acceleration/ deceleration time constant	STC
PRM14, PRM1014	Torque command time constant	TQC
PRM15, PRM1015	Station number setting	*SNO
PRM16, PRM1016	Serial communication function selection, alarm history clear	*BPS
PRM17, PRM1017	Analog monitor output	MOD
PRM18, PRM1018	Status display selection	*DMD
PRM19, PRM1019	Parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	Function selection 3 (Command pulse selection)	*OP3

Device name	Item	Symbol ^{*1}
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Feed forward gain	FFC
PRM24, PRM1024	Zero speed	ZSP
	Analog speed command	
PRM25, PRM1025	maximum speed	VCM
	/limit maximum speed	
PRM26, PRM1026	Analog torque command	TLC
PRM27_PRM1027	Encoder output pulses	*ENR
PRM28_PRM1028	Internal torque limit 1	TI 1
	Analog speed command offset	
PRM29, PRM1029	/limit offset	VCO
PRM30 PRM1030	Analog torque command offset	TLO
	/limit offset	120
PRM31,PRM1031	Analog monitor 1 offset	MO1
PRM32, PRM1032	Analog monitor 2 offset	MO2
PRM33, PRM1033	Electromagnetic brake	MBR
-	sequence output	
PRM34, PRM1034	servo motor inertia moment	GD2
PRM35, PRM1035	Position loop gain 2	PG2
PRM36, PRM1036	Speed loop gain 1	VG1
PRM37, PRM1037	Speed loop gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40, PRM1040	For manufacturer setting	
	Input signal automatic ON	+014
PRM41, PRM1041	selection	*DIA
PRM42, PRM1042	Input signal selection 1	*DI1
PRM43, PRM1043	Input signal selection 2 (CN1B-5)	*DI2
PRM44, PRM1044	Input signal selection 3 (CN1B-14)	*DI3
PRM45, PRM1045	Input signal selection 4 (CN1A-8)	*DI4
PRM46, PRM1046	Input signal selection 5 (CN1B-7)	*DI5
PRM47, PRM1047	Input signal selection 6 (CN1B-8)	*DI6
PRM48, PRM1048	Input signal selection 7 (CN1B-9)	*DI7
PRM49, PRM1049	Output signal selection 1	*DO1
PRM50, PRM1050	For manufacturer setting	_
PRM51, PRM1051	Function selection 6	*OP6
PRM52, PRM1052	For manufacturer setting	_
PRM53, PRM1053	Function selection 8	*OP8
PRM54, PRM1054	Function selection 9	*OP9
PRM55, PRM1055	Function selection A	*OPA
PRM56, PRM1056	Serial communication	SIC
PRM57 PRM1057	For manufacturer setting	
	Machine resonance	
PRM58, PRM1058	suppression filter 1	NH1
	Machine resonance	NUID
PRM59, PRM1059	suppression filter 2	NH2
PRM60 PRM1060	Low-pass filter, adaptive	I PF
	vibration suppression control	
PRM61, PRM1061	Ratio of load inertia moment	GD2B
	to serve motor inertia moment 2	
PRM62, PRM1062	changing ratio	PG2B
	Speed control gain 2 changing	
PRM63, PRM1063	ratio	VG2B
	Speed integral compensation	
FRIVI04, PRIVI1004	changing ratio	VICB
PRM65, PRM1065	Gain changing selection	*CDP
PRM66, PRM1066	Gain changing condition	CDS
PRM67, PRM1067	Gain changing time constant	CDT
PRM68, PRM1068	For manufacturer setting	
PRM69, PRM1069	Command pulse multiplying	CMX2
	tactor numerator 2	
	(Continued to n	ext page)

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Device name	Item	Symbol*1
PRM70, PRM1070	Command pulse multiplying factor numerator 3	CMX3
PRM71, PRM1071	Command pulse multiplying factor numerator 4	CMX4
PRM72, PRM1072	Internal speed command4/limit4	SC4
PRM73, PRM1073	Internal speed command5/limit5	SC5
PRM74, PRM1074	Internal speed command6/limit6	SC6
PRM75, PRM1075	Internal speed command7/limit7	SC7
PRM76, PRM1076	Internal torque limit 2	TL2
PRM77 to PRM84, PRM1077 to PRM1084	For manufacturer setting	_

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(e) Status display

Device name	Item	Symbol
ST0	Cumulative feedback pulses	-
ST1	servo motor speed	_
ST2	Droop pulses	_
ST3	Cumulative command pulses	_
ST4	Command pulse frequency	
ST5	Analog speed command voltage/limit voltage	_
ST6	Analog torque command voltage/limit voltage	_
ST7	Regenerative load ratio	
ST8	Effective load ratio	_
ST9	Peak load ratio	_
ST10	Instantaneous torque	
ST11	Within one-revolution position	_
ST12	ABS counter	_
ST13	load inertia moment ratio	_
ST14	Bus voltage	_

(f) Alarm

Device name	Item	Symbol
AL0	Current alarm number	—
AL1	Detailed data of current alarms	_
AL11	Servo status when alarm occurs cumulative feedback pulses	_
AL12	Servo status when alarm occurs servo motor speed	_
AL13	Servo status when alarm occurs droop pulses	
AL14	Servo status when alarm occurs cumulative command pulses	_
AL15	Servo status when alarm occurs command pulse frequency	_
AL16	Servo status when alarm occurs analog speed command voltage/limit voltage	_
AL17	Servo status when alarm occurs analog torque command voltage/limit voltage	_
AL18	Servo status when alarm occurs regenerative load ratio	_
AL19	Servo status when alarm occurs effective load ratio	_
AL20	Servo status when alarm occurs peak load ratio	_
AL21	Servo status when alarm occurs instantaneous torque	_
AL22	Servo status when alarm occurs within one- revolution position	_
AL23	Servo status when alarm occurs ABS counter	_
AL24	Servo status when alarm occurs load inertia moment ratio	_

Device name	Item	Symbol
AL25	Servo status when alarm occurs bus voltage	—
AL200	Alarm number from alarm history most recent alarm	_
AL201	Alarm number from alarm history first alarm in past	_
AL202	Alarm number from alarm history second alarm in past	—
AL203	Alarm number from alarm history third alarm in past	—
AL204	Alarm number from alarm history fourth alarm in past	_
AL205	Alarm number from alarm history fifth alarm in past	—
AL210	Alarm occurrence time in alarm history most recent alarm	—
AL211	Alarm occurrence time in alarm history first alarm in past	—
AL212	Alarm occurrence time in alarm history second alarm in past	—
AL213	Alarm occurrence time in alarm history third alarm in past	—
AL214	Alarm occurrence time in alarm history fourth alarm in past	—
AL215	Alarm occurrence time in alarm history fifth alarm in past	—
AL230	Detailed alarm from alarm history most recent alarm	—
AL231	Detailed alarm from alarm history first alarm in past	—
AL232	Detailed alarm from alarm history second alarm in past	—
AL233	Detailed alarm from alarm history third alarm in past	—
AL234	Detailed alarm from alarm history fourth alarm in past	_
AL235	Detailed alarm from alarm history fifth alarm in past	_

(g) External I/O signal

Device name	Item	Symbol
DIO	External input pin statuses	—
DO0	External output pin statuses	

(h) Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal status for test operation	—

(i) Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output status of signal pin	-

(j) Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	_
TMD1	Writes the acceleration/deceleration time constant (test mode)	_
TMD2	Writes the moving distance in pulses (test mode)	_

(5) MELSERVO-J2S-*CP

Device name ^{*3}		Setting range		Device No. represent ation	
d)	Servo amplifier request (SP)	SP0	to	SP6	
it device	Operation mode selection (OM)	OM0	to	OM4	
Θ	Instruction demand (for test operation) (TMB)	TMB0	to	TMB1	
	Basic parameter /expansion parameter (PRM) ^{*1}	PRM0 PRM1000	to to	PRM90 PRM1090	
	Status display (ST)	ST0	to	ST16	
	Alarm (AL)	AL0 AL11 AL200 AL210 AL230	to to to to to	AL1 AL27 AL205 AL215 AL235	
	External input (DI)*4	DI0	to	DI2	
Word device	External output (DO)	DO0	to	DO1	
	Point table (position) (POS) ^{*2}	POS1 POS1001	to to	POS31 POS1031	
	Point table Point table (speed) (SPD) ^{*2}	SPD1 SPD1001	to to	SPD31 SPD1031	Decimal
	Point table (acceleration time constant) (ACT) ^{*2}	ACT1 ACT1001	to to	ACT31 ACT1031	
	Point table (deceleration time constant) (DCT) ^{*2}	DCT1 DCT1001	to to	DCT31 DCT1031	
	Point table (dwell) (DWL) ^{*2}	DWL1 DWL1001	to to	DWL31 DWL1031	
	Point table (auxiliary function) (AUX) ^{*2}	AUX1 AUX1001	to to	AUX31 AUX1031	
	Input signal for test operation (for test operation) (TMI)	ТМІО			
	Forced output of signal pin (for test operation) (TMO)	TMO0			
	Set data (for test operation) (TMD)	TMD0	to	TMD2	

*1 Use PRM0 to PRM90 when writing parameters to the servo amplifier RAM. PRM1000 to PRM1090 are used when writing parameters to

PRM1000 to PRM1090 are used when writing parameters to E²PROM of the servo amplifier.

*2 When writing to a point table, use the area of 1001 to 1031 (E²PROM area) of POS, SPD, ACT, DCT, DWL, or AUX. If writing to the area of 1 to 31 (RAM area) of POS, SPD, ACT, DCT, DWL, or AUX, the value is not reflected.

*3 The GOT cannot read or write data from/to consecutive devices.

*4 Only reading is possible for DI0 to DI1.

POINT.

Precautions for SP, OM, TMB, TMI, TMO, and TMD devices $% \left({{\left[{{T_{\rm{A}}} \right]_{\rm{A}}}} \right)$

- For bit devices
 Only writing is possible.
 [Alternate] of a bit switch cannot be used.
 Use [Set], [Reset], and [Momentary] of a bit switch.
- (2) For word devices
 Only writing is possible.
 Numerical input cannot be used.
 When writing, use [Word Set] of a data set switch.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

(a) Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	—
SP1	Current alarm clear	_
SP2	Alarm history clear	_
SP3	External input signal prohibited	_
SP4	External output signal prohibited	_
SP5	External input signal resumed	_
SP6	External output signal resumed	_

(b) Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	_
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	_

(c) Instruction demand (for test operation)

Device name	Item	Symbol
ТМВО	Clears the acceleration/ deceleration time constant	—
TMB1	Temporary stop command	_

(d) Basic parameter/expansion parameter

Device name	Item	Symbol*1
PRM0, PRM1000	Command system/ regenerative brake option	*STY
PRM1, PRM1001	Feeding function selection	*FTY
PRM2, PRM1002	Function selection 1	*OP1
PRM3, PRM1003	Auto tuning	ATU
PRM4, PRM1004	Electronic gear numerator	*CMX
PRM5, PRM1005	Electronic gear denominator	*CDV
PRM6, PRM1006	In-position range	INP
PRM7. PRM1007	Position loop gain 1	PG1
PRM8. PRM1008	Home position return type	*ZTY
PRM9, PRM1009	Home position return speed	ZRF
PRM10, PRM1010	Creep speed	CRF
PRM11, PRM1011	Home position shift distance	ZST
PRM12, PRM1012	Rough match output range	CRP
PRM13_PRM1013	Jog speed	JOG
PRM14, PRM1014	S-pattern acceleration/ deceleration time constant	*STC
PRM15_PRM1015	Station number setting	*SNO
PRM16, PRM1016	Serial communication function selection,	*BPS
PRM17 PRM1017		MOD
PRM18 PRM1018	Status display selection	
PRM10, PRM1010	Barameter block	
PRM19, PRM1019	Function coloction 2	*002
PRIVI20, PRIVI 1020	For manufacturer setting	UFZ
PRIVIZ 1, FRIVI 1021		*004
PRM23, PRM1022	Serial communication time-out	SIC
	Food forward gain	FEC
PRW24, PRW1024		VCO
PRM25, PRM1025	Torque limit offset	TLO
DDM27_DDM1027	Encoder output pulsos	*ENID
DDM28_DDM1028	Internal torque limit 1	
PRM20, PRM1020	Internal torque limit 1	
PRW29, PRW1029	Recklock componention	*PKC
PRIVI30, PRIVI 1030		MOI
	Analog monitor 1 offset	MOT
	Electromagnetic brake	102
PRM33, PRM1033	sequence output	MBR
PRM34, PRM1034	Ration of load inertia moment to servo motor inertia moment	GD2
PRM35, PRM1035	Position control gain 2	PG2
PRM36, PRM1036	Speed control gain 1	VG1
PRM37, PRM1037	Position control gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential compensation	VDC
PRM40 to PRM41, PRM1040 to PRM1041	For manufacturer setting	_
PRM42, PRM1042	Home position return position data	*ZPS
PRM43, PRM1043	Moving distance after proximity dog	DCT
PRM44, PRM1044	Moving distance after proximity dog	ZTM
PRM45, PRM1045	Stopper type home position return torque limit value	ZTT

Device name	Item	Symbol ^{*1}	
PRM46, PRM1046	Software limit +	*I MP	
PRM47, PRM1047			
PRM48, PRM1048	Software limit -	*I MN	
PRM49, PRM1049			
PRM50, PRM1050	Position range output address +	*I PP	
PRM51, PRM1051	i ositori range output address i	L	
PRM52, PRM1052	Position range output address -	*I NP	
PRM53, PRM1053	i ositori range output address	LINI	
PRM54, PRM1054	For manufacturer setting	_	
PRM55, PRM1055	Function selection 6	*OP6	
PRM56, PRM1056	For manufacturer setting	_	
PRM57, PRM1057	Function selection 8	*OP8	
PRM58, PRM1058	Function selection 9	*OP9	
PRM59, PRM1059	Function selection A	*OPA	
PRM60, PRM1060	For manufacturer setting	_	
PRM61_PRM1061	Machine resonance	NH1	
	suppression filter 1		
PRM62, PRM1062	Machine resonance	NH2	
	suppression filter 2		
DDM62 DDM1062	Low-pass filter,		
FRIM03, FRIM1003	control	LFF	
	Ratio of load inertia moment		
PRM64, PRM1064	to servo motor inertia moment 2	GD2B	
PRM65_PRM1065	Position control gain 2	PG2B	
	changing ratio	. 015	
PRM66, PRM1066	Speed control gain 2 changing	VG2B	
PRM67, PRM1067	changing ratio	VICB	
PRM68, PRM1068	Gain changing selection	*CDP	
PRM69, PRM1069	Gain changing condition	CDS	
PRM70, PRM1070	Gain changing time constant	CDT	
PRM71 to PRM90,	For manufacturer setting		
PRM1071 to PRM1090	i or manulaciurer setting		

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(e) Status display

Device name	Item	Symbol
ST0	Current position	_
ST1	Command position	_
ST2	Command remaining distance	_
ST3	Point table No.	_
ST4	Cumulative feedback pulses	_
ST5	Servo motor speed	_
ST6	Droop pulses	_
ST7	Override	_
ST8	Torque limit voltage	_
ST9	Regenerative load ratio	_
ST10	Effective load ratio	_
ST11	Peak load ratio	_
ST12	Instantaneous torque	_
ST13	Within one-revolution position	_
ST14	ABS counter	_
ST15	Load inertia moment ratio	_
ST16	Bus voltage	_

(f) Alarm

	Device	ltem	Symbol
	name	liem	Symbol
4	ALO	Current alarm number	_
-	AL1	Detailed data of current alarms	_
-	AL11	Servo status when alarm occurs current position	
A	AL12	position	_
A	AL13	Servo status when alarm occurs command remaining distance	
A	AL14	Servo status when alarm occurs point table No.	
A	AL15	Servo status when alarm occurs cumulative feedback pulses	_
A	AL16	Servo status when alarm occurs servo motor speed	
7	AL17	Servo status when alarm occurs droop pulses	_
7	AL18	Servo status when alarm occurs override	_
A	AL19	Servo status when alarm occurs torque limit voltage	
A	AL20	Servo status when alarm occurs regenerative load ratio	_
A	AL21	Servo status when alarm occurs effective load ratio	_
7	L22	Servo status when alarm occurs peak load ratio	_
A	AL23	Servo status when alarm occurs instantaneous torque	_
A	AL24	Servo status when alarm occurs within one- revolution position	_
7	AL25	Servo status when alarm occurs ABS counter	_
A	AL26	Servo status when alarm occurs	_
7	L27	Servo status when alarm occurs bus voltage	_
4	AL200	Alarm number from alarm history most recent alarm	
A	AL201	Alarm number from alarm history first alarm in past	_
A	AL202	Alarm number from alarm history second alarm in past	
4	AL203	Alarm number from alarm history	_
4	AL204	Alarm number from alarm history	_
A	AL205	Alarm number from alarm history	_
4	AL210	Alarm occurrence time in alarm history	_
4	AL211	Alarm occurrence time in alarm history	_
4	AL212	Alarm occurrence time in alarm history	_
4	AL213	Alarm occurrence time in alarm history	
4	AL214	Alarm occurrence time in alarm history	
-	AL215	Alarm occurrence time in alarm history	_
4	AL230	Detailed alarm from alarm history	
	AI 231	most recent alarm Detailed alarm from alarm history	
	1 232	first alarm in past Detailed alarm from alarm history	
-	1 222	second alarm in past Detailed alarm from alarm history	
-	AL233	third alarm in past Detailed alarm from alarm history	_
-	AL234	fourth alarm in past	
A	L235	fifth alarm in past	—

(g) External I/O signal

Device name	ltem	Symbol
D10	Input device statuses	—
DI1	External input pin statuses	_
DI2	Statuses of input devices switched on through communication	-
DO0	Output device statuses	_
DO1	External output pin statuses	_

(h) Point table (position)

Device name	Item	Symbol
POS1 to POS31, POS1001 to POS1031	Point table (position) No. 1 to No. 31	_
SPD1 to SPD31, SPD1001 to SPD1031	Point table (speed) No. 1 to No. 31	
ACT1 to ACT31, ACT1001 to ACT1031	Point table (acceleration time constant) No. 1 to No. 31	_
DCT1 to DCT31, DCT1001 to DCT1031	Point table (deceleration time constant) No. 1 to No. 31	_
DWL1 to DWL31, DWL1001 to DWL1031	Point table (dwell) No. 1 to No. 31	_
AUX1 to AUX31, AUX1001 to AUX1031	Point table (auxiliary function) No. 1 to No. 31	_

(i) Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal for test operation	—

(j) Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	_

(k) Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	_
TMD1	Writes the acceleration/deceleration time constant (test mode)	_
TMD2	Writes the moving distance in pulses (test mode)	_

(6) MELSERVO-J2S-*CL

Device name ^{*2}		Setting range		Device No. represent ation	
۵	Servo amplifier request (SP)	SP0	to	SP6	
t devic	Operation mode selection (OM)	OM0	to	OM4	
B	Instruction demand (for test operation) (TMB)	TMB0	to	TMB1	
	Basic parameter /expansion parameter (PRM) ^{*1}	PRM0 PRM1000	to to	PRM90 PRM1090	
	Status display (ST)	ST0	to	ST17	
	Alarm (AL)	AL0 AL11 AL200 AL210 AL230	to to to to to	AL1 AL28 AL205 AL215 AL235	
	External input (DI) ^{*4}	DI0	to	DI2	Decimal
0	External output(DO)	DO0	to	DO1	
d device	Current position latch data (LD)	LD1			
Word	The value of the general- purpose register (Rx) (RR) ^{*3}	RR1 RR1001	to to	RR4 RR1004	
	The value of the general- purpose register (Dx) (RD)	RD1	to	RD4	
	Input signal for test operation (for test operation) (TMI)	ТМІО			
	Forced output of signal pin (for test operation) (TMO)	TMO0			
	Set data (for test operation) (TMD)	TMD0	to	TMD2	

*1 PRM0 to PRM90 are used when writing parameters to the servo amplifier RAM.

PRM1000 to PRM1090 are used when writing parameters to E²PROM of the servo amplifier.

*2 The GOT cannot read or write data from/to consecutive devices.

Use the integer number when writing parameters to Rx. Only reading is possible for DI0 to DI1. *3 *4

POINT

Precautions for SP, OM, TMB, TMI, TMO, and TMD devices

- (1) For bit devices Only writing is possible. [Alternate] of a bit switch cannot be used. Use [Set], [Reset], and [Momentary] of a bit switch.
- (2) For word devices Only writing is possible. Numerical input cannot be used. When writing, use [Word Set] of a data set switch.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

(a) Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	_
SP1	Current alarm clear	—
SP2	Alarm history clear	—
SP3	External input signal prohibited	—
SP4	External output signal prohibited	—
SP5	External input signal resumed	—
SP6	External output signal resumed	—

(b) Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	—
OM1	JOG operation	_
OM2	Positioning operation	_
OM3	Motorless operation	_
OM4	Output signal (DO) forced output	_

(c) Instruction demand (for test operation)

Device name	Item	Symbol
TMB0	Clears the acceleration/ deceleration time constant	_
TMB1	Temporary stop command	_

(d) Basic parameter/expansion parameter

Device name	Item	Symbol ^{*1}
	Command system/	
PRM0, PRM1000	regenerative brake option selection	*STY
PRM1, PRM1001	Feeding function selection	*FTY
PRM2, PRM1002	Function selection 1	*OP1
PRM3, PRM1003	Auto tuning	ATU
PRM4, PRM1004	Electronic gear numerator	*CMX
PRM5_PRM1005	Electronic gear denominator	*CDV
PRM6_PRM1006	In-position range	INP
PRM7_PRM1007	Position loop gain 1	PG1
	Home position return type	*717
	Home position return apood	705
	Crean and d	
PRM10, PRM1010	Creep speed	
PRM11, PRM1011	Home position shift distance	251
PRM12, PRM1012	For manufacturer setting	-
PRM13, PRM1013	Jog speed	JOG
PRM14, PRM1014	S-pattern acceleration/ deceleration time constant	*STC
PRM15, PRM1015	Station number setting	*SNO
	Serial communication function	
PRM16, PRM1016	selection,	*BPS
	alarm history clear	
PRM17, PRM1017	Analog monitor output	MOD
PRM18, PRM1018	Status display selection	*DMD
PRM19, PRM1019	Parameter block	*BLK
PRM20, PRM1020	Function selection 2	*OP2
PRM21, PRM1021	For manufacturer setting	_
PRM22, PRM1022	Function selection 4	*OP4
PRM23, PRM1023	Serial communication time-out	SIC
PRM24 PRM1024	Feed forward gain	FEC
DDM25_DDM1025		VC0
PRIVI20, PRIVI 1020		
PRIVI20, PRIVI 1020		TLU *END
PRM27, PRM1027	Encoder output pulses	
PRM28, PRM1028		1L1
PRM29, PRM1029	Internal torque limit 2	TL2
PRM30, PRM1030	Backlash compensation	*BKC
PRM31,PRM1031	Analog monitor 1 offset	MO1
PRM32, PRM1032	Analog monitor 2 offset	MO2
PRM33, PRM1033	Electromagnetic brake sequence output	MBR
	Ration of load inertia moment	0.00
PRM34, PRM1034	to servo motor inertia moment	GD2
PRM35, PRM1035	Position control gain 2	PG2
PRM36, PRM1036	Speed control gain 2	VG1
PRM37, PRM1037	Speed control gain 2	VG2
PRM38, PRM1038	Speed integral compensation	VIC
PRM39, PRM1039	Speed differential	VDC
PRM40, PRM1040	deceleration time constant	JTC
PRM41, PRM1041	Home position return operation acceleration/	ZTS
	deceleration time constant	
PRM42, PRM1042	Home position return position data	*ZPS
PRM43, PRM1043	Moving distance after proximity dog	DCT
PRM44, PRM1044	Stopper type home position return stopper time	ZTM
PRM45, PRM1045	Stopper type home position return torque limit value	ZTT
PRM46, PRM1046	Softwara limit+	
PRM47, PRM1047		LIVIP

15. SERVO AMPLIFIER CONNECTION 15.6 Device Range that Can Be Set

Device name	Item	Symbol*1
PRM48, PRM1048	Softwara limit	*I MNI
PRM49, PRM1049		LIVIN
PRM50, PRM1050	Position range output	*I DD
PRM51, PRM1051	address+	
PRM52, PRM1052	Position range output address	*I ND
PRM53, PRM1053	Position range output address-	LINF
PRM54, PRM1054	For manufacturer setting	_
PRM55, PRM1055	Function selection 6	*OP6
PRM56, PRM1056	For manufacturer setting	_
PRM57, PRM1057	Function selection 8	*OP8
PRM58, PRM1058	Function selection 9	*OP9
PRM59, PRM1059	Function selection A	*OPA
PRM60, PRM1060	For manufacturer setting	_
PRM61, PRM1061	Machine resonance suppression filter 1	NH1
PRM62, PRM1062	Machine resonance suppression filter 2	NH2
PRM63, PRM1063	Low-pass filter, adaptive vibration suppression control	LPF
PRM64, PRM1064	Ratio of load inertia moment to Servo motor inertia moment 2	GD2B
PRM65, PRM1065	Position control gain 2 changing ratio	PG2B
PRM66, PRM1066	Speed control gain 2 changing ratio	VG2B
PRM67, PRM1067	Speed integral compensation changing ratio	VICB
PRM68, PRM1068	Gain changing selection	*CDP
PRM69, PRM1069	Gain changing condition	CDS
PRM70, PRM1070	Gain changing time constant	CDT
PRM71 to PRM73, PRM1071 to PRM1073	For manufacturer setting	_
PRM74, PRM1074	OUT1 output time selection	OUT1
PRM75, PRM1075	OUT2 output time selection	OUT2
PRM76, PRM1076	OUT3 output time selection	OUT3
PRM77, PRM1077	Selected to program input polarity selection 1	SYC1
PRM78 to PRM90, PRM1078 to PRM1090	For manufacturer setting	_

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(e) Status display

Device name	Item	Symbol
ST0	Current position	_
ST1	Command position	_
ST2	Command remaining distance	_
ST3	Program Number	_
ST4	Step Number	_
ST5	Cumulative feedback pulses	_
ST6	Servo motor speed	_
ST7	Droop pulses	_
ST8	Override	_
ST9	Torque limit voltage	_
ST10	Regenerative load ratio	_
ST11	Effective load ratio	_
ST12	Peak load ratio	_
ST13	Instantaneous torque	_
ST14	Within one-revolution position	_
ST15	ABS counter	_
ST16	Load inertia moment ratio	—
ST17	Bus voltage	_

(f) Alarm

	Device name	Item	Symbol
/	AL0	Current alarm number	—
/	AL1	Detailed data of current alarms	—
/	AL11	Servo status when alarm occurs Current position	_
/	AL12	Servo status when alarm occurs Command position	_
/	AL13	Servo status when alarm occurs Command remaining distance	_
/	AL14	Servo status when alarm occurs Program Number	_
7	AL15	Servo status when alarm occurs Step Number	_
,	AL16	Servo status when alarm occurs Cumulative feedback pulses	_
/	AL17	Servo status when alarm occurs Servo motor speed	_
7	AL18	Servo status when alarm occurs Droop pulses	_
7	AL19	Servo status when alarm occurs Override	_
,	AL20	Servo status when alarm occurs Torque limit voltage	_
,	AL21	Servo status when alarm occurs Regenerative load ratio	_
,	AL22	Servo status when alarm occurs Effective	_
,	AL23	Servo status when alarm occurs Peak load	_
,	AL24	Servo status when alarm occurs	_
_	AL25	Servo status when alarm occurs Within one-	
-	11.26	Revolution position	
-	AL20	Servo status when alarm occurs	_
/	AL27	Load inertia moment ratio	_
7	AL28	Servo status when alarm occurs Bus voltage	_
/	AL200	Alarm number from Alarm History most recent alarm	
/	AL201	Alarm number from Alarm History first alarm in past	_
,	AL202	Alarm number from Alarm History second alarm in past	_
,	AL203	Alarm number from Alarm History third alarm in past	_
,	AL204	Alarm number from Alarm History	_
,	AL205	Alarm number from Alarm History	_
,	AL210	Alarm occurrence time in alarm history	_
,	AL211	Alarm occurrence time in alarm history first alarm in past	_
,	AL212	Alarm occurrence time in alarm history	_
,	AL213	Alarm occurrence time in alarm history	_
,	AL214	Alarm occurrence time in alarm history	_
/	AL215	Alarm occurrence time in alarm history	_
_	AL230	Detailed alarm from Alarm History	_
_	AI 231	Detailed alarm from Alarm History	
_	NL 000	first alarm in past Detailed alarm from Alarm History	
_	4232	second alarm in past Detailed alarm from Alarm History	
-	AL233	third alarm in past	

Device name	Item	Symbol
AL234	Detailed alarm from Alarm History fourth alarm in past	_
AL235	Detailed alarm from Alarm History fifth alarm in past	_

(g) External I/O signal

Device name	Item	Symbol
DIO	Input device statuses	_
DI1	External input pin statuses	_
DI2	Statuses of input devices switched on through communication	_
DO0	Output device statuses	_
DO1	External output pin statuses	

(h) Current position latch data

Device name	Item	Symbol
LD1	Current position latch data	_

(i) The value of the general-purpose register (Rx)

Device name	Item	Symbol
RR1, RR1001	The value of the general- purpose register (R1)	_
RR2, RR1002	The value of the general- purpose register (R2)	_
RR3, RR1003	The value of the general- purpose register (R3)	_
RR4, RR1004	The value of the general- purpose register (R4)	

(j) The value of the general-purpose register (Dx)

Device name	Item	Symbol
RD1	The value of the general- purpose register (D1)	_
RD2	The value of the general- purpose register (D2)	
RD3	The value of the general- purpose register (D3)	_
RD4	The value of the general- purpose register (D4)	

(k) Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal for test operation	—

(I) Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	—

(m) Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	_
TMD1	Writes the acceleration/deceleration time constant(test mode)	_
TMD2	Writes the moving distance in pulses(test mode)	_

(7) MELSERVO-J3-*A

Device name ^{*2}		Setting range		Device No. represen tation	
	Servo amplifier request (SP)	SP0	to	SP6	
device	Operation mode selection (OM)	OM0	to	OM4	
Bit	Instruction demand (for test operation) (TMB)	TMB1	to	TMB6	
	Basic setting parameter	PA1	to	PA19	
	(PA) ^{*1}	PA1001	to	PA1019	
	Gain filter parameter	PB1	to	PB45	
	(PB) ^{*1}	PB1001	to	PB1045	
	Extension setting parameter	PC1	to	PC50	
	(PC) ^{*1}	PC1001	to	PC1050	
	I/O setting parameter (PD) ^{*1}	PD1	to	PD30	
		PD1001	to	PD1030	
	Status display (ST) ^{*3}	ST0	to	ST14	Decimal
/ice		AL0	to	AL1	
de∖		AL11	to	AL25	
ord	Alarm (AL) ^{*3}	AL200	to	AL205	
≥		AL210	to	AL215	
		AL230	to	AL235	
	External input (DI) ^{*4}	D10	to	DI2	
	External output (DO) ^{*3}	DO0	to	DO1	
	Input signal for test operation (for test operation) (TMI)	тміо			
	Forced output of signal pin (for test operation) (TMO)	ТМО0			
	Set data	TMD0	to	TMD1	
	(for test operation) (TMD)	TMD3			

*1 1 to 50 of PA, PB, PC, and PD are used when writing data to the servo amplifier RAM. 1001 to 1050 of PA, PB, PC, and PD are used when writing

- data to E²PROM of the servo amplifier. The GOT cannot read or write data from/to consecutive
- *2 devices. *3
- Only reading is possible. *4
- Only reading is possible for DI0 to DI1.

OINT

Precautions for SP, OM, TMB, TMI, TMO, and TMD devices

- (1) For bit devices Only writing is possible. [Alternate] of a bit switch cannot be used. Use [Set], [Reset], and [Momentary] of a bit switch.
- (2) For word devices Only writing is possible. Numerical input cannot be used. When writing, use [Word Set] of a data set switch.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

(a) Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	_
SP2	Alarm history clear	_
SP3	External input signal prohibited	_
SP4	External output signal prohibited	_
SP5	External input signal resumed	-
SP6	External output signal resumed	—

(b) Operation mode selection

Device	ltem	Symbol
name		Cymbol
OM0	Normal mode (not test operation mode)	—
OM1	JOG operation	-
OM2	Positioning operation	-
OM3	Motorless operation	-
OM4	Output signal (DO) forced output	_

(c) Instruction demand (for test operation)

Device name	Item	Symbol
TMB1	Temporary stop command	—
TMB2	Test operation (positioning operation) start command	-
TMB3	Forward rotation direction	_
TMB4	Reverse rotation direction	_
TMB5	Restart for remaining distance	_
TMB6	Remaining distance clear	_

(d) Basic parameter/expansion parameter

Device name	Item	Symbol*1
PA1, PA1001	Control mode	*STY
PA2, PA1002	Regenerative brake option	*REG
PA3, PA1003	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Number of command input pulses per revolution	*FBP
PA6, PA1006	Electronic gear numerator (command pulse multiplying factor numerator)	CMX
PA7, PA1007	Electronic gear denominator (command pulse multiplying factor denominator)	CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP
PA11, PA1011	Forward torque limit	TLP
PA12, PA1012	Reverses torque limit	TLN
PA13, PA1013	Command pulse input form	*PLSS
PA14, PA1014	Rotation direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16 to PA18, PA1016 to PA1018	For manufacturer setting	—
PA19, PA1019	Parameter block	*BLK

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(e) Gain filter parameter

Device name	Item	Symbol*1	
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT	
PA2, PB1002	Vibration suppression control filter tuning mode (Advanced vibration suppression control)	VRFT	
PB3, PB1003	Position command acceleration/ deceleration time constant (position smoothing)	PST	
PB4, PB1004	Feed forward gain	FFC	
PB5, PB1005	For manufacturer setting	_	
PB6, PB1006	Ratio of load inertia moment to servo motor inertia moment	GD2	
PB7, PB1007	Model control gain	PG1	
PB8, PB1008	Position loop gain	PG2	
PB9, PB1009	Speed loop gain	VG2	
PB10, PB1010	Speed integral compensation	VIC	
PB11, PB1011	Speed differential compensation	VDC	
PB12, PB1012	For manufacturer setting	_	
PB13, PB1013	Machine resonance suppression filter 1	NH1	
PB14, PB1014	Notch form selection 1	NHQ1	
PB15, PB1015	Machine resonance suppression filter 2	NH2	
PB16, PB1016	Notch form selection 2	NHQ2	
PB17, PB1017	For manufacturer setting	_	
PB18, PB1018	Low-pass filter setting	LPF	
PB19, PB1019	Vibration suppression control vibration frequency setting	VRF1	
PB20, PB1020	Vibration suppression control resonance frequency setting	VRF2	
PB21 to PB22, PB1021 to PB1022	For manufacturer setting	_	
PB23, PB1023	Low-pass filter selection	VFBF	
PB24, PB1024	Slight vibration suppression control selection	*MVS	
PB25, PB1025	Function selection B-1	*BOP1	
PB26, PB1026	Gain changing selection	*CDP	
PB27, PB1027	Gain changing condition	CDL	
PB28, PB1028	Gain changing time constant	CDT	
PB29, PB1029	Ratio of load inertia moment to servo motor inertia moment at changing gain	GD2B	
PB30, PB1030	Position loop gain at changing gain	PG2B	
PB31, PB1031	Speed loop gain at changing gain	VG2B	
PB32, PB1032	Speed integral compensation at changing gain	VICB	
PB33, PB1033	Vibration suppression control vibration frequency setting for changing gain	VRF1B	
PB34, PB1034	Vibration suppression control vibration resonance setting for changing gain	VRF2B	
PB35 to PB45, PB1035 to PB1045	For manufacturer setting	_	

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(f) Extension setting parameter

Device name	Item	Symbol*1
PC1, PC1001	Acceleration time constant	STA
PC2, PC1002	Deceleration time constant	STB
PC3, PC1003	S-pattern acceleration/ deceleration time constant	STC
PC4, PC1004	Torque command time constant	TQC
PC5, PC1005	Internal speed command1/limit1	SC1
PC6, PC1006	Internal speed command2/limit2	SC2
PC7, PC1007	Internal speed command3/limit3	SC3
PC8, PC1008	Internal speed command4/limit4	SC4
PC9, PC1009	Internal speed command5/limit5	SC5
PC10, PC1010	Internal speed command6/limit6	SC6
PC11, PC1011	Internal speed command7/limit7	SC7
PC12, PC1012	Analog speed command maximum speed	VCM
	/limit maximum speed	
PC13, PC1013	Analog torque command maximum output	TLC
PC14, PC1014	Analog monitor 1 output	MOD1
PC15, PC1015	Analog monitor 2 output	MOD2
	Electromagnetic brake	MDD
PC16, PC1016	sequence output	MBK
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20, PC1020	Station number setting	*SNO
PC21, PC1021	Communication function selection	*SOP
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	Function selection C-2	*COP2
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	For manufacturer setting	
PC26, PC1026	Function selection C-5	*COP5
PC27 to PC29, PC1027 to PC1029	For manufacturer setting	-
PC30, PC1030	Acceleration time constant 2	STA2
PC31, PC1031	Deceleration time constant 2	STB2
PC32, PC1032	Command pulse multiplying factor numerator 2	CMX2
PC33, PC1033	Command pulse multiplying factor numerator 3	CMX3
PC34, PC1034	Command pulse multiplying factor numerator 4	CMX4
PC35, PC1035	Internal torque limit 2	TL2
PC36, PC1036	Status display selection	*DMD
PC37, PC1037	Analog speed command offset /limit offset	VCO
PC38, PC1038	Analog torque command offset /limit offset	TPO
PC39, PC1039	Analog monitor 1 offset	MO1
PC40, PC1040	Analog monitor 2 offset	MO2
PC41 to PC50, PC1041 to PC1050	For manufacturer setting	_

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(g) I/O setting parameter

Device name	Item	Symbol*1
PD1, PD1001	Input signal automatic ON selection 1	*DIA1
PD2, PD1002	For manufacturer setting	—
PD3, PD1003	Input signal device selection 1 (CN1-15)	*DI1
PD4, PD1004	Input signal device selection 2 (CN1-16)	*DI2
PD5, PD1005	Input signal device selection 3 (CN1-17)	*DI3
PD6, PD1006	Input signal device selection 4 (CN1-18)	*DI4
PD7, PD1007	Input signal device selection 5 (CN1-19)	*DI5
PD8, PD1008	Input signal device selection 6 (CN1-41)	*DI6
PD9, PD1009	For manufacturer setting	—
PD10, D1010	Input signal device selection 8 (CN1-43)	*DI8
PD11, PD1011	Input signal device selection 9 (CN1-44)	*DI9
PD12, PD1012	Input signal device selection 10 (CN1-45)	*DI10
PD13, PD1013	Output signal device selection 1 (CN1-22)	*DO1
PD14, PD1014	Output signal device selection 2 (CN1-23)	*DO2
PD15, PD1015	Output signal device selection 3 (CN1-24)	*DO3
PD16, PD1016	Output signal device selection 4 (CN1-25)	*DO4
PD17, PD1017	For manufacturer setting	—
PD18, PD1018	Output signal device selection 6 (CN1-49)	*DO6
PD19, PD1019	Response level setting	*DIF
PD20, 1020	Function selection D-1	*DOP1
PD21, PD1021	For manufacturer setting	—
PD22, PD1022	Function selection D-3	*DOP3
PD23, PD1023	For manufacturer setting	_
PD24, PD1024	Function selection D-5	*DOP5
PD25 to PD30, PD1025 to PD1030	For manufacturer setting	_

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(h) Status display

Device name	Item	Symbol
ST0	Cumulative feedback pulses	_
ST1	Servo motor speed	_
ST2	Droop pulses	_
ST3	Cumulative command pulses	_
ST4	Command pulse frequency	_
ST5	Analog speed command voltage/limit voltage	_
ST6	Analog torque command voltage/limit voltage	_
ST7	Regenerative load ratio	_
ST8	Effective load ratio	_
ST9	Peak load ratio	_
ST10	Instantaneous torque	_
ST11	Within one-revolution position	_
ST12	ABS counter	_
ST13	Load inertia moment ratio	—
ST14	Bus voltage	—

(i) Alarm

Device name	Item	Symbol
AL0	Current alarm number	_
AL1	Detailed data of current alarms	_
AL11	Servo status when alarm occurs cumulative feedback pulses	_
AL12	Servo status when alarm occurs servo monitor speed	_
AL13	Servo status when alarm occurs droop pulses	_
AL14	Servo status when alarm occurs cumulative command pulses	_
AL15	Servo status when alarm occurs command pulse frequency	_
AL16	Servo status when alarm occurs analog speed command voltage /limit voltage	_
AL17	Servo status when alarm occurs analog torque command voltage /limit voltage	
AL18	Servo status when alarm occurs regenerative load ratio	_
AL19	Servo status when alarm occurs effective load ratio	
AL20	Servo status when alarm occurs peak load ratio	_
AL21	Servo status when alarm occurs instantaneous torque	_
AL22	Servo status when alarm occurs within one- revolution position	_
AL23	Load inertia moment ratio ABS counter	-
AL24	Servo status when alarm occurs load inertia moment ratio	_
AL25	Servo status when alarm occurs bus voltage	_
AL200	Alarm number from alarm history most recent alarm	_
AL201	Alarm number from alarm history first alarm in past	_
AL202	Alarm number from alarm history second alarm in past	_
AL203	Alarm number from alarm history third alarm in past	_
AL204	Alarm number from alarm history fourth alarm in past	_
AL205	Alarm number from alarm history fifth alarm in past	_
AL210	Alarm occurrence time in alarm history most recent alarm	_
AL211	Alarm occurrence time in alarm history first alarm in past	_
AL212	Alarm occurrence time in alarm history second alarm in past	_
AL213	Alarm occurrence time in alarm history third alarm in past	_
AL214	Alarm occurrence time in alarm history fourth alarm in past	_
AL215	Alarm occurrence time in alarm history fifth alarm in past	_
AL230	Detailed alarm from alarm history most recent alarm	
AL231	Detailed alarm from alarm history first alarm in past	_
AL232	Detailed alarm from alarm history second alarm in past	_
AL233	Detailed alarm from alarm history third alarm in past	
AL234	Detailed alarm from alarm history fourth alarm in past	
AL235	Detailed alarm from alarm history fifth alarm in past	_

(j) External input

Device name	Item	Symbol
D10	Input device statuses	—
DI1	External input pin statuses	—
DI2	Statuses of input devices switched on through communication	_

(k) External output

Device name	Item	Symbol
DO0	Output device statuses	—
DO1	External output pin statuses	_

(I) Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal for test operation	—

(m) Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output of signal pin	—

(n) Set data (for test operation)

Device name	Item	Symbol	
TMD0	Writes the speed (test mode)	—	
TMD1	Writes the acceleration/ deceleration time constant (test mode)	_	
TMD2	For manufacturer setting		
TMD3	Writes the moving distance (test mode)	_	

(8) MELSERVO-J3-*T

Device name ^{*5}		Setting range			Device No. represen tation
	Servo amplifier request (SP)	SP0	to	SP6	
device	Operation mode selection (OM)	OM0	to	OM5	Decimal
Bit	Instruction demand (for test operation) (TMB)	TMB1	to	TMB6	
	Basic setting parameter	PA1	to	PA19	
	(PA) ^{*1}	PA1001	to	PA1019	
	Gain filter parameter (PB) ^{*1}	PB1 PB1001	to to	PB45 PB1045	
	Extension setting	PC1	to	PC50	
	parameter (PC) ^{*1}	PC1001	to	PC1050	
	I/O setting parameter	PD1	to	PD30	
	(PD) ^{*1}	PD1001	to	PD1030	
	Option unit parameter	PO1	to	PO35	
	(PO) ^{*1}	PO1001	to	PO1035	
	Status display (ST) ^{*4}	ST0	to	ST17	
		AL0	to	AL1	
		AL11	to	AL28	
	Alarm (AL) ^{*4}	AL200	to	AL205	
		AL210	to	AL215	
		AL230	to	AL235	
	External input (DI) ^{*6}	DI0	to	DI7	
сD	External output (DO) ^{*4}	DO0	to	DO4	
evic.	Point table	POS1	to	POS255	
p.	(position) (POS) ^{*2}	POS1001	to	POS1255	Decimal
Wor	Point table	SPD1	to	SPD255	
-	(speed) (SPD) ^{*2}	SPD1001	to	SPD1255	
	Point table	1074	1.	A OTO55	
	(acceleration time constant)	ACT1001	to to	ACT255	
	(ACT) ^{*2}	ACTION	10	AGT1200	
	Point table	DCT1	to	DOT255	
	(deceleration time constant)	DCT1001	to	DCT255	
	(DCT) ^{*2}	2011001	10	0011200	
	Point table	DWL1	to	DWL255	
	(dwell) (DWL) ^{*2}	DWL1001	to	DWL1255	
	Point table	AUX1	to	AUX255	
	(auxiliary function) (AUX) ^{*2}	AUX1001	to	AUX1255	
	Point table	MCD1	to	MCD255	
	(M code) (MCD) ^{*2*3}	MCD1001	to	MCD1255	
	Input signal for test operation (for test operation) (TM0)	ТМІО	to	TMI2	
	Forced output of signal pin (for test operation) (TMO)	TMO0	to	TMO1	
	Set data (for test operation) (TMD)	TMD0 TMD3	to	TMD1	

- Use 1 to 50 of PA, PB, PC, PD, and PO when the GOT *1 writes data to RAM of the servo amplifier. Use 1001 to 1050 of PA, PB, PC, PD, and PO when the GOT write data to E²PROM of the servo amplifier.
- When the GOT writes data to point tables, use 1001 to 1255 *2 of POS, SPD, ACT, DCT, DWL, AUX, and MCD (E²PROM area). MCD cannot be used as a real number.
- *3
- *4 Only reading is possible.
- *5 The GOT cannot read or write data from/to consecutive devices.
- *6 Only reading is possible for DI0 to DI4.

POINT.

Precautions for SP, OM, TMB, TMI, TMO, and TMD devices

- (1) For bit devices Only writing is possible. [Alternate] of a bit switch cannot be used. Use [Set], [Reset], and [Momentary] of a bit switch.
- (2) For word devices Only writing is possible. Numerical input cannot be used. When writing, use [Word Set] of a data set switch.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

(a) Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	-
SP1	Current alarm clear	—
SP2	Alarm history clear	—
SP3	External input signal prohibited	—
SP4	External output signal prohibited	—
SP5	External input signal resumed	—
SP6	External output signal resumed	_

(b) Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	-
OM1	JOG operation	—
OM2	Positioning operation	—
OM3	Motorless operation	—
OM4	Output signal (DO) forced output	—
OM5	One step sending	_

(c) Instruction demand (for test operation)

Device name	Item	Symbol
TMB1	Temporary stop command	_
TMB2	Test operation (positioning operation) start command	_
TMB3	Forward rotation direction	—
TMB4	Reverse rotation direction	_
TMB5	Restart for remaining distance	_
TMB6	Remaining distance clear	_

(d) Basic setting parameter

Device name	Item	Symbol ^{*1}
PA1, PA1001	Control mode	*STY
PA2, PA1002	Regenerative brake option	*REG
PA3, PA1003	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Feeding function selection	*FTY
PA6, PA1006	Electronic gear numerator	*CMX
PA7, PA1007	Electronic gear denominator	*CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP
PA11, PA1011	Forward torque limit	TLP
PA12, PA1012	Reverses torque limit	TLN
PA13, PA1013	For manufacturer setting	_
PA14, PA1014	Rotation direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16 to PA18, PA1016 to PA1018	For manufacturer setting	_
PA19, PA1019	Parameter block	*BLK

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(e) Gain filter parameter

Device name	Item	Symbol*1
PB1, PB1001	Adaptive tuning mode (Adaptive filter II)	FILT
PA2, PB1002	Vibration suppression control filter tuning mode (advanced vibration suppression control)	VRFT
PB3, PB1003	For manufacturer setting	
PB4, PB1004	Feed forward gain	FFC
PB5, PB1005	For manufacturer setting	
PB6, PB1006	Ratio of load inertia moment to servo motor inertia moment	GD2
PB7, PB1007	Model control gain	PG1
PB8, PB1008	Position loop gain	PG2
PB9, PB1009	Speed loop gain	VG2
PB10, PB1010	Speed integral compensation	VIC
PB11, PB1011	Speed differential compensation	VDC
PB12, PB1012	For manufacturer setting	-
PB13, PB1013	Machine resonance suppression filter 1	NH1
PB14, PB1014	Notch form selection 1	NHQ1
PB15, PB1015	Machine resonance suppression filter 2	NH2
PB16, PB1016	Notch form selection 2	NHQ2
PB17, PB1017	For manufacturer setting	
PB18, PB1018	Low-pass filter setting	LPF
PB19, PB1019	Vibration suppression control vibration frequency setting	VRF1
PB20, PB1020	Vibration suppression control resonance frequency setting	VRF2
PB21 to PB22, PB1021 to PB1022	For manufacturer setting	_
PB23, PB1023	Low-pass filter selection	VFBF
PB24, PB1024	Slight vibration suppression control selection	*MVS
PB25, PB1025	For manufacturer setting	_
PB26, PB1026	Gain changing selection	*CDP
PB27, PB1027	Gain changing condition	CDL
PB28, PB1028	Gain changing time constant	CDT

Device name	Item	Symbol*1
PB29, PB1029	Gain changing, Ratio of load inertia moment to servo motor inertia moment	GD2B
PB30, PB1030	Gain changing, Position loop gain	PG2B
PB31, PB1031	Gain changing, Speed loop gain	VG2B
PB32, PB1032	Gain changing, Speed integral compensation	VICB
PB33, PB1033	Gain changing, Vibration suppression control vibration frequency setting	VRF1B
PB34, PB1034	Gain changing, Vibration suppression control resonance frequency setting	VRF2B
PB35 to PB45, PB1035 to PB1045	For manufacturer setting	_

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(f) Extension setting parameter

Device name	Item	Symbol ^{*1}
PC1, PC1001	For manufacturer setting	_
PC2, PC1002	Home position return type	*ZTY
PC3, PC1003	Direction of home position return	*ZDIR
PC4, PC1004	Home position return speed	ZRF
PC5, PC1005	Creep speed	CRF
PC6, PC1006	Home position shift distance	ZST
PC7, PC1007	Home position return position data	*ZPS
PC8, PC1008	Moving distance after proximity dog	DCT
PC9, PC1009	Hold time home position return hold time	ZTM
PC10, PC1010	Hold time home position return torque limit value	ZTT
PC11, PC1011	Rough match output range	CRP
PC12, PC1012	Jog speed	JOG
PC13, PC1013	S-pattern acceleration/ deceleration time constant	*STC
PC14, PC1014	Backlash compensation	*BKC
PC15, PC1015	For manufacturer setting	_
PC16, PC1016	Electromagnetic brake sequence output	MBR
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20, PC1020	Station number setting	*SNO
PC21, PC1021	Communication function selection	*SOP
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	For manufacturer setting	_
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	For manufacturer setting	_
PC26, PC1026	Function selection C-5	*COP5
PC27, PC1027	For manufacturer setting	-
PC28, PC1028	Function selection C-7	*COP7
PC29 to PC30, PC1029 to PC1030	For manufacturer setting	—
PC31, PC1031	Software limit + Low	LMPL
PC32, PC1032	Software limit + High	LMPH
PC33, PC1033	Software limit - Low	LMNL
PC34, PC1034	Software limit - High	LMNH
PC35, PC1035	Internal torque limit 2	TL2
PC36, PC1036	Status display selection	*DMD
PC37, PC1037	Position range output address + Low	*LPPL
PC38, PC1038	Position range output address + High	*LPPH
PC39, PC1039	Position range output address - Low	*LNPL

(Continued to next page)

Device name	Item	Symbol*1
PC40, PC1040	Position range output address - High	*LNPH
PC41 to PC50, PC1041 to PC1050	For manufacturer setting	

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(g) I/O setting parameter

Device name	Item	Symbol*1
PD1, PD1001	Input signal automatic ON selection 1	*DIA1
PD2, PD1002	For manufacturer setting	_
PD3, PD1003	Input signal automatic ON selection 3	*DIA3
PD4, PD1004	Input signal automatic ON selection 4	*DIA4
PD5, PD1005	For manufacturer setting	_
PD6, PD1006	Input signal device selection 2 (CN6-2)	*DI2
PD7, PD1007	Input signal device selection 3 (CN6-3)	*DI3
PD8, PD1008	Input signal device selection 4 (CN6-4)	*DI4
PD9, PD1009	Output signal device selection 1 (CN6-14)	*DO1
PD10, D1010	Output signal device selection 2 (CN6-15)	*DO2
PD11, PD1011	Output signal device selection 3 (CN6-16)	*DD3
PD12 to PD15, PD1012 to PD1015	For manufacturer setting	_
PD16, PD1016	Input polarity selection	*DIAB
PD17 to PD18, PD1017 to PD1018	For manufacturer setting	_
PD19, PD1019	Response level setting	*DIF
PD20, 1020	Function selection D-1	*DOP1
PD21, PD1021	For manufacturer setting	_
PD22, PD1022	Function selection D-3	*DOP3
PD23, PD1023	For manufacturer setting	-
PD24, PD1024	Function selection D-5	*DOP5
PD25 to PD30, PD1025 to PD1030	For manufacturer setting	_

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(h) Option unit parameter

Device name	Item	Symbol
PO1, PO1001	For manufacturer setting	_
PO2, PO1002	MR-J3-D01 Input signal device selection 1 (CN10-21, 26)	*ODI1
PO3, PO1003	MR-J3-D01 Input signal device selection 2 (CN10-27, 28)	*ODI2
PO4, PO1004	MR-J3-D01 Input signal device selection 3 (CN10-29, 30)	*ODI3
PO5, PO1005	MR-J3-D01 Input signal device selection 4 (CN10-31, 32)	*ODI4
PO6, PO1006	MR-J3-D01 Input signal device selection 5 (CN10-33, 34)	*ODI5

Device name	Item	Symbol
PO7, PO1007	MR-J3-D01 Input signal device selection 6 (CN10-35, 36)	*ODI6
PO8, PO1008	MR-J3-D01 Output signal device selection 1 (CN10-46, 47)	*ODO1
PO9, PO1009	MR-J3-D01 Output signal device selection 2 (CN10-48, 49)	*ODO2
PO10, PO1010	Function selection 0-1	*00P1
PO11, PO1011	For manufacturer setting	—
PO12, PO1012	Function selection 0-3	*00P3
PO13, PO1013	MR-J3-D01 Analog monitor 1 output	MOD1
PO14, PO1014	MR-J3-D01 Analog monitor 2 output	MOD2
PO15, PO1015	MR-J3-D01 Analog monitor 1 offset	M01
PO16, PO1016	MR-J3-D01 Analog monitor 2 offset	M02
PO17 to 20, PO1017 to PO1020	For manufacturer setting	_
PO21, PO1021	MR-J3-D01 Override offset	VCO
PO22, PO1022	MR-J3-D01 Analog torque limitation offset	TLO
PO23 to 35, PO1023 to PO1035	For manufacturer setting	—

(i) Status display

Device name	Item	Symbol
ST0	Current position	_
ST1	Command position	_
ST2	Command remaining distance	_
ST3	Point table No.	_
ST4	Cumulative feedback pulses	_
ST5	Servo monitor speed	_
ST6	Droop pulses	_
ST7	Override voltage	_
ST8	Override	_
ST9	Analog torque command voltage/limit voltage	_
ST10	Regenerative load ratio	_
ST11	Effective load ratio	_
ST12	Peak load ratio	_
ST13	Instantaneous torque	_
ST14	Within one-revolution position	_
ST15	ABS counter	—
ST16	load inertia moment ratio	—
ST17	Bus voltage	—

SERVO AMPLIFIER CONNECTION

(j) Alarm

AL0 Current alarm number AL1 Detailed data of current alarms AL11 Servo status when alarm occurs Current position AL12 Servo status when alarm occurs Command position AL13 Servo status when alarm occurs Command position AL14 Servo status when alarm occurs Cumulative feedback pulses AL15 Servo status when alarm occurs Cumulative feedback pulses AL16 Servo status when alarm occurs Override AL17 Servo status when alarm occurs Override AL18 Servo status when alarm occurs Override AL20 Servo status when alarm occurs Override AL21 Servo status when alarm occurs Effective load ratio AL22 Servo status when alarm occurs Effective load ratio AL23 Servo status when alarm occurs Bas counter AL24 Servo status when alarm occurs Bus voltage AL25 Servo status when alarm occurs Bus voltage AL26 Servo status when alarm occurs Bus voltage	Device name	Item	Symbol
AL1 Detailed data of current alarms — AL11 Servo status when alarm occurs Current position — AL12 Servo status when alarm occurs Command position — AL13 Servo status when alarm occurs Command position — AL14 Servo status when alarm occurs Cumulative feedback pulses — AL15 Servo status when alarm occurs Cumulative feedback pulses — AL16 Servo status when alarm occurs Override — AL17 Servo status when alarm occurs Override — AL18 Servo status when alarm occurs Override — AL19 Servo status when alarm occurs Override — AL20 Servo status when alarm occurs Override — AL21 Servo status when alarm occurs Effective — AL22 Servo status when alarm occurs Effective — AL23 Servo status when alarm occurs Bus load ratio — AL24 Servo status when alarm occurs Bus voltage — AL25 Servo status when alarm occurs Bus voltage — AL26 Servo status when alarm occurs Bus voltage — AL27 Load inertia momeatr mbistory	AL0	Current alarm number	—
AL11 Servo status when alarm occurs Current position AL12 Servo status when alarm occurs Command position AL13 Servo status when alarm occurs Command remaining distance AL14 Servo status when alarm occurs Cumulative feedback pulses AL15 Servo status when alarm occurs Cumulative feedback pulses AL16 Servo status when alarm occurs Override AL17 Servo status when alarm occurs Override AL18 Servo status when alarm occurs Override AL20 Servo status when alarm occurs Override AL21 Servo status when alarm occurs Override AL22 Servo status when alarm occurs Override AL21 Servo status when alarm occurs Override AL22 Servo status when alarm occurs Peak load ratio AL23 Servo status when alarm occurs Peak load ratio AL24 Instantaneous torque AL25 Servo status when alarm occurs Bus coltage AL26 Servo status when alarm occurs Bus voltage AL27 Servo status when al	AL1	Detailed data of current alarms	—
AL12 Servo status when alarm occurs Command position AL13 Servo status when alarm occurs AL14 Servo status when alarm occurs AL15 Servo status when alarm occurs Cumulative feedback pulses AL16 Servo status when alarm occurs Droop pulses AL17 Servo status when alarm occurs Override AL18 Servo status when alarm occurs Override AL19 Servo status when alarm occurs Override AL20 Servo status when alarm occurs Override AL21 Servo status when alarm occurs Override AL22 Servo status when alarm occurs Override AL21 Servo status when alarm occurs Override AL22 Servo status when alarm occurs Peak load ratio AL23 Servo status when alarm occurs Peak load ratio AL24 Instantaneous torque AL25 Servo status when alarm occurs Bus voltage AL26 Servo status when alarm occurs Bus voltage AL27 Servo status when alarm thistory	AL11	Servo status when alarm occurs Current position	_
AL13 Servo status when alarm occurs Command - AL14 Servo status when alarm occurs - AL15 Servo status when alarm occurs Cumulative - feedback pulses - AL16 Servo status when alarm occurs Droop pulses - AL17 Servo status when alarm occurs Droop pulses - AL18 Servo status when alarm occurs Override - AL19 Servo status when alarm occurs Override - AL20 Servo status when alarm occurs Coverride - AL21 Servo status when alarm occurs Peak load ratio - AL22 Servo status when alarm occurs Effective load ratio - AL23 Servo status when alarm occurs Within one- revolution position - AL24 Servo status when alarm occurs Bus voltage - AL25 Servo status when alarm occurs Bus voltage - AL26 Servo status when alarm occurs Bus voltage - AL27 Servo status when alarm occurs Bus voltage - AL28 Servo status when alarm occurs Bus voltage - AL20 Alarm number from alarm history - AL28	AL12	Servo status when alarm occurs Command position	—
AL14 Servo status when alarm occurs — AL15 Servo status when alarm occurs Cumulative feedback pulses — AL16 Servo status when alarm occurs Droop pulses — AL17 Servo status when alarm occurs Override — AL18 Servo status when alarm occurs Override — AL19 Servo status when alarm occurs Override — AL20 Servo status when alarm occurs Override — AL21 Servo status when alarm occurs Override — AL22 Servo status when alarm occurs Override — AL21 Servo status when alarm occurs Override — AL22 Servo status when alarm occurs Override — AL23 Servo status when alarm occurs Peak load ratio — AL24 Servo status when alarm occurs Peak load ratio — AL25 Servo status when alarm occurs ABS counter — AL26 Servo status when alarm occurs Bus voltage — AL27 Load inerti amoent ratio — AL28 Servo status when alarm occurs fully on the story first alarm in past — AL200 Alarm number from alarm history first alarm in past	AL13	Servo status when alarm occurs Command remaining distance	_
AL15 Servo status when alarm occurs Cumulative feedback pulses — AL16 Servo status when alarm occurs Droop pulses — AL17 Servo status when alarm occurs Override — AL18 Servo status when alarm occurs Override — AL19 Servo status when alarm occurs Override — AL20 Servo status when alarm occurs — AL21 Servo status when alarm occurs — AL22 Servo status when alarm occurs — AL21 Servo status when alarm occurs Effective load ratio — AL23 Servo status when alarm occurs Peak load ratio — AL24 Servo status when alarm occurs Within one- revolution position — AL25 Servo status when alarm occurs Bus voltage — AL26 Servo status when alarm occurs Bus voltage — AL27 Load inertia momeat ratio — AL28 Servo status when alarm occurs — AL20 Alarm number from alarm history — AL201 First alarm in past — AL202 Alarm number from alarm history — AL203 <t< td=""><td>AL14</td><td>Servo status when alarm occurs Point table No.</td><td>—</td></t<>	AL14	Servo status when alarm occurs Point table No.	—
AL16 Servo status when alarm occurs AL17 Servo status when alarm occurs Droop pulses AL18 Servo status when alarm occurs Override AL19 Servo status when alarm occurs Override AL20 Servo status when alarm occurs Override AL21 Servo status when alarm occurs Override AL22 Servo status when alarm occurs Effective Ioad ratio AL23 Servo status when alarm occurs Effective Ioad ratio AL24 Servo status when alarm occurs Peak load ratio AL25 Servo status when alarm occurs Within one- revolution position AL26 Servo status when alarm occurs ABS counter AL27 Servo status when alarm occurs Bus voltage AL28 Servo status when alarm occurs Bus voltage AL200 Alarm number from alarm history AL201 Alarm number from alarm history AL202 Alarm number from alarm history <	AL15	Servo status when alarm occurs Cumulative feedback pulses	-
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AL18 Servo status when alarm occurs Override voltage — AL19 Servo status when alarm occurs Override Al20 — AL20 Servo status when alarm occurs Regenerative load ratio — AL21 Servo status when alarm occurs Effective load ratio — AL22 Servo status when alarm occurs Effective load ratio — AL23 Servo status when alarm occurs Peak load ratio — AL24 Instantaneous torque — AL25 Servo status when alarm occurs ABS counter — AL26 Servo status when alarm occurs ABS counter — AL27 Servo status when alarm occurs Bus voltage — AL28 Servo status when alarm occurs Bus voltage — AL200 Alarm number from alarm history — AL201 Alarm number from alarm history — AL202 Alarm number from alarm history — AL203 Alarm number from alarm history — AL204 Alarm number from alarm history — AL205 Fifth alarm in past — AL204 Alarm number from alarm history — AL204 Alarm	AL17	Servo status when alarm occurs Droop pulses	-
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AL20 Servo status when alarm occurs Analog torque limit voltage — AL21 Servo status when alarm occurs Regenerative load ratio — AL22 Servo status when alarm occurs Effective load ratio — AL23 Servo status when alarm occurs Peak load ratio — AL24 Servo status when alarm occurs Peak load ratio — AL24 Servo status when alarm occurs Peak load ratio — AL25 Servo status when alarm occurs Within one- revolution position — AL26 Servo status when alarm occurs ABS counter — AL27 Servo status when alarm occurs Bus voltage — AL28 Servo status when alarm occurs Bus voltage — AL200 Alarm number from alarm history — AL201 Alarm number from alarm history — AL202 Alarm number from alarm history — AL203 Alarm number from alarm history — AL204 Alarm number from alarm history — AL205 Alarm number from alarm history — AL204 Alarm occurrence time in alarm history — AL205 Alarm occurrence time in alarm history	AL19	Servo status when alarm occurs Override	-
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AL23 Servo status when alarm occurs Peak load ratio - AL24 Servo status when alarm occurs - AL25 Servo status when alarm occurs Within one-revolution position - AL26 Servo status when alarm occurs ABS counter - AL27 Servo status when alarm occurs Bus voltage - AL28 Servo status when alarm occurs Bus voltage - AL200 Alarm number from alarm history - AL201 Alarm number from alarm history - AL202 Alarm number from alarm history - AL203 Alarm number from alarm history - AL204 Alarm number from alarm history - AL203 Alarm number from alarm history - AL204 Alarm number from alarm history - AL204 Alarm number from alarm history - AL204 Alarm occurrence time in alarm history - AL210 Alarm occurrence time in alarm history - AL210 Alarm occurrence time in alarm history - AL210 Alarm occurrence time in alarm history - AL211 Alarm occurrence time i	AL22	Servo status when alarm occurs Effective load ratio	_
AL24 Servo status when alarm occurs Instantaneous torque — AL25 Servo status when alarm occurs Within one- revolution position — AL26 Servo status when alarm occurs ABS counter — AL27 Servo status when alarm occurs Bus voltage — AL28 Servo status when alarm occurs Bus voltage — AL200 Alarm number from alarm history, Most recent alarm — AL201 Alarm number from alarm history — AL202 Second alarm in past — AL203 Alarm number from alarm history — AL204 Alarm number from alarm history — AL205 Alarm number from alarm history — AL204 Alarm number from alarm history — AL205 Alarm number from alarm history — AL204 Alarm occurrence time in alarm history — AL210 Alarm occurrence time in alarm history — AL211 Alarm occurrence time in alarm history — AL212 Alarm occurrence time in alarm history — AL211 Alarm occurrence time in alarm history — AL212	AL23	Servo status when alarm occurs Peak load ratio	—
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AL27 Servo status when alarm occurs Load inertia moment ratio — AL28 Servo status when alarm occurs Bus voltage — AL200 Alarm number from alarm history, Most recent alarm — AL201 Alarm number from alarm history — AL202 Alarm number from alarm history — AL203 Alarm number from alarm history — AL204 Alarm number from alarm history — AL205 Alarm number from alarm history — AL204 Alarm number from alarm history — AL205 Alarm number from alarm history — AL204 Alarm number from alarm history — AL205 Alarm number from alarm history — AL210 Alarm number from alarm history — AL210 Alarm occurrence time in alarm history — AL211 Alarm occurrence time in alarm history — AL212 Alarm occurrence time in alarm history — AL213 Alarm occurrence time in alarm history — AL214 Alarm occurrence time in alarm history — AL215 Alarm occurrence time in alarm his	AL26	Servo status when alarm occurs ABS counter	—
AL28 Servo status when alarm occurs Bus voltage — AL200 Alarm number from alarm history, Most recent alarm — AL201 Alarm number from alarm history First alarm in past — AL202 Alarm number from alarm history Second alarm in past — AL203 Alarm number from alarm history Third alarm in past — AL204 Alarm number from alarm history Fourth alarm in past — AL205 Alarm number from alarm history Fourth alarm in past — AL205 Alarm number from alarm history Fourth alarm in past — AL210 Alarm occurrence time in alarm history Most recent alarm — AL211 Alarm occurrence time in alarm history First alarm in past — AL212 Alarm occurrence time in alarm history First alarm in past — AL213 Alarm occurrence time in alarm history Third alarm in past — AL214 Alarm occurrence time in alarm history Fourth alarm in past — AL215 Alarm occurrence time in alarm history Third alarm in past — AL214 Alarm occurrence time in alarm history Fourth alarm in past — AL215 Fifth alarm from alarm history F	AL27	Servo status when alarm occurs Load inertia moment ratio	
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AL231 Detailed alarm from alarm history - AL232 Detailed alarm from alarm history - AL232 Detailed alarm from alarm history - AL233 Detailed alarm from alarm history - AL234 Detailed alarm from alarm history - AL234 Detailed alarm from alarm history - AL235 Detailed alarm from alarm history -	AL230	Detailed alarm from alarm history	_
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AL235 Detailed alarm from alarm history	AL234	Detailed alarm from alarm history	
	AL235	Detailed alarm from alarm history	

(k) External input

Device name	Item	Symbol
DI0	Input device statuses 1	_
DI1	Input device statuses 2	_
DI2	Input device statuses 3	—
DI3	External input pin statuses 1	_
DI4	External input pin statuses 2	_
DI5	Statuses of input devices switched on through communication 1	_
DI6	Statuses of input devices switched on through communication 2	_
DI7	Statuses of input devices switched on through communication 3	_

(I) External output

Device name	Item	Symbol
DO0	Output device statuses 1	—
DO1	Output device statuses 2	_
DO2	Output device statuses 3	—
DO3	External output pin statuses 1	_
DO4	External output pin statuses 2	_

(m) Point table (position)

Device name	Item	Symbol
POS1 to POS255, POS1001 to POS1255	Point table (position) No.1 to 255	_
SPD1 to SPD255, SPD1001 to SPD1255	Point table (speed) No.1 to 255	_
ACT1 to ACT255, ACT1001 to ACT1255	Point table (acceleration time constant) No.1 to 255	_
DCT1 to DCT255, DCT1001 to DCT1255	Point table (deceleration time constant) No.1 to 255	_
DWL1 to DWL255, DWL1001 to DWL1255	Point table (dwell) (DWL) No.1 to 255	_
AUX1 to AUX255, AUX1001 to AUX1255	Point table (auxiliary function) No.1 to 255	_
MCD1 to MCD255, MCD1001 to MCD1255	Point table (M code) No.1 to 255	_

(n) Input signal for test operation (for test operation)

Device	Item	Symbol
name		
TMI0	Input signal for test operation 1	—
TMI1	Input signal for test operation 2	_
TMI2	Input signal for test operation 3	—

(o) Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output from signal pin (CN6)	-
TMO1	Forced output from signal pin (CN10)	_

(p) Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	—
TMD1	Writes the acceleration/deceleration time constant (test mode)	_
TMD3	Writes the moving distance (test mode)	—

(9) MELSERVO-J4-*A, -JE-*A

Device name ^{*2}		S	Setting	ı range	Device No. represer tation	
	Servo amplifier request (SP)	SP0	to	SP6		
device	Operation mode selection (OM)	ОМО	to	OM4		
Bit	Instruction demand (for test operation) (TMB)	TMB1	to	TMB6		
	Basic setting parameter	PA1	to	PA32		
	(PA) ^{*1}	PA1001	to	PA1032		
	Gain filter parameter (PB) ^{*1}	PB1 PB1001	to to	PB64 PB1064		
	Extension setting	PC1	to	PC80		
	parameter (PC) ^{*1}	PC1001	to	PC1080		
	I/O setting parameter	PD1	to	PD48		
	(PD)*1	PD1001	to	PD1048		
	Extension setting 2	PE1	to	PE64		
	parameter (PE) ^{*1}	PE1001	to	PE1064		
	Extension setting 3	PF1	to	PF48		
	parameter (PF) ^{*1}	PF1001	to	PF1048		
۵	Status display (ST) ^{*3}	ST0	to	ST41	Decimai	
Svice		AL0	to	AL1		
ф р		AL11	to	AL25		
Vor	Alarm (AL) ^{*3}	AL200	to	AL205		
-		AL210	to	AL215		
		AL230	to	AL235		
		ALM0	to to	ALM1		
	$\Lambda larm (\Lambda I M)^{*3}$	ALIVITI ALM200	to	ALIVISZ ALM215		
		ALM220 to ALM	ALM235			
		ALM240	to	ALM255		
	External input (DI) ^{*4}	DI0	to	DI2		
	External output (DO)*3	DO0	to	DO1		
	Input signal for test operation (for test operation) (TM0)	тміо				
	Forced output of signal pin (for test operation) (TMO)	TMO0				
	Set data	TMD0	to	TMD1	1	
	(for test operation) (TMD)	TMD3				

*1 Use 1 to 80 of PA, PB, PC, PD, PE, and PF when the GOT writes data to RAM of the servo amplifier. Use 1001 to 1080 of PA, PB, PC, PD, PE, and PF when the GOT write data to E²PROM of the servo amplifier.

*2 The GOT cannot read or write data from/to consecutive devices

*3 Only reading is possible.

*4 Only reading is possible for DI0 to DI1.

POINT,

Precautions for SP, OM, TMB, TMI, TMO, and TMD devices $% \left({{\left[{{{\rm{TMO}}_{\rm{TMO}}} \right]_{\rm{TMO}}}} \right)$

- For bit devices Only writing is possible.
 [Alternate] of a bit switch cannot be used.
 Use [Set], [Reset], and [Momentary] of a bit switch.
- (2) For word devices Only writing is possible. Numerical input cannot be used. When writing, use [Word Set] of a data set switch.

The following shows correspondences between virtual devices for servo amplifier and data of the servo amplifier used with the GOT.

(a) Servo amplifier request

Device name	Item	Symbol
SP0	Status display data clear	_
SP1	Current alarm clear	-
SP2	Alarm history clear	-
SP3	External input signal prohibited	-
SP4	External output signal prohibited	-
SP5	External input signal resumed	-
SP6	External output signal resumed	_

(b) Operation mode selection

Device name	Item	Symbol
OM0	Normal mode (not test operation mode)	_
OM1	JOG operation	—
OM2	Positioning operation	_
OM3 ^{*1}	Motorless operation	_
OM4	Output signal (DO) forced output	
*1 MEL	SERVO-JE is equivalent to MELSERVO-J4.	

However, they have differences in the parameter function. For using the MELSERVO-JE series, refer to the following.

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(c) Instruction demand (for test operation)

Device name	Item	Symbol
TMB1	Temporary stop command	_
TMB2	Test operation (positioning operation) start command	_
TMB3	Forward rotation direction	_
TMB4	Reverse rotation direction	_
TMB5	Restart for remaining distance	_
TMB6	Remaining distance clear	_

(d) Basic setting parameter

Device name	Item	Symbol ^{*1}
PA1, PA1001	Operation mode	*STY
PA2, PA1002	Regenerative option	*REG
PA3, PA1003 ^{*2}	Absolute position detection system	*ABS
PA4, PA1004	Function selection A-1	*AOP1
PA5, PA1005	Number of command input pulses per revolution	*FBP
PA6, PA1006	Electronic gear numerator (command pulse multiplication numerator)	CMX
PA7, PA1007	Electronic gear denominator (command pulse multiplication denominator)	CDV
PA8, PA1008	Auto tuning mode	ATU
PA9, PA1009	Auto tuning response	RSP
PA10, PA1010	In-position range	INP
PA11, PA1011	Forward rotation torque limit	TLP
PA12, PA1012	Reverse rotation torque limit	TLN
PA13, PA1013	Command pulse input form	*PLSS
PA14, PA1014	Rotation direction selection	*POL
PA15, PA1015	Encoder output pulses	*ENR
PA16, PA1016	Encoder output pulses 2	*ENR2
PA17 to 18, PA1017 to 1018	For manufacturer setting	—
PA19, PA1019	Parameter writing inhibit	*BLK
PA20, PA1020	Tough drive setting	*TDS
PA21, PA1021	Function selection A-3	*AOP3
PA22, PA1022	For manufacturer setting	—
PA23, PA1023	Drive recorder arbitrary alarm trigger setting	DRAT
PA24, PA1024	Function selection A-4	*AOP4
PA25, PA1025	One-touch tuning - Overshoot permissible level	OTHOV
PA26, PA1026 ^{*2}	Function selection A-5	*AOP5
PA27 to 32, PA1027 to 1032	For manufacturer setting	_

*1 *2

For the parameters prefixed by an asterisk (*), setting becomes effective when the power is turned off once and back on after setting the parameter data. MELSERVO-JE is equivalent to MELSERVO-J4. However, they have differences in the parameter function. For using the MELSERVO-JE series, refer to the following. MELSERVO-JE Series Servo Amplifier Instruction

Manual

(e) Gain filter parameter

Device name	Item	Symbol*1
PB1, PB1001	Adaptive tuning mode (adaptive filter II)	PB1
PB2, PB1002	Vibration suppression control tuning mode (advanced vibration suppression control II)	VRFT
PB3, PB1003	Position command acceleration/ deceleration time constant (position smoothing)	PST
PB4, PB1004	Feed forward gain	FFC
PB5, PB1005	For manufacturer setting	_
PB6, PB1006	Load to motor inertia ratio	GD2
PB7, PB1007	Model loop gain	PG1
PB8, PB1008	Position loop gain	PG2
PB9, PB1009	Speed loop gain	VG2
PB10, PB1010	Speed integral compensation	VIC
PB11, PB1011	Speed differential compensation	VDC
PB12, PB1012	Overshoot amount compensation	OVA

Device name	Item	Symbol*1
PB13, PB1013	Machine resonance suppression filter 1	NH1
PB14, PB1014	Notch shape selection 1	NHQ1
PB15, PB1015	Machine resonance suppression filter 2	NH2
PB16, PB1016	Notch shape selection 2	NHQ2
PB17, PB1017	Shaft resonance suppression filter	NHF
PB18, PB1018	Low-pass filter setting	LPF
PB19, PB1019	Vibration suppression control 1 Vibration frequency	VRF11
PB20, PB1020	- Resonance frequency	VRF12
PB21, PB1021	Vibration suppression control 1 - Vibration frequency dumping	VRF13
PB22, PB1022	Vibration suppression control 1 - Resonance frequency dumping	VRF14
PB23, PB1023	Low-pass filter selection	VFBF
PB24, PB1024	Slight vibration suppression control	*MVS
PB25, PB1025	Function selection B-1	*BOP1
PB26, PB1026	Gain switching function	*CDP
PB27, PB1027	Gain switching condition	CDL
PB28, PB1028	Gain switching time constant	CDT
PB29, PB1029	gain switching	GD2B
PB30, PB1030	Position loop gain after gain switching	PG2B
PB31, PB1031	Speed loop gain after gain switching	VG2B
PB32, PB1032	Speed integral compensation after gain switching	VICB
PB33, PB1033	Vibration suppression control 1 - Vibration frequency after gain switching	VRF1B
PB34, PB1034	Vibration suppression control 1 - Resonance frequency after gain switching	VRF2B
PB35, PB1035	Vibration suppression control 1 - Resonance frequency dumping after gain switching	VRF3B
PB36, PB1036	Vibration suppression control 1 - Resonance frequency dumping after gain switching	VRF4B
PB37 to 44, PB1037 to 1044	For manufacturer setting	_
PB45, PB1045	Command notch filter	CNHF
PB46, PB1046	Machine resonance suppression filter 3	NH3
PB47, PB1047	Notch shape selection 3	NHQ3
PB48, PB1048	Machine resonance suppression filter 4	NH4
PB49, PB1049	Notch shape selection 4	NHQ4
PB50, PB1050	Machine resonance suppression filter 5	NH5
PB51, PB1051	Notch shape selection 5	NHQ5
PB52, PB1052	Vibration suppression control 2 - Vibration frequency	VRF21
PB53, PB1053	Vibration suppression control 2 - Resonance frequency	VRF22
PB54, PB1054	Vibration suppression control 2 - Vibration frequency dumping	VRF23
PB55, PB1055	Vibration suppression control 2 - Resonance frequency dumping	VRF24
PB56, PB1056	Vibration suppression control 2 - Vibration frequency after gain switching	VRF21B
PB57, PB1057	Vibration suppression control 2 - Resonance frequency after gain switching	VRF22B
Device name	Item	Symbol*1
-------------------------------	--	----------
PB58, PB1058	Vibration suppression control 2 - Vibration frequency dumping after gain switching	VRF23B
PB59, PB1059	Vibration suppression control 2 - Resonance frequency dumping after gain switching	VRF24B
PB60, PB1060	Model loop gain after gain switching	PG1B
PB61 to 64, PB1061 to 1064	For manufacturer setting	_

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.

(f) Extension setting parameter

Device name	Item	Symbol*1
PC1, PC1001	Acceleration time constant	STA
PC2, PC1002	Deceleration time constant	STB
PC3, PC1003	S-pattern acceleration/ deceleration time constant	STC
PC4, PC1004	Torque command time constant	TQC
PC5 PC1005	Internal speed command 1	SC1
1 00,1 01000	Internal speed limit 1	001
PC6, PC1006	Internal speed command 2	SC2
	Internal speed limit 2	
PC7, PC1007	Internal speed command 3	SC3
	Internal speed limit 3	
PC8, PC1008	Internal speed command 4	SC4
	Internal speed limit 4	
PC9, PC1009	Internal speed command 5	SC5
	Internal speed limit 5	
PC10, PC1010		SC6
	Internal speed command 7	
PC11, PC1011	Internal speed command 7	SC7
	Analog speed command -	
	Maximum speed	
PC12, PC1012	Analog speed limit - Maximum	VCM
	speed	
PC13 PC1013	Analog torque command	TLC
	maximum output	120
PC14, PC1014	Analog monitor 1 output	MOD1
PC15, PC1015	Analog monitor 2 output	MOD2
PC16, PC1016	Electromagnetic brake sequence output	MBR
PC17, PC1017	Zero speed	ZSP
PC18, PC1018	Alarm history clear	*BPS
PC19, PC1019	Encoder output pulse selection	*ENRS
PC20, PC1020 ^{*2}	Station number setting	*SNO
PC21, PC1021 ^{*2}	Communication function selection	*SOP
PC22, PC1022	Function selection C-1	*COP1
PC23, PC1023	Function selection C-2	*COP2
PC24, PC1024	Function selection C-3	*COP3
PC25, PC1025	For manufacturer setting	—
PC26, PC1026	Function selection C-5	*COP5
PC27, PC1027 ^{*2}	Function selection C-6	*COP6
PC28, PC1028	For manufacturer setting	—
PC29, PC1029	For manufacturer setting	—
PC30, PC1030	Acceleration time constant 2	STA2
PC31, PC1031	Deceleration time constant 2	STB2
PC32, PC1032	Command input pulse multiplication numerator 2	CMX2
PC33, PC1033	Command input pulse multiplication numerator 3	СМХЗ
PC34, PC1034	Command input pulse multiplication numerator 4	CMX4

Device name	Item	Symbol*1
PC35, PC1035	Internal torque limit 2	TL2
PC36, PC1036	Status display selection	*DMD
DC27 DC1027	Analog speed command offset	VOO
F 037, F 01037	Analog speed limit offset	VCO
DC20 DC1020	Analog torque command offset	TDO
FC30, FC1030	Analog torque limit offset	IFU
PC39, PC1039	Analog monitor 1 offset	MO1
PC40, PC1040	Analog monitor 2 offset	MO2
PC41 to 42, PC1041 to 1042	For manufacturer setting	_
PC43, PC1043	Error excessive alarm detection level	ERZ
PC44 to 50, PC1044 to 1050	For manufacturer setting	-
PC51, PC1051	Forced stop deceleration time constant	RSBR
PC52, PC1052	For manufacturer setting	-
PC53, PC1053	For manufacturer setting	-
PC54, PC1054	Vertical axis freefall prevention compensation amount	RSUP1
PC55 to PC59, PC1055 to PC1059	For manufacturer setting	-
PC60, PC1060	Function selection C-D	*COPD
PC61 to PC80, PC1061 to PC1080	For manufacturer setting	_

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.
*2 MELSERVO-JE is equivalent to MELSERVO-J4.

MELSERVO-JE is equivalent to MELSERVO-J4. However, they have differences in the parameter function. For using the MELSERVO-JE series, refer to the following.

MELSERVO-JE Series Servo Amplifier Instruction Manual

(g) I/O setting parameter

Device name	Item	Symbol ^{*1}
PD1, PD1001	Input signal automatic on selection 1	*DIA1
PD2, PD1002	For manufacturer setting	—
PD3, PD1003	Input device selection 1L	*DI1L
PD4, PD1004	Input device selection 1H	*DI1H
PD5, PD1005 ^{*2}	Input device selection 2L	*DI2L
PD6, PD1006 ^{*2}	Input device selection 2H	*DI2H
PD7, PD1007 ^{*2}	Input device selection 3L	*DI3L
PD8, PD1008 ^{*2}	Input device selection 3H	*DI3H
PD9, PD1009 ^{*2}	Input device selection 4L	*DI4L
PD10, PD1010 ^{*2}	Input device selection 4H	*DI4H
PD11, PD1011	Input device selection 5L	*DI5L
PD12, PD1012	Input device selection 5H	*DI5H
PD13, PD1013	Input device selection 6L	*DI6L
PD14, PD1014	Input device selection 6H	*DI6H
PD15 to 16, PD1015 to 1016	For manufacturer setting	_
PD17, PD1017	Input device selection 8L	*DI8L
PD18, PD1018	Input device selection 8H	*DI8H
PD19, PD1019	Input device selection 9L	*DI9L
PD20, PD1020	Input device selection 9H	*DI9H
PD21, PD1021 ^{*2}	Input device selection 10L	*DI10L
PD22, PD1022 ^{*2}	Input device selection 10H	*DI10H
PD23, PD1023 ^{*2}	Output device selection 1	*DO1
PD24, PD1024	Output device selection 2	*DO2
PD25, PD1025	Output device selection 3	*DO3
PD26, PD1026 ^{*2}	Output device selection 4	*DO4
PD27, PD1027	For manufacturer setting	—
PD28, PD1028	Output device selection 6	*DO6

15. SERVO AMPLIFIER CONNECTION 15.6 Device Range that Can Be Set

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Device name	Item	Symbol*1
PD29, PD1029	Input filter setting	*DIF
PD30, PD1030	Function selection D-1	*DOP1
PD31, PD1031	For manufacturer setting	_
PD32, PD1032	Function selection D-3	*DOP3
PD33, PD1033	For manufacturer setting	_
PD34, PD1034	Function selection D-5	*DOP5
PD35 to 48, PD1035 to 1048	For manufacturer setting	

1 For the parameters prefixed by an asterisk (), setting becomes effective when the power is turned off once and back on after setting the parameter data.
*2 MELSERVO-JE is equivalent to MELSERVO-J4.

MELSERVO-JE is equivalent to MELSERVO-J4. However, they have differences in the parameter function. For using the MELSERVO-JE series, refer to the following.

MELSERVO-JE Series Servo Amplifier Instruction Manual

(h) Extension setting 2 parameter

Device name	Item	Symbol
PE1 to 40, PE1000 to 1040	For manufacturer setting	_
PE41, PE1041	Function selection E-3	EOP3
PE42 to 64, PE1042 to 1064	For manufacturer setting	-

(i) Extension setting 3 parameter

Device name	Item	Symbol
PF1 to 8,		
PF1001 to	For manufacturer setting	-
1008		
PF9,	Function soluction F 5	*EOD5
PF1009 ^{*1}	Tunction selection 1-5	1015
PF10 to 14,		
PF1010 to	For manufacturer setting	-
1014		
PF15,	Electronic dynamic brake operating time	DBT
PF1015 ^{*1}	Electionic dynamic brake operating time	
PF16 to 20,		
PF1016 to	For manufacturer setting	—
1020		
PF21,	Drive recorder switching time setting	DRT
PF1021		5.0
PF22,	For manufacturer setting	_
PF1022		
PF23,	Vibration tough drive - Oscillation detection	OSCL1
PF1023	level	
PF24,	Vibration tough drive function selection	OSCL2
PF1024		
PF25,	Instantaneous power failure tough drive	CVAT
PF1025	- Detection time	
PF26 to 30,		
PF1026 to	For manufacturer setting	_
1030		
PF31,	Machine diagnosis function - Friction	FRIC
PF1031	judgement speed	
PF32 to 48,		
PF1032 to	For manufacturer setting	—
1048		

*1 MELSERVO-JE is equivalent to MELSERVO-J4. However, they have differences in the parameter function. For using the MELSERVO-JE series, refer to the following.

MELSERVO-JE Series Servo Amplifier Instruction Manual

(j) Status display

Device name	Item	Symbol
ST0	Comulative feedback pulse	—
ST1	Servo motor speed	
ST2	Droop pulse	
ST3	Cumulative command pulse	
ST4	Command pulse frequency	-
ST5	Analog speed command voltage/limit voltage	
ST6	Analog torque command voltage/limit voltage	_
ST7	Regenerative load ratio	
ST8	Effetive load ratio	
ST9	Peak load ratio	
ST10	Instantaneous torque	
ST11	Within one-revolution position(1 pulse unit)	
ST12	ABS counter	
ST13	Load inertia moment ratio	
ST14	Bus voltage	
ST15 to 31	For manufacturer setting	
ST32	Internal temperature of encoder	
ST33	Setting time	
ST34	Oscillation detection frequency	
ST35	Number of tough drives	_
ST36 to 39	For manufacturer setting	
ST40	Unit power consumption 1 (incremwnt of 1 W)	_
ST41	Unit total power consumption 1 (incremwnt of 1 Wh)	_

(k) Alarm (compatible with MELSERVO-J3-*A)

Device name	Item	Symbol
AL0	Current alarm number	_
AL1*1	Detailed data of current alarms	-
AL11	Servo status when alarm occurs Cumulative feedback pulses	_
AL12	Servo status when alarm occurs Servo motor speed	_
AL13	Servo status when alarm occurs Droop pulses	-
AL14	Servo status when alarm occurs cumulative command pulses	_
AL15	Servo status when alarm occurs command pulse frequency	_
AL16	Servo status when alarm occurs analog speed command voltage/limit voltage	-
AL17	Servo status when alarm occurs analog torque command voltage/limit voltage	_
AL18	Servo status when alarm occurs regenerative load ratio	_
AL19	Servo status when alarm occurs effective load ratio	_
AL20	Servo status when alarm occurs peak load ratio	_
AL21	Servo status when alarm occurs Instantaneous torque	_
AL22	Servo states when alarm occurs Within onerevolution position(1 pulse unit)	_
AL23	Servo status when alarm occurs ABS counter	-
AL24	Servo status when alarm occurs load inertia moment ratio	—
AL25	Servo status when alarm occurs Bus voltage	—
AL200	Alarm number from Alarm History most recent alarm	_

Device name	Item	Symbol
AL201	Alarm number from Alarm History first alarm in past	_
AL202	Alarm number from Alarm History second alarm in past	_
AL203	Alarm number from Alarm History third alarm in past	_
AL204	Alarm number from Alarm History fourth alarm in past	_
AL205	Alarm number from Alarm History fifth alarm in past	_
AL210	Alarm occurrence time in alarm history most recent alarm	_
AL211	Alarm occurrence time in alarm history first alarm in past	_
AL212	Alarm occurrence time in alarm history second alarm in past	_
AL213	Alarm occurrence time in alarm history third alarm in past	_
AL214	Alarm occurrence time in alarm history fourth alarm in past	_
AL215	Alarm occurrence time in alarm history fifth alarm in past	_
AL230	Detailed alarm from Alarm History most recent alarm	_
AL231	Detailed alarm from Alarm History first alarm in past	_
AL232	Detailed alarm from Alarm History second alarm in past	_
AL233	Detailed alarm from Alarm History third alarm in past	_
AL234	Detailed alarm from Alarm History fourth alarm in past	_
AL235	Detailed alarm from Alarm History fifth alarm in past	_

MELSERVO-JE is equivalent to MELSERVO-J4. However, they have differences in the parameter function. For using the MELSERVO-JE series, refer to the following.

MELSERVO-JE Series Servo Amplifier Instruction Manual

(I) Alarm (extended for MELSERVO-J4-*A)

Device name	Item	Symbol
ALM0	Current alarm number	—
ALM1 ^{*1}	Detailed data of current alarms	_
ALM11	Servo status when alarm occurs Cumulative feedback pulses	_
ALM12	Servo status when alarm occurs Servo motor speed	_
ALM13	Servo status when alarm occurs Droop pulses	_
ALM14	Servo status when alarm occurs cumulative command pulses	_
ALM15	Servo status when alarm occurs command pulse frequency	_
ALM16	Servo status when alarm occurs analog speed command voltage/limit voltage	_
ALM17	Servo status when alarm occurs analog torque command voltage/limit voltage	_
ALM18	Servo status when alarm occurs regenerative load ratio	_
ALM19	Servo status when alarm occurs effective load ratio	_
ALM20	Servo status when alarm occurs peak load ratio	_
ALM21	Servo status when alarm occurs Instantaneous torque	_
ALM22	Servo states when alarm occurs Within onerevolution position(1 pulse unit)	_

Device	ltem	Symbol
name	nem	Symbol
ALM23	Servo status when alarm occurs ABS counter	-
ALM24	Servo status when alarm occurs load inertia moment ratio	_
ALM25	Servo status when alarm occurs Bus voltage	-
ALM 26 to 42	For manufacturer setting	_
ALM43	Servo states when alarm occurs Internal temperature of encoder	
ALM44	Servo states when alarm occurs Setting time	
ALM45	Servo states when alarm occurs Oscillation	
ALM46	Servo states when alarm occurs Number of tough drives	_
ALM 47 to 50	For manufacturer setting	
ALM51	Servo states when alarm occurs Unit power consumption 1 (increment of 1 W)	
ALM52	Servo states when alarm occurs Unit total	
AL M200	Alarm number from Alarm History most	
	recent alarm	
ALM201	past	_
ALM202	Alarm number from Alarm History 2nd alarm in past	_
ALM203	Alarm number from Alarm History 3rd alarm in past	-
ALM204	Alarm number from Alarm History 4th alarm in past	_
ALM205	Alarm number from Alarm History 5th alarm in past	_
ALM206	Alarm number from Alarm History 6th alarm in past	_
ALM207	Alarm number from Alarm History 7th alarm in past	_
ALM208	Alarm number from Alarm History 8th alarm in past	_
ALM209	Alarm number from Alarm History 9th alarm in past	_
ALM210	Alarm number from Alarm History 10th alarm in past	_
ALM211	Alarm number from Alarm History 11th alarm in past	_
ALM212	Alarm number from Alarm History 12th alarm in past	
ALM213	Alarm number from Alarm History 13th alarm in past	_
ALM214	Alarm number from Alarm History 14th alarm in past	_
ALM215	Alarm number from Alarm History 15th alarm in past	_
ALM220	Alarm occurrence time in alarm history most recent alarm	_
ALM221	Alarm occurrence time in alarm history 1st alarm in past	_
ALM222	Alarm occurrence time in alarm history 2nd alarm in past	_
ALM223	Alarm occurrence time in alarm history 3rd alarm in past	_
ALM224	Alarm occurrence time in alarm history 4th alarm in past	_
ALM225	Alarm occurrence time in alarm history 5th alarm in past	_
ALM226	Alarm occurrence time in alarm history 6th alarm in past	_
ALM227	Alarm occurrence time in alarm history 7th alarm in past	_
ALM228	Alarm occurrence time in alarm history 8th alarm in past	_

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15. SERVO AMPLIFIER CONNECTION 15.6 Device Range that Can Be Set

Device	Item	Symbol
name		0,111001
ALM229	Alarm occurrence time in alarm history 9th alarm in past	-
ALM230	Alarm occurrence time in alarm history 10th alarm in past	_
ALM231	Alarm occurrence time in alarm history 11th alarm in past	-
ALM232	Alarm occurrence time in alarm history 12th alarm in past	
ALM233	Alarm occurrence time in alarm history 13th alarm in past	_
ALM234	Alarm occurrence time in alarm history 14th alarm in past	_
ALM235	Alarm occurrence time in alarm history 15th alarm in past	_
ALM240	Detailed alarm from Alarm History most recent alarm	_
ALM241	Detailed alarm from Alarm History 1st alarm in past	_
ALM242	Detailed alarm from Alarm History 2nd alarm in past	_
ALM243	Detailed alarm from Alarm History 3rd alarm in past	_
ALM244	Detailed alarm from Alarm History 4th alarm in past	_
ALM245	Detailed alarm from Alarm History 5th alarm in past	_
ALM246	Detailed alarm from Alarm History 6th alarm in past	_
ALM247	Detailed alarm from Alarm History 7th alarm in past	_
ALM248	Detailed alarm from Alarm History 8th alarm in past	_
ALM249	Detailed alarm from Alarm History 9th alarm in past	_
ALM250	Detailed alarm from Alarm History 10th alarm in past	_
ALM251	Detailed alarm from Alarm History 11th alarm in past	_
ALM252	Detailed alarm from Alarm History 12th alarm in past	_
ALM253	Detailed alarm from Alarm History 13th alarm in past	_
ALM254	Detailed alarm from Alarm History 14th alarm in past	_
ALM255	Detailed alarm from Alarm History 15th alarm in past	_
*1 MEI	SERVO IE is equivalent to MELSERVO IA	

However, they have differences in the parameter function. For using the MELSERVO-JE series, refer to the following. ٢

J MELSERVO-JE Series Servo Amplifier Instruction Manual

(m) External input

Device name	Item	Symbol
D10	Input device statuses	_
DI1	External input pin statuses	_
DI2	Statuses of input devices switched on through communication	_

(n) External output

Device name	Item	Symbol
DO0	Output device statuses	_
DO1	External output pin statuses	—

(o) Input signal for test operation (for test operation)

Device name	Item	Symbol
TMI0	Input signal for test operation	_

(p) Forced output of signal pin (for test operation)

Device name	Item	Symbol
TMO0	Forced output from signal pin	—

(q) Set data (for test operation)

Device name	Item	Symbol
TMD0	Writes the speed (test mode)	-
TMD1	Writes the acceleration/deceleration time constant (test mode)	_
TMD3	Writes the moving distance (test mode)	—

15.7 Precautions



15

Station number setting in the servo system Make sure to establish servo system with the station number set with the host address. For details of host address setting, refer to the

following.

15.4.1 Setting communication interface (Communication settings)

GOT clock function

Since the servo amplifier does not have a clock function, the settings of [Adjust] or [Broadcast] by GOT clock control will be disabled.

Servo amplifier/test operation using the GOT During the servo amplifier/test operation, when the communication between the GOT and the servo amplifier is interrupted for 0.5[ms] or more, the servo amplifier decelerates, stops, and then gets into the servo lock status. During the servo amplifier/test operation, continue the communication constantly by monitoring the status display of the servo amplifier on the GOT screen, etc.



16 ROBOT CONTROLLER CONNECTION

16.1	Connectable Model List	16 - 2
16.2	System Configuration	16 - 2
16.3	GOT Side Settings	16 - 3
16.4	PLC Side Settings	16 - 5
16.5	Device Range that Can Be Set	16 - 7
16.6	Precautions	16 - 7

16.1 Connectable Model List

The following table shows the connectable models.

	0				
Series	Model name	Clock	Communication type	Connectable model ^{*2}	Refer to
Robot controller ^{*1}	CRnD-700 CR750-D CR751-D	0	Ethernet	27 23 GS	16.2.1

*1 For details on the connection with CRnQ-700/CR750-Q/CR751-Q (Q172DRCPU), refer to Mitsubishi Products (Chapter 5 to 13).
 *2 When the robot controller is connected, use the GOT outside the safety fence.

16.2 System Configuration

16.2.1 Connecting to robot controller (CRnD-700)



		Connection apple			Number of connectable	
Model name	Communication type	*1*2	segment length ^{*3}	Option device	Model	equipment
CRnD-700 ^{*4*5} CR750-D ^{*4*5} CR751-D ^{*4*5}	Ethernet	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3, 4, or 5 • 100BASE-TX Shielded twisted pair cable (STP) of category 5 or 5e	100m	- (Built into GOT)	ет 27 6т 23 GS	1 GOT
 *1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet no Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable E system. Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standard. *2 A straight cable is available. When connecting QnUDE(H) and GOT directly with Ethernet cable, remember that the by cross cable is availa *3 A length between a hub and a node. The maximum distance differs depending on the Ethernet device to be used. to 10BASE-T: Max. 4 nodes for a cascade connection (500m) to 100BASE-TX: Max. 2 nodes for a cascade connection (205m) When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the cascades. For the limit, contact the switching hub manufacturer. *4 For the system configuration of CRnD-700, CR750-D/CR751-D, refer to the following manual. 			thernet network system. plicable Ethernet network e is available. mit for the number of			
ار حج CRnD-700, CR750 *5 Select [CRnD-700] for [Con For [Ethernet] of GT Design		et [CRnD-700] for [Controller Type] in [Ethernet] of GT Designer3, refer to the follow	iviANUAL iet] of GT Des ring.	igner3.		

16.3.4 Ethernet setting

16.3 GOT Side Settings

16.3.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.



- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- Set the following items.
 - Manufacturer: Mitsubishi
 - Controller Type: Set according to the Controller Type to be connected.
 - I/F: Standard I/F(Ethernet):Multi
 - Driver: Ethernet(MELSEC), Q17nNC, CRnD-700, Gateway
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.
 - 16.3.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT.

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following:

1.1.2 I/F communication setting

16.3.2 Communication detail settings

Make the settings according to the usage environment.

Property	Value
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5001
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239
GOT Station	Set the station No. of the GOT. (Default: 1)	1 to 64
GOT Ethernet Setting	Set the GOT IP address, subnet mask, default gateway, peripheral S/ W communication port No., transparent port No.	
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5001)	1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153)
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (× 10ms)

POINT

Example of [Detail setting]. For examples of [Detail setting], refer to the following.

16

16.3.3 GOT Ethernet setting

GOT IP Address:	192		168		3		18
-	Select fr	rom	GOT	Set	ting Li	st:	
							Ŧ
						List	t
Subnet <u>M</u> ask:	255	÷	255	•	255	÷	0
<u>D</u> efault Gateway:	0		0	÷	0		0
Peripheral <u>S</u> /W Communication Port No.:	5015		* *				
Transparent Port No.:	5014		A				

Item	Description	Range
GOT IP Address	Set the IP address of the GOT. (Default: 192.168.0.18)	0.0.0.0 to 255.255.255.255
Subnet Mask	Set the subnet mask for the sub network. (Only for connection via router) If the sub network is not used, the default value is set. (Default: 255.255.255.0)	0.0.0.0 to 255.255.255.255
Default Gateway	Set the router address of the default gateway where the GOT is connected. (Only for connection via router) (Default: 0.0.0.0)	0.0.0.0 to 255.255.255.255
周辺 S/W 通信 用ポート No.	Set the GOT port No. for the S/W communication. (Default: 5015)	1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153)
トランスペア レント用ポー ト No .	Set the GOT port No. for the transparent function. (Default: 5014)	1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153)

16.3.4 Ethernet setting



Item	Description	Range
Host	The host is displayed. (The host is indicated with an asterisk (*))	—
N/W No.	Set the network No. of the connected Ethernet module. (Default: blank)	1 to 239
PLC No.	Set the station No. of the connected Ethernet module. (Default: blank)	1 to 64
Type ^{*1}	Set the type of the connected Ethernet module. CRnD-70(fixed)	CRnD-70(fixed)
IP address	Set the IP address of the connected Ethernet module. (Default: blank)	0.0.0.0 to 255.255.255.255
Port No.	Set the port No. of the connected Ethernet module. (Default: 5001)	1024 to 65534
Communication	UDP (fixed)	UDP (fixed)

*1 Select [CRnD-700] for [Controller Type].

POINT.

- (1) Example of [Ethernet] For examples of [Ethernet], refer to the following.
- 16.4 PLC Side Settings
- (2) Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

- GOT2000 Series User's Manual (Utility)
- (3) Precedence in communication settings When settings are made by GT Designer3 or the Utility, the latest setting is effective.

16.4 PLC Side Settings

Mc	Reference	
Robot controller	CRnD-700	16.4.1

16.4.1 Connecting to robot controller (CRnD-700)

This section describes the settings of a GOT and a robot controller in the following case of system configuration.

POINT,

Robot controller (CRnD-700)

For details of the robot controller (CRnD-700), refer to the following manual.

CRnD-700 SET UP MANUAL

System configuration



Parameter settings for CRnD-700

Parameter settings for CRnD-700

(1) For RT ToolBox2



O: Necessary △: As necessary ×: Not necessary

(2) For R32TB or R56TB

Parameter	💌 2 : USBR 🔤 Doint	TOOLD 💌
Find	-Parametar list	
Find word	Search Read	
Parameter	Explanation	Attribute 🔺
MORG	Mechanical stopper origin (Joint coordinate)	Robot
MXTCOM1	Ethernet Host IP Address1 for Realtime control	Common
MKTCOM2	Ethernet Host JP Address2 for Realtime control	Common
MXTCOM3	Ethernet Host IP Address3 for Realtime control	Common 🔍
MXTTOUT	MXT command timeout (7.1msec x N)	Common 📅
NETGW	Ethernet Gateway IP Address	Common
NETHSTIP	Ethernet Host IP Address for data link x 9(OPT11-OPT19)	Common 🛞
NETIP	Ethernet IP Adress	Common
NETLOGIN	Ethernet Login name	Common
NETMODE	Ethernet server mode (Liserver / Dictiont OPT11-OPT19)	Common
NETWER	Ethernet subnet mask	Common
NETPORT	Ethernet Part number (Realtime, OPT11 - OPT19)	Common
NETPSPEC	Ethernet Packet specification for datalink (0:0/d/1:New)	Common
NETPOSIND	Ethernet Password	Common 💌
Parameter manu	Cdit Peremeter NETIP Read	: > >> >>
100%	00	
15:46:40	KE	II HENU
	(For R56TB)	

ltem	Set value	Setting necessity at GOT connection
NETIP	192.168.0.19	0
GOTPORT	5001	0

 \bigcirc : Necessary \triangle : As necessary \times : Not necessary

[Controller Setting] and [Ethernet] of GT Designer3

(1) Communication settings

Item	Set value
GOT NET No.	1
GOT PLC No.	1
GOT IP Address	192.168.0.18
GOT 機器通信用ポート No.	5001
Retry	3times
Startup Time	3sec
Timeout Time	3sec
Delay Time	0ms

(2) GOT Ethernet setting

Item	Set value (Use default value)
GOT IP Address	192.168.3.18
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
周辺 S/W 通信用ポート No.	5015
トランスペアレント用ポート No .	5014

16

(3) Ethernet setting

Item		Set value
	Host	*
	N/W No.	1
	PLC No.	2
Ethernet setting No.1	Туре	CRnD-700
	IP address	192.168.0.19
	Port No.	5001 (fixed)
	Communication	UDP (fixed)

POINT

[Controller Setting] and [Ethernet] of GT Designer3 For [Controller Setting] and [Ethernet] of GT Designer3, refer to the following.

16.3.1 Setting communication interface (Communication settings)

- Confirming communication state of CRnD-700
- (4) When using the Command Prompt of Windows[®]. Execute a Ping command at the Command Prompt of Windows[®].
 - (a) When normal communication
 C:\>Ping 192.168.0.19
 Reply from 192.168.0.19: bytes=32 time<1ms
 TTL=64
 - (b) When abnormal communication C:\>Ping 192.168.0.19 Request timed out.
- (5) When abnormal communication At abnormal communication, check the followings and execute the Ping command again.
 - Cable connecting condition
 - Parameter settings
 - Operation state of the CRnD-700. (faulty or not)
 - The IP address of the CRnD-700 specified for the Ping command.

16.5 Device Range that Can Be Set

For details on the device range that can be used on the GOT, refer to the following.

2.1 MELSEC-Q/QS, Q17nD/M/NC/DR, CRnD-700

16.6 Precautions

When setting IP address

Do not use "0" and "255" at the end of an IP address.

(Numbers of *.*.*.0 and *.*.*.255 are used by the system)

The GOT may not monitor the controller correctly with the above numbers.

Consult with the administrator of the network before setting an IP address to the GOT and controller.

When connecting to the multiple network equipment (including GOT) in a segment By increasing the network load, the transmission speed between the GOT and PLC may be reduced.

The following actions may improve the communication performance.

- · Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT



17

CNC CONNECTION

17.1	Connectable Model List	17 - 2
17.2	System Configuration	17 - 3
17.3	Connection Diagram	17 - 7
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17.6	Device Range that Can Be Set 1	7 - 20
17.7	Precautions 1	7 - 20

17. CNC CONNECTION

17.1 Connectable Model List

	8				
Series	Model name	Clock	Communication type	Connectable model	Refer to
MELDAS C6/C64 *1			RS-232 RS-422	27 23 GS	17.2.1
	S FCA C6 X FCA C64 X	~	MELSECNET/10 ^{*2}	27 23 GS	17.2.2
		^	CC-Link(ID)	GT GT 27 23 GS	17.2.3
			Ethernet	27 C GS GS	17.2.4

The following table shows the connectable models.

*1 Use the NC system software version D0 or later.

*2 Includes the case on the MELSECNET/H network system in the NET/10 mode. The GOT cannot be connected to the remote I/O network..

For the connection to CNC C70, refer to Mitsubishi Products (Chapter 5 to Chapter 13).

17 - 2

17.2 System Configuration

17.2.1 Direct connection to CPU



	CNC		Connection cable		GOT		Number of		
Model name	F311 cable	Communi cation type	Cable model	Max. distance	Option device	Model	connectable equipment		
MELDAS C6/C64		RS-232 (User) RS232 connection diagram 1) 15m	(Jeen) RS232 connection diagram 1)	232 User RS232 connection diagram 1)	15m	- (Built into GOT)	ат 27 ат 23 GS		
ч					1011	GT15-RS2-9P	ст 27 ст 23 GS	1 COT for 1 DLC	
MELDAS C6/C64	(Lisen*3	GT01-C300 GT01-C1000 GT01-C2000 GT01-C3000	GT01-C30R4 GT01-C100R4 GT01-C100R4	G آلتین ^{*3} RS-422	GT01-C30R4-25P(3m) GT01-C100R4-25P(10m)	30 5m	- (Built into GOT)	ат 27 ат 23 GS	
*2	(presaring)		² GT01-C200R4-25P(20m) GT01-C300R4-25P(30m)	30.311	GT15-RS4-9S	бт 27 23 GS			

*1 Connect the connector of the CNC side to TERMINAL.

*2 Connect the connector of the CNC side to SIO.

*3 To be prepared by the user, referring the following.

MELDAS C6/C64 CONNECTION AND MAINTENANCE MANUAL (BNP-B2255) F311 Cable Production Drawing

POINT,

 Connectable network MELSECNET/10 connection includes the case that MELSECNET/H is used in NET/10 mode. The GOT cannot be connected to the remote I/O network.

Connect the GOT to the following network systems as an ordinary station.

- MELSECNET/10 network system (PLC to PLC network) optical loop system
- MELSECNET/10 network system (PLC to PLC network) coaxial bus system
- (2) MELSECNET/H network module

When connecting the MELSECNET/H network module to the MELSECNET/10 network system, specify the MELSECNET/10 Mode as a network type.



CNC		Connection cable		GOT		Number of	
Model name	Expansion unit	Communication type	Cable model	Max. distance	Option device	Model	connectable equipment
	FCU6-EX878	MELSECNET/10 (Coaxial bus system)	Coaxial cable *3	*1	GT15-J71BR13 ^{*2}	ст 27 ст 23 GS	31 GOTs
	FCU6-EX879	MELSECNET/10 (Optical loop system)	Optical fiber cable *3	*1	GT15-J71LP23-25 ^{*2}	ст 27 23 GS	63 GOTs

*1 The overall extension cable length and the length between stations vary depending on the cable type to be used and the total number of stations.

For details, refer to the following manuals.

C6/C64/C64T CONNECTION AND MAINTENANCE MANUAL BNP-B2255

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

*2 Specify the MELSECNET/10 Mode as the Communication Settings.For the setting, refer to the following

[37 17.4.1 Setting communication interface (Communication settings)

*3 For the coaxial cable and optical fiber cable, refer to the following manuals.

C6/C64/C64T CONNECTION AND MAINTENANCE MANUAL BNP-B2255

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373



*1 The overall extension cable length and the length between stations vary depending on the cable type to be used and the total number of stations.

For details, refer to the following manuals.

C6/C64/C64T CONNECTION AND MAINTENANCE MANUAL BNP-B2255

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

*2 Specify Ver.1 as the mode setting in the Communication Settings to use it. For details of the settings, refer to the following the manual.

17.4.1 Setting communication interface (Communication settings)

*3 For the specifications and inquiries of the CC-Link dedicated cable, refer to the following.

CC-Link Partner Association's home page: http://www.cc-link.org/

17.2.4 Ethernet connection



CNC		Connection cable ^{*1}		GOT		Number of	
Model name	Expansion unit	Commun ication type	Cable model	Maximum segment length ^{*2}	Option device	Model	connectable equipment
MELDAS C6/C64	FUC6-EX875 *2*4	Ethernet	 100BASE-TX Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 5 or higher 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP) of category 3 or higher 	100m	- (Built into GOT)	ет 27 ^{GT} 23 GS	128 GOTs (recommended to 16 units or less)

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver or other system equipment corresponding to the applicable Ethernet network system.

Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

A cross cable is available for connecting the GOT to the Ethernet module.

*2 A length between a hub and a node.

The maximum distance differs depending on the Ethernet device to be used.

The following shows the number of the connectable nodes when a repeater hub is used.

- 10BASE-T: Max. 4 nodes for a cascade connection (500m)
- 100BASE-TX: Max. 2 nodes for a cascade connection (205m)

When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.

For the limit, contact the switching hub manufacturer.

*3 For the system configuration of the expansion unit, refer to the following manuals.

C6/C64/C64T CONNECTION AND MAINTENANCE MANUAL BNP-B2255

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

*4 Select [AJ71QE71] for [Controller Type] in [Ethernet] of GT Designer3.

For [Ethernet] of GT Designer3, refer to the following.

17.4.4 Ethernet setting

17.3 Connection Diagram

The following diagram shows the connection between the GOT and the CNC.

17.3.1 RS-232 cable

- Connection diagram
- (1) RS232 connection diagram 1)



- Precautions when preparing a cable
- (2) Cable length

The length of the RS-232 cable must be 15m or less.

(3) GOT side connector

For the GOT side connector, refer to the following.

1.4.1 GOT connector specifications

17.4 GOT Side Settings

17.4.1 Setting communication interface (Communication settings)

Set the channel of the connected equipment.

LSEC-QnA, ME			
ne <u>M</u> anufa	duren MITSUBISH		35
R/Duplex Setta	er Type: MELSEC-Qn	A, MELDAS C6*	
ting Informatio	Standard U	F(R5232)	-
ommunication Onvert	AJ71QC24,	MELDAS C6*	-
teway Clent Details	etting		$ \longrightarrow $
TP Server		harr	4
edundant	Property Transmission Speed/RPS')	19200	
i No. Switch	Data Bt	8 bit	
	Stop Bit	1 br:	
	Party	Odd	
	Retry(Times)	U	
	Timeout Time(Sec)	3	
	Delay Time(ms)	0	
	1		715

- **1.** Select [Common] \rightarrow [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - · Manufacturer: Mitsubishi
 - Controller Type:
 - MELSEC-QnA/Q/QS, MELDAS C6*
 - I/F: Interface to be used
 - Driver:
 - For direct connection to CPU AJ71QC24, MELDAS C6* For ELSECNET/10 connection MELSECNET/H (used in MNET/10 mode of [@@@])For CC-Link (ID) connection

 - CC-Link Ver2 (ID)
 - CC-Link (ID)
 - For Ethernet connection
 - Ethernet (MELSEC), Q17nNC, CRnD-700
- 4. The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

17.4.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

17.4.2 Communication detail settings

Make the settings according to the usage environment.

(1) AJ71QC24, MELDAS C6*

Property	Value
Transmission Speed(BPS)	19200
Data Bit	8 bit
Stop Bit	1 bit
Parity	Odd
Retry(Times)	0
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 19200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Data Bit	Set this item when change the data length used for communication with the connected equipment. (Default: 8bit)	8bit (fixed)
Stop Bit	Specify the stop bit length for communications. (Default: 1bit)	1bit (fixed)
Parity	Specify whether or not to perform a parity check, and how it is performed during communication. (Default: Odd)	Odd (fixed)
Retry	Set the number of retries to be performed when a communication timeout occurs. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300ms

Property	Value
Network Type	MNET/H mode
Network No.	1
Station No.	1
Group No.	0
Mode Setting	Online(Auto Reconnect)
Transmission Speed(Mbps)	25
Refresh Interval(Times)	1
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Network Type	Set the network type. (Default: MNET/H mode)	MNET/H mode MNET/10 mode MNET/H EXT mode
Network No.	Set the network No. (Default: 1)	1 to 239
Station No.	Set the station No. of the GOT. (Default: 1)	1 to 64
Mode Setting	Set the operation mode of the GOT. (Default: Online (auto. reconnection))	 Online (auto. reconnection) Offline Test between slave station^{*1} Self-loopback test^{*1} Internal self- loopback test^{*1} H/W test^{*1}
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 300ms
Refresh Interval	Set the number of refreshes to secure the send/receive data in station units during communication. (Default: 1time) Valid when [Secured data send/ Secured data receive] is marked by the control station side network parameters of the MELSECNET/H network system.	1 to 1000times
Transmission Speed	Set the communication transmission speed. (Default: 25Mbps) When specifying [MNET/10 mode] as the network type, only 10Mbps can be set applicable.	10Mbps/25Mbps
*1	For details, refer to the following ma	anual. NET/H Network System

Q corresponding MELSECNET/H Network System Reference Manual (PLC to PLC network)

POINT.

When MELSECNET/H communication unit is used When connecting to the MELSECNET/10 network using the MELSECNET/H communication unit, specify [MNET/10 mode] as [Network Type]. 17

(3) CC-Link Ver.2 (ID)

Property	Value
Station No.	1
Transmission Rate	0:Online:156kbps
Mode	Ver.1
Expanded Cyclic	Single
Occupied Station	1 station
Input for Error Station	Clear
Retry(Times)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range
Station No.	Set the station No. of the GOT. (Default: 1)	1 to 64
Transmission Rate ^{*1}	Set the transmission speed and the mode of the GOT. (Default: 0)	0 to E
Mode	Set the mode of CC-Link. (Default: Ver.1)	Ver.1/Ver.2/ Additional/ Offline
Expanded Cyclic	Set the cyclic point expansion. (Default: Single)	Single/ Double/ Quadruple/ Octuple
Occupied Station	Set the number of stations occupied by the GOT. (Default: 1 Station)	1 Station/4 Stations
Input for Error Station	Set Clear/Hold at an error occurrence. (Default: Clear)	Clear/Hold
Retry	Set the number of retries to be performed when a communication timeout occurs. When no response is received after retries, a communication times out. (Default: 3times)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	3 to 90sec
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 300ms

*1 Transmission speed settings The following lists the transmission speed settings of the CC-Link communication.

Set value	Description
0	Online: 156kbps
1	Online: 625kbps
2	Online: 2.5Mbps
3	Online: 5Mbps
4	Online: 10Mbps
5	Line test: 156kbps
6	Line test: 625kbps
7	Line test: 2.5Mbps
8	Line test: 5Mbps
9	Line test: 10Mbps
A	Hardware test: 156kbps
В	Hardware test: 625kbps
С	Hardware test: 2.5Mbps
D	Hardware test: 5Mbps
E	Hardware test: 10Mbps

For details of the hardware test, refer to the following manual.

CC-Link System Master/Local Module User's Manual for CC-Link module to be used

(4) Ethernet (MELSEC), Q17nNC, CRnD-700, and gateway

Property	Value
GOT Net No.	1
GOT Station	1
GOT Ethernet Setting	192.168.3.18
GOT Communication Port No.	5001
Retry(Times)	3
Startup Time(Sec)	3
Timeout Time(Sec)	3
Delay Time(ms)	0

Item	Description	Range			
GOT Net No.	Set the network No. of the GOT. (Default: 1)	1 to 239			
GOT Station	Set the station No. of the GOT. (Default: 1)	1 to 64			
GOT Ethernet Setting	Set the GOT IP address, subnet mask, default gateway, peripheral S/W communication port No., transparent port No.	17.4.3 GOT Ethernet Setting			
GOT Communication Port No.	Set the GOT port No. for the connection with the Ethernet module. (Default: 5001)	1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153)			
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 3times)	0 to 5times			
Startup Time	Specify the time period from the GOT startup until GOT starts the communication with the PLC CPU. (Default: 3sec)	3 to 255sec			
Timeout Time	Timeout Time communication to time out. (Default: 3sec)				
Delay Time	Set the delay time for reducing the load of the network/destination PLC. (Default: 0ms)	0 to 10000 (× 10ms)			

17.4.3 GOT Ethernet Setting

is setting is shared by other Ethernet driv	ver setting	IS.					
GOT IP Address:	192		168	•	3	÷	18
	Select fro	om (GOT !	Set	ting Li	st:	
							Ŧ
						List	t
Subnet <u>M</u> ask:	255	÷	255	÷	255	÷	0
Default Gateway:	0	÷	0	÷	0		0
Peripheral <u>S</u> /W Communication Port No.:	5015		×				
Transparent Port No.:	5014		A V				

Item	Description	Range				
GOT IP	Set the IP address of the GOT.	0.0.0.0 to				
Address	255.255.255.255					
Subnet Mask	Set the subnet mask for the sub network.(Only for connection via router) If the sub network is not used, the default value is set. (Default: 255.255.255.0)	0.0.0.0 to 255.255.255.255				
Default Gateway	Default Gateway Default (Default gateway where the GOT is connected.(Only for connection via router) (Default: 0.0.0.0)					
Peripheral S/W Communicatio n Port No.	Peripheral S/WSet the GOT port No. for the S/WCommunicatiocommunication.n Port No.(Default: 5015)					
Transparent Port No.	Set the GOT port No. for the transparent function. (Default: 5014)	1024 to 5010 to 5014 to 65534 (Except for 5011, 5012, 5013 and 49153)				

POINT.

 Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

(2) Precedence in communication settingsWhen settings are made by GT Designer3 or the Utility, the latest setting is effective.

17.4.4 Ethernet setting

- Q OH1:MELSEC-QnA, ME			-							
CH2:None CH3:None	Manufacture	871	METSUBISHL							
GH4:None	Controller T	yp <u>e</u> :	MELSEC-QnA, MELDAS C6*							
Reation Information			*Please set	the Ethern	et Setting of the Contro	oller with a list of lo	wer so			
Gateway	∦F:		Standard 1/	F(Ethernet):Multi	+	R.			
Communication	Driver:		Ethernet(M	ELSEC), Q	17nNC, CRnD 700, Gate	way 🔻	Ĕ.			
22 Gateway Client	Detail Setti	10		GOT Ethernet Setting						
FTP Server	[Dece	e antes		105	has					
- Q Redundant	60	T Net No.								
- 🕲 Station No. Switch	GO	T Station		1						
	GO	GOT Ethemet Setting			192.368.3.18					
	GO	T Commu	inication Port I	Vo. 50	5001					
	Ret	ry(Times)	3		_				
	Sta	rtup Tim	e(Sec)	3						
	Tin	eout Tin	e(Sec)	3						
	De	зу птац	π5)	0						
	Citera I C	112								
	Eniciner 5	curly -								
	1	X	n n 5							
		Host	Net No.	Station	Unit Type	JP Address	1			
	1	*	1	1	Q371E71/LJ71E71	1.1.1.1	ŧ.			

Item	Description	Range
Host	The host is displayed. (The host is indicated with an asterisk (*))	_
N/W No.	Set the network No. of the connected Ethernet module. (Default: blank)	Network No. of CNC ^{*1}
PLC No.	Set the station No. of the connected Ethernet module. (Default: blank)	Station No. of CNC
Туре	Set the type of the connected Ethernet module. (Default: QJ71E71)	AJ71QE71
IP Address	Set the IP address of the connected Ethernet module. (Default: blank)	IP address of CNC
Port No.	Set the port No. of the connected Ethernet module. (Default: 5001)	5001
Communication	UDP (fixed)	UDP (fixed)

*1 For operating CNC monitor function, set N/W No. to "239".

17.5 CNC Side Settings

17.5.1 MELSECNET/10 connection

Parameter setting

Set parameters related to MELSECNET/10 with MELSEC's peripheral devices in the same way as parameter setting of MELSEC CPU, and write them on CNC by Personal computer. However, in the case of using the default parameters or not requiring separate settings due to normal stations, it is not necessary to set the network

(1) Control Station Parameter

If you wish to place the control station in CNC and set the common parameters, set the network parameters by peripheral device and write them on CNC. An example of parameter setting by GPPW is as follows. Set the first I/O No. as follows according to the expansion slot to which the unit is inserted. (a) Start I/O No.



(b) Example of GX Developer setting



For details of the parameter setting, refer to the following.

- C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373
- (2) Normal Station Parameter

As for normal stations, it is not necessary to set parameters unless separate settings are required. The refresh parameters are set and written as required. In this case, the parameter setting of the first I/O No. is the same as in the case of the control station.

Expansion unit settings

(1) FCU6-EX879 (Optical fiber cable)

No.	Switch name		Settings										
	Condition setting	Set th	Set the operation condition.										
	switch	SW	Description	ON	ON								
		1	Network type ^{*1}	type ^{*1} Inter-PC net (PC)						Remote I/O net			
		2	Station type ^{*4}	Control	station (N	/NG)							
		3	Used parameter ^{*2}	Comme	on parame	eters (PR	M)	Default	paramete	er (D.PR	M)		
1)		4	Number of stations ^{*2}	OFF	8	8 ON		OFF	32	ON 6	64		
		5	(Valid when SW3 is ON)	OFF	Station	OFF	Station	ON	Station	ON	Station		
	ON	6	B/W total points ^{*2}	OFF	2К	ON	4K	OFF	6K	ON	8K		
		7	(Valid when SW3 is ON)	OFF	points	OFF	points	ON	points	ON	points		
		8	Not used	Always	OFF								
2)	Station number setting switch	Station number setting ^{*2*3} (Setting range) 01 to 64: Station number Other than 01 to 64: Setting error											
3)	Setting switch of group number	Grouț Not u	Group number setting Not used, fixed to 0										
4)	Setting switch of network number	Netwo (Setti 001 to Other	Network number setting ^{*2} (Setting range) 001 to 255: Network number Other than 001 to 255: Setting error										
5)	Mode setting switch	Mode 0: On 1: Ca 2: Off 3 to F	setting ^{*2} line nnot be used line :: Test mode										

*2 Set as necessary.

*3 Set the station No. not to overlap with that of other units.

*4 Set the station type to the control station.

For details of the parameter setting, refer to the following.

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(2) FCU6-EX878 (Coaxial cable)

Switch layout	No.	Switch name	Settings											
			Set t	Set the operation condition.										
		switch	SW	SW Description OFF										
_			1	Network type*1 Inter-PC net (PC) Remo							Remote I/O net			
			2	Station type ^{*4}	Norma	ıl stati	on (N.ST	Γ)	Control station (MNG)					
			3	Used parameter ^{*2}	Comm (PRM)	ion pa	rameters	S	Defaul (D.PRI	t paraı M)	meter			
	1)		4	*2	OFF	8	ON	16	OFF	32	ON	64		
			5	Number of stations ² (Valid when SW3 is ON)	OFF	Sta tio n	OFF	Sta tio n	ON	Sta tio n	ON	Sta tio n		
			6	B/W total points*2	OFF	2K	ON	4K	OFF	6K	ON	8K		
			7	(Valid when SW3 is ON)	OFF	poi nts	OFF	poi nts	ON	poi nts	ON	poi nts		
			8	Not used	Always	s OFF								
 (水) (水) (水) (×) (×)<td>2)</td><td colspan="9">2) Station number setting switch 2) Station number setting^{*2*3} (Setting range) 01 to 64: Station number Other than 01 to 64: Setting error</td><td></td><td></td>	2)	2) Station number setting switch 2) Station number setting ^{*2*3} (Setting range) 01 to 64: Station number Other than 01 to 64: Setting error												
	3)	Setting switch of group number Group number setting Not used, fixed to 0												
	4)	Setting switch of network number	Netw (Sett 001 t Othe	rork number setting ^{*2} ing range) o 255: Network number r than 001 to 255: Setting er	rror									
	5)	Mode setting switch	Mode 0: Or 1: Ca 2: Of 3 to I	e setting ^{*2} nline annot be used fline E: Test mode										

*1 Set the network type to the PLC to PLC network.

*2 Set as necessary.

*3 Set the station No. not to overlap with that of other units.

*4 Set the station type to the control station.

For details of the parameter setting, refer to the following.

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

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17. CNC CONNECTION 17.5 CNC Side Settings

17.5.2 CC-Link (ID) connection

Parameter setting

Set parameters related to CC-Link connection with GX Developer and write them to CNC by PLC. However, in the case of using the local stations, it is not necessary to set the network parameters.

(1) Master station parameter

It is necessary to set and write the network parameters to CNC with GX Developer. The following shows an example of parameter settings.Set the first I/O No. as follows according to the expansion slot to which the unit is inserted.

(a) Start I/O No.



(b) Example of GX Developer setting



chrowledge Manigument Dear Zhaok into Canca

For details of the parameter setting, refer to the following.

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

Expansion unit settings

Make the communication settings by the setting switch in the expansion unit (FCU6-HR865).

(1) Expansion unit





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CNC CONNECTION

(2) Contents of setting

No.	Switch name		Settings												
		Set the	operation condition.												
				Switch	status	;						Setting validity			
	Condition setting switch	No.	Description	OFF	OFF ON					Master station (Standby master station)	Local station (Standby master station)				
		SW1	Station type ^{*1}	Master station/local Standby master station					(Valid)	(Valid)					
		SW2	Not used	Always OFF					-	-					
1)		SW3	Not used	Always OFF					-	-					
		SW4	Data link error station input data status ^{*1}	Clear				Hold				valid	valid		
		SW4		OFF	1	OFF	2	ON	3	ON	4				
		SW5	Number of occupied stations ^{*1}	OFF	Sta tio n	ON	Sta tio n	ON	Sta tion	OFF	Sta tio n	Invalid	valid		
		SW7	Not used	Always	S OFF							-	-		
		SW8	Not used	Always	S OFF							-	-		
		This sw	itch sets the unit operation	n status.								[
	Mode setting switch	No.	Name	Descrip	otion							Settability			
												Master station	Local station		
		0	Online ^{*1}	Automatic online return provided when data link is enabled							Yes	Yes			
		1		Link with remote I/O net mode						Yes	No				
2)		2	Offline ^{*1}	Data link offline state						Yes	Yes				
		3	Line test 1 ^{*1}	Line test 1 in offline state							Yes	No			
		4	Line test 2 ^{*1}	Line test 2 in offline state							Yes	No			
		5	Parameter confirmation test ^{*1}	Checks the parameter details						Yes	No				
		6	Hardware test ^{*1}	Test Ex	kpansi	on unit (F	CU6-	HR865)				Yes	Yes		
		7 to F	Not usable												
	Transmission speed	This sw	itch sets the unit transmiss	sion spe	ed.										
	setting switch	No.	Description												
		0	156Kbps ^{*1}												
2)		1	625Kbps ^{*1}												
3)		2	2.5Mbps ^{*1}												
		3	5Mbps ^{*1}												
		4	10Mbps ^{*1}												
		5 to F	Not usable												
4)	Setting switch of station No.	This sw (Setting Master Local st Standby	itch sets the unit station N range) station: 00 tation: 01 to 64 y master station: 01 to 64	0. ^{*1*2}											
	*1 *2	Set as Set the For det	necessary. station No. not to overlap ails of the parameter settir	with tha ng, refer	t of oth to the	ner units. following	 .								

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

17.5.3 Ethernet connection

System configuration

The following shows the example of the system configuration when using the CNC monitor function.



Parameter setting

Set parameters related to Ethernet with MELSEC's peripheral devices in the same way as parameter setting of MELSEC CPU, and write them on CNC by Personal computer.

(1) Network parameter setting

Set the network parameters by peripheral device and write them on CNC. An example of parameter setting by GPPW is as follows. Set the first I/O No. as follows according to the expansion slot to which the unit is inserted.

(a) Unit No.



(b) Example of GX Developer setting

		[++-]	(meta						
	H bw	Vodale 12.2	Hana Ku2	Vodale 1. 4 🔺					
Assessing a	Bhand -	bure .	1.4. ·	bure 🗸					
Stat. 70 Ko.									
EWARE NO.									
Total subjects									
Linch to									
Status No.									
Effertweddi (Fiéld on Foliage								
	Jenne Mit des Landsmallins								
	FTE Fusikitus								
	Louist was parameter			-					
				•					
لواقية وتمسيلا	Notesting 2: A cody set 1. Exhibition	eded (flaster, 7, 4 ead, st.)							
Let 13 Sec. Wild Law .									
nte file all enformed and enforcements and the standard of the module of Receivers and the state of the state									
Anomaleme Meximum Foots, particular Linns Millions									

For details of the parameter setting, refer to the following.

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373

POINT,

IP address setting

IP address setting on GX Developer is invalid. Set the IP address by the 7-segment LED and rotary switch of the CNC side, referring to the next page.

(2) CNC side parameter setting

Confirm the CNC side parameter setting with the settings of IP address, gateway address, subnet mask and port No. by the 7-segment LED and rotary switch of the CNC side.

For details of the parameter setting operation, refer to the following.

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373 IV Setting the Ethernet IP Address



17.6 Device Range that Can Be Set

For details of the device range that can be used on the GOT, refer to the following.

2.2 MELSEC-QnA, MELDAS C6 *

17.7 Precautions

17.7.1 Direct connection to CPU

Version of CNC

For MELDAS C6/C64, use NC system software version D0 or later.

17.7.2 MELSECNET/10 connection

Network configuration

Use the MELSECNET/10 mode of MELSECNET/H (PLC to PLC network) or MELSECNET/10 (PLC to PLC network) to configure a network including the GOT.

- (1) The following networks including the GOT cannot be configured.
 - MELSECNET/10 (Remote I/O network)
 - MELSECNET/H (Remote I/O network)
- (2) When configuring the network (MELSECNET/H (PLC to PLC network) including the GOT, refer to the following.
 - 9. MELSECNET/H CONNECTION (PLC TO PLC NETWORK), MELSECNET/10 CONNECTION (PLC TO PLC NETWORK)

Monitoring range

Only CNC of the same networks No. can be monitored in GOT.

For details, refer to the following manual.

3.1 Access Range for Monitoring Stations on Network Systems

Starting GOT with CNC connection (MELSECNET/10 connection)

With the CNC connection (MESLSECNET/10 connection), the data link starts approximately 10 seconds after the GOT starts.

When a network error occurs in the system alarm

When a system alarm regarding a network error occurs with the CNC connection (MELSECNET/10 connection), the system alarm is kept displaying on the GOT even though the error factor is removed.

To cancel the system alarm display, restart the GOT.

Version of CNC

For MELDAS C6/C64, use NC system software version E0 or later.

17.7.3 CC-Link (ID) connection

Using cyclic transmission

- (1) I/O signal for master station
 - Do not turn on the reserved output signals in the output signals (remote output: RY) to the GOT from the master station.

When the reserved output signal is turned on, the CNC system may be malfunctioned.

For the assignment of I/O signals in the GOT, refer to the following manual.

- MODEL GT15-J61BT13 CC-Link communication unit User's Manual
- GT15 CC-Link communication unit User's Manual
- (2) CC-Link Mode CNC is not compatible with CC-Link Ver.2.
- (3) When GOT malfunctions The cyclic output status remains the same as before becoming faulty.
- For transient transmission
- (1) Access range that can be monitored The GOT can access to the CNC mounting the master and local station of the CC-Link System. It cannot access another network via the CC-Link module.
- GOT startup in CNC connection (CC-Link connection (intelligent device station)) In the CNC connection (CC-Link connection (intelligent device station)), the data link is started approximately 10 seconds after the GOT startup.

When a network error occurs in the system alarm

In the CNC connection (CC-Link connection (intelligent device station)), when a network error occurs in the system alarm, the system alarm message cannot be canceled even though the causes are removed.

To cancel the system alarm display, restart the GOT.

Version of CNC

For MELDAS C6/C64, use NC system software version D0 or later.

17.7.4 Ethernet connection

Via network system

GOT with Ethernet communication cannot access the CNCs in another network via the CNC (network module, Ethernet module, etc.).

When connecting to multiple GOTs

When connecting two or more GOTs in the Ethernet network, set each [PLC No.] to the GOT.

17.4.1 Setting communication interface (Communication settings)

When connecting to the multiple network

equipment (including GOT) in a segment By increasing the network load, the transmission speed between the GOT and CNC may be reduced.

The following actions may improve the communication performance.

- · Using a switching hub
- More high speed by 100BASE-TX (100Mbps)
- Reduction of the monitoring points on GOT

Ethernet cable connection

Ethernet cable is so susceptible to noise that you should wire power cables and electric supply cables separately. And you need to attach a ferrite core (attachment) on the control unit side.

For details of the Ethernet cable connection, refer to the following

C6/C64/C64T NETWORK INSTRUCTION MANUAL BNP-B2373 IX Connection Function with GOT



Version of CNC

For MELDAS C6/C64, use NC system software version D0 or later.



MULTIPLE GOT CONNECTIONS



18 GOT MULTI-DROP CONNECTION

18.1 CPU that can be Monitored	. 18 - 2
18.2 Connectable Model List	. 18 - 3
18.3 System Configuration	18 - 13
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18.6 Setting of Serial Multi-Drop Connection Unit	18 - 18
18.7 Precautions	18 - 23

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18. GOT MULTI-DROP CONNECTION

18.1 CPU that can be Monitored

The GOT can monitor only a CPU to which a serial multi-drop connection unit (GT01-RS4-M) is connected directly.



18.2 Connectable Model List

Connecting the CPU to the Serial Multi-Drop Connection Unit (hereinafter referred to as "master module") directly

The following table shows the connectable models.

	Communication type		cation type		
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model
	Q00JCPU				
	Q00CPU ^{*1}				
	Q01CPU ^{*1}				
	Q02CPU ^{*1}		RS-232		GT GT
		0	RS-422	RS-485	27 23 GS
					CT CT
		0	-	-	27 23 GS
	Q12PRHCPU (Main base)				
	Q25PRHCPU (Main base)				
	Q12PRHCPU (Extension base)				GT GT
	Q25PRHCPU (Extension base)	0	-	-	27 23 GS
	Q00UJCPU				
	Q00UCPU		RS-232 RS-422	RS-485	
	Q01UCPU				
MELSEC-Q	Q02UCPU				
(Q mode) ⁴	Q03UDCPU				
	Q04UDHCPU	0			27 23 GS
	Q06UDHCPU				
	Q10UDHCPU				
	Q13UDHCPU				
	Q20UDHCPU				
	Q26UDHCPU				
	Q03UDECPU				
	Q26UDEHCPU				GT GT
	Q50UDEHCPU	0	RS-232	RS-485	27 23 GS *2
	Q100UDEHCPU				
	Q03UDVCPU				
	Q04UDVCPU				
	Q06UDVCPU				
	Q13UDVCPU				
	Q26UDVCPU				
C Controller	Q12DCCPU-V ^{*3}				GT GT
module	Q24DHCCPU-V	0	RS-232	RS-485	27 23 GS
	Q24DHCCPU-LS				
MELSEC-QS ^{*4}	QS001CPU	0	-	-	GT GT 27 23 GS

When in multiple CPU system configuration, use CPU function version B or later. Access via the (RS-232) in the multiple CPU system. Use a module with the upper five digits of the serial No. later than 12042. Ww and Wr devices cannot be monitored. *1

*2 *3 *4

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(Continued to next page)

	Communication type				
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model
MELSEC-L ^{*23}	L02CPU ^{*4} L06CPU ^{*4} L26CPU-BT ^{*4} L02CPU-P ^{*4} L06CPU-P ^{*4} L26CPU-P ^{*4} L26CPU-PBT ^{*4} L02SCPU L02SCPU-P	0	RS-232 RS-422	RS-485	ет ет 23 GS
MELSEC-Q (A mode) ^{*2}	Q02CPU-A Q02HCPU-A Q06HCPU-A	0	RS-232 RS-422	RS-485	27 CS
MELSEC-QnA (QnACPU) ^{*2}	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU	0	RS-422	RS-485	27 23 GS
. ,	Q4ARCPU	0	RS-422	RS-485	Transformed Field Strength Str
MELSEC-QnA (QnASCPU) ^{*2}	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	0	RS-422	RS-485	27 CS
MELSEC-A (AnCPU) ^{*3}	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPUP21 A2ACPUP21 A2ACPUR21 A2ACPUR21 A2ACPUP21-S1 A2ACPUR21-S1 A2ACPUR21-S1 A3ACPUR21 A3ACPUR21 A3ACPUR21 ^{*1} A1NCPUR21 ^{*1} A2NCPUR21 ^{*1} A2NCPUR21 ^{*1} A2NCPUR21-S1 ^{*1} A2NCPUR21-S1 ^{*1} A3NCPUR21 ^{*1} A3NCPUR21 ^{*1}	0	RS-422	RS-485	GT 27 23 GS
MELSEC-A (AnSCPU) ^{*3}	A2USCPU	0	RS-422	RS-485	27 CT GS

When monitoring AnNCPU or A2SCPU, only the following or later software version is used to write to the CPU. • AnNCPU(S1) with link: Version L or later, AnNCPU(S1) without link: Version H or later *1

A2SCPU: Version H or later

Ww and Wr devices cannot be monitored.

*2 *3 *4

SB, SW, Ww, Wr, ER, and BM devices cannot be monitored. When connecting in direct CPU connection, the adapter L6ADP-R2 is required.

			Communi	cation type		
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model	
	A2USCPU-S1					1
	A2USHCPU-S1					
	A1SCPU					
	A1SCPUC24-R2					
MELSEC-A	A1SHCPU	0	RS-422	RS-485	GT GT GS	z
(AnSCPU) ^{*5}	A2SCPU ^{*1}	Ŭ			27 23 00	ō
	A2SHCPU					E E
	A1SJCPU					Щ
	A1SJCPU-S3					Ş
	A1SJHCPU					ō
	A0J2HCPU ^{*1}					с С
	A0J2HCPUP21*1		50.400	50.405	GT GT CO	Ъ
	A0J2HCPUR21*1	- ×	RS-422	RS-485	27 23 ^{GS}	Ř
	A0J2HCPU-DC24 ^{*1}					<u> </u>
	A2CCPU ^{*1}			RS-485		5
MELSEC-A ^{*5}	A2CCPUP21		RS-422		GT GT GS	N N
	A2CCPUR21	_				
	A2CCPUC24					Ö
	A2CCPUC24-PRF					G
	A2CJCPU-S3					
	A1FXCPU					
	Q172CPU*2*3		RS-232 RS-422	RS-485	GT 27 23 GS	
	Q173CPU*2*3					
	Q172CPUN ^{*2}					
	Q173CPUN ^{*2}					
	Q172HCPU					
	Q173HCPU					
Motion controller	Q172DCPU					
CPU (Q Series)	Q173DCPU		PS-232	PS-485	GT GT CS	
	Q172DCPU-S1	0	10-202	KS-400	27 23 ³⁵ ⁴	
	Q173DCPU-S1					
	Q172DSCPU					
	Q173DSCPU					
	Q170MCPU				GT GT	
	Q170MSCPU	0	RS-232	RS-485	27 23 ^{GS}	
	Q170MSCPU-S1					
	A273UCPU	0				
	A273UHCPU	0				
Madaa	A273UHCPU-S3	_	4			
Motion controller		4	-	-	GT GT GS	
CPU (A Series)	A373UCPU-S3	-				
	A17150PU	-				
	A1719CPUL 93N	4				
	11110010-00N	1	1			

*1 When monitoring A0J2HCPU or A2CCPU, only the following or later software version is used to write to the CPU.

- A0J2HCPU (with/without link): Version E or later
- A0J2HCPU-DC24: Version B or later
- A2CCPU: Version H or later

*4

- *2 When using SV13, SV22, or SV43, use the motion controller CPU on which any of the following main OS version is installed.
 - SW6RN-SV13Q□: 00E or later
 - SW6RN-SV22Q□: 00E or later
 - SW6RN-SV43Q□: 00B or later
- *3 Use main modules with the following product numbers.
 - Q172CPU: Product number K****** or later
 - Q173CPU: Product number J******* or later
 - Access via the (RS-232) in the multiple CPU system.
- *5 SB, SW, Ww, Wr, ER, and BM devices cannot be monitored.

б

Communication type					
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model
	A171SHCPU				
	A171SHCPUN				
Motion controller	A172SHCPU	0	RS-422	RS-485	GT GT GS
CPU (A Series) ^{*2}	A172SHCPUN				27 23 00
	A173UHCPU				
	A173UHCPU-S1				
MELSEC-WS	WS0-CPU0	×	RS-232	_	GT_GT_GT
	WS0-CPU1				27 23 00
	QJ72LP25-25				
remote I/O station	QJ72LP25G	×	RS-232	-	27 23 GS
	QJ72BR15				
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	-	et et es
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	-	GT GT GS
CNC C70	Q173NCCPU	0	RS-232	-	27 CT CS
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	0	RS-232	-	CT CT CT CS
	FX ₀	×			
	FXos	~			
	FXon		DS 422	DC 495	GT GT CO
	FX1	×	100-422	100-400	27 23 33
	FX2	×			
	FX2C	*1			
	FX1s				
	FX1N	0			
MELSEC-EX	FX2N	Ŭ			
	FX1NC				
	FX2NC	× *1	RS-232	RS-485	GT GT CS
	FX3S		RS-422	110 400	27 23 00
	FX3G				
	FX3GC	0			
	FX3GE				
	FX3U				
	FX3UC				

*1 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

*2 SB, SW, Ww, Wr, ER, and BM devices cannot be monitored.

			Communication type			
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model	
	FREQROL-A500/A500L					1
	FREQROL-F500/F500L					
	FREQROL-V500/V500L					
	FREQROL-E500					
	FREQROL-S500/S500E					z
	FREQROL-F500J					<u>0</u>
FREQROL	FREQROL-D700					с С
	FREQROL-F700PJ	×	-	-	GT GT GS	Щ
	FREQROL-E700				27 23 30	ź
	FREQROL-A700					Ö
	FREQROL-F700					0
	FREQROL-F700P					Ö
	FREQROL-A800					R
	FREQROL-F800					그
Sensorless servo	FREQROL-E700EX	-				_ <u>7</u>
MELIPM	MD-CX522-□□K(-A0)					Π
	MR-J2S-⊟A					
	MR-J2S-□CP					Ö
	MR-J2S-□CL					Ċ
	MR-J2M-P8A					
MELSERVO	MR-J2M-□DU	×	-	-		
	MR-J3-□A	-				
	MR-J3-□T					
	MR-J4-□A					
	MR-JE-⊟A					

Connecting the CPU to the Serial Multi-Drop Connection Unit (hereinafter referred to as "master module") in computer link connection

The following table shows the connectable models.

			Communio	cation type	
Series	Model name	Clock	Between CPU	Between	Connectable model
			module	and GOT	
	Q00JCPU				
	Q00CPU ^{*1}				
	Q01CPU ^{*1}				
	002CPU*1		DC 000		
		0	RS-232 RS-422	RS-485	27 23 GS
	Q12HCPU				
	Q25HCPU ¹				
		0			07 07
			-	-	
	025PRHCPU (Main base)				
	Q12PRHCPU (Extension base)				
	Q25PRHCPU (Extension base)	0			
	Q00UJCPU				
	Q00UCPU				
	Q01UCPU				
MELSEC-Q	Q02UCPU				
(Q mode) ^{*3}	Q03UDCPU				
	Q04UDHCPU	0			
	Q06UDHCPU				
	Q10UDHCPU				
	Q13UDHCPU				
	Q20UDHCPU				
	Q26UDHCPU				
	Q03UDECPU		RS-232	DO 105	GT GT
			RS-422	RS-485	27 23 ^{GS}
	Q26UDEHCPU				
	Q50UDEHCPU	0			
	Q100UDEHCPU				
	Q03UDVCPU				
	Q04UDVCPU				
	Q06UDVCPU				
	Q13UDVCPU				
	Q26UDVCPU				
C Controllor	Q12DCCPU-V ^{*2}				CT CT
module	Q24DHCCPU-V	0	RS-232	RS-485	^{GT} 27 23 GS
	Q24DHCCPU-LS				
MELSEC OS		~			GT_GT_GS
		0	-		27 23 33

(Continued to next page)

*1 When in multiple CPU system configuration, use CPU function version B or later.

*2 Use a module with the upper five digits of the serial No. later than 12042.

*3 Ww and Wr devices cannot be monitored.

			Communication type			
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model	
	L02CPU					1
	L06CPU					
	L26CPU	_				
	L26CPU-BT	_				
MELSEC-L ^{*1}	L02CPU-P	0	RS-232	RS-485	GT GT GS	Z
	L06CPU-P		RS-422		21 23 23	<u>0</u>
	L26CPU-P	_				្រ
	L26CPU-PBT	_				뿌
	LO2SCPU	_				Ž
	L02SCPU-P					00
MELSEC-Q	Q02CPU-A	_			GT GT GT	<u>ک</u>
(A mode) ^{*1}		- 0	-	-	27 23 GS	Õ
						Ц
		_	50.000			Ë
		0	RS-232 RS-422	RS-485		Ë
MELSEC-QnA			110-422			Ē
(QNACPU)	Q4ACFU					F
	Q4ARCPU	0	-	-		Ö
	02400000					Ŭ
		_	50.000			
		- 0	RS-232 RS-422	RS-485	27 23 GS	
(QIIASCEU)						
	A2UCPU-S1					
	A3UCPU					
	A4UCPU	_				
	A2ACPU	_				
	A2ACPUP21					
	A2ACPUR21	_				
	A2ACPU-S1					
	A2ACPUP21-S1	_				
	A2ACPUR21-S1					
	A3ACPU					
	A3ACPUP21					
MELSEC-A	A3ACPUR21	0	RS-232	-		
(AnCPU)	A1NCPU		RS-422		21 23	
	A1NCPUP21					
	A1NCPUR21					
	A2NCPU					
	A2NCPUP21					
	A2NCPUR21					
	A2NCPU-S1					
	A2NCPUP21-S1					
	A2NCPUR21-S1					
	A3NCPU					
	A3NCPUP21					
	A3NCPUR21					
MELSEC-A (AnSCPU)	A2USCPU	0	RS-232 RS-422			
					(Continued to next page)	

*1 Ww and Wr devices cannot be monitored.

			Communication type			
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model	
	A2USCPU-S1					
	A2USHCPU-S1					
	A1SCPU					
	A1SCPUC24-R2					
MELSEC-A	A1SHCPU				GTGTCC	
(AnSCPU)	A2SCPU	0	-	-	27 23 65	
	A2SHCPU					
	A1SJCPU					
	A1SJCPU-S3					
	A1SJHCPU					
	A0J2HCPU					
	A0J2HCPUP21					
	A0J2HCPUR21	×		-		
MELSEC-A			-			
		0				
	A1EXCPU					
	0172CPU ^{*1*2}					
	Q1720F0	_			CT CS CS	
	Q173CFU	0				
	Q172CPUN * =	_				
	Q173CPUN 12					
	Q172HCPU					
	Q173HCPU	_				
Motion controller	Q1/2DCPU		RS-232	RS-485		
CPU (Q Series)	Q173DCPU	0	RS-422		GT GT GS	
	Q1/2DCPU-S1					
	Q173DCPU-S1	_				
		_				
		0			GT_ GT_ GS	
		0			27 23 63	
	A273UHCPU	-				
	A273UHCPU-S3	-				
Motion controller	A373UCPU	1	RS-232		GT GT	
CPU (A Series)	A373UCPU-S3	0	RS-422	-		
	A171SCPU	1	R3-422			
	A171SCPU-S3	1				
	A171SCPU-S3N					

*1 When using SV13, SV22, or SV43, use the motion controller CPU on which any of the following main OS version is installed. SW6RN-SV13Q□: 00E or later

- SW6RN-SV22Q□: 00E or later
- SW6RN-SV43Q□: 00B or later
- *2 Use main modules with the following product numbers.
 Q172CPU: Product number K****** or later
 Q173CPU: Product number J****** or later
- *3 Access via the (RS-232) in the multiple CPU system.

			Communie	cation type		
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model	
	A171SHCPU					1
	A171SHCPUN					
Motion controller	A172SHCPU	0	_	_	GT GT GS	
CPU (A Series)	A172SHCPUN				27 23 65	
	A173UHCPU					z
	A173UHCPU-S1					<u>0</u>
MELSEC-WS	WS0-CPU0	×	-	-	GT GT GS	С Ц
	WS0-CPU1				27 23 00	Щ
	QJ72LP25-25					ź
remote I/O station	QJ72LP25G	×	-	-	27 23 GS	Ö
	QJ72BR15					0
CC-Link IE Field Network head module	LJ72GF15-T2	×	-	-	27 CT CT CS	-DROI
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	×	-	-	et et es	Τ Μυμτι
CNC C70	Q173NCCPU	0		-	27 CT CS	09
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	0	-	-	27 CS	
	FX ₀	×				
	FXos	~				
	FXon	Â				
	FX1	×				
	FX2	×				
	FX2C	*1				
	FX1s					
	FX1N	0				
MELSEC-FX	FX2N	Ŭ	-	-		
	FX1NC		-		21 23	
	FX2NC	× *1				
	FX3S					
	FX3G					
	FX3GC	0				
	FX3GE					
	FX3U					
	FX3UC					

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*1 It is available by installing the real time clock function board or the EEPROM memory with the real time clock function.

18. GOT MULTI-DROP CONNECTION

18.2 Connectable Model List

			Communie	cation type	
Series	Model name	Clock	Between CPU and master module	Between master module and GOT	Connectable model
	FREQROL-A500/A500L				
	FREQROL-F500/F500L				
	FREQROL-V500/V500L				
	FREQROL-E500				
	FREQROL-S500/S500E				
	FREQROL-F500J				
FREQROI	FREQROL-D700				
	FREQROL-F700PJ	×	-	-	GT GT GS
	FREQROL-E700				27 23 00
	FREQROL-A700				
	FREQROL-F700				
	FREQROL-F700P				
	FREQROL-A800				
	FREQROL-F800				
Sensorless servo	FREQROL-E700EX				
MELIPM	MD-CX522-□□K(-A0)				
	MR-J2S-⊟A				
	MR-J2S-□CP				
	MR-J2S-□CL				
	MR-J2M-P8A				
MELSERVO	MR-J2M-□DU	×	-	-	
	MR-J3-∏A	-			-21 2J
	MR-J3-□T				
	MR-J4-⊟A	1			
	MR-JE-□A]			

[Controller Type] and [Communication driver] of GT Designer3 The following table shows the [Controller Type] and [Communication driver] of GT Designer3 for which the GOT multi-drop connection is available.

GOT type		PLC ↔ Serial Multi-Drop Connection	l Unit		
eer gpe	Connection type	Туре	Serial Multi-Drop Connection driver		
	DIRECT	MELSEC-QnU/DC, Q17nD/M/NC/DR, CRnD-700			
GT CONNECTION TO CPU MELSEC-QnA/Q/QS, MELDAS C6* 27 COMPUTER LINK COMPUTER LINK CONNECTION MELSEC-Q(MULTI)/Q MOTION GS DIRECT MELSEC-A					
	CPU COMPUTER LINK	MELSEC-Q(MULTI)/Q MOTION	QnA/L/Q CPU		
	CONNECTION	MELSEC-L			
	DIRECT	MELSEC-A	MELSEC-A		
	CONNECTION TO CPU	MELSEC-FX	MELSEC-FX		

GOT MULTI-DROP CONNECTION

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18.3 System Configuration



*2 The maximum distance from the PLC to the terminal GOT.

*3 When the number of connected GOTs is increased, the response performance decreases.

18.4 Connection Diagram

The following diagram shows the cable connection between the serial multi-drop connection unit and the GOT.

18.4.1 RS-485 cable

Connection diagram

(1) RS485 connection diagram 1)



- *3 Set the terminating resistor setting switch to "Disable".
 - 1.4.3 Terminating resistors of GOT
- *4 Connect a 330Ω terminating resistor to the GOT to be a terminal.
- *5 Make sure to ground the shield of the cable with a ground resistance of 100 Ω or less.
- *6 For the cable for converting D-sub9 pin connector to terminal block, refer to the following.
 - Precautions when preparing a cable(2)

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(2) RS485 connection diagram 2)



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(For 1 pair wiring)



- *1 Use the twisted pair cable for SDA/SDB
- *2 Set the terminating resistor selector to "110 Ω ".
- *3 Set the terminating resistor setting switch of the GOT main unit to "Disable".
 - 1.4.3 Terminating resistors of GOT
- Connect a 110 $\ensuremath{\Omega}$ terminating resistor to the GOT to be a terminal. *4
- *5 Make sure to ground a cable shield line by applying Class D Grounding.

(3) RS485 connection diagram 2)





- Use the twisted pair cable for SDA/SDB, RDA/RDB. *1
- *2 Set the terminating resistor selector to "330 Ω ".
- Set the terminating resistor setting switch of the GOT main unit to "Disable". *3
 - 1.4.3 Terminating resistors of GOT
- *4 Connect a 330 Ω terminating resistor to the GOT to be a terminal.
- *5 Make sure to ground a cable shield line by applying Class D Grounding.

Precautions when preparing a cable

(1) Cable

Use a shielded twisted pair cable of 0.3mm² or more as a cable for GOT multi-drop connection.The following shows recommended model names and manufacturers of the cable to be used.

Manufacturer	Model	Remark	
Mitsubishi Cable Industries,Ltd	SPEV(SB)-0.5-2P	Two-pair cable of 0.5mm ²	
Showa Electric Wire & Cable Co.,Ltd	KMPEV-SB CWS-178 0.5SQ × 2P	Two-pair cable of 0.5mm ²	
Sumitomo Electric	DPEV SB 0.3 × 3P	Three-pair cable of 0.3mm ²	
Industries.,Ltd	DPEV SB 0.5 × 3P	Three-pair cable of 0.5mm ²	
The Furukawa Electric Co.,Ltd	D-KPEV-SB 0.5 × 3P	Three-pair cable of 0.5mm ²	
Euiikura I td	IPEV-SB 2P × 0.3 mm ²	Two-pair cable of 0.3mm ²	
	IPEV-SB 2P \times 0.5 mm ²	Two-pair cable of 0.5mm ²	



Two-pair cable structural drawing example

Three-pair cable structural drawing example

(2) Cable for converting D-sub9 pin connector to terminal block Create by yourself, referring to the following connection diagram.



Make sure to connect the wiring branched on the GOT side connector.

Use a shielded twisted pair cable of 0.2mm² or more. Use an applicable cable to D-sub connector. Wiring should be the shortest distance.

(3) GOT side connector

For the GOT side connector, refer to the following.

1.4.1 GOT connector specifications

Connecting terminating resistors

When connecting a Serial Multi-Drop Connection Unit to the GOT, a terminating resistor must be connected to the GOT.

Set the terminating resistor setting switch to "Disable". For the procedure to set the terminating resistor, refer to the following.

1.4.3 Terminating resistors of GOT

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18.5 GOT Side Settings

18.5.1 Setting communication interface (communication settings)

Set the channel of connecting equipment.

no Es	nufacturer:	MITSUBISHI			- 9
ne Go k/Duplex Settir	ntroller Type:	MELSEC-Q/QS	MELSEC-Q/QS, Q17nD/M/NC/DR, G6-D-700 *		ni -
ting informatio away	4	Standard I/F(8	5422/485>		3
mmunication teway Serve	ver)	Multidrop(Slav	e)	2.	-
teway Clent	tal Setting				Υ_
TP Server He Transfer (F	Property		Value		
dundant Inn No. Switch	Transmissio	n Speed(BPS)	115200		
THE SHEET	Retry(Time	E)	0		
	GOT Addre	me(sec) es	20		
	Delay Time	(me)	ō		

- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- 3. Set the following items.
 - Manufacturer: Set it according to the connected equipment.
 - Controller Type: Set it according to the connected equipment.
 - I/F: Interface to be used
 - Driver: Multi-Drop (slave)
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.
 - 18.5.2 Communication detail settings

Click the [OK] button when settings are completed.

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

18.5.2 Communication detail settings

Make the settings according to the usage environment.

Property	Value
Propercy	Value
Transmission Speed(BPS)	115200
Retry(Times)	0
Timeout Time(Sec)	20
GOT Address	0
Delay Time(ms)	0

Item	Description	Range
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
GOT Address	Specify the station number of the host station in the system configuration. (Default: 0)	0 to 15
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 ms

POINT .

 Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after writing [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

- GOT2000 Series User's Manual (Utility)
- (2) Precedence in communication settings When settings are made by GT Designer3 or the Utility, the latest setting is effective.

18.6 Setting of Serial Multi-Drop Connection Unit

18.6.1 Write the OS

Write the standard monitor OS and communication driver according to the desired connection type onto the serial multi-drop connection unit.

For the OS writing methods, refer to the following manual.

GT Designer3 Version1 Screen design manual

Communicate with GT01-RS4-M
OS Write OF Comm. Param. Write Date Comm. Param. Read
General Standard monitor OS
Communication driver Q QA2L/Q CPU [01.13.00] MELSECA [01.10.00] MELSEC PU [01.11.01]
Wite
Click!
Communication Configuration Close

1. Check-mark a communication driver according to the desired connection type and click the [Write] button.

18.6.2 Setting communication interface (Communication settings)

Make the Serial Multi-Drop Connection Unit interface setting on [Communication with GT01-RS4-M] of GT Designer 3.

For the communication interface driver, set the same communication driver as the serial multi-drop connection.

For details on [Communication with GT01-RS4-M] of GT Designer3, refer to the manuals.

GT Designer3 Version1 Screen design manual

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Controller setting



- 1. Set the following to the driver for the connected equipment.
 - · Connection type dependent

The driver for connection with the GOT is fixed to the following one.

- Multi-drop(Host)
- 2. Perform the detailed settings for the driver.

Communication detail settings

- **3**. Set [Use the system information of Multidrop] as necessary.
 - Setting the multi-drop system information function
- 4. Click the [Write] button when settings are completed.
- If the [Communication with GT01-RS4-M] dialog box is closed, communication setting contents for GT01-RS4-M does not remain.
 - To maintain the communication setting contents, click **Ex** (export).
 - Exporting/Importing the communication setting contents
 - To use communication setting contents which are saved previously, click <u>Im</u> (import).
 - Exporting/Importing the communication setting contents

Setting the multi-drop system information function

1

When checking the connection status of each GOT which is connected to GT01-RS4-M on the PLC side, set the multi-drop system information function. The GOT connection status is stored in the PLC side word device.

(1) Setting on the PLC side word device

mmunicate with	GT01-RS4-M	
📲 OS Write 💻	📲 Comm. Param. Write 📃	📱 Comm. Param. Read
Driver For Connected	GOT: Multidrop(Hest)	Details
Controller Type:	MELSEC-QrU/DC	Details
Use the system info	ormation of Multidrop	etting
The following set (1) Communicatic (2) Communicatic (3) System inform Select a controlle The communicative when this dialog Press the Im/Ex I	transcort secting will be written in Ings can be set for GT01-RS41 in parameter setting of driver for ation ir to be connected with GT01-R to parameter setting is initialized is closed. Juitton when the setting is saved	M. GOT connection controller connection IS4-M and set the details. d d and imported. <u>Im</u> Ex
		Write

 Select [Use the system information of Multidrop] and click the [Set] button. The following dialog window is displayed.



 Set the PLC side word device to [Head Device (10 Points)]. In this example, "D0" is set. (2) Assignment contents of the PLC side word device The following table shows the device assignment contents when setting [Head Device (10 Points)] to "D0".

Device	Description
D0 (Head device+0)	Control signal 1-1
D1(Head device+1)	Station information notification signal
D2(Head device+2)	(Reserve)
D3(Head device+3)	(Reserve)
D4(Head device+4)	(Reserve)
D5(Head device+5)	Slave station control signal
D6(Head device+6)	(Reserve)
D7(Head device+7)	(Reserve)
D8(Head device+8)	(Reserve)
D9(Head device+9)	(Reserve)

(3) Details on the word device assignment contents

(a) Control signal 1-1

Bit position	Description	
bit0	10 second cycle flicker signal	
bit1 to 15	(Reserve)	

< 10 second cycle flicker signal ^{*1} > By the repetition of turning ON/OFF every 5 seconds, the connection between GT01-RS4-M and the PLC can be confirmed on the PLC side. When no repetition of this ON/OFF is observed, GT01-RS4-M is not connected to the PLC.



*1 When writing or clearing data on the program area from the personal computer to the PLC using FA transparent function, flicker of the signal as shown above may be temporarily stopped.

(b) Station information notification signal *² This signal notifies the status of the slave station (GOT) which is connected to the master station (GT01-RS4-M). Only the bit corresponding to the number of connected slave station (GOT) is turned ON and other bits are turned OFF.

bit15	bit14	 bit2	bit1	bit0
Station	Station	 Station	Station	Station
No. 15	No. 14	No. 2	No. 1	No. 0

 ^{1:} Connected

- 0: Unconnected (Including communication error status)
 - *2 When the communication between GT01-RS4-M and the PLC becomes faulty, the station information notification signal is not updated.

- (c) Slave station control signal
 - This signal controls slave stations which are not updated by the master station. Usually, the master station accesses all stations (up to 16 stations). In addition, if stations are temporarily in communication error due to a power disconnection or screen data transfer during the steady operation, the automatic recovery of the station is executed for one station per ten seconds. Therefore, the automatic recovery may take maximum 2 minutes and 30 seconds. Using this control signal, the number of slave stations to be monitored by the master station can be reduced to the actual number of slave stations to be used by a user. This makes the automatic recovery processing smooth. If an error occurs in only one station, the time for the station to recover automatically can be reduced within 10 seconds.

Device value			Act	ion		
0	The master station accesses all the slave stations (station 0 to 15). When the multi-drop system information is not used, the operation is the same.					
	Turning o disconne master st	on the bit cts the sp tation.	correspo becified s	nding to a lave stati	a station I on from tl	No. าe
Other	bit15	bit14		bit2	bit1	bit0
than 0	Station No. 15	Station No. 14		Station No. 2	Station No. 1	Station No. 0
	1Conne 0Uncor	ected nnected				

When the bits are off and the master station and the slave stations are in communication, the communication with the corresponding slave stations is disconnected if the above corresponding bits are turned on.

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- Exporting/Importing the communication setting contents
- (1) Export



- After determining the storage location as necessary, name the file and save it. The file format is [*.ini] (fixed).
- (2) Import

	My Document	3	-	
My Recent Documents	My Computer	Naces		
Desktop My Documents				
My Computer				
F F	file name:			Open
My Network F	Files of type:	Comm Param Setting file(*.ini)	-	Cance

 Enter the name of the file previously saved and open the file.

The file format is [*.ini] (fixed).

- Communication detail settings Make the settings according to the usage environment.
- (3) For the connection with GOT

De	Detail Settings 🛛 🔀					
	Driver: Multidrop(Host)					
	Property	Value				
	Transmission Speed(BPS)	115200				
	Retry(Times)	0				
	Timeout Time(Sec)	3				
	Delay Time(ms)	0				
OK Cancel						

Item	Item Description	
Transmission Speed	Set this item when change the transmission speed used for communication with the connected equipment. (Default: 115200bps)	4800bps, 9600bps, 19200bps, 38400bps, 57600bps, 115200bps
Retry	Set the number of retries to be performed when a communication timeout occurs. When receiving no response after retries, the communication times out. (Default: 0time)	0 to 5times
Timeout Time	Set the time period for a communication to time out. (Default: 3sec)	1 to 30sec
Delay Time	Set this item to adjust the transmission timing of the communication request from the GOT. (Default: 0ms)	0 to 300 ms

(4) For the connected equipment

Set the communication detail settings of the driver for controllers according to the connection type.

Refer to each chapter.

18.6.3 Setting switches

Set the switches according to the connection type.

POINT,

Serial Multi-Drop Connection Unit For details on the Serial Multi-Drop Connection Unit, refer to the following manual.

Serial Multi-Drop Connection Unit User's Manual



Terminating resistor selector switch

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PLC communication selection switch

18.7 Precautions

- Connecting GOT2000 in multi-drop connection
- (1) Standard monitor OS installation, Writing Communication driver

When connecting GOT2000 in multi-drop connection, the writing of the standard monitor OS and communication driver to the GOT from GT Designer3 (GOT1000) (Version 1.12N or later), as well as the writing of the standard monitor OS and communication driver to the serial multi-drop connection unit are required

The standard monitor OS or communication driver cannot be installed from GT Designer3 (GOT2000).

(2) Device specification

Network No. and station No. are not supported.

Station number setting on GOT

Set each station number so that no station number overlaps.When the station No. is duplicated, the GOT whose station No. is duplicated cannot be monitored normally.

The station number can be set without regard to the cable connection order. There is no problem even if station numbers are not consecutive.



The example of a Station No. setting

Extended/Option function of GOT

The extended/option functions of GOT shown below are not available.

System monitor, Device monitor, Ladder monitor, A list editor, FX list editor, Intelligent unit monitor, Network monitor, Q motion monitor, Servo amplifier monitor, CNC monitor, Backup/restore, CNC data I/O, SFC monitor, Ladder editor, Log viewer, MELSEC-L troubleshoot, Motion SFC, motion program (SV43) editor, Motion program (SV43) I/O

System alarm

The alarms of the serial multi-drop connection unit are displayed on the system alarm. The alarms of the connected PLC are not displayed.

Activating the serial multi-drop connection unit

The master module detects a slave GOT, which is connected, at the startup. It may take time to detect again the slave station which is not detected at this point. Activate the master module in the condition that a communication can be made after the startup of the slave GOT.

Using the multi-drop connection in the multichannel configuration

If a communication timeout error occurs when using the multi-drop connection in the multi-channel configuration, set the send delay time to the serial multi-drop connection unit side.

Communication detail settings

Device update cycle

- When the number of connected slave GOTs and the device points of each GOT increase, the device update cycle on the screen may get slower. In such a case, it is recommended to reduce the device points of each GOT. (Please consider 250 points as a guide of 1 GOT, and 750 points as a guide of the total points.) In addition, when a timeout error occurs, make the timeout time longer in the communication settings of the slave GOT.
- When the device number is set randomly, the device update cycle becomes slower compared to the case that the device number is set consecutively. Therefore, it is recommended to set the device number consecutively.
- Depending on the device points or combination, it may take time to switch the screen. At this time, the device update cycle of other slave station is also affected.

■ FA transparent function

FA transparent function is available for each GOT in the GOT multi-drop connection system.

(1) Standard monitor OS installation, Writing Communication driver

When using FA transparent function in GOT multi-drop connection, the writing of the standard monitor OS and communication driver to the GOT from GT Designer3 (GOT1000) (Version 1.18U or later), as well as the writing of the standard monitor OS and communication driver to the serial multi-drop connection unit are required.

(2) Number of personal computers

Only one personal computer can be connected to the multi-drop connection system.



(3) Monitor speed of GOT

The monitoring performance slows down according to the number of monitoring GOTs. While using FA transparent function, the monitoring performance of the whole multi-drop system decreases. As a result, timeout error may occur in GOTs in the system.

MULTI-CHANNEL FUNCTION

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MULTI-CHANNEL FUNCTION

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19. MULTI-CHANNEL FUNCTION

19.1 What is Multi-channel Function?

Multi-channel Function is a function to monitor up to four FA controllers (PLC CPU, temperature controller, inverter, etc.) on one GOT by writing multiple communication drivers in the GOT.



POINT,

 Before using the multi-channel function This manual describes the procedure to use the multi-channel function, based on the following system configuration example.

19.2.1 Bus connection and serial connection

19.2.2 Ethernet multiple connection

(2) System configuration when the multi-channel function is used The system configuration between GOT and the controllers is the same as that of when not using the multichannel function.

For the system configuration between GOT and the controllers, refer to the following.

 \square Each chapter indicating the system configuration

Features of the multi-channel function

(1) With a single unit of GOT, the system consisting of PLC CPU, temperature controller, servo amplifier and other controllers can be configured.
 One GOT can monitor a PLC CPU, temperature controller and servo amplifier, etc. Therefore, the system configuration, in which several controllers are mixed, can be easily established.
 In addition, each system can be monitored on the GOT screen, and the unified management of the information is possible.



(2) Controlling FXCPU/third party PLC, etc. through the network (MELSECNET/H, etc.) It is possible to control FXCPU/third party PLC, etc. through the network (MELSECNET/H, etc.). For example, it is possible to execute read/write of a device such as FXCPU when the condition is satisfied, using the device of the PLC CPU on the network (MELSECNET/H, etc.) as the trigger for action.



(3) With one GOT, the Ethernet connection and the bus or network connection are available in combination. One GOT can make the Ethernet connections and the bus or network connection. Therefore, the system configuration, in which several networks are linked, can be established. Also, the GOT can monitor multiple controllers on an Ethernet network. (Multi-channel Ethernet connection)



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19.2 System Configuration

19.2.1 Bus connection and serial connection

One GOT can monitor a PLC CPU, temperature controller and servo amplifier, etc. Therefore, the system configuration, in which several controllers are mixed, can be easily established.

In addition, each system can be monitored on the GOT screen, and the unified management of the information is possible.



	Connection type		GOT			Number of
PLC		Connection cable	Channel No.	Option device	Model	connectable equipment
MELSEC-Q	Bus connection	Bus onnection For the system configuration between GOT and the controllers, refer to the following. irect CPU onnection Image: Control of the system configuration	1	GT15-QBUS	ст 27 23 GS	4 connected
OMRON PLC			2	- (Built into GOT)		GOT
OMRON temperature controller	Direct CPU connection		3	GT15-RS2-9P		(4 obannala)
MELSERVO-J2-Super	connection		4	GT15-RS4-9S		(4 channels)
OMRON PLC		For the system configuration between GOT and the controllers, refer to the following.	1		GT	2 connected
OMRON temperature controller	Direct CPU connection		2	- (Built into GOT)	27 97 23 GS	equipment for 1 GOT (2 channels)

Controllers that use Channels No.5 to 8

The following shows the drivers that can be set to Channels No. 5 to 8.

For the system configuration and connection condition with the controller, refer to the chapter of each controller.

Channel No.	Driver ^{*1}	Reference
5 to 7	Barcode Reader, RFID Controller, PC Remote Operation (Serial)	GOT1000 Series Connection Manual (Microcomputer, MODBUS, Products, Peripherals)
8	Barcode Reader, RFID Controller, PC Remote Operation (Serial)	Image: State of the state

*1 Only one channel can be assigned to one driver.

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19.2.2 Ethernet multiple connection

One GOT can make several Ethernet connections and the bus or network connections. Therefore, the system configuration, in which several networks are linked, can be established.



MELSEC-FX	connection	For the system configuration between GOT and the controllers, refer to the following. Image: Configuration Image: Configuration For the system configuration For the system configuration between GOT and the controllers, refer to the	Ι	GT15-R5214-9P	GT	4 connected
QCPU	MELSECNET/H		2 GT15-J71LP23-25	<u>27</u> бт	equipment for 1	
ALLEN-BRADLEY PLC	Ethernet		3	- (Built into GOT)	23 GS	(4 channels)
Robot controller			4			
ALLEN-BRADLEY PLC			1		бт 27	2 connected
	Ethernet	following.	_	- (Built into GOT)	^{GT} 23	GOT
OMRON PLC		Each chapter indicating the system configuration	2		GS	(2 channels)

19.3 GOT Side Settings

19.3.1 Basics of interface selection

This section explains basic knowledge of the multi-channel function.

A general flow of operation from system selection for the multi-channel function to drawing is explained in 19.3.2 to 19.3.6.

It is recommended to refer to 19.3.2 to 19.3.6 when making necessary settings using the multi-channel function for the first time.

Multi-channel function specifications

How the units are installed and the multi-channel function specifications are described below.

(1) Image drawing of unit installation



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(2) Specifications

Item	Specifications	Description	
Max. number of channels	4 channels	 In bus connection and network connection (*1), only 1 channel can be set for one GOT. For the Ethernet connection (*2), up to 4 channels can be set. When the Ethernet interface built in the GOT is used for connection other than communication with a controller (*3), the connection is not included in the count of the number of channels. The interface used for connecting to an external device (*4) is not included in the count of the number of the number of channels. 	
Max. installable number of modules	3	 Multiple identical units can be installed only for serial communication units. It is necessary to calculate the consumed current. (∫	
Allowable number of stages	Max. 3 stages (2 slots)	 A module that occupies 2 slots (*5, *6, *7) must be installed at the first stage. For the video/RGB display, RGB output, and multimedia function, install the unit indicated in *6 at the first stage and the other units at the second or later stage. When a unit indicated in *7 is used, other extension units cannot be installed. The CF card unit must be installed on the last stage, if used. 	
*1 MELSECNET/H connection, MELSECNET/10 connection, CC-Link IE Controller Network connection, CC-Lin (intelligent device station)			
 *2 Ethernet connection, MODBUS[®]/TCP connection *3 Gateway function, MES interface function, Ethernet download 			

*4 Barcode reader, RFID controller, or personal computer (writing remote personal computer operation (serial), FA transparent function, OS install, project data)

*5 GT15-QBUS2, GT15-ABUS2, GT15-J71GP23-SX, GT15-J71LP23-25, GT15-J71BR13, GT15-J61BT13

GT27-V4-Z, GT27-R2-Z, GT27-V4R1-Z, GT27-ROUT-Z, GT27-MMR-Z
 GT15-75QBUSL, GT15-75QBUS2L, GT15-75ABUS2L
Calculating consumed current

For using multiple extension units, a bar code reader, or a RFID controller, the total current for the extension units, bar code reader, or RFID controller must be within the current that the GOT can supply.

For the current that the GOT can supply and the current for the extension units, bar code reader, or RFID controller, refer to the following tables. Make sure that the total of consumed current is within the capacity of the GOT.

(1) Current supply capacity of the GOT

GOT type	Capacity (A)
GT2712-S	
GT2710-S	
GT2710-V	
GT2708-S	
GT2708-V	

(2) Current consumed by an extension unit/barcode reader/RFID controller

Modul	e type	Consumed current (A)	Module type	Consumed current (A)
GT15-QBUS, GT15-75QBUSL,	GT15-QBUS2, GT15-75QBUS2L	0.275 ^{*1}	GT27-V4-Z	0.12 ^{*1}
GT15-ABUS, GT15-75ABUSL,	GT15-ABUS2, GT15-75ABUS2L	0.12	GT27-R2-Z	0*1
GT15-RS2-9P		0.29	GT27-V4R1-Z	0.12 ^{*1}
GT15-RS4-9S		0.33	GT27-ROUT-Z	0.11 ^{*1}
GT15-RS4-TE		0.3	GT27-MMR-Z	0.27 ^{*1}
GT15-J71GP23-SX		1.07	GT15-SOUT	0.08
GT15-J71GF13-T2		0.96	GT15-DIO	0.1
GT15-J71LP23-25		0.56	GT15-DIOR	0.1
GT15-J71BR13		0.77	Bar code reader	*2
GT15-J61BT13		0.56		

*1 Value used for calculating the current consumption of the multi-channel function.

For the specifications of the unit, refer to the manual included with the unit.

*2 When the GOT supplies power to a barcode reader or an RFID controller from the standard interface, add their consumed current. (Maximum value is less than 0.3 A)

(3) Calculation example

(a) When connecting the GT15-J71BR13, GT15-RS4-9S (2 units), and a bar code reader (0.12 A) to the GT2710-V

Current supply capacity of GOT (A)	Total consumed current (A)
2.4	0.77 + 0.33 + 0.33 + 0.12 = 1.55

Since the calculated value is within the capacity of the GOT, they can be connected to the GOT.

(b) When connecting the GT27-MMR-Z, GT15-J71GP23-SX, GT15-RS4-9S (2 units), and a bar code reader (0.3A) to the GT2712-S

Current supply capacity of GOT (A)	Total consumed current (A)
2.4	0.27 + 1.07 + 0.33 + 0.3 = 1.97

Since the calculated value is within the capacity of the GOT, they can be connected to the GOT.

19.3.2 General flow from system selection to drawing

System selection for using the multi-channel function is explained below. Make selection and setting for the multi-channel function by following the order shown below.



19.3.3 Determining the connection type and channel No. (System selection)

Determining the connection type

For GOT27, the combinations of the bus or network connection, the Ethernet connection, and the serial connection are available as shown in the following table.

Connection type		Reference		
	Bus connection	5. BUS CONNECTION		
	MELSECNET/H connection (PLC to PLC network)	9. MELSECNET/H CONNECTION (PLC TO PLC NETWORK)		
	MELSECNET/10 connection (PLC to PLC network)	10. MELSECNET/10 CONNECTION (PLC TO PLC NETWORK)		
	CC-Link IE Controller Network connection	11. CC-Link IE CONTROLLER NETWORK CONNECTION		
Bus/network connection	CC-Link IE Field Network connection	12. CC-Link IE FIELD NETWORK CONNECTION		
	CC-Link connection (intelligent device station)	13. CC-Link CONNECTION (INTELLIGENT DEVICE STATION)		
	CNC connection (MELSECNET/10 connection (PLC to PLC network))	18.2.2 MELSECNET/10 connection (PLC to PLC network)		
	CNC connection (CC-Link connection (intelligent device station))	18.2.3 CC-Link connection (intelligent device station)		
	Ethernet connection	8. ETHERNET CONNECTION		
	Robot controller connection	17. ROBOT CONTROLLER CONNECTION		
	CNC connection (Ethernet connection)	18.2.4 Ethernet connection		
Ethernet connection	Third party PLC connection (Ethernet connection)	Non-Mitsubishi Products 1 • 3. CONNECTION TO OMRON PLC 3.3 Ethernet Connection Non-Mitsubishi Products 2 • 6. CONNECTION TO YASKAWA PLC 6.3 Ethernet Connection • 7. CONNECTION TO YOKOGAWA PLC 7.3 Ethernet Connection • 10. CONNECTION TO ALLEN-BRADLEY PLC 10.3 Ethernet Connection • 14. CONNECTION TO SIEMENS PLC 14.3 Ethernet Connection		
	Microcomputer connection (Ethernet)	Microcomputer, MODBUS Products, Peripherals 3. MICROCOMPUTER CONNECTION (ETHERNET) 		
	MODBUS [®] /TCP connection	Microcomputer, MODBUS Products, Peripherals 5. MODBUS(R)/TCP CONNECTION 		
	Direct CPU connection	6. DIRECT CONNECTION TO CPU		
	Computer link connection	7. COMPUTER LINK CONNECTION		
	CC-Link connection (via G4)	14. CC-Link CONNECTION (Via G4)		
	Inverter connection	15. INVERTER CONNECTION		
	Servo amplifier connection	16. SERVO AMPLIFIER CONNECTION		
	CNC connection (serial connection)	18.2.1 Direct connection to CPU		
	GOT Multi- Drop Connection	19. GOT MULTI-DROP CONNECTION		
Serial connection	Third party PLC connection (serial connection)	 Non-Mitsubishi Products 1 4. CONNECTION TO OMRON PLC 4.2 Serial Connection 6. CONNECTION TO KEYENCE PLC 7. CONNECTION TO KOYO EI PLC 8. CONNECTION TO JTEKT PLC 9. CONNECTION TO SHARP PLC 12. CONNECTION TO TOSHIBA PLC 13. CONNECTION TO TOSHIBA MACHINE PLC 15. CONNECTION TO PANASONIC EW PLC Non-Mitsubishi Products 2 2. CONNECTION TO HITACHI IES PLC 3. CONNECTION TO FUJI FA PLC 4. CONNECTION TO YASKAWA PLC 6.2 Serial Connection 7. CONNECTION TO ALLEN-BRADLEY PLC 10.2 Serial Connection 11. CONNECTION TO GE FANUC PLC 		

⁽Continued to next page)

Connection type		Reference
	Third party PLC connection (serial connection)	Non-Mitsubishi Products 2 • 12. CONNECTION TO LS INDUSTRIAL SYSTEMS PLC • 14. CONNECTION TO SIEMENS PLC
	Third party safety controller connection	Non-Mitsubishi Products 2 13. CONNECTION TO SICK SAFETY CONTROLLER
	Third party servo amplifier connection	Non-Mitsubishi Products 2 14. CONNECTION TO PANASONIC SERVO AMPLIFIER
Third party robot controller connection	Non-Mitsubishi Products 2 • 2. CONNECTION TO IAI ROBOT CONTROLLER • 15. CONNECTION TO HIRATA CORPORATION HNC CONTROLLER	
Serial connection	Third party temperature controller connection	Non-Mitsubishi Products 1 • 5. CONNECTION TO OMRON TEMPERATURE CONTROLLER • 10. CONNECTION TO SHINKO TECHNOS INDICATING CONTROLLER • 11. CONNECTION TO CHINO CONTROLLER Non-Mitsubishi Products 2 • 5. CONNECTION TO FUJI SYS TEMPERATURE CONTROLLER • 8. CONNECTION TO FUJI SYS TEMPERATURE CONTROLLER • 3. CONNECTION TO YOKOGAWA TEMPERATURE CONTROLLER • 3. CONNECTION TO AZBIL (former YAMATAKE) CONTROL EQUIPMENT • 9. CONNECTION TO RKC TEMPERATURE CONTROLLER
Microcomputer Connection (Serial)	Microcomputer Connection (Serial)	Microcomputer, MODBUS Products, Peripherals 2. MICROCOMPUTER CONNECTION (SERIAL)
	MODBUS [®] /RTU connection	Microcomputer, MODBUS Products, Peripherals 4. MODBUS(R)/RTU CONNECTION

The following shows the applicable combinations of connection types, the number of channels, and restricted functions.

				O: Alle	owed \triangle : Restricted	
		GOT to be used	Functions that ar	e restricted by the	connection type ^{*1}	
Item	Allowable combination of connection types	0727	FA transparent function			
		6127	RS-232	USB	Ethernet	
(a)	 Bus/network connection: 1 channel Serial connection: 1 to 3 channels 	Max. 4 channels	△*2	0	0	
(b)	Bus/network connection: 1 channelEthernet connection: 1 to 3 channels	Max. 4 channels	△*2	0	\triangle^{*3}	
(c)	Ethernet connection: 1 to 3 channelsSerial connection: 1 to 3 channels	Max. 4 channels	△*2	0	\triangle^{*3}	
(d)	 Bus/network connection: 1 channel Ethernet connection: 1 to 2 channels Serial connection: 1 to 2 channels 	Max. 4 channels	۵**2	0	۵ ^{*3}	
(e)	Serial connection: 4 channels	Max. 4 channels	△*2	0	0	
(f)	Ethernet connection: 4 channels	Max. 4 channels	\triangle^{*2}	0	×	

*1 When the functions below are used, the connectable number of channels may be restricted depending on the combination of the functions to be used.

Barcode function

*2

RFID function

Video display function
 RGB display function
 Report function

External I/O function
Sound output function

· Remote personal computer operation function

The video display function, multimedia function and RGB display function cannot be used together. For details, refer to the following.

19.3.4 Determining the GOT side interface (Interface selection)

For the FA transparent function via the RS-232 connection, the RS-232 interface built in the GOT is available only.

When the RS-232 interface built in the GOT is already used, the FA transparent function is not available.

*3 When a GOT and PLC are connected by Ethernet connection, connecting a GOT and a personal computer by Ethernet is not allowed.

Determining the channel No.

(1) Channel No. of PLC, motion controller, temperature controller, inverter, servo amplifier, CNC, robot controller

After determining the connection type to be used, determine the channel Nos. (CH No. 1 to CH No. 4) to be used for the respective connection types.

There are no special cautions to be attended to for determining channel Nos.

Set the channel No. by selecting [Common] \rightarrow [Controller Setting] from the menu.

[37 1.1.1 Setting connected equipment (Channel setting)

(2) Channel No. of external devices (fingerprint unit, barcode reader, RFID controller, personal computer and serial printer)

When connecting a barcode reader, RFID controller, or personal computer, select the channel No. (No. 5 to No. 8) for each external device.

- (a) Number of external devices that can be connected to the GOT
 One barcode reader, RFID controller, or personal computer can be connected to one GOT.
 One driver must be set for one channel No. (No. 5 to No. 8) in the communication settings.
- (b) Operator authentication (external authentication) When using the operator authentication (external authentication), the RFID controller is available for the channel No. 8 only.
- (c) External devices that requires the power supply from the GOT When using the barcode reader or RFID controller that requires the power supply from the GOT, set the channel No.8.

When the channel No.5 to No.7 is set, the GOT cannot supply the power.



Write down the following items selected in this section to the check sheet.

Selection of connection type

Write down the name of connection type to be used.

19.5 Multi-channel Function Check Sheet	■ Ch (1)	eck sheet No.1 (selection of connec Channel No. of PLC, motion controller C controller (No.1 to No.4)	ction type and interface) CPU, temperature controller, inverter, servo amplifier, CNC, robot
	CH No.	Selection of connection type ([: 19.3.3)	Selection of interface (communication unit) ([13.3.4)
	1	Connection name Bus(Q)	
	2	Connection name OMRON PLC	
	3	Connection name OMRON temp.	
	4	Connection name Servo amplifier	
	(2)	Channel No. of barcode reader, RFID o	ontroller, personal computer (CH No. 5 to 8)
	CH Na.	Selection of connection type (EFF 18.3.3)	Selection of interface (communication unit)
	5	Connection name Barcode reader	
	6	Connection name	
	7	Connection name	
	8	Connection name RFID controller connection	

19.3.4 Determining the GOT side interface (Interface selection)

To use the multi-channel function, add interfaces to the GOT with the following methods if required.

- Install communication units on the extension interfaces.
 - Use communication units installed on the extension interfaces with the RS-232 interface, the RS422/485 interface, and/or the Ethernet interface built in the GOT.



For the connection via the connection type selected in 19.3.3, select interfaces and communication units to be used. Select the interfaces and communication units according to the connection type by referring to the following.

Selected connection type	Reference for required interface and communication unit
Bus connection	This section ■ GOT interface used for bus connection
MELSECNET/H connection (PLC to PLC network)	
MELSECNET/10 connection (PLC to PLC network)	
CC-Link IE Controller Network connection	
CC-Link IE Field Network connection	This section GOT interface used for network connection
CC-Link connection (intelligent device station)	
CNC connection (MELSECNET/10 connection (PLC to PLC network), CC-Link connection (intelligent device station))	
Ethernet connection	
Third party PLC connection (Ethernet connection)	
Robot controller connection	
CNC connection (Ethernet connection)	GOT Interface used for Ethernet connection
Microcomputer connection (Ethernet)	
MODBUS [®] /TCP connection	
Direct CPU connection	
Computer link connection	
CC-Link connection (via G4)	
Inverter connection	
Servo amplifier connection	
CNC connection (serial connection)	
GOT Multi- Drop Connection	
Third party PLC connection (serial connection)	GOT interface used for serial connection
Third party safety controller connection	
Third party servo amplifier connection	
Third party robot controller connection	
Third party temperature controller connection	
Microcomputer Connection (Serial)	
MODBUS [®] /RTU connection	
Other functions	This section Interfaces and option units used for other functions

GOT interface used for bus connection

For the bus connection, use the following communication units.

Interface	Model ^{*1}			
Bus connection unit	GT15-75QBUS(2)L, GT15-ABUS(2)	GT15-75ABUS(2)L,	GT15-QBUS(2),	

*1 To mount multiple units, the GT15-QBUS(2) or GT15-ABUS(2) is required.

POINT

(1) Bus connection units to be used

GT15-QBUS(2) and GT15-ABUS(2) can be used independent of the number of serial connection channels. When using the multi-channel function for the first time, it is recommended to use GT15-QBUS(2) or GT15-ABUS(2).

(2) Restrictions by bus connection unit installation

For the following functions, use the GT15-QBUS(2) or GT15-ABUS(2), regardless of the number of channels used for the serial connection.

With the GT15-75QBUS(2)L or GT15-75ABUS(2)L, the following functions are not available.

	Function		
Remote personal computer operation (serial),	Video display function,	Multimedia function,	
External I/O function,	RGB display function,	Sound output function	

GOT interface used for network connection

For the network connection, use the following communication units.

Interface	Model
MELSECNET/H communication unit	GT15-J71LP23-25,GT15-J71BR13
CC-Link IE Controller Network communication unit	GT15-J71GP23-SX
CC-Link IE Field Network communication unit	GT15-J71GF13-T2
CC-Link communication unit	GT15-J61BT13

GOT interface used for Ethernet connection

For the Ethernet connection, use the following interface built in the GOT and communication unit.

Inter	face	Name
Name		Ethernet interface*1
*1	Up to four channels	s can be used

Up to four channels can be used.

GOT interface used for serial connection

For the serial connection, provide interfaces equivalent to the number of channels by using the following interfaces built in the GOT and communication units in combinations.

Interface	Name/model
Interface built in GOT	RS-232 interface ^{*1} , RS-422/485 interface
Serial communication module	GT15-RS2-9P,GT15-RS4-9S,GT15-RS4-TE

*1 The operator authentication (external authentication) or the FA transparent function (RS-232 communication) uses the RS-232 interface built in the GOT.

Interfaces and option units used for other functions

When the following functions are used in combinations, the number of available channels may vary according to the combinations of units

Fu	nction	Reference
Sound output function	External I/O function,	(1) (a)
Remote personal computer operation (serial), Multimedia function,	Video display function, RGB display function	(1) (b)
Remote personal computer operation (Ethernet), Gateway function,	Ethernet download, MES interface function	(1) (c)
RFID function,	Barcode function, Remote personal computer operation (serial),	(1) (d)

Refer to the explanation below to check if the number of channels for the multi-channel function to be used is restricted or not. If it is restricted, review the system configuration.

- (1) Number of stages taken up by the individual functions (number of slots)
 - (a) Report function and sound output function



The printer unit, sound output unit, or external I/O unit is required depending on the function to be used.

Each unit uses one stage (one slot) of an extension interface.

(b) Remote personal computer operation (serial), video display function, multimedia function and RGB display function



A video input unit, an RGB input unit, a video/RGB input unit, an RGB output unit or a multimedia unit is required corresponding to the function to be used. Each type of unit uses 1 stage (2 slots) of extension interface. Only one piece of each type of unit can be installed on a GOT.

(c) Remote personal computer operation (Ethernet), Ethernet download, and gateway function



Use the interface built in the GOT. The Ethernet communication unit is not applicable.

(d) Barcode function, RFID function, and remote personal computer operation (serial)



Use the interface built in the GOT or a serial communication unit. A serial communication unit uses 1 stage (1 slot) of extension interface.



Write down the following items selected in this section to the check sheet.

Selection of interface (communication unit)

Write down the name of interface and the model name of communication unit to be used for each of the connection type.

3 19.5 Multi-channel Function Check Sheet

CH No.	Selection of connection type	\cap	Selection of interface (communication unit)
1	Connection name BUS(Q)		GT15-QBUS2
2	Connection name OMRON PLC		Ethernet interface built in the GOT
3	Connection name OMRON temp.		RS-422/485 interface built in the GOT
4	Connection name Servo amplifier		GT15-RS2-9P
		\checkmark	01101102 01
(2) сн №.	Channel No. of barcode reader, RFID c	onti	roller, personal computer (CH No. 5 to 8)
(2) CH No.	Channel No. of barcode reader, RFID c	ontr	coller, personal computer (CH No. 5 to 8)
(2) CH No. 6	Channel No. of barcode reader, RFID c Selection of connection type (고국 18.3.3) Connection name Barcode reader Connection name	ont	off of No. 2 of roller, personal computer (CH No. 5 to 8) Selection of interface (communication unit) ([]] = 19.34) GT15-RS2-9P
(2) CH No. 6 7	Channel No. of barcode reader, RFID c		GT15-RS2-9P

(Continued to next page)



Write down the following items to the check sheet.

Attaching the communication unit

1. Write down the name of communication unit to be used for each of the connection type.





 After writing down the names of communication units, write down CH No. to be assigned to respective units based on the entry in ■ Check Sheet No. 1 (selection of connection type and interface).



3. After writing down CH No., write down the communication driver name for each connection type. For the communication drivers used for the respective connection types, refer to the following.





19.3.5 Setting for communication settings



Make communication settings based on the interface and the installation position of the respective communication units.



Make settings for Communication Settings by GT Designer3 referring to the check sheet where the necessary information has been written.

The positions that the settings should be made on the communication settings screen are specified on the check sheet by numbers.





This completes the setting for Communication Settings. Create a screen with GT Designer3.

	CIT NO.	Driver		
-1: RS422/485	4	▼ FREQROL 500/700	•]	Detail Setting
-2: RS232	8	▼ Barcode	•]	Detail Setting
-3: USB	9	- Host (PC)	•]	
-4: Ethernet	0	▼ None	•	Detail Setting
nd I/F Setting				
nd I/F Setting	CH No.	Driver		
nd I/F Setting	CH No.	Driver	•	Detail Setting
nd I/F Setting 1st 2nd	CH No. 1 2	Driver Bus(Q) MELSEC-FX		Detail Setting Detail Setting

Example: Setting example for "Bus connection (1 channel) + Serial connection (3 channels) + Bar code reader"

Example: Setting example for "MELSECNET/H connection (1 channel) + Serial connection (1 channel)"

	CH No.	Driver	
F-1: RS422/485	0	▼ None	Detail Setting
/F-2: RS232	0	✓ None	Detail Setting
I/F-3: USB	9	+ Host (PC)	
I/F-4: Ethernet RS232 Setting — Enal tend I/F Setting	0 ble the 5	None None V power supply	Detail Setting
I/F-4: Ethernet RS232 Setting — Enal	0 ble the 5 CH No.	None V power supply Driver	Detail Setting
I/F-4: Ethernet RS232 Setting — [] Ena tend I/F Setting 1st	0 ble the 5 CH No. 1	None V power supply Driver MELSECNET/H	Detail Setting Detail Setting
I/F-4: Ethernet RS232 Setting — [] Ena tend I/F Setting 1st 2nd	0 ble the 5 CH No. 1 2		

Example: Setting	example for	Ethernet	connection	(4 channels)
------------------	-------------	----------	------------	--------------

	CH No.	Driver	
F-1: RS422/485	0 -	None	 Detail Setting
F-2: RS232	0 🔹	None	Detail Setting
F-3: USB	9 *	Host (PC)	•
F-4: Ethernet	Multi 🔻	EthernetMulti	Detail Setting
RS232 Setting –	able the 5V pov	ver supply	
end I/F Setting			
	CH No.	Driver	
1st	0 -	None	Detail Setting
2nd	0 •	None	 Detail Setting
3rd	0 🗸	None	Detail Setting
			OK Cancel
			OK Cancel
hernet Multi Co	onnection	•	OK Cancel
hernet Multi Cc CH No. [onnection		OK Cancel
hernet Multi Co CH No. [1]	onnection Driver Ethernet(MEI	LSEC), Q17nNC, CRnD-700, Gateway	OK Cancel
hernet Multi Co CH No. [1] 2]	onnection Driver Ethernet(MEI Ethernet(YO	LSEC), Q17nNC, CRnD-700, Gateway KOGAWA), Gateway	
hernet Multi Co CH No. [1 • [2 •] 3 •]	onnection Driver Ethernet(MEI Ethernet(YO Ethernet(YA	LSEC), Q17nNC, CRnD-700, Gateway KOGAWA), Gateway SKAWA), Gateway	
hernet Multi Co CH No. 2 3 4	onnection Driver Ethernet(MEI Ethernet(YO Ethernet(YA	LSEC), Q17nNC, CRnD-700, Gateway KOGAWA), Gateway SKAWA), Gateway 9, Gateway	 OK Cancel Z Detail Setting Detail Setting Detail Setting Detail Setting Detail Setting

19.3.6 Items to be checked before starting drawing

The following describes that should be understood before starting drawing and the functions that should be set beforehand when using the multi-channel function.

Device settings

It is necessary to set the device to be used together with the CH No.



1. Click the device setting button.

2. Click the controller to be set.

3. Set the device.

Accessible range for monitoring

The accessible range for monitoring is not changed even when the multi-channel function is used.

3. ACCESS RANGE FOR MONITORING



Clock function

Set the controller for which adjust/broadcast should be executed by the CH No.

GT Designer3 (GOT2000) Help



FA transparent function

Set the controller for which the FA transparent function should be executed by the CH No.

18.5.1 Setting communication interface (communication settings)

The set CH No. can be changed by the Utility. To execute the FA transparent function for other CH No., change the CH No. using the Utility.



Station No. switching function

Set the controller for which the station No. switching function should be executed by the CH No.



19.4 Precautions

19.4.1 Precautions for use

- Occurrence of the same system alarm at different channels When the advanced system alarm is used, if the system alarms with the same error code occur in different channels the GOT treats the alarms as the same system alarm. Therefore, if the system alarms with the same error code occur one by one, the time of later system alarm occurrence is not reflected to the GOT.
- Confirmation of the channel No. at which a system alarm occurred When a system alarm occurred, confirm the channel No. where the alarm occurred, using the procedure indicated below.
 - (1) Check by [System alarm display] of the utility.

GOT2000 Series User's Manual (Utility)

(2) Monitor the internal devices of the GOT.

GT Designer3 (GOT2000) Help

19.5 Multi-channel Function Check Sheet

This section provides the check sheet to be used for Communication Settings when the multi-channel function is used.

Sections 20.3.3 to 20.3.5 contain explanations of the items to be checked on the check sheet. Checking items explained in these sections using the check sheet on the following page allows you to complete the setting for the multi-channel function.

		Enter t	he selections having been ma	ade	in the steps above to the check s	heet.
		Sele	ection of connection type		4	Shows items and contents to be written on
Write Che Sheet	Section 2 8 10	En	ter the name of connection ty	the check sheet. Also describes an example of the check sheet.		
-	Multi-channel function	■ Ch	eck sheet No.1 (selection of connec			
	check sheet		 Channel No. of PLC, motion controller CPU, temperature controller, inverter, servo amplifier, C controller (No.1 to No.4) 			
		CH No.	Selection of connection type		Selection of interface (communication unit)	0
		1	Connection name Bus(Q)		ل[7 ای.	(4)
		2	Connection name OMRON PLC			
		а	Connection name OMRON temp.			
	\backslash	4	Connection name Servo amplifier	J		
		(2)	Channel No. of barcode reader, RFID c	ontro	vller, personal computer (CH No. 5 to 8)	
	\backslash	CH No.	Selection of connection type		Selection of interface (communication unit)	.4)
		5	Connection name Barcode reader			
		6	Connection name			
	\backslash	7	Connection name			_
		8	Connection name RFID controller connection			

The following symbols are used for each purpose.



Indicates parts where items and details are to be written. Confirm the details and write them to the check sheet.



Check

Indicates parts where written details are to be checked. Confirm the details and perform the Communication Settings.

Check sheet No.1 (selection of connection type and interface)

(1) Channel No. of PLC, motion controller CPU, temperature controller, inverter, servo amplifier, CNC, robot controller (No.1 to No.4)

СН	Selection of connection type	Selection of interface (communication unit)
No.	(]] 19.3.3)	([]] 19.3.4)
1	Connection name	
2	Connection name	
3	Connection name	
4	Connection name	

(2) Channel No. of barcode reader, RFID controller, personal computer (CH No. 5 to 8)

CH No.	Selection of connection type	Selection of interface (communication unit)
5	Connection name	
6	Connection name	
7	Connection name	
8	Connection name	

Check sheet No. 2 (selection of GOT side interface)

Attaching the communication unit (-71) 1.3.5



FA TRANSPARENT FUNCTION



20

FA TRANSPARENT FUNCTION

20.1	FA Transparent Function
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20.3	List of Models that Can Be Monitored 20 - 8
20.4	System Configuration
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20.7	Precautions

20. FA TRANSPARENT FUNCTION

Wireless LAN connection precautions

Wireless LAN connection is available for use only in Japan.

20.1 FA Transparent Function

The FA transparent function allows the sequence programs of the Mitsubishi PLC to be read, written and monitored from a personal computer connected via a GOT.



The following shows the software compatible with the FA transparent function.

POINT,

- The range accessible by software when FA transparent function is used Use of the FA transparent function does not affect the range accessible by the software. For details on accessible range, refer to the manual for the respective software.
- (2) The software settings when using FA transparent function For the software settings, refer to the following when using FA transparent function.
 - 20.6.1 Accessing the PLC by the PX Developer, GX Configurator
 - 20.6.2 Accessing by GX Works2
 - 20.6.3 Accessing by GX LogViewer
 - 20.6.4 Accessing PLC by GX Configurator-QP
 - 20.6.5 Accessing by the MT Developer
 - 20.6.6 Accessing by the MT Works2
 - \fbox 20.6.7 Accessing the servo amplifier by the MR Configurator
 - 20.6.8 Accessing the servo amplifier by the MR Configurator2
 - 20.6.9 Accessing the inverter by the FR Configurator
 - 20.6.10 Accessing PLC by FX Configurator-FP
 - 20.6.11 Accessing by FX3U-ENET-L Configuration tool
 - 20.6.12 Accessing by RT ToolBox2
 - 20.6.13 Accessing by NC Configurator
 - 20.6.14 Accessing by MELSOFT Navigator
 - 20.6.15 Accessing by QnUDVCPU•LCPU Logging Configuration Tool
 - 20.6.16 Accessing by Setting/ Monitoring tool for C Controller module

When connecting the GOT and the personal computer by USB

(1) When connecting the GOT and PLC in bus connection The following shows the software and the accessible PLC CPUs.

PLC CPU	Software			
QCPU (Q mode), C Controller module	MELSOFT Navigator ^{*1} GX Works2 ^{*2} PX Developer ^{*3} MX Component ^{*4} , MX Sheet ^{*5} Setting/Monitoring tool for C Controller module ^{*6} QnUDVCPU•LCPU Logging Configuration Tool ^{*8}			
QCPU (A mode), QnA/ACPU, motion controller CPU (A Series)	MX Component ^{*4} , MX Sheet ^{*5}			
Motion controller CPU (Q Series)	MELSOFT Navigator ^{*1} MT Works2 ^{*9} , MX Component ^{*4} , MX Sheet ^{*5}			
CNC CPU(Q173NCCPU)	NC Configurator ^{*10}			
Robot controller (CRnQ-700)	RT ToolBox2 ^{*11}			
MELSERVO(MR-J3-B) ^{*14}	MR Configurator2*12*13			
MELSERVO(MR-J4-B)*14	MR Configurator2*12*13			
*1 MELSOFT Navigator Version 1.71Z or later is required to use the FA transparent function.				

*2 GX Works2 Version 1.497T or later is required to use the FA transparent function.

*3 PX Developer Version 1.40S or later is required to use the FA transparent function.

*4 MX Component that you can use the FA transparent function is scheduled to be supported soon.

*5 The MX Sheet, please use the MX Component (will be supported soon).

*6 Setting/Monitoring tool for C Controller module Version 4.04E or later is required to use the FA transparent function. (Available soon)

*7 GX LogViewer Version 1.32J or later is required to use the FA transparent function.

*8 QNUDVCPU-LCPU Logging Configuration Tool Version 1.32J or later is required to use the FA transparent function.

*9 MT Developer Version 1.66U or later is required to use the FA transparent function.

- *10 NC Configurator that you can use the FA transparent function is scheduled to be supported soon.
- *11 RT ToolBox2 Version 3.00 or later is required to use the FA transparent function.

*12 Start MR Configurator2 with MT Developer2 Version 1.66U or later.

*13 MR Configurator Version 1.23Z or later is required to use the FA transparent function.

*14 A motion controller is required between the GOT and PLC in bus connection.

The following shows the software and the accessible FLC CFOS.				
PLC CPU	Software			
	MELSOFT Navigator ^{*1}			
	GX Works2 ^{*2}			
OCPU (Q mode)	PX Developer ^{*3}			
	MX Component ^{*4} , MX Sheet ^{*5}			
	GX Logviewer ^{*6}			
	QnUDVCPU•LCPU Logging Configuration Tool ^{*7}			
	MELSOFT Navigator ^{*1}			
	GX Works2 ^{*2}			
LCPU ^{*15}	MX Component ^{*4} , MX Sheet ^{*5} ,			
	GX Logviewer ^{*6}			
	QnUDVCPU•LCPU Logging Configuration Tool ^{*7}			
QCPU (A mode), QnA/ACPU,	MX Component ^{*4} , MX Sheet ^{*5}			
	MELSOFT Novigator*1			
	GY Worke2*2			
EXCPU	EX Configurator-EP ^{*9}			
	FX31LENET_L Configuration tool *10			
	MX Component ^{*4} MX Sheet ^{*5}			
	MELSOET Novigotor*1			
Motion controller CPU (Q Series)	MT Works ^{2*11} MY Component ^{*4} MY Sheet ^{*5}			
FREQROL A700/F700/F700/D700 Series	ER Configurator ^{*12}			
Sensorless servo (FREQROL E700EX)	ER Configurator ^{*12}			
Robot controller (CRnQ-700)	RT ToolBox2*13			
	MB Configurator ^{2*14*15}			
MELSERVO(MR-J4-B) '°	MR Contigurator217 19			
*1 MELSOFT Navigator Versio	on 1.71Z or later is required to use the FA transparent function.			
*2 GX Works2 Version 1.497T	or later is required to use the FA transparent function.			
*3 PX Developer Version 1.40	S or later is required to use the FA transparent function.			

(2) When connecting the GOT and PLC in direct CPU connection

MX Component that you can use the FA transparent function is scheduled to be supported soon. *4

*5 The MX Sheet, please use the MX Component (will be supported soon).

*6 GX LogViewer Version 1.32J or later is required to use the FA transparent function.

*7 QnUDVCPU•LCPU Logging Configuration Tool Version 1.32J or later is required to use the FA transparent function.

The adapter (L6ADP-R2) is required. *8

*9 FX Configurator-FP that you can use the FA transparent function is scheduled to be supported soon.

*10 FX3U-ENET-L Configuration tool that you can use the FA transparent function is scheduled to be supported soon.

*11 MT Developer Version 1.66U or later is required to use the FA transparent function.

*12 FR Configurator that you can use the FA transparent function is scheduled to be supported soon.

*13 RT ToolBox2 Version 3.00 or later is required to use the FA transparent function.

*14 Start MR Configurator2 with MT Developer2 Version 1.66U or later.

*15 MR Configurator2 Version 1.24A or later is required to use the FA transparent function.

*16 A motion controller is required between the GOT and PLC in direct CPU connection.

(3) When connecting the GOT and PLC in computer link connection The following shows the software and the accessible PLC CPUs.

	Coffuero
FLC CFU	Soliware
	MELSOFT Navigator ^{*1}
	GX Works2*2
OCDU(Omede)	PX Developer*3
	MX Component ^{*4} , MX Sheet ^{*5}
	GX LogViewer ^{*6}
	QnUDVCPU•LCPU Logging Configuration Tool*7
	MELSOFT Navigator*1
	GX Works2 ^{*2}
LCPU	MX Component ^{*4} , MX Sheet ^{*5} ,
	GX LogViewer ^{*6}
	QnUDVCPU•LCPU Logging Configuration Tool ^{*7}
Motion controller CPU (Q Series)	MX Component ^{*4} , MX Sheet ^{*5}
*1 MELSOFT Navigator	Version 1.71Z or later is required to use the FA transparent function.

*2 GX Works2 Version 1.497T or later is required to use the FA transparent function.

*3 PX Developer Version 1.40S or later is required to use the FA transparent function.

*4 MX Component that you can use the FA transparent function is scheduled to be supported soon.

*5 The MX Sheet, please use the MX Component (will be supported soon).

*6 GX LogViewer Version 1.32J or later is required to use the FA transparent function.

*7 QnUDVCPU•LCPU Logging Configuration Tool Version 1.32J or later is required to use the FA transparent function.

(4) When connecting the GOT and PLC in Ethernet communication

The following shows the software and the accessible PLC CPUs.	
---	--

PLC CPU	Software			
	MELSOFT Navigator ^{*1} GX Works2 ^{*2*3}			
QCPU (Q mode) ^{*1} C Controller module	MX Component ^{*4} , MX Sheet ^{*5}			
	Setting/Monitoring tool for C Controller module ^{*6}			
	GX LogViewer ⁷⁷			
	QnUDVCPU•LCPU Logging Configuration Tool*8			
	MELSOFT Navigator ^{*1}			
	GX Works2 ^{*2}			
LCPU	MX Component ^{*4} , MX Sheet ^{*5} ,			
	GX LogViewer ^{*7}			
	QnUDVCPU•LCPU Logging Configuration Tool ^{*8}			
FXCPU	GX Works2 ^{*2}			
QCPU (A mode), QnA/ACPU ^{*1}	MX Component ^{*4} , MX Sheet ^{*5}			
Motion controller CPU (O Series)	MELSOFT Navigator ^{*1}			
	MT Works2 ^{*10}			
CNC CPU(Q173NCCPU)	NC Configurator*11			
Robot controller (CRnQ-700, CRnD-700)	RT ToolBox2 ^{*12}			
MELSERVO(MR-J3-B) *15	MR Configurator2*13*14			
MELSERVO(MR-J4-B) *15	MR Configurator2*13*14			

*1 MELSOFT Navigator Version 1.71Z or later is required to use the FA transparent function.

*2 GX Works2 Version 1.497T or later is required to use the FA transparent function.

*3 GX Works2 Version 1.34L or later is required to execute the FA transparent function with using CC-Link IE Field Network Ethernet adapter (NZ2GF-ETB).

C controller module does not support CC-Link IE Field Network. *4 MX Component that you can use the FA transparent function is scheduled to be supported soon.

*5 The MX Sheet, please use the MX Component (will be supported soon).

*6 Setting/Monitoring tool for C Controller module Version 4.04E or later is required to use the FA transparent function.(will be supported soon)

GX LogViewer Version 1.32J or later is required to use the FA transparent function.

*8 QNUDVCPU-LCPU Logging Configuration Tool Version 1.32J or later is required to use the FA transparent function.

*9 Only QCPU can be connected. To connect to QnA/ACPU, connect via QCPU.

*10 MT Developer2 Version 1.66U or later is required to use the FA transparent function.

*11 NC Configurator that you can use the FA transparent function is scheduled to be supported soon.

*12 RT ToolBox2 Version 3.00 or later is required to use the FA transparent function.

*13 Start MR Configurator2 with MT Developer2 Version 1.66U or later.

*14 MR Configurator2 Version 1.23Z or later is required to use the FA transparent function.

*15 A motion controller is required between the GOT and PLC in Ethernet connection.

When connecting the GOT and the personal computer by Ethernet

(1) When connecting the GOT and PLC in Bus connection The following shows the software and the accessible PLC CPUs.

PLC CPU	Software
OCPLI (O mode), C Controller module	GX Works2 *1, MX Component *2, MX Sheet*3, Setting/Monitoring tool for C Controller
	module ^{*8}
Motion controller CPU (Q series)	MT Works2 ^{*4}
MELSERVO(MR-J3-B) *5	MR Configurator2 ^{*6}
MELSERVO(MR 14 R) *5	MB Configurator ³⁷

- GX Works2 Version 1.48A or later is required to use the FA transparent function. *1
 - MX Component Version 3.15R or later is required to use the FA transparent function.
- *3 MX Component Version 3.15R or later is required for MX Sheet to use the FA transparent function.
- *4 Use MT Works2 Version 1.25B or later for MT Works2.

*2

- *5 A motion controller is required between the GOT and PLC in bus connection.
- *6 Use MR Configurator2 Version 1.07H or later for MR Configurator2.
- *7 Use MR Configurator2 Version 1.09K or later for MR Configurator2.
- *8 Setting/Monitoring tool for C Controller module Version 4.00A or later is required to use the FA transparent function.

(2) When connecting the GOT and PLC in direct CPU connection

The following shows the software and the accessible PLC CPUs.

PLC CPU	Software
QCPU (Q mode)	GX Works2 *1, MX Component *3, MX Sheet*4
LCPU ^{*2}	GX Works2 *1, MX Component *3, MX Sheet*4
FXCPU	GX Works2 ^{*5}
Motion controller CPU (Q series)	MT Works2 ^{*6}
MELSERVO(MR-J3-B) ^{*9}	MR Configurator2 ^{*7}
MELSERVO(MR-J4-B) ^{*9}	MR Configurator2 ^{*8}
*1 GX Works? Version 1 484 or later is r	equired to use the EA transparent function

- .48A or later is required to use the FA trans
- *2 The adapter (L6ADP-R2) is required.
- *3 MX Component Version 3.15R or later is required to use the FA transparent function.
- *4 MX Component Version 3.15R or later is required for MX Sheet to use the FA transparent function.
- *5 GX Works2 Version 1.73B or later is required for GX Works2 to use the FA transparent function *6
 - MT Works2 Version 1.25B or later is required for MT Works2 to use the FA transparent function.
- *7 MR Configurator2 Version 1.07H or later is required for MR Configurator2 to use the FA transparent function.
- *8 MR Configurator2 Version 1.09K or later is required to use the FA transparent function.
- *9 A motion controller is required between the GOT and PLC in direct CPU connection.

(3) When connecting the GOT and PLC in computer link connection

The following shows the software and the accessible PLC CPUs.

PLC CPU	Software
QCPU (Q mode)	GX Works2 ^{*1} , MX Component ^{*2} , MX Sheet ^{*3}
LCPU ^{*2}	GX Works2 *1, MX Component *2, MX Sheet*3

*1 GX Works2 Version 1.48A or later is required to use the FA transparent function.

*2 MX Component Version 3.15R or later is required to use the FA transparent function.

*3 MX Component Version 3.15R or later is required for MX Sheet to use the FA transparent function.

20.3 List of Models that Can Be Monitored

The following models support FA transparent function.

When connecting the GOT and the personal computer by USB

	Model name	Target software	Connection type			
Series			Bus connection	Direct CPU	Computer link	Ethernet
				connection	connection	connection
	Q00JCPU					
	QUUCPU		GT	GT	GT	GT
	Q01CPU		27	27	27	27
	Q02CPU		ат 23	^{ст} 23	^{ст} 23	^{ст} 23
			GS	GS	GS	GS
	Q25HCPU					
			GT	GT	GT	GT
	Q06PHCPU		27	27	<u>27</u>	27
	Q12PHCPU		23	23	23	23
	Q25PHCPU		GS	GS	GS	GS
	Q12PRHCPU (Main base)		खा 27 दा 23 GS			
	Q25PRHCPU (Main base)	GX Works2		ат 27 ат 23 GS	ат 27 ат 23 GS	GT 27
	Q12PRHCPU					GT 23 GS
	(Extension base)					
	Q25PRHCPU					
	(Extension base)					
	Q00UJCPU		^{ст} 27	दा 27 दा 23 GS	- ^{ст} 27	
	Q00UCPU					
MELSEC-Q	Q01UCPU	BX Configurator				
(Q mode)	Q02UCPU	MX Component MX Sheet				
	Q03UDCPU					
	Q13UDHCPU					
	Q20UDHCPU					
	Q26UDHCPU					0T
	Q03UDECPU					27
	Q04UDEHCPU		^{GT} 23.		^{ст} 23	^{ст} 23
	Q06UDEHCPU		<u></u>		GS	GS
				GT		
	Q26UDEHCPU			27		
	Q50UDEHCPU			23		
	Q100UDEHCPU			GS		
	Q03UDVCPU*2			*1		
	Q04UDVCPU*2					
	Q06UDVCPU*2					
	Q13UDVCPU ^{*2}					l

(Continued to next page)

*1 Use the serial port of QCPU in the multiple CPU system, since QnUDEHCPU, QnUDVCPU has no direct coupled I/F.

*2 QNUDVCPU is applicable to QNUDVCPU+LCPU Logging Configuration Tool and GX LogViewer.

			Connection type				
Series	Model name	Target software	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	
C Controller module	Q12DCCPU-V Q24DHCCPU-V Q24DHCCPU-LS	GX Works2 MX Component MX Sheet	GT 27 23 GS •2	ст 27 ст 23 GS -1	ат 27 ст 23 GS	िन 27 दिन 23 GS *2	
	Q24DHCCPU-V Q24DHCCPU-LS	Setting/Monitoring tool for C Controller module	GT 27 GT 23 GS +2	GT 27 GT 23 GS +1	ст 27 23 GS	бт 27 6т 23 GS	20
MELSEC-QS	QS001CPU	-	бт 27 6т 23 GS	бт 27 ст 23 GS	Ст 27 Ст 23 GS	ат 27 ат 23 GS	NO
MELSEC-L	L02CPU L06CPU L26CPU-BT L06CPU-BT L06CPU-P L26CPU-P L02CPU-P L26CPU-PBT L02SCPU L02SCPU L02SCPU-P	GX Works2 GX LogViewer MX Component MX Sheet QnUDVCPU•LCPU Logging Configuration Tool	ет 27 23 GS	ет 27 ст 23 GS	ет 27 ст 23 GS	ет 27 ст 23 GS	PARENT FUNCT
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	MX Component MX Sheet	ат 27 <u>ат</u> 23 GS	ст 27 ст 23 СS	ст 27 Ст 23 СS	бт 27 6т 23 GS	A TRANS
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU Q4ARCPU	MX Component MX Sheet	ат 27 33 GS	бт 27 6т 23 GS	ст 27 ст 23 GS	бт 27 6т 23 GS	ш
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	MX Component MX Sheet	бт 27 Gт 23 GS	бт 27 6т 23 GS	^{GT} 27 ^{GT} 23 GS	ат 27 ^{6т} 23 GS	
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUP21 A2ACPUP21-S1 A2ACPUP21-S1 A2ACPUR21-S1 A3ACPU A3ACPUP21 A3ACPUR21 A1NCPU A1NCPUP21 A1NCPUR21 A2NCPU	MX Component MX Sheet	GT 27 23 GS •3	ет 27 ст 23 GS	ет 27 ст 23 GS	ат 27 ат 23 GS	

*1 Use the serial port of QCPU in the multiple CPU system since Q12DCCPU-V1 and Q24DHCCPU-V have no direct coupled I/F. *2 When using Q12DCCPU-V1 or Q24DHCCPU-V as the connected CPU, only MX Component can be used.

When accessing other CPUs relaying Q12DCCPU-V or Q24DHCCPU-V, GX Works2 can also be used. Do not execute the write during RUN in the bus connection.

*3

	Model name Ta		Connection type				
Series		Target software	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	
	A2NCPUP21	-					
	A2NCPUR21					GT GT GS GS	
	A2NCPU-S1		GT	GT	GT		
MELSEC-A	A2NCPUP21-S1	MX Component	GT GT	27 GT	27 GT GS		
(AnCPU)	A2NCPUR21-S1	MX Sheet	23	23			
	A3NCPU		65 *2	GS			
	A3NCPUP21						
	A3NCPUR21						
	A2USCPU					ет 27 ет 23 GS	
	A2USCPU-S1						
	A2USHCPU-S1						
	A1SCPU						
	A1SCPUC24-R2			ମ 27 ମୁ 23 GS	ст 27 ст 23 GS		
	A1SHCPU	MX Common and	^{ст} 27				
(AnSCPU)	A2SCPU	MX Component MX Sheet	^{ст} 23				
(/	A2SCPU-S1		GS				
	A2SHCPU						
	A2SHCPU-S1						
	A1SJCPU						
	A1SJCPU-S3						
	A1SJHCPU						
	A0J2HCPU	MX Component MX Sheet	GT 27 GS GS 23 GS 42 27 GT 23 GS	бт 27 бт 23 GS 65 67 27 61 23 GS	бт 27 бт 23 GS 65 СS	ат 27 ат 23 GS ^{6†} 27 ^{6†} 23 GS	
	A0J2HCPUP21						
	A0J2HCPUR21						
	A0J2HCPU-DC24						
	A2CCPU	-					
MELSEC-A	A2CCPUP21						
	A2CCPUR21						
	A2CCPUC24	MX Component MX Sheet					
	A2CCPUC24-PRF						
	A2CJCPU-S3						
	A1FXCPU						
	Q172CPU		GT_	GT			
	Q173CPU	MT Developer	27 GT	27 6ग 23 GS	GT		
	Q172CPUN		23			GT	
Motion	Q173CPUN		GS		GT	GT	
(Q Series)	Q172HCPU		GT		<u>Z3</u> GS	<u>23</u> GS	
	Q173HCPU	MT Developer MR Configurator	MT Developer MR Configurator GS	GT GS	GT 23 GS *1	63	GS

*1 Use the serial port of QCPU in the multiple CPU system since only the USB port is available as the direct coupled I/F for Q172H/ Q173HCPU.

 $^{\ast}2$ $\,$ Do not execute the write during RUN in the bus connection.

			Connection type				
Series	Model name	Target software	Bus connection	Direct CPU connection	Computer link	Ethernet	
Motion controller CPU (Q Series)	Q172DCPU	MT Works2	ет 27 ^{GT} 23 GS	ਰਾ 27 ਰਾ 23 GS -1	ат 27 ат 23 GS		
	Q173DCPU					ат 27 ат 23 GS	
	Q172DCPU-S1						
	Q173DCPU-S1						
	Q172DSCPU						
	Q173DSCPU						
	Q170MCPU		ет 27 ст 23 GS	GT 27 GT 23 GS	^{ст} 27 <u>ст</u> 23 GS	ат 27 ат 23 GS	20
	Q170MSCPU	MT Works2					
	Q170MSCPU-S1	GX Works2					
	A273UCPU		GS -2	eт 27 €т 23 68	ет 27 6т 23 GS	ат 27 ат 23 GS	Z
	A273UHCPU						Ĕ
Motion controller CPU (A Series)	A273UHCPU-S3	-					2 Z
	A373UCPU						Ŀ
	A373UCPU-S3						Ę
	A171SCPU						Ĩ
	A171SCPU-S3	MX Component MX Sheet					A R
	A171SCPU-S3N						IS I
	A171SHCPU						AN
	A171SHCPUN						ЦЦ
	A172SHCPU						Ę
	A172SHCPUN						
	A173UHCPU						
	A173UHCPU-S1						
MELSEC-FX	FX0, FX0s, FX0n, FX1, FX2, FX2C, FX1s, FX1n, FX2n, FX1nc, FX2nc	GX Works2 MX Component MX Sheet	ат 27 33 GS	ат 27 23 GS	ат 27 33 GS	ат 27 23 GS	
	FX3G(c), FX3S, FX3GE	FX Configurator-FP MX Component MX Sheet	ат 27 6т 23 GS	^{ст} 27 ^{ст} 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	
		GX Works2	ат 27 ат 23 GS	ст 27 ст 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	
	FX3U(c)	FX Configurator-FP FX3U-ENET-L Configuration tool MX Component MX Sheet	ст 27 ст 23 GS	ет 27 ет 23 СS	ст 27 ст 23 GS	ст 27 ст 23 GS	
		GX Works2	ст 27 ст 23 GS	^{ст} 27 ^{ст} 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	

*1 Use the serial port of QCPU in the multiple CPU system since Q172H/Q173HCPU has no direct coupled I/F.

*2 Do not execute the write during RUN in the bus connection.

	Model name		Connection type				
Series		Target software	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	
MELSEC-WS	WS0-CPU0		GT	GT	GT	GT	
	WS0-CPU1	-	27 GT 23 GS	<u>ст</u> 23 GS	27 GT GS	<u>ст</u> 23 GS	
MELSECNET/H Remote I/O station	QJ72LP25-25	_	ст 27 6т 23 GS	бт 27 6т 23 GS	ат 27 ат 23 GS	ат 27 33 GS	
	QJ72LP25G						
	QJ72BR15						
CC-Link IE Field Network head module	LJ72GF15-T2	-	бт 27 23 GS	ат 27 23 GS	ат 27 23 GS	ат 27 23 GS	
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	GX Works2	ат 27 ат 23 GS	ат 27 ат 23 GS	ст 27 ст 23 GS	ст 27 ст 23 GS	
CNC	CNC C70 (Q173NCCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	NC Configurator	бт 27 23 GS	GT 27 GT 23 GS •1	ат 27 ат 23 GS	GT 27 GT 23 GS • ₂	
	MELDAS C6/C64	-	бт 27 9т 23 GS	бт 27 6т 23 GS	ат 27 ^{ат} 23 GS	ат 27 91 23 GS	
Robot controller	CRnQ-700 (Q172DRCPU)	- RT ToolBox2	ст 27 ^{GT} 23 GS	GT 27 GT 23 GS •3	ат 27 ат 23 GS	ст 27 ст 23 GS	
	CRnD-700 CR750-D CR751-D		ст 27 ст 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	бт 27 6т 23 GS	

*1 Use the serial port of QCPU in the multiple CPU system since Q173NCCPU has no direct coupled I/F.

*2 Connect to the DISPLAY I/F of Q173NCCPU.

*3 Use the serial port of QCPU in the multiple CPU system, since CRnQ-700 has no direct coupled I/F.
				Connec	tion type		
Series	Model name	Target software	Bus connection	Direct CPU	Computer link	Ethernet	
				connection	connection	connection	
-	FREQROL-V500//5001						
	FREQROL-E500		CT	CT.	CT	CT	
	FREQROL-S500/S500E		27	27	27	27	
	FREQROL-E500J	FR Configurator	23	23	23	23	
	FREQROL-D700		GS	GS	GS	GS	
FREQROL	FREQROL-E700						
	FREQROL-A700						_
	FREQROL-F700						
	FREQROL-A800		GT	GT	GT	GT	
	FREQROL-F800	-	<u>27</u> ^{GT} GS	<u>27</u> <u>Gт</u> GS	27 GT 23 GS	<u>27</u> ^{GT} 23 GS	
Sensorless servo	FREQROL-E700EX		GT	GT	GT	GŢ	ž
MELIPM	MD-CX522-□□K(-A0)	FR Configurator	27 GT 23 GS	27 ^{GT} 23 GS	27 GT 23 GS	27 ^{GT} 23 GS	ENT FU
	MR-J2S-⊟A					ат ат <u>ат</u> <u>а</u> з аз аз	2
	MR-J2S-□CP						<u> </u>
	MR-J2S-□CL		бт 27	бт 27	^{GT} 27		ž
	MR-J2M-P8A	-	GS GS	GT 23	GT 23		RA A
	MR-J2M-□DU			GS	GS		F
	MR-J3-⊟A						μ
	MR-J3-□T						
		MR Configurator	GT 27 GT 23 GS	ст 27 ст 23 GS	бт 27 6т 23 GS	ат 27 ат 23 GS	
MELSERVO	MK-13-∐R	MR Configurator2	GT 27 <u>GT</u> 23 GS	ст 27 ст 23 GS	ст 27 ст 23 GS	ат 27 ат 23 GS	
	MR-J4-∏A	-	ат 27 ат 23 GS	ат 27 <u>ат</u> 23 GS	бт 27 бт 23 GS	ат 27 23 GS	
	MR-J4B MR-J4W2B MR-J4W3B	MR Configurator2	бт 27 ^{GT} 23 GS	ст 27 ст 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	
	MR-JE-□A	-	ат 27 ат 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	ат 27 ^{GT} 23 GS	

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			Connection type			
Series	Model name	Target software	Bus connection	Direct CPU	Computer link	Ethernet
			200 00111000001	connection	connection	connection
	Q00JCPU					
	Q00CPU		6T	67	6T	ot
	Q01CPU		27	27	27	27
	Q02CPU		23	23	23	23
			GS	GS	GS	GS
	Q12HCPU					
	Q25HCPU					
	Q02PHCPU		GT 27	GT 27	GT 27	GT 27
	Q06PHCPU		GT	GT	GT	GT
			23	23	23	23
	QZJFTICFU		3	63	63	3
	Q12PRHCPU (Main base)		07	0.7	07	07
	Q25PRHCPU (Main base)		27	27	27	27
	(Extension base)		23	23	23	^{GT} 23
	Q25PRHCPU		GS	GS	GS	GS
	(Extension base)	GX Works2 MX Component MX Sheet				
	Q00UJCPU		s2 nent et	ता 27		
MELSEC-Q	Q00UCPU					
(Q mode)	Q01UCPU					
	Q02UCPU					
	Q03UDCPU			GT 23		
				GS		
	Q10UDHCPU					
	Q13UDHCPU					
	Q20UDHCPU		CT.		er.	GT
			27		27	27
	Q03UDECPU Q04UDEHCPU		23		23	23
	Q06UDEHCPU		GS		GS	GS
	Q10UDEHCPU					
				GT		
	Q26UDEHCPU			27 GT		
	Q50UDEHCPU			23		
	Q100UDEHCPU	DUDEHCPU		GS *1		
	Q06UDVCPU					
	Q13UDVCPU					
	Q26UDVCPU					

When connecting the GOT and the personal computer by Ethernet or wireless LAN

(Continued to next page)

*1 Use the serial port of QCPU in the multiple CPU system, since QnUDEHCPU, QnUDVCPU has no direct coupled I/F.

				Connec	tion type		
Series	Model name	Target software	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	
C controller	Q12DCCPU-V Q24DHCCPU-V Q24DHCCPU-LS	GX Works2 MX Component MX Sheet	GT 27 23 GS	GT 27 GT 23 GS •1	ат 27 ат 23 GS	ат 27 ат 23 GS	-
module Q24DHCCPU-V Q24DHCCPU-LS	Q24DHCCPU-V Q24DHCCPU-LS	Setting/Monitoring tool for C Controller module	6 7 27 33 GS	бт 27 6т 23 GS +1	ет 27 33 GS	бт 27 33 GS	2
MELSEC-QS	QS001CPU	-	ст 27 ^{ст} 23 GS	ст 27 ^{ст} 23 GS	ет 27 ^{ст} 23 GS	ат 27 ат 23 GS	Z
MELSEC-L	L02CPU L06CPU L26CPU-BT L02CPU-P L06CPU-P L26CPU-P L26CPU-P L26CPU-PBT L02SCPU L02SCPU-P	GX Works2 MX Component MX Sheet	ет 27 ст 23 GS	दा 27 दा 23 GS	दा 27 दा 23 GS	ет 27 ^{6т} 23 GS	SPARENT FUNCTIO
MELSEC-Q (A mode)	Q02CPU-A Q02HCPU-A Q06HCPU-A	-					TRAN
MELSEC-QnA (QnACPU)	Q2ACPU Q2ACPU-S1 Q3ACPU Q4ACPU Q4ARCPU	-	ат 27 ат 23 GS	ст 27 ст 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	- 4
MELSEC-QnA (QnASCPU)	Q2ASCPU Q2ASCPU-S1 Q2ASHCPU Q2ASHCPU-S1	-	бт 27 GT 23 GS	бт 27 6т 23 GS	бт 27 3 23 GS	ат 27 ат 23 GS	_
MELSEC-A (AnCPU)	A2UCPU A2UCPU-S1 A3UCPU A4UCPU A2ACPU A2ACPUP21 A2ACPUP21 A2ACPUP21-S1 A2ACPUP21-S1 A2ACPUP21-S1 A3ACPU A3ACPUP21 A3ACPUP21 A1NCPU A1NCPUP21 A1NCPUR21 A2NCPU	-	ст 27 ст 23 GS	ст 27 ст 23 GS	ст 27 ст 23 GS	ст 27 ст 23 GS	

*1 Use the serial port of QCPU in the multiple CPU system since Q12DCCPU-V1 and Q24DHCCPU-V have no direct coupled I/F.

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			Connection type				
Series	Model name	Target software	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	
	A2NCPUP21						
	A2NCPUR21						
	A2NCPU-S1		GT	GT	GT	GT	
MELSEC-A (AnCPU)	A2NCPUP21-S1		27 GT	27 GT	<u>27</u> _{GT_}	27 GT_	
	A2NCPUR21-S1	-	23	23	23	23	
	A3NCPU		63	63	63	63	
	A3NCPUP21						
	A3NCPUR21						
	A2USCPU						
	A2USCPU-S1						
	A2USHCPU-S1						
	A1SCPU						
	A1SCPUC24-R2					ст 27 23 GS	
	A1SHCPU		GT 27 33 GS	ат 27 ат 23 GS	ет 27 6т 23 GS		
MELSEC-A	A2SCPU	-					
(/ 1001 0)	A2SCPU-S1						
	A2SHCPU						
	A2SHCPU-S1						
	A1SJCPU						
	A1SJCPU-S3						
	A1SJHCPU						
	A0J2HCPU						
	A0J2HCPUP21						
	A0J2HCPUR21	-					
	A0J2HCPU-DC24						
	A2CCPU		^{GT} 27	G⊺ 27	^{GT} 27	^{ст} 27	
MELSEC-A	A2CCPUP21		^{ст} 23	^{GT} 23	^{ст} 23	^{ст} 23	
	A2CCPUR21		GS	GS	GS	GS	
	A2CCPUC24	-					
	A2CCPUC24-PRF						
	A2CJCPU-S3						
	A1FXCPU						
	Q172CPU						
	Q173CPU		GT	GT	GT	GT	
Motion	Q172CPUN		27 GT	27 GT	бт Ст 23 GS	27 GT	
controller CPU (Q Series)	Q173CPUN	-	23	23 GS		23	
(Q Series)	Q172HCPU		GS			GS	
	Q173HCPU						

				Connec	tion type					
Series	Model name	Target software	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection				
	Q172DCPU									
	Q173DCPU		GT	GT	GT	GT				
	Q172DCPU-S1		27	27 GT	27 GT	27 GT				
Motion	Q173DCPU-S1	MT WORKS2	MII VVOrks2	MT Works2	MT Works2	23	23	23	23	
	Q172DSCPU		GS	GS *1	GS	GS				
(Q Series)	Q173DSCPU									
	Q170MCPU		GT	GT	GT	GT	-97			
	Q170MSCPU	MT Works2	27 GT	<u>27</u> бт	<u>27</u> бт	<u>27</u> бт				
	Q170MSCPU-S1	GX Works2	23 GS	23 GS	<u>23</u> GS	<u>23</u> GS				
	A273UCPU						z			
	A273UHCPU	-					ō			
	A273UHCPU-S3	-					С			
	A373UCPU			GT		6τ 27 6τ 23 GS	Ž			
	A373UCPU-S3				GT 27 23 GS		Ē			
	A171SCPU		- GT 27 23 GS				Ż			
Motion controller CPU (A Series)	A171SCPU-S3			<u>27</u>			Ш Ш			
	A171SCPU-S3N			23			A			
	A171SHCPU			GS			N N			
	A171SHCPUN						₹			
	A172SHCPU						Ë			
	A172SHCPUN							₽₽		
	A173UHCPU									
	A173UHCPU-S1									
	FX ₀									
	FX _{0S}									
	FXon	-								
	FX1	-								
	FX2	-								
	FX _{2C}	-								
	FX1s	-	GT 27	^{бт} 27	GT 27	GT 27				
MELSEC-FX	FX1N	GX Works2	GT 23	GT 23	GT 23	GT 23				
	FX _{2N}		GS	GS	GS	GS				
	FX1NC				_	_				
	FX2NC									
	FX3S									
	FX3G(C)									
	FX3GE	1								
	FX3U(C)	1								
	WS0-CPU0		GT	GT _	GT _	GT				
MELSEC-WS	WS0-CPU1	-	27 GT GS	27 GT 23 GS	27 GT 23 GS	27 ^{GT} 23 GS				

*1 Use the serial port of QCPU in the multiple CPU system since Q172D/Q173DCPU has no direct coupled I/F.

			Connection type				
Series	Model name	Target software	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	
	QJ72LP25-25		GT	GT	GT	GT	
MELSECNET/H Remote I/O station	QJ72LP25G	_	GT	GT	GT	GT	
	QJ72BR15		GS	GS	GS	<u>23</u> GS	
CC-Link IE Field Network head module	LJ72GF15-T2	-	ат 27 33 GS	27 27 23 GS	ат 27 3 3 GS	^{GT} 27 23 GS	
CC-Link IE Field Network Ethernet adapter module	NZ2GF-ETB	-	ст 27 ст 23 GS	ст 27 ст 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	
CNC	CNC C70 (Q173NCCPU)		бт 27 3 3 3 3 6 5 6 5	бт 27 33 GS	ат 27 ^{GT} 23 GS	ат 27 23 GS	
UNC	MELDAS C6/C64		ет 27 ^{ст} 23 GS	ет 27 ^{ст} 23 GS	бт 27 3 GT GS	бт 27 3 GS	
Robot controller	CRnQ-700 (Q172DRCPU) CR750-Q (Q172DRCPU) CR751-Q (Q172DRCPU)	-	бт 27 6т 23 GS	бт 27 6т 23 GS	^{ст} 27 ^{ст} 23 GS	ат 27 ат 23 GS	
	CRnD-700 CR750-D CR751-D		ет 27 ^{Gт} 23 GS	бт 27 33 GS	бт 27 3 GT GS	ат 27 3 3 GS	
	FREQROL-A500/A500L FREQROL-F500/F500L FREQROL-V500/V500L FREQROL-F500						
	FREQROL-S500/S500E						
	FREQROL-F500J						
FREQROL	FREQROL-D700		^{GT} 27	^{GT} 27	^{GT} 27	^{GT} 27	
	FREQROL-E700	-	^{GT} 23	^{ст} 23	ст 23	^{GT} 23	
	FREQROL-A700		GS	GS	GS	GS	
	FREQROL-F700						
	FREQROL-A800						
	FREQROL-F800						
Sensorless servo	FREQROL-E700EX						
MELIPM	MD-CX522-						

		Connection type					
Series	Model name	Target software	Bus connection	Direct CPU connection	Computer link connection	Ethernet connection	
	MR-J2S-⊟A						
	MR-J2S-□CP						
	MR-J2S-⊟CL		27	27	27	ат 27	
	MR-J2M-P8A	-	23	23	23	ат 23	
	MR-J2M-□DU		GS	GS	GS	GS	
	MR-J3-□A						
	MR-J3-□T						20
	MR-J3-□B ^{*1*2}	MR Configurator2	бт 27 33 GS	бт 27 3 GS	бт 27 3 GS	ат 27 33 GS	N
MELSERVO	MR-J4-⊟A	-	ат 27 ат 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	ат 27 23 GS	FUNCTIC
	MR-J4-□B ^{*1*2} MR-J4W2-□B ^{*1*2} MR-J4W3-□B ^{*1*2}	MR Configurator2	GT 27 GT 23 GS	ст 27 ст 23 GS	ат 27 ат 23 GS	ат 27 23 GS	ISPARENT
	MR-JE-⊡A	-	ат 27 ат 23 GS	ат 27 ат 23 GS	ат 27 ат 23 GS	ат 27 23 GS	FA TRAN

*1 A motion controller is required between the GOT and PLC in bus connection.

*2 A motion controller is required between the GOT and PLC in direct CPU connection.

20.4 System Configuration

Varies according to the connection type.

20.4.1 GX Works2, GX LogViewer, MX Component, MX Sheet, QnUDVCPU•LCPU Logging Configuration Tool, Setting/Monitoring tool for C Controller module







PLC	GOT		Connection cable	•	Personal computer	Number of
Connection type	Model	Interface	Cable model	Max. distance	Software	connectable equipment
For the system configuration between the GOT and PLC, refer to the following.	ет 27 ет 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	GX Works2 GX LogViewer MX Component MX Sheet QnUDVCPU• LCPU Logging Configuration Tool Setting/ Monitoring tool for C Controller module	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following. $\int \vec{J}^{T}$ BUS CONNECTION ^{*2}	ет 27 ет 23 СS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	GX Works2 GX LogViewer MX Component MX Sheet QnUDVCPU• LCPU Logging Configuration Tool Setting/ Monitoring tool for C Controller module	1 personal computer for 1 GOT

*1 Applicable to the QCPU only

*2 QNUDVCPUoLCPU Logging Configuration Tool is not applicable to the bus connection

*3 GX LogViewer, MX Component, MX Sheet, QnUDVCPU+LCPU Logging Configuration Tool and Setting/Monitoring tool for C Controller module are not supported.

*4 Not applicable to Setting/Monitoring tool for C Controller module.

■ When connecting the GOT and the personal computer by Ethernet



Varies according to the connection type.

Communication driver
Connection type dependant

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PLC	GOT Model Interface		Connection cable*1	Maximum segment	Personal computer	Number of connectable
For the system configuration						
the GOT and PLC, refer to the following.	GT 27		Twisted pair cable			
CONNECTION TO CPU ^{*4}	23 GS		10BASE-T Shielded twisted pair cable (STP) or unshielded		GX Works2	
COMPUTER LINK		- (Built into GOT)	twisted pair cable (UTP): Category 3, 4, and 5	100m	Setting/ Monitoring tool for C Controller	1 personal computer for 1 GOT
For the system configuration between	GT		100BASE-TX Shielded twisted pair cable (STP):		module	
the following.	GT 23		Category 5 and 5e			
	GS					
*1	The destination co	nnected with the twisted	I pair cable varies with the config	uration of the	applicable Ethern	et network system.

The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver, or other system equipment corresponding to the applicable Ethernet network system.

Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

A cross cable is available for connecting the GOT to the Ethernet module.

*2 A length between a hub and a node.

The maximum distance differs depending on the Ethernet device to be used.

The following shows the number of the connectable nodes when a repeater hub is used.

• 10BASE-T: Max. 4 nodes for a cascade connection (500m)

• 100BASE-TX: Max. 2 nodes for a cascade connection (205m)

When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.

For the limit, contact the switching hub manufacturer.

- *3 LCPU is not applicable to the bus connection.
- *4 Not applicable to Setting/Monitoring tool for C Controller module.



■ When connecting the GOT and the personal computer by wireless LAN

Connection typeModelOption deviceModel nameSoftwareconnectable equipmentFor the system configuration between the GOT and PLC, refer to the following.For the system configuration between the GOT and PLC, refer to the following.For the wireless LAN access point, use the access point compatible with IEEE802.11b/g/n.GX Works2 Setting/ Monitoring tool for C Controller module1 personal computer for 1 GOTImage: Connectable equipmentImage: Connectable equipmentImage: Connectable equipmentImage: Connectable between the GOT and PLC, refer to the following.Image: Connectable equipmentImage: Connectable equipmentImage: Connectable between the GOT and PLC, refer to the following.Image: Connectable equipmentImage: Connectable equipmentImage: Connectable between following.Image: Connectable equipmentImage: Connectable equipmentImage: Connectable equipmentImage: Connectable between following.Image: Connectable equipmentImage: Connectable equipmentImage: Connectable equipmentImage: Connectable between Image: Connectable equipmentImage: Connectable equipment <td< th=""><th>PLC</th><th colspan="2">GOT</th><th>Wireless LAN access point</th><th>Personal computer</th><th>Number of</th></td<>	PLC	GOT		Wireless LAN access point	Personal computer	Number of
For the system configuration between the GOT and PLC, refer to the following. Image: Constant of the got and PLC, refer to the following. Image: Constant of the got and PLC, refer to the following. Image: Constant of the got and PLC, refer to the following. Image: Constant of the got and PLC, refer to the following. Image: Constant of the got and PLC, refer to the following. Image: Constant of the got and PLC, refer to the following. Image: Constant of the got and PLC, refer to the following. Image: Constant of the got and PLC, refer to the following. Image: Constant of the got and PLC, refer to the got and PLC, refer tot and PLC, refer to the got and PLC, refer to the got an	Connection type	Model	Option device	Model name	Software	equipment
	For the system configuration between the GOT and PLC, refer to the following. BUS CONNECTION ^{*1}	er 27 er 23 GS	GT25-WLAN	For the wireless LAN access point, use the access point compatible with IEEE802.11b/g/n.	GX Works2 Setting/ Monitoring tool for C Controller module	1 personal computer for 1 GOT

*1 LCPU is not applicable to the bus connection.

*2 Not applicable to Setting/Monitoring tool for C Controller module.

20.4.2 PX Developer, GX Configurator





Varies acc	ording to
the connec	tion type.

PLC	GOT		Connection cable		Personal computer	Number of
Connection type	Model	Interface	Cable model	Max. distance	Software	equipment
For the system configuration between the GOT and PLC, refer to the following.	ет 27 вт 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	PX Developer GX Configurator	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following.	ат 27 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	PX Developer GX Configurator	1 personal computer for 1 GOT

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20. FA TRANSPARENT FUNCTION 20.4 System Configuration

20.4.3 MT Developer, MT Works2

the connection type.

When connecting the GOT and the personal computer by USB QCPU + Motion controller CPU Q series) Image: Connection cable Image: Connection cable Varies according to

Communication driver
Connection type dependant

PLC	GOT		Connection cable	Personal computer	Number of	
Connection type	Model	Interface	Cable model	Max. distance	Software	equipment
For the system configuration between the GOT and PLC, refer to the following.	ет 27 ет 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	MT Developer MT Works2	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following. \overrightarrow{J} BUS CONNECTION	ат 27 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	MT Developer MT Works2	1 personal computer for 1 GOT

*1 GX LogViewer, MX Component and MX Sheet are not supported.

■ When connecting the GOT and the personal computer by Ethernet



the connection type.



PLC		GOT	Connection cable ^{*1}	Maximum segment	Personal computer	Number of connectable
Connection type	Model	Interface	Cable model	length ^{*2}	Software	equipment
For the system configuration between the GOT and PLC, refer to the following. $\begin{bmatrix} \hline & \hline & \\ & \hline & \\ & \hline & \\ & \hline & \end{bmatrix}$ DIRECT CONNECTION TO CPU	ет 27 вт 23 GS	- (Built into GOT)	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	MT Works2	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following.	ет 27 ^{6т} 23 GS	- (Built into GOT)	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	MT Works2	1 personal computer for 1 GOT

*1 The destination connected with the twisted pair cable varies with the configuration of the applicable Ethernet network system. Connect to the Ethernet module, hub, transceiver, or other system equipment corresponding to the applicable Ethernet network system.

Use cables, connectors, and hubs that meet the IEEE802.3 10BASE-T/100BASE-TX standards.

A cross cable is available for connecting the GOT to the Ethernet module.

*2 A length between a hub and a node.

The maximum distance differs depending on the Ethernet device to be used.

The following shows the number of the connectable nodes when a repeater hub is used.

• 10BASE-T: Max. 4 nodes for a cascade connection (500m)

• 100BASE-TX: Max. 2 nodes for a cascade connection (205m)

When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of cascades.

For the limit, contact the switching hub manufacturer.

*3 LCPU is not applicable to the bus connection.



When connecting the GOT and the personal computer by wireless LAN

*1 LCPU is not applicable to the bus connection.

FA TRANSPARENT FUNCTION

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Communication driver

20.4.4 MR Configurator, MR Configurator2

When connecting the GOT and the personal computer by USB



*1 Only MR Configurator2 is compatible with the Ethernet connection.

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Servo amplifier	Servo amplifier	QCPU + Motion contr CPU (Q serie Motion CPU (Q	Oller es) Contraction type.	Conne	ction cable	Connection type dependant
PLC		GOT	Connection cable ^{*1}	Maximum segment	Personal computer	Number of connectable
Connection type	Model	Interface	Cable model	length ^{*2}	Software	equipment
For the system configuration between the GOT and PLC, refer to the following.	ет 27 ет 23 GS	- (Built into GOT)	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	MR Configurator2	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following. \overrightarrow{r} BUS CONNECTION ^{*3}	ст 27 ст 23 GS	- (Built into GOT)	Twisted pair cable • 10BASE-T Shielded twisted pair cable (STP) or unshielded twisted pair cable (UTP): Category 3, 4, and 5 • 100BASE-TX Shielded twisted pair cable (STP): Category 5 and 5e	100m	MR Configurator2	1 personal computer for 1 GOT
*1	The destination co Connect to the Eth system. Use cables, conner A cross cable is av A length between a The maximum dist The following show • 10BASE-T: Max	nnected with the twisted ernet module, hub, tran ctors, and hubs that me vailable for connecting th a hub and a node. ance differs depending vs the number of the cou- 4 podes for a cascade	d pair cable varies with the config sceiver, or other system equipme et the IEEE802.3 10BASE-T/100 he GOT to the Ethernet module. on the Ethernet device to be used nnectable nodes when a repeated connection (500m)	uration of the ent correspon DBASE-TX sta d. r hub is used	applicable Etherr ding to the applica andards.	net network system. able Ethernet network

When switching hubs are used, the cascade connection between the switching hubs has no logical limit for the number of

20. FA TRANSPARENT FUNCTION

20.4 System Configuration

When connecting the GOT and the personal computer by Ethernet

cascades. For the limit, contact the switching hub manufacturer.

100BASE-TX: Max. 2 nodes for a cascade connection (205m)

*3 LCPU is not applicable to the bus connection.

FA TRANSPARENT FUNCTION

Communication driver



USB

3m

GT09-C20USB-5P(2m)

FR Configurator

computer for 1 GOT

When connecting the GOT and the personal computer by wireless LAN

GS

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INVERTER CONNECTION

20.4.6 FX Configurator-FP, FX3U-ENET-L Configuration tool



Varies according to the connection type.

PLC	GOT		Connection cable		Personal computer	Number of
Connection type	Model	Interface	Cable model	Max. distance	Software	connectable equipment
For the system configuration between the GOT and PLC, refer to the following.	ст 27 ст 23	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	FX Configurator-FP, FX3U-ENET-L Configuration tool	1 personal computer for 1
DIRECT CONNECTION	GS				Comgaration tool	

20.4.7 RT ToolBox2



Varies according to the connection type.

PLC	GOT		Connection cabl	e	Personal computer	Number of
Connection type	Model	Interface	Cable model	Max. distance	Software	equipment
For the system configuration between the GOT and PLC, refer to the following. DIRECT CONNECTION TO CPU ^{*1} CONNECTION	ат 27 ат 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	RT ToolBox2	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following.	ст 27 ст 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	RT ToolBox2	1 personal computer for 1 GOT

*1 CRnD-700 is not applicable to the bus connection, the direct CPU connection.

20.4.8 NC Configurator



Varies according to the connection type.

PLC	GC	т	Connection cabl	е	Personal computer	Number of
Connection type	Model	Interface	Cable model	Max. distance	Software	equipment
For the system configuration between the GOT and PLC, refer to the following. ETHERNET CONNECTION	GT 27 GT 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	NC Configurator	1 personal computer for 1 GOT
For the system configuration between the GOT and PLC, refer to the following.	б ^т 27 23 GS	USB	GT09-C30USB-5P(3m) GT09-C20USB-5P(2m)	3m	NC Configurator	1 personal computer for 1 GOT

20.5 GOT Side Settings

20.5.1 Setting communication interface

Controller setting

Set the channel of the connected equipment.



- Select [Common] → [Controller Setting] from the menu.
- 2. The Controller Setting window is displayed. Select the channel to be used from the list menu.
- **3**. Set Manufacturer, Controller Type, I/F, and Driver according to the connected equipment to be used.
- The detailed setting is displayed after Manufacturer, Controller Type, I/F, and Driver are set. Make the settings according to the usage environment.

Click the [OK] button when settings are completed.

POINT,

The settings of connecting equipment can be confirmed in [I/F Communication Setting]. For details, refer to the following.

1.1.2 I/F communication setting

Communication setting with personal computer

Set the communication setting between the GOT and the personal computer.

For details of the setting contents, refer to the following manual.

GT Designer3 (GOT2000) Help

Hast (PC)		
Destination I/F 1:	Standard I/F(USB)	j.
Ethemet Download		
Destination I/F:	Standard I/F(Ethernet):Multi	▼ Clotal Setting
V/reless LAN		
Destination 1/F:	Extended I/F(V/ireless LAN)	+ Detai Setting

- Select [Common] → [Peripheral Setting] → [PC(Data Transfer)]from the menu.
- The [PC (Data Transfer)] is displayed. Set the interface of the GOT to be used in the communication with the personal computer.
 - (a) Host (PC) setting When communicating the GOT and the personal computer in the direct connection, set the interface of the GOT to be used in the communication with the personal computer.
 - (b) Ethernet download setting When communicating the GOT via Ethernet, set the interface of the GOT to be used in the communication with the personal computer.



Item	Description	Range
GOT Standard Ethernet Setting *1	Set the IP address of the GOT. (Default: 192.168.3.18)	0.0.0.0 to 255.255.255.255

 Click the [GOT Standard Ethernet Setting] button and perform the setting in the [GOT Standard Ethernet Setting] screen.



Item	Description	Range
GOT IP Address	Set the IP address of the GOT. (Default: 192.168.3.18) When selecting the address from the GOT setting list, click the [List] button and select the GOT to be connected.	0.0.0.0 to 255.255.255.255
Select from GOT Setting List	Select the set GOT in the [GOT Setting List] dialog.	-
Subnet Mask	Set the subnet mask for the sub network. (Only for connection via router) If the sub network is not used, the default value is set. (Default: 255.255.255.0)	0.0.0.0 to 255.255.255.255
Default Gateway	Set the router address of the default gateway where the GOT is connected. (Only for connection via router) (Default: 0.0.0.0)	0.0.0.0 to 255.255.255.255
Peripheral S/W Communication Port No.	Set the GOT port No. for the S/W communication. (Default: 5015)	1024 to 65534 (Except for 5011 to 5014 and 49153 to 49170)
Transparent Port No.	Set the GOT port No. for the transparent function. (Default: 5014)	5014 (fixed)

(c) Wireless LAN setting

When communicating the GOT via wireless LAN, set the interface of the GOT to be used in the communication with the personal computer.

	<u></u>
	GOT Wireless LAN I/F Setting
Property	Value
GOT Net No.	1
GOT Station	1
GOT Wireless LAN Setting	192.168.4.20

Item	Description	Range
GOT Wireless LAN I/F Setting *1	Set the IP address of the GOT. (Default: 192.168.4.20)	0.0.0.0 to 255.255.255.255

*1 Click the [GOT Wireless LAN I/F Setting] button and perform the setting in the [GOT Wireless LAN I/F Setting] screen.

his setting is shared by other Ethernet driv	ver settin	gs.					
GOT IP Address:	192	•	168	÷	4	•	20
	Select fi	om	GOT	Set	ting Li	st;	
						List	
Subnet Mask:	255	•	255		255	•2	0
Default Gateway:	0	•	0	2	0		0
Peripheral S/W Communication Port No.:	5015		*				
Transparent Port No.:	5014		*				

Item	Description	Range
GOT IP Address	Set the IP address of the GOT. (Default: 192.168.4.20)	0.0.0.0 to 255.255.255.255
Select from GOT Setting List	Select the set GOT in the [GOT Setting List] dialog. GT Designer3 (GOT2000) Help	-
Subnet Mask	Set the subnet mask for the sub network. (Only for connection via router) If the sub network is not used, the default value is set. (Default: 255.255.255.0)	0.0.0.0 to 255.255.255.255
Default Gateway	Set the router address of the default gateway where the GOT is connected. (Only for connection via router) (Default: 0.0.0.0)	0.0.0.0 to 255.255.255.255

Item	Description	Range
Peripheral S/W Communication Port No.	Set the GOT port No. for the S/ W communication. (Default: 5015)	1024 to 65534 (Except for 5011 to 5014 and 49153 to 49170)
Transparent Port No.	Set the GOT port No. for the transparent function. (Default: 5014)	5014 (fixed)
Automatically enable wireless LAN connection	Select this item to automatically connect the wireless LAN to the wireless LAN access point after the GOT is powered on.	-
Time to Automatic Disconnect	Set the time for the wireless LAN communication to automatically disconnect. (Default: 0)	0 to 360

POINT.

When connecting the GOT and the personal computer by Ethernet or wireless LAN, match the GOT IP address and the transparent port No. with those in [PLC side I/F Detailed Setting of GOT] of GX Works2.

20.6.2 Accessing by GX Works2

3. Click the [OK] button when settings are completed.

POINT,

 Communication interface setting by Utility The communication interface setting can be changed on the Utility's [Communication Settings] after downloading [Communication Settings] of project data.

For details on the Utility, refer to the following manual.

GOT2000 Series User's Manual (Utility)

 Precedence in communication settings
 When settings are made by GT Designer3 or the Utility, the latest setting is effective.

GOT Setup

When using the multi-channel function, specify the channel No. on which FA transparent function is executed.



- Select [Common] → [GOT Environmental Setting] → [GOT Setup] from the menu.
- Check [Enable GOT Setup].
- 3. As necessary, check one of [CH1] to [CH4]. (Default: CH1)

Click the [OK] button when settings are completed.

POINT,

Transparent setting on the utility screen Transparent setting can be performed by the GOT. For details of the operating, refer to the following.

GOT2000 Series User's Manual (Utility)

20.6 Personal Computer Side Setting

20.6.1 Accessing the PLC by the PX Developer, GX Configurator

The setting method for the FA transparent function of PX Developer is used as an example.

Connecting the GOT and PLC in bus connection or direct CPU connection (when connecting to QCPU (Q mode))



- 1. Click [Online] \rightarrow [Transfer Setup] in PX Developer.
- 2. The [Transfer Setup] is displayed.
- **3.** Set the [Transfer Setup]:



- Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].
- Select [USB] in the [PC side I/F Serial Setting] dialog.





- Double-click [PLC module] of the PLC side I/F to display [PLC side I/F Detailed setting of PLC module].
- 7. Check-mark either of the following in [PLC side I/F Detailed setting of PLC module].

Bus connection

[via GOT(Bus) transparent mode]

Direct CPU connection

[via GOT (direct coupled) transparent mode]



8. The screen returns to [Transfer Setup]. Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode). Connecting the GOT and PLC in computer link connection(when connected to the QJ71C24(N)) (GX Configurator is not supported.)



- 1. Click [Online] \rightarrow [Transfer Setup] in PX Developer.
- 2. The [Transfer Setup] is displayed.
- **3.** Set the [Transfer Setup]:
 - PC side I/F : Serial
 - PLC side I/F : C24 Other station : No specification



- **4**. Return to [Transfer Setup] and double-click [C24] of the PLC side I/F to display [PLC side I/F detailed setting of C24].
- Check [via GOT transparent mode] for [PLC side I/F detailed setting of C24].



PC side I/F Serial s	✓		X
• RS-2320			ОК
C USB			Cancel
COM port	COM 1	•	
Transmission speed	115.2Kbps	•	

Л

- 6. Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].
- Select [USB] in the [PC side I/F Serial Setting] dialog.



8. The screen returns to [Transfer Setup]. Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode).

When connecting the GOT and PLC in Ethernet communication (when connecting to QCPU (Q mode))



- 1. Click [Online] \rightarrow [Transfer Setup] in PX Developer.
- 2. The [Transfer Setup] is displayed.
- 3. Set the [Transfer Setup]:
 - PC side I/F: Serial USB (COM)PLC side I/F: PLC moduleOther station: No specification



- **4**. Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].
- Select [USB] in the [PC side I/F Serial Setting] dialog.



- Double-click [PLC module] of the PLC side I/F to display [PLC side I/F Detailed setting of PLC module].
- 7. On the [PLC side I/F Detailed setting of PLC module], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Set].

(rmerner)	transparent sett	ing.		OK
PLC type	QnUDE(H)	·		Canc
- Module side -				
Network No.	1			
Station No.	1			
IP address	198 168 1	19 IP ir	nput format	DEC. 💌
– GOT side —				
Network No.	1			
Station No.	64			

- By clicking [Set], the [GOT (Ethernet) transparent setting] is displayed.
 Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.
- 9. Set [QnUDE(H)] or [QJ71E71] for [Type name]. When connecting the Q173NCCPU, set [QJ71E71].
- 10. Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.When [QnUDE(H)] is set for [Type name], the setting is not required.
- Specify the IP address for [IP address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.





- 12. The screen returns to [Transfer Setup]. Click [Connection Test] to check if PX Developer has been connected to the QCPU (Q mode).
- Connecting the GOT and PLC in direct CPU connection (when connecting to FXCPU)



- 1. Click [Online] → [Transfer Setup] in PX Developer.
- The [Transfer Setup] is displayed.
- 3. Set the [Transfer Setup]:
 - PC side I/F : Serial
 - PLC side I/F : PLC module
 - Other station : No specification





- Double-click [Serial] of the PC side I/F to display [PC side I/F Serial setting].
- Select [USB (GOT transparent mode)] in the [PC side I/F Serial Setting] dialog.



6. The screen returns to the [Transfer Setup]. Click the [Connection Test] to check if PX Developer has been connected to the FXCPU.

POINT,

How to operate PX Developer

For the PX Developer operation method, refer to the following manual.

PX Developer Version 1 Operating Manual (Programming Tool)

20.6.2 Accessing by GX Works2

The following shows the procedure to set the FA transparent function of GX Works2.

- When connecting the GOT and the personal computer by USB
- Connecting the GOT and PLC in bus connection or direct CPU connection (when connecting to QCPU (Q mode))



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
- 2. The [Transfer Setup Connection1] is displayed.
- 3. Set the [Transfer Setup Connection1]: PC side I/F : Serial USB PLC side I/F : GOT Other Station Setting : No Specification: PC side I/F Serial Setting • RS-232C OK C USB Cancel COM 1 COM Port -Transmission Speed 115.2Kbps -
- **4.** Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
- 5. Select [USB] in the [PC side I/F Serial Setting] dialog.

(For bus connection)



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- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- 7. Check-mark either of the following in [PLC side I/F Detailed Setting of GOT].

Bus connection

[via GOT(Bus) transparent mode]

Direct CPU connection

Mark the [via GOT(direct coupled) transparent mode] checkbox.



 The screen returns to [Transfer Setup Connection1]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode). (2) Connecting the GOT and PLC in computer link connection (when connecting to QJ71C24 (N))



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
- 2. The [Transfer Setup Connection1] is displayed.
- 3. Set the [Transfer Setup Connection1]:

 PC side I/F
 : Serial USB

 PLC side I/F
 : GOT

 Other Station Setting
 : No Specification

	$\hat{\nabla}$		
PC side I/F Serial Se	etting		
 RS-232C USB 			OK Cancel
COM Port Transmission Speed	COM 1 115.2Kbps	•	

- **4**. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
- 5. Select [USB] in the [PC side I/F Serial Setting] dialog.

· · · · · · · · · · · · · · · · · · ·	OK
 PLC Module/CC IE Field Ethernet Adapter Setup 	
	Cancel
PLC Mode QCPU (Q mode)	
🖲 via GOT(Bus) transparent mode	
C via GOT(direct coupled) transparent mode	
C via GOT(Ethernet) transparent mode	
Se	tting
© C24	
© C24 Setup	
C24 Setup Computer Type 0171C24	
C C24 Setup Computer Type Q371C24	
C24 Computer Type Q371C24	

- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- Check-mark [C24] in [PLC side I/F Detailed Setting of GOT].

	$\hat{\nabla}$
MELSOF	T Application
(į)	Successfully connected with the Q02/Q02HCPU.
	ОК

 The screen returns to [Transfer Setup Connection1]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

- (3) Connecting the GOT and PLC in Ethernet connection
 - (a) Connecting to QCPU (Q mode)



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
- 2. The [Transfer Setup Connection1] is displayed.
- 3. Set the [Transfer Setup Connection1]: PC side I/F : Serial USB PLC side I/F : GOT Other Station Setting : No Specification

PC side I/F Serial Setting	
 	OK Cancel
COM Port COM 1 Transmission Speed 115.2Kbps	

- 4. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
- 5. Select [USB] in the [PC side I/F Serial Setting] dialog.



- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- 7. On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].

			Oł
PLC Type Qnl	JDE(H)		Can
Module Side			
Network No.	1		
Station No.	1		
IP Address	198 168 1 19	IP Input Format	DEC. 💌
-GOT Side			
Network No.	1		

- By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.
 Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.
- 9. Set [QnUDE(H)] or [QJ71E71] for [PLC Type].

20



 Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.

When [QnUDE(H)] is set for [PLC type], the setting is not required.

 Specify the IP address for [IP Address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.



12. The screen returns to [Transfer Setup Connection1]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode). (b) Connecting to FXCPU



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
- 2. The [Transfer Setup Connection1] is displayed.
- 3. Set the [Transfer Setup Connection1]: PC side I/F : Serial USB PLC side I/F : GOT Other Station Setting : No Specification

	7	
\checkmark		

PC side I/F Serial Se	etting		×
RS-232C			ОК
C USB			Cancel
COM Port	COM 1	•	
Transmission Speed	115.2Kbps	-	

- **4**. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
- 5. Select [USB] in the [PC side I/F Serial Setting] dialog.

ie m Detaile	d Setting of GOT		
PLC Module/CC	CIE Field Ethernet Adapter		OK
Setup			Cance
PLC Mode F	XCPU 👤		
🔿 via GOT(di	rect coupled) transparent mode		
via GOT(Et)	hernet) transparent mode		
FX3U-ENE	T-ADP-0.0.0.0	Setting	
E : corre	300 transparent mode		
Via GUT #S			
C24			
C24 Setup Module Name	0.171024		
C24 Setup Module Name	QJ71C24		
C24 Setup Module Name Station No.	QJ71C24		
C24 Setup Module Name Station No. Parity	QJ71C24 💌 0 Odd 💌		
C24 Setup Module Name Station No. Parity Sum Check	QJ71C24 V 0 Odd V Exists V		
Via GUT PS C24 Setup Module Name Station No. Parity Sum Check Data Bit 8	0.171C24 V 0 Odd V Existe V		

- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- 7. On the [PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].



- By clicking [Set], the [GOT (Ethernet) transparent setting] is displayed.
 Here, set the [FX3U-ENET-ADP] or [Ethernet Module], which is connected via a GOT.
- 9. Set [FX3U-ENET-ADP] or [Ethernet Module] for [PLC Type].
- 10. Specify the IP address for [IP address] same as the IP address assigned to the [FX3U-ENET-ADP] or [Ethernet Module].





11. The screen returns to [Transfer Setup]. Click [Connection Test] to check if GX Works2 has been connected to the FXCPU. (4) Connecting the GOT and Ethernet adapter (NZ2GF-ETB) in Ethernet connection, and connecting it to a PLC in the CC-Link IE Field Network. This section describes the settings of the GX Works2 in the following case of system configuration.

POINT,

Version of GX Works2

GX Works2 Version 1.34L or later is required to execute the FA transparent function with using Ethernet adapter (NZ2GF-ETB).



ansfer Set	up Connectio	n1							
side [/F	Sala LES	CC IE Core METIIOPO Board Tranuminion	CC-Link Baard	Ethernet Baard	Q Series Bui	NET(II) Board	PLC Board	4F Board	
C side QF	PLC PLC Mastale	CC IE Cont NET/10)-0 Module	CC-UNA Module	Ethernet Module	C ²⁴	<u>102</u> 102	CC IE Field Communication Head Module	CC IE Reid Ethernet Adapter	11
					via G	OT(Bui) transp	arent reode	_	
har stion tting	No. Specification	1 <u>01</u>	er Station de Network)	Other: LCo-sci	Station Station Network	2	Connect PLC Dire	tion Channell. ect. Coupled Se	at
							0	enection Test	
work wearication Re	CC IE Cont NET/100-0	CC IE Field	Ethernet	CC-Unk	C24		PLC Type Detail	sten Drage	_
						11	Une Come	tico (Q.WETE)	
ecistence work								OK	
	CC IE Cont NET/100+0	OC 32 Field	Etherrat	oc-unk	624	11		Cancel	
	Nultiple CPU:	Setting							
get ten	1 2	3 4 Targ			2	3			

- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
- 2. The [Transfer Setup Connection1] is displayed.
- 3. Set the [Transfer Setup Connection1]. PC side I/F : Serial USB PLC side I/F : GOT



- **4**. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
- 5. Select [USB] in the [PC side I/F Serial Setting] dialog.

5		
		OK
PLC Module/CC IE Field Ethernet Ac	lapter	
DIGMAR OCDU (O mate)		Cancel
PLC Mode (Q mode)	<u> </u>	
via GOT(Bus) transparent mode	•	
via GOT(direct coupled) transp	arent mode	
 via GOT(Ethernet) transparent 	mode	
	Setting	
	Setting,	
	Setting	
C24 Setup	Setting	
C24 -Setup- Computer Type 1771 C24	Setting	
Cather Computer Type QJ71C24	Setting.,.	
C24 -Setup Computer Type Q371C24 Stetion No. 0	Setting	
C24 Setup Computer Type Q371C24 Station No. 0 Parity Odd V	Setting	
C24 Setup Computer Type Q371C24 Station No. 0 Parity Odd s Sum Check Exists s	Setting	
C24 Setup Computer Type Q371C24 Station No. 0 Parity Odd Sum Check. Exists Data Bit 8	Setting	

- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- 7. Set the [CPU mode] to [LCPU].



 On the[PLC side I/F Detailed Setting of GOT], mark the [via GOT(Ethernet) transparent mode] checkbox and click [Setting...].

ΥĻ



9. [GOT (Ethernet) Transparent Setting] is displayed. Here, set the Ethernet module, which is firstly connected via a GOT.

 \mathcal{J}

10. Set [NZ2GF-ETB] for [PLC Type].

				OK.
LC Type NZ20	GF-ETB		¥	Cance
Module Side				
Network No.	1			
Station No.	1			
IP Address	192 168 3	30 IP In	put Format	EC. 💌
-GOT Side				
Network No.	1			
Station No.	64			
This setting i Please set a	s an assignment fo station No. that is	or the Etherne not overlappi	t port of GOT. ng on the same	e network.

11. Set the same number to [IP address] as the number assigned to NZ2GF-ETB, and click [OK].
In the system configuration example, the setting is as follows.
ID address): 102, 168, 2, 20

[IP address]: 192 168 3 30

12. Return to [PLC side I/F Detailed Setting of GOT], and click [OK].





- 13. The [Transfer Setup Connection1] is displayed.
- 14. Click [Other station (Single network)].



15. Double-click [CC IE Field].



- Network Communication Route Detailed Setting of CC IE Field is displayed.
- **17.** Set [Network No.] and [Station No.] assigned to CPU, and click [OK].

When connecting to CC-Link IE Field Network Master/Local module of the system configuration example, the setting is as follows. [Network No.] :1

[Station No.] :0



18. The screen returns to [Transfer Setup]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

- When connecting the GOT and the personal computer by Ethernet
- Connecting the GOT and PLC in bus connection or direct CPU connection (when connecting to QCPU (Q mode))



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
- 2. The [Transfer Setup] is displayed.
- Set the [Transfer Setup]: PC side I/F :Ethernet Board PLC side I/F :GOT Other Station Setting : No specification



- **4**. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].
- Set the protocol to TCP. Network No. and Station No. are not required to be changed (default) because they are not used.



(For bus connection)



- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection].
 Set the IP address and port No. to the same as the Ethernet download setting.

20.5.1 (b) Ethernet download setting

8. Check either of the followings in [Detail setting for GOT and PLC connection].

Bus connection

[via GOT(Bus) transparent mode]

Direct CPU connection

Mark the [via GOT(direct coupled) transparent mode] checkbox.



9. The screen returns to [Transfer Setup]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode). (2) Connecting the GOT and PLC in computer link connection (when connecting to QJ71C24 (N))



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of GX Works2.
- 2. The [Transfer Setup] is displayed.
- 3. Set the [Transfer Setup]: PC side I/F : Ethernet Board PLC side I/F : GOT Other Station Setting : No specification



- **4**. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].
- Set the protocol to TCP. Network No. and Station No. are not required to be changed (default) because they are not used.



- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection]. Set the IP address and port No. to the same as the Ethernet download setting.

8. Check [C24] in [Detail setting for GOT and PLC connection].



9. The screen returns to [Transfer Setup]. Click [Connection Test] to check if GX Works2 has been connected to the QCPU (Q mode).

20.6.3 Accessing by GX LogViewer

The following shows the procedure to set the FA transparent function of GX LogViewer.

CPU	giteri is chosen.	_	
	Show Logged Device Status The status of devices that are continuously-logged or trigger-logged by the LCPU will be displayed in historical trend graphs.		Save Logging Files to PC Data logging files will be saved to the personal computer. The saved files can be viewed as historical
ligh Spee	ed Data Logger Unit		
	Show Logged Device Status Displays, in historical trend graphe, the status of devices for which continuous logging or trigger logging was performed by the High Speed Data Logger Module.		Show Logged Events Displays events logged by the High Speed Data Logger Module, as historical events.
	Show Current Device Status Displays real-time device status in trend graphs.		Show Ongoing Events Displays ongoing events in real-time.
	Save Logging Files to PC Data logging files or event files will be saved to The saved files can be viewed as historical data	the personal compi a	uter.
Show at SI	artup		

- Click [Show Assistant Dialog] for [View] on GX LogViewer.
- 2. The [Assistant] dialog box is displayed.



- Click [LCPU] → [Show Logged Device Status] in the [Assistant] dialog box.
- **4**. The [Transfer Setup Connection 1] dialog box is displayed.
- 5. Set the [Transfer Setup Connection 1]: PC side I/F : Serial USB PLC side I/F : GOT Other Station Setting : (Select from the system configuration)
- For [PC side I/F Serial Setting] and [PLC side I/F Detailed Setting of GOT] of [Transfer Setup], refer to the following.
 20.6.2 Accessing by GX Works2

20.6.4 Accessing PLC by GX Configurator-QP

The following shows the procedure to set the FA transparent function of GX Configurator-QP.

Connection setup[Un PC Interface CDM setting Transmission speed	titled2 / QD75P4] RS-232C COM1 115.2kbps	Module connecting I/D address I/D adr. 0 (Caution)Real address setting	OK Cancel Comm. test
PLC Interface PLC type Multi PLC specification In via GOT transparent Type	FLC Image: Comparison of the second	Time check Wait time 10 x 500ms Timeout time 10 sec	

- Click [Connection setup] for [Online] on GX Configurator-QP.
- 2. The [Connection setup] is displayed.
- 3. Set the following in [PC] of the [Connection setup] dialog. Interface: USB




- Comm. test - PLC Time check -Interfa Wait time Q26UDH -PLC typ 10 x 500m ation Non-choice -Multi PLC sp 🔽 via GOT transpa -Type 10 sec
- Set the [Module connecting I/O address] in [Connection setup].
 Specify the actual IP address of the module.



6. The screen returns to the [Connection setup]. Click the [Connection Test] to check if GX Configurator-QP has been connected to the QD75***(QnCPU).

20.6.5 Accessing by the MT Developer

This section explains the procedure to set the FA transparent function of MT Developer with an example of connecting to motion controller CPU (Q series).



 Click [Communication] → [Communication Setting] in MT Developer.



- 2. Select [USB] in [Serial port].
- 3. Click [Detail].





4. Check-mark either of the following in [PLC side I/F setting of PLC module].

Bus connection

[via GOT(Bus) transparent mode]

Direct CPU connection

[via GOT(direct coupled) transparent mode]

- 5. As necessary, select a CPU that is targeted by using the transparent function in [CPU].
- 6. Click [Connection Test].



7. Confirm that the personal computer is connected to the motion controller CPU (Q series).

20.6.6 Accessing by the MT Works2

This section explains the procedure to set the FA transparent function of MT Works2 with an example of connecting to motion controller CPU (Q series).

- When connecting the GOT and the personal computer by USB
- (1) Connecting the GOT and PLC in bus connection or direct CPU connection

Transfer Set	lup	
P⊂ sice 1/F	Sanda SSC CC IF Carry CC Like Finance Q Social SSC SSC SC IF Carry CC Like Finance Q Social SSC SSC SC IF Carry CC Like Finance Q Social SSC SSC SSC SSC SSC SSC SSC SSC SSC SSC	Sn.4to
CFU ade QF	Annuch Ros, - Statem Ros, - Findeou Tico Buc Statem Ros, - Columno Statem Ros, - Findeou Tico Statem Ros, - Statem Ros, - Findeou Tico Statem Ros, - Statem Ros, - Findeou Tico Statem Ros, - Statem Ros, - Statem Ros, - Findeou Tico Statem Ros, - Statem Ros, - Statem Ros, - Findeou Tico Statem Ros, - Statem Ros, - Statem Ros, - Findeou Tico Statem Ros, - Statem Ros, - Statem Ros, - Findeou Tico Statem Ros, - Statem Ros, - Statem Ros, - Findeou Tico Statem Ros, - Statem Ros, - St	AGACETEL EUS
	Produces (Host Nerre 0.0.0.0 Port No. 5014 Via (507)	Marie QCPU Bus) biansparent mode
Other Station Setting	No. Sacofication (Thur Station) (Shok Harver()) (Considering Alberty)	Connection Channel List
		Connection Test
Network Communication Route	CCIE Cant Ethemet CC-Link CC4 NET(C)	PLCType Detail
	NET(200-0)	System Image
Co-existence Network Route		OK.
	CCTE Card Ethemet CC-Unix C24 NET(D) NET(D0)+5	Cancel
	Nuble CPU Setting	
System	1 2 3 4	

- Click [Transfer setup] → [Online].
- 2. The [Transfer setup] is displayed.
- 3. Set the [Transfer setup]: PC side I/F : Serial USB CPU side I/F : GOT Other Station Setting : No specification

PC side I/F Serial Se	etting		
• R5-232C			ОК
C USB			Cancel
COM Port	COM 1	-	
Transmission Speed	115.2Kbps	•	

- Double-click [Serial] of the PLC side I/F to display [PC side I/F Serial setting].
- 5. Select [USB] in the [PC side I/F Serial Setting] dialog.



- 6. Double-click [GOT] of the CPU side I/F to display [CPU side I/F Detailed Setting of GOT].
- Check-mark either of the following in [CPU side I/F Detailed Setting of GOT].

Bus connection

Mark the [via GOT(Bus) transparent mode] checkbox.

Direct CPU connection

Mark the [via GOT (direct coupled) transparent mode] checkbox.



8. The screen returns to [Transfer setup]. Click [Connection Test] to check if MT Works2 has been connected to the motion controller (Q mode). (2) When connecting the GOT and PLC in Ethernet communication



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Works2.
- 2. The [Transfer Setup] is displayed.
- 3. Set the [Transfer Setup]:

 PC side I/F
 : Serial USB

 PLC side I/F
 : GOT

 Other Station Setting
 : No Specification:

_	\bigtriangledown		
PC side I/F Serial Se	etting		×
RS-232C			ОК
C USB			Cancel
COM Port	COM 1	•	
Transmission Speed	115.2Kbps	Ŧ	

Π

- **4**. Double-click [Serial USB] of the PC side I/F to display [PC side I/F Serial Setting].
- 5. Select [USB] in the [PC side I/F Serial Setting] dialog.





- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- PLC side I/F Detailed Setting of GOT Mark the [via GOT(Ethernet) transparent mode] checkbox and click [Set].

			ОК
LC Type QnL	JDE(H)	•	Cano
Module Side			
Network No.	1		
Station No.	1		
IP Address	198 168 1 1	9 IP Input For	mat DEC. 💌
GOT Side			
Network No.	1		
Station No.	64		
This setting	is an assignment for	the Ethernet port (of GOT.
(It does not	a station No. that is n : have to be the same	ot overlapping on t : network No. or st	ne same network. ation No. of GOT)

- By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.
 Here, set the built-in Ethernet port QCPU or Ethernet module, which is firstly connected via a GOT.
- 9. Set [QnUDE(H)] or [QJ71E71] for [Type name].



 Specify the number for [Network No.] and [Station No.] same as the number assigned to the Ethernet module.

When [QnUDE(H)] is set for [Type name], the setting is not required.

11. Specify the IP address for [IP address] same as the IP address assigned to the built-in Ethernet port QCPU or Ethernet module.

MELSOF	T Application 🛛 🔀
(j)	Successfully connected with the Q172DCPU(PLC No.2).
\checkmark	The composition of the multiple CPU is as follows.
	#1: Install #2: Install #3: Uninstall #4: Uninstall
	(ОК

12. The screen returns to [Transfer setup]. Click [Connection Test] to check if MT Works2 has been connected to the motion controller (Q mode).

- When connecting the GOT and the personal computer by Ethernet
- (1) Connecting the GOT and PLC in bus connection or direct CPU connection



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Works2.
- The [Transfer Setup] is displayed.
- 3. Set the [Transfer Setup]:

 PC side I/F
 : Ethernet Board

 PLC side I/F
 : GOT

 Other Station Setting
 : No Specification:



- **4.** Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].
- Set the protocol to TCP. Network No. and Station No. are not required to be changed (default) because they are not used.
 - \checkmark

- (For bus connection)
 - PLC side I/F Detailed Setting of GOT Ethernet detail setting for PC and GOT conn OK IP Address 0 0 0 0 IP Input DEC. V Cancel C Host Name 5014 Port No. Detail setting for GOT and PLC connection PLC Module/CC IE Field Ethernet Adapter PLC Mode QCPU (Q mode) -📀 via GOT(Bus) transparent mode via GOT(direct coupled) transparent mode C24
- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- 7. Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection]. Set the IP address and port No. to the same as the Ethernet download setting.

20.5.1 (b) Ethernet download setting

8. Check either of the followings in [Detail setting for GOT and PLC connection].

Bus connection

[via GOT(Bus) transparent mode]

Direct CPU connection

Mark the [via GOT(direct coupled) transparent mode] checkbox.



 The screen returns to [Transfer Setup]. Click [Connection Test] to check if MT Works2 has been connected to the Motion controller (Q mode).

20.6.7 Accessing the servo amplifier by the MR Configurator

Make the FA transparent settings with the of MT Developer.

For details, refer to the following:

20.6.5 Accessing by the MT Developer

20.6.8 Accessing the servo amplifier by the MR Configurator2

Make the FA transparent settings with the of MT Works2. For details, refer to the following:

20.6.6 Accessing by the MT Works2

20.6.9 Accessing the inverter by the FR Configurator

This section explains the setting method of the FA transparent function of FR Configurator with an example of connecting to FREQROL A700/F700 series.

FR Conf	igurator					
le lice	Settings Parameter Monitor	Diagnosis Text Furth	a Advanced(Z): 4110.	Help	151	
	System Soltings	12:0 2:0 8	Node - 🔷 🗉	OF RECEMBER	108	FLINE
stenist	Communication Settings					
Pystem	Environmental Settings					
	-					
	12					
				10000		

 Click [Settings] → [Communication Settings...] in FR Configurator.



- 2. Select [USB] in [Communication Port].
- 3. Click the [GOT Transparent Communication].
- 4. Click the [OK].





- 5. Click [OFFLINE] to make it [ONLINE].
- 6. Click the [System Read], then check if GOT has been connected to FREQROL A700/F700 series normally.

20.6.10 Accessing PLC by FX Configurator-FP

This section explains the procedure to set the FA transparent function of FX Configurator-FP with an example of connecting to FXCPU.



1. Click [Connection setup] for [Online] on FX Configurator-FP.



- 2. Select [USB (GOT Transparent)] in [PC side].
- Click [Comm. Test].



4. After the communication test is completed, check that the GOT is correctly connected to the FXCPU.

20.6.11 Accessing by FX3U-ENET-L Configuration tool

This section explains the procedure to set the FA transparent function of the FX3U-ENET-L Configuration tool.

Carrier Crist 200	odulo settings		
1	Nodule 2	-	
	Operational settings		
	Initial testings		
	Open zettings		
	Fouter (cray parameter	_	
	-E-mail settings		
Set If It is needled (Ho of	TER / Atosty of)	Check	
Transfer setup	PLC remote operation	Degrastics	
	Bead	Venty	
vete			

1. Click [Transfer setup] on the FX3U-ENET-L Configuration tool.



- Select [USB (GOT Transparent mode)] in [Serial port/ USB] of [Connecting interface].
- 3. Click [Connection test]



4. After the communication test is completed, check that the GOT is correctly connected to the FXCPU.

20.6.12 Accessing by RT ToolBox2

This section explains the procedure to set the FA transparent function of RT ToolBox2 with an example of connecting to CRnQ-700.

 Connecting the GOT and Controller in bus connection or direct CPU connection (CRnQ-700)



 Right-click a project name to be a target on the project tree of RT ToolBox2. Click [Edit Project].

	RC1	
Communication	n setting	
R/C type:	CRnQ-700	
Method:	CRnQ	Detail
None 10del Selectio	n for Offline	
None Iodel Selectio Robot model:	n for Offline	Select
None Aodel Selectio Robot model: Language:	n for Offline RV-6S MELFA-BASIC V	Select
None Aodel Selectio Robot model: Language: Fravel base se	n for Offline RV-6S MELFA-BASIC V	Select
None Aodel Selectio Robot model: Language: Fravel base se inly travel bass overment rand	n for Offline RV-6S MELFA-BASIC V tting for display e information for display is set here. To a of the travel axis, change the paran	Select

- 2. Set [Method] to [CRnC].
- 3. Click [Detail].



- 4. Select [USB] in [Serial port].
- 5. Click [Detail].



Check-mark either of the following in [PLC side I/F setting of PLC module].

Bus connection [via GOT(Bus) transparent mode]

Direct CPU connection

[via GOT(direct coupled) transparent mode]

7. As necessary, select a CPU that is targeted in [CPU].

Connecting the GOT and Controller in Ethernet connection



 Right-click a project name to be a target on the project tree of RT ToolBox2. Click [Edit Project].



- 2. Set [Method] to [CRnQ].
- 3. Click [Detail].



- 4. Select [USB] in [Serial port].
- 5. Click [Detail].



 On the [PLC side I/F setting of PLC module], mark the [via GOT (Ethernet) transparent mode] checkbox and click [Set].

 $\frac{1}{2}$

GOT (Ethernet)	Transparent setting	×
Туре	QJ71E71 💌	OK Cancel
Unit Network No.	1	
Station No.	1	
IP Address	0.0.0.0	
Network No.	1	
Station No.	64	

- 7. Set [QJ71E71] for [Type].
- Specify the number assigned to the Ethernet module for [Network No.], [Station No.] and [IP Address] in "Module side".
- 9. Specify the number assigned to the GOT for [Network No.], [Station No.] and [IP Address] in "GOT side".
- 10. As necessary, select a CPU that is targeted in [CPU].

20.6.13 Accessing by NC Configurator

The following shows the procedure to set the FA transparent function of NC Configurator.

NC Configurator	(E1)=)
na sa	ŕ
「醫療論論」は次のの名れない語	- () 合用(す.

- 1. Click [File] \rightarrow [Open].
- 2. The [Open] is displayed.



 Select [NC] on the upper left of the screen, and set the following: NC series : C70 M or C70 L Connect pattern : Set the pattern according to the connect pattern.

IP address : Set as necessary.

4. By clicking [Open], data is read from CNC and displayed.



20.6.14 Accessing by MELSOFT Navigator

This section explains the procedure to set the FA transparent function of the MELSOFT Navigator.

meLSOF I	Navigator	ents an	d Settings\TEAM (GT1000\My Docur	ments\test - [Module Config
: Workspace	Project E	dit View	Module Configuration	System Label List	Online Tools	Window Hel
🗅 📂 💾		X D B	- 🖻 Q 🖻 🖊	ㅇ딱똑뿍	Batch Rea	be
Workspace			Ф X 🔛	Module Configurati	Password	Setup 🕨
test	etwork Conf Network C odule Config	iguration onfiguration uration				
. Clic Nav	k [Onl/	ine] —	► [Batch R	ead] in M	ELSOF	Г
. The	e [Batc	h Rea	d] is displa	iyed.		
			$\hat{\nabla}$			
Jatch Read						X
1 2	htsutish(325	Frajest Ha	Connector: D Default Conn. [esination Target Data Change I Betting.	Security Electing	School All
When GXVI2 proj	ect or MTD2 proje	ct is read, symbol	c information and parameter o	r program and parameter are	rread in set.	
Save Folder Pa	H-2					
Seve Bolder Pe CoPingram F	en Les mars contributes	CTT_New geto V	its.b.ch			Beie
Save Bolder Pa CoProgram F	er lesimilisisin finitii re	Voteg vel/_TOX	its.b.ch			Bele
Seve Did Arpera Seve Doder Pe CoProgram F Workspace Nar Filtschich	er lesimousion finitu re	XFT_Nev geto (f	iks.b.ch			Beie
Seve Workspace Seve Edder Pe Criff ogram F Workspace Nar Mitschicht	er lesinci.son timici. re	XCFT_(Hew getor)/	iko.b.zh			Beie
Seve Workpere Seve Edder Re CitProgram F Woolspace Nar Mitsubishi Tit is	er lesiMatson (fyna) re	XCFT_Play geto (/	¥s.b.ch			Bein
Seve Didde peop Seve Didde He Criffingten Fi Mischichi Title	er IeoMCLSOFT/MCL re	xCf™_[New peter//	nesduch			Beie

- Select the projects to be read from [Select Project], and set the storage destination of the workspace in [Save Workspace].
- Click [Execute] to read and display the specified project.



20.6.15 Accessing by QnUDVCPU•LCPU Logging **Configuration Tool**

The following shows the procedure to set the FA transparent function of QnUDVCPU•LCPU Logging Configuration Tool .



- 1. Click [Online] → [Transfer Setup...].
- 2. The [Transfer Setup] is displayed.



- 3. Set the [Transfer Setup]: PC side I/F : Serial USB PLC side I/F : GOT Other Station Setting : No specification
- 4. Set [PC side I/F Serial Setting] and [PLC side I/F Detailed Setting of GOT] in [Transfer Setup]. For details, refer to the following.

20.6.2 Accessing by GX Works2

20.6.16 Accessing by Setting/ Monitoring tool for C Controller module

The following shows the procedure to set the FA transparent function of Setting/Monitoring tool for C Controller module with the C Controller module (Q24DHCCPU-V) connected.

- When connecting the GOT and personal computer with USB
- (1) When connecting the GOT and PLC in bus connection



- 1. Click the Connection Destination view \rightarrow [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Setting/ Monitoring tool for C Controller module.
- 2. The [Transfer Setup] is displayed.
- 3. Set the [Transfer Setup]: PLC side I/F : GOT Other station : No specification

CPU Module	OK
Setup	Cancel
FLC Mode (QOU (Q mide)	
🙃 via GOT(Bus) transparent mode	
vie GOT(Ethernet) transparant mode	
Schip.	
Leiup	
Noble Rene (0021024	
Subano 0	
evelo ode =	
and a second sec	
2.00 C 160 E1883 #	
Sancheo Data M	

4. Double-click [GOT] of the CPU side I/F to display [CPU side I/F Detailed Setting of GOT].



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FA TRANSPARENT FUNCTION

 Mark the [via GOT(Bus) transparent mode] checkbox on the [CPU side I/F Detailed Setting of GOT] screen.

Setting/	monitoring tools for the C Controller module 🔯
(į)	Successfully connected with the Q24DHCCPU-V.

- The screen returns to [Transfer Setup]. Click [Connection Test] to check if Setting/Monitoring tool for C Controller module has been connected to the motion controller (Q mode).
- (2) When connecting the GOT and PLC in Ethernet communication



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Setting/ Monitoring tool for C Controller module.
- 2. The [Transfer Setup] is displayed.



 Set the [Transfer Setup]: PLC side I/F : GOT Other station : No specification



- **4**. Double-click [GOT] of the CPU side I/F to display [CPU side I/F Detailed Setting of GOT].
- Mark the [via GOT(Ethernet) transparent mode] checkbox on the [CPU side I/F Detailed Setting of GOT] screen.

			0
LC Type	DHC-V	7	Car
Module Side			
	1		
	1		
IP Address	0 0 0	0 IP Input Format	DEC. 💌
	1		
	64		
	is an assignment for t station No. that is no have to be the same		

- By clicking [Set], the [GOT (Ethernet) Transparent Setting] is displayed.
 Here, set the C Controller module (Q24DHCCPU-V), which is firstly connected via a GOT.
- Specify the IP address for [IP address] same as the IP address assigned to the C Controller module (Q24DHCCPU-V).

Setting/	monitoring tools for the C Controller module	X
Ų,	Successfully connected with the Q24DHCCPU-V.	
	OK	

 The screen returns to [Transfer Setup]. Click [Connection Test] to check if Setting/Monitoring tool for C Controller module has been connected to the C Controller module (Q24DHCCPU-V).

- When connecting the GOT and personal computer in Ethernet connection
- (1) When connecting the GOT and PLC in bus connection



- Click the Connection Destination view → [Connection Destination] → [(Connection target data name)] in the Navigation window of MT Setting/ Monitoring tool for C Controller module.
- 2. The [Transfer Setup] is displayed.
- 3. Set the [Transfer Setup]: PC side I/F : Ethernet Board PLC side I/F : GOT Other station : No specification



- **4**. Double-click [Ethernet Board] of the PC side I/F to display [PC side I/F Ethernet Board Setting].
- Set the protocol to TCP. Network No. and Station No. are not required to be changed (default) because they are not used.



side I/F Detailed	Setting o	t GOT					
Eathernet Detail set	ting for PC a	nd GOT co	nnection				
IP Address	0 0	0 0	IP Input Fo	mat DEC	. 🔻	OK	
C Host Name				,	_		
						Cano	el
Port No.	5014						
Detail setting for GC	T and PLC co	onnection -					
CPU Module							
Setup			_				
PLC Mode	PU (Q mode)) _	-				
via GOT(Bus) transparent	t mode					
via GOT(Bus) transpareni	t mode					
via GOT(Bus C via GOT(Eth)) transparen ernet) transp	t mode varent mod	le				
via GOT(Bus via GOT(Eth) transparen ernet) transp	t mode parent mod	le S	etting,			
© via GOT(Bus) transparen ernet) transp	t mode parent mod	e S	etting,			
C via GOT(Bus) transparen ernet) transp	t mode parent mod	le S	etting			
via GOT(Bus via GOT(Eth C c24 Setup Module Name	o transpareni ernet) transp	t mode	e s	etting,			
via GOT(Bus via GOT(Eth c24 Setup Module Name Satisfy No	QJ71C24	t mode	ie 5	etting,			
via GOT(Bus via GOT(Eth c24 Setup Module Name Station No, c24	QJ71C24	t mode	le <u>5</u>	etting,			
via GOT(Bus via GOT(Eth c24 Setup Module Name Station No. Parity	QJ71C24	t mode varent mod	le	etting,			
via GOT(Bus via GOT(Eth C24 Setup Module Name Station No. Parity Sum Check	QJ71C24 Odd	t mode varent mod	le <u>s</u>	etting,			
via GOT(Bus via GOT(Eth C 224 Setup Module Name Station No. Parity Sum Check Data Bit 8	QJ71C24 Odd Exists	t mode	e 5	etting			

- 6. Double-click [GOT] of the PLC side I/F to display [PLC side I/F Detailed Setting of GOT].
- 7. Set the IP address and port No. in [Ethernet detail setting for PC and GOT connection]. Set the IP address and port No. to the same as the Ethernet download setting.
 - 20.5.1 (b) Ethernet download setting



 The screen returns to [Transfer Setup]. Click [Connection Test] to check if Setting/Monitoring tool for C Controller module has been connected to the motion controller (Q mode).

20.7 Precautions

20.7.1 Precautions common to each software

GOT interface required to use the FA transparent function

Connect the personal computer, to which PX Developer or any other relevant software has been installed, to the USB interface of the GOT.

When performing the FA transparent function, use USB interface of the GOT.

Using both of them to perform the FA transparent function concurrently is not allowed.



Conditions for suspending the FA transparent function

The FA transparent function is also suspended when any of the following operations, which stop the GOT monitor, is performed.

Note that the FA transparent function will not be stopped while using the optional function such as the Utility display or ladder monitor function.

- · When project data is written/read, or when the OS is written by GT Designer3^{*1}
- When the GOT is set up*1
- · When no communication request (online monitor, etc.) has been issued from PX Developer for 45 minutes
 - *1 A timeout error occurs in PX Developer.

When GOT monitoring is faulty

The FA transparent function cannot be used in case that the GOT monitoring is faulty due to PLC CPU errors or faulty communication between the PLC CPU and GOT.

When GOT monitoring is faulty, check the following.

(1) Whether the PLC CPU operates normally

Refer to the User's Manual of the PLC CPU you use.

- (2) Whether the PLC CPU and GOT are connected normally
 - **6. DIRECT CONNECTION TO CPU**
 - 7. COMPUTER LINK CONNECTION
 - **8. BUS CONNECTION**

When monitoring the PLC CPU from a personal computer

When monitoring the PLC CPU from a personal computer, the GOT and personal computer refresh the display slower.

Software available for the FA transparent function

When multiple kinds of software are activated on one personal computer, only one of them is available for communications using the FA transparent function.

Do not concurrently perform any communications using the FA transparent function.

(Offline operation with each software is available)

Also, do not perform communications with the GOT (e.g. downloading project data) from GT Designer3 during execution of communications using the FA transparent function.



T Designer3 Communication with GOT

- When the FA transparent function is used in a bus connection
- (1) When multiple GOTs are bus-connected When multiple GOTs are bus-connected, the FA transparent function can be used on each GOT. However, note that the monitoring performance of each GOT slows down as the number of monitoring GOTs and personal computers increases.



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(2) When the FA transparent function is used in a bus connection

When the FA transparent function is used in a bus connection, the following GX Works2 functions cannot be executed.

The message [The executed function is not supported. Please check the manual and other documentation.] is displayed on GX Works2.

Unsupported functions	Remark
Remote Reset Remote system reset	_
 Remote RUN Remote STOP Remote PAUSE Remote STEP-RUN Remote latch clear Write clock data Clear malfunction log 	Inexecutable only when specify all stations/groups has been performed.

When PLC power disconnection occurs with the FA transparent function being used While the FA transparent function is being used, if the communication between the PLC and the GOT is stopped due to PLC power disconnection or a disconnection of the communication cable between the PLC and the GOT, the GOT waits for timeout against the communication request from the peripheral devices (PX Developer, etc.), and it takes a few minutes to recover the monitoring between the PLC and the GOT.



PX Developer and so on

When the FA transparent function is used in an Ethernet connection

(1) GX Works2 function

When the FA transparent function is used in an Ethernet connection, the following GX Works2 functions cannot be executed. The message [The executed function is not supported.

Please check the manual and other documentation.] is displayed on GX Works2.

Unsupported functions	Remark
 Remote Reset Remote system reset	_
 Remote RUN Remote STOP Remote PAUSE Remote STEP-RUN Remote latch clear Write clock data Clear malfunction log 	Inexecutable only when specify all stations/groups has been performed.
 Remote password function MELSECNET diagnostics CC IE Control diagnostics CC IE Field diagnostics Ethernet diagnostics (PING test/loopback test with the Ethernet module (Q series)) 	_

(2) GOT station monitoring function

When the FA transparent function is used in an Ethernet connection, GOT station monitoring function cannot be operated.

Therefore, in the cases of [no connection target], [PLC power OFF], etc., the monitoring of the GOT delays for the timeout time.

When connecting the GOT multi-drop connection

FA transparent function is available for each GOT in the GOT multi-drop connection system.

(1) Standard monitor OS installation, Communication driver writing

When using FA transparent function in GOT multi-drop connection, the writing of the standard monitor OS and communication driver to the GOT from GT Designer3 (Version 1.18U or later), as well as the writing of the standard monitor OS and communication driver to the serial multi-drop connection unit are required.

(2) Number of personal computers Only one personal computer can be connected to the multi-drop connection system.



(3) Monitor speed of GOT

The monitoring performance slows down according to the number of monitoring GOTs. While using FA transparent function, the monitoring performance of the whole multi-drop system decreases. As a result, timeout error may occur in GOTs in the system.

When connecting the GOT and the personal computer by USB

When the operations shown below are executed, the operation is executed in the PLC. However, the display on the GOT may stop temporarily or the display of timeout may appear on GX Works2.

Operation ^{*1}	Remark
Remote Reset	Applied for the following operations specifying the currently selected station.
Remote RUN Remote STOP Remote PAUSE Remote STEP-RUN Remote Reset Remote latch clear Write clock data	Applied for the following operations specifying all the station.
CC IE Control diagnostics (Link startup/stop) CC IE Field diagnostics (Link startup/stop)	_

*1 The remote operations only of when the connection type between the GOT and CPU is the direct CPU connection or computer link connection are applied.

20.7.2 When using GX Woks2

- When [monitor conditions] have been set on GX Works2
- (1) Monitoring performance of the GOT is temporarily suspended.
- (2) The GOT cannot respond to the touch switch operation and numerical/ascii inputs.
- (3) Writing to PLC results in a system alarm occurrence and displays the message, "315 Device writing error. Correct device.".
- (4) While setting the monitor conditions, do not perform any operation which makes the GOT restart (e.g. downloading project data, changing utility data). Doing so may display a system alarm, "402 Communication timeout. Confirm communication pathway or modules." when the GOT restarts. When the monitor conditions setting for the PLC CPU has not been cancelled, reconnect GX Works2 to cancel the setting.(An error may be output when the monitor conditions setting is cancelled.)
- (5) When the time check of GX Works2 is set to 30 seconds or more in the monitor condition settings, the message "402 Communication timeout. Confirm communication pathway or modules." may appear. Set the time check time of GX Works2 to 30 seconds or less.

When exiting GX Works2

For 45 seconds after GX Works2 has been exited, the GOT continues monitoring at the same speed as when the FA transparent function is working.

When performing [Read to PLC], [Write to PLC] and other file operations on GX Works2 If any of the following GOT functions is executed during the file operation such as [Read to PLC] or [Write to PLC], an error may occur on the GOT, GX Works2. In this case, take the following corrective action:

• File reading in the ladder monitor function for MELSEC-Q

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
The file is not found.	With no file operation being executed on GX Works2, re- execute the file reading.	File access failure. Please retry.	With no file reading being executed in the ladder monitor function for MELSEC-Q, re-execute the file operation.

• Read/write of values of the file register specified for the recipe function

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
358 PLC file access failure. Confirm PLC drive. ^{*1}	With no file operation on GX Works2, turn ON the trigger device for the recipe function again.	File access failure. Please retry. PLC file system error. Unable to communicate with PLC.	Execute the file access operation again with the recipe in- process signal in GOT system information OFF.

• Reading TC monitor set value in the system monitor function

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
No message is displayed. (The TC set value space is blank.)	With no file operation being executed on GX Works2, re- execute the TC monitor.	File access failure. Please retry.	With no TC set value being read, re- execute the file operation.

*1 The numerical indicates the system alarm No. • Reading the special module monitor CPU

Malfunction log

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2			
Communication error	With no file operation being executed on GX Works2, re- execute the CPU malfunction log reading.	File access failure. Please retry.	With no special module monitor malfunction log being read, execute the file operation.			

Backup/restore

Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
Backup	With no file operation being executed on GX Works2, re- execute the backup.	-	With no backup being executed, execute the file operation.
Restore	With no file operation being executed on GX Works2, re- execute the restore.	-	With no restore being executed, execute the file operation.
 SFC more 	nitor file readin	g	
Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
-	With no file operation being executed on GX Works2, re- execute the file reading.	-	With no special module monitor CPU malfunction log being read, execute the file operation.
 Reading/ 	/Writing files of	ladder edit	
Error messages on GOT	Corrective action on GOT side	Error messages on GX Works2	Corrective action on GX Works2
Read	With no file operation being executed on GX Works2, re- execute the file reading.	_	With no file reading being executed on ladder edit, execute the file operation.
Write	With no file operation being executed on GX Works2, re- execute the file writing.	_	With no file writing being executed on ladder edit, execute the file operation.

When PLC write is failed while using the FA transparent function

The execution of PLC write using the FA transparent function may be failed due to some reason such as cable disconnection.

When this occurs, re-execute the PLC write from the same personal computer, or reset the PLC CPU.

- Restrictions on GX Works2 during backup/ restore execution
- (1) When reading/writing data from/to a PLC, monitoring a PLC, and others are executed with GX Works2 with the FA transparent function during the backup/restore execution with the GOT, the backup/restore is stopped. Check that reading/writing data from/to the PLC, monitoring the PLC, and others are not executed with GX Works2 with the FA transparent function. Execute the backup/restore with the GOT again.
- (2) When the backup/restore is executed with the GOT while reading/writing data from/to a PLC, monitoring a PLC, and others are executed with GX Works2 with the FA transparent function, errors occur on GX Works2. The backup/restore with the GOT is correctly executed.

20.7.3 When using MT Developer, MT Works2

- When exiting MT Developer, MT Works2 For 45 seconds after MT Developer, MT Works2 has been exited, the GOT continues monitoring at the same speed as when the FA transparent function is working.
- When PLC write is failed while using the FA transparent function

The execution of PLC write using the FA transparent function may be failed due to some reasons such as cable disconnection.

When this occurs, re-execute the PLC write from the same personal computer, or reset the motion controller CPU.

When a cable disconnection has occurred When the cable between the GOT and the motion CPU is disconnected, it takes time until a timeout error occurs in MT Developer.

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20.7.4 When using MR Configurator, MR Configurator2

Unavailable functions and restrictions For the use via the motion controller, there are unavailable functions and restrictions.

For details on the restrictions, refer to the help screen of MR Configurator.

Monitor speed of GOT

Since the FA transparent function is used via the motion CPU, the monitor speed of GOT is slow.

20.7.5 When using FR Configurator

GOT monitoring when using FA transparent function

When FA transparent function is used, GOT suspends monitoring on channels supporting FA transparent function.

POINT

Cancelling the suspended GOT monitoring immediately

To cancel the suspended (45 seconds) GOT monitoring immediately after FA transparent is executed, input "1" to device GS457.Then GOT resumes monitoring.

If FA transparent is resumed even if "1" is already input to device GS457, an error will occur on FR Configurator.

For the details of the device, refer to the following manual.

GT Designer3 Version□ Screen Design Manual

When using the oscilloscope function specified sampling

Since the monitoring of the inverter data may be not performed at the specified sampling intervals depending on the settings of oscilloscope function, adjust the communication setting, a sampling interval, etc.

PU mode operation command source selection

On the setting of PU mode operation command source selection (Pr:551) of the inverter, specify the terminal (1:RS-485 terminals, 2:PU connected) connected to GOT.



REVISIONS

* The manual number is given on the bottom left of the back cover.

Print Date	* Manual Number	Revision
Sep., 2013	SH(NA)-081197ENG-A	Compatible with GT Works3 Version1.100E
Nov., 2013	SH(NA)-081197ENG-B	Compatible with GT Works3 Version1.104J • Changing the icons of the supported models
Jan., 2014	SH(NA)-081197ENG-C	Compatible with GT Works3 Version1.108N • FX3GE is supported. • FREQROL-A800, F800, and E700EX are supported. • MELSERVO-JE is supported.
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WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company. However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

The gratis warranty term of the product shall be for thirty-six (36) months after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be forty-two (42) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

[Gratis Warranty Range]

- (1) The customer shall be responsible for the primary failure diagnosis unless otherwise specified.
 - If requested by the customer, Mitsubishi Electric Corporation or its representative firm may carry out the primary failure diagnosis at the customer's expence.

The primary failure diagnosis will, however, be free of charge should the cause of failure be attributable to Mitsubishi Electric Corporation.

- (2) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (3) Even within the gratis warranty term, repairs shall be charged for in the following cases.
 1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
 - 2. Failure caused by unapproved modifications, etc., to the product by the user.
 - 3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
 - Failure that could have been avoided if consumable parts designated in the instruction manual had been correctly serviced or replaced.
 - 5. Replacing consumable parts such as the battery, backlight and fuses.
 - 6. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
 - 7. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
 - 8. Any other failure found not to be the responsibility of Mitsubishi or that admitted not to be so by the user.

2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not available after production is discontinued.

3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

4. Exclusion of loss in opportunity and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to damages caused by any cause found not to be the responsibility of Mitsubishi, loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products, special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products, replacement by the user, maintenance of on-site equipment, start-up test run and other tasks.

5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

6. Product application

(1) In using the Mitsubishi graphic operation terminal, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the graphic operation terminal device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.

(2) The Mitsubishi graphic operation terminal has been designed and manufactured for applications in general industries, etc. Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or Public service purposes shall be excluded from the graphic operation terminal applications.

In addition, applications in which human life or property that could be greatly affected, such as in aircraft, medical applications, incineration and fuel devices, manned transportation equipment for recreation and amusement, and safety devices, shall also be excluded from the graphic operation terminal range of applications.

However, in certain cases, some applications may be possible, providing the user consults the local Mitsubishi representative outlining the special requirements of the project, and providing that all parties concerned agree to the special circumstances, solely at our discretion.

In some of three cases, however, Mitsubishi Electric Corporation may consider the possibility of an application, provided that the customer notifies Mitsubishi Electric Corporation of the intention, the application is clearly defined and any special quality is not required.

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GOT2000 Series Connection Manual (Mitsubishi Product)

For GT Works3 Version1

	COT2000_CON1_SW1_E
MODEL	GUI2000-CUNI-SVVI-E

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MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN NAGOYA WORKS : 1-14 , YADA-MINAMI 5-CHOME , HIGASHI-KU, NAGOYA , JAPAN