Changes for the Better

MITSUBISHI
ELECTRIC

Mitsubishi Graphic Operation Terminal

Graphic Operation Terminal
900
series

GOT-A900 SERIES
What extends from here is
the field called the future

GOT-F900
series

Mitsubishi Electric Corporation Nagoya Works is a factory certified for ISO14001 (standards for environmental management systems) and ISO9001 (standards for quality assurance management systems)

MELFANS web
MITSUBISHI ELECTRIC
FA NETWORK SERVICE ON WORLD WIDE

MELSOFT

What extends from here is the field called the future

From machine to factory - from factory to Global Web.
In the Information Technology (IT) age, the fields surrounding the Human Machine Interface (HMI) have unlimited possibilities. What is really demanded of the HMI at each site?
Increased efficiency of design time by "comfortable development environment", operation to maintenance of various devices by "Factory Automation integration", operation between fields beyond the space and time by "IT utilization",——
Mitsubishi's HMI, the GOT, that implements such future has gone through new evolution.
With the GOT900 series, we extend your fields to the future.

Graphic Operation Terminal
900
series

Advanced multimedia functions in a slim body
Recommended for the operator **P.12**

Troubleshooter on-site
Recommended for the maintenance personnel **P.13**

Only one PC is required for screen design to debugging
Recommended for the designer **P.14**

GLOBAL WEB
FACTORY
MACHINE

New drawing software
MELSOFT MITSUBISHI TOTAL FA SOLUTION
GT Designer2
Integrated screen development software
The drawing software with greatly improved operability achieves, Reduction in screen drawing time by *half*
*The screens created with GT Designer is usable without any modifications.

CONTENTS

Introduction

■ Concept ··· P.2
■ Lineup ··· P.4
■ Special report!
•GT Designer2 New ··· P.6
•FA integrated functions New ··· P.8
•Gateway functions New ··· P.10
■ Features and recommended points
•Recommended for the operator ··· P.12
•Recommended for the maintenance personnel ··· P.13
•Recommended for the designer ··· P.14

Product overview

■ GT SoftGOT2 New ··· P.16
■ HMI
•A985GOT-V ··· P.18
•A985GOT ··· P.20
•A975GOT ··· P.22
•A970GOT ··· P.23
•A960GOT ··· P.25
•A956WGOT ··· P.26
•A95□GOT ··· P.28
■ Screen development software
•GT Works2 New ··· P.30
GT Designer2 New ··· P.30
GT Simulator2 New ··· P.31
■ Optional parts
•Video/RGB mixed input interface unit New ··· P.32
•Video input interface unit ··· P.32
•RGB input interface unit ··· P.32
•Printer interface unit ··· P.32
•External input/output interface unit ··· P.32
•PC card interface unit ··· P.32
•Flash PC card ··· P.33
•Memory board ··· P.33
•Protection sheet ··· P.33
•Backlight ··· P.33
•Stand ··· P.33
•Attachment ··· P.33

Function description

GOT dictionary

■ Features/hardware
•OS installation, various connection forms, etc. ··· P.34
■ Main unit functions
•Recipe, script, security, etc. ··· P.35
■ Maintenance functions
•System monitor, Ladder monitor, etc. ··· P.36
■ Drawing software (including GT Simulator2)
•GOT simulation, converter, etc. ··· P.37

Others

■ Connection configuration ··· P.38
■ Bus connection ··· P.42
■ Specifications ··· P.50
■ External dimensions ··· P.52
■ Function list for each model ··· P.54
■ Connectable model list ··· P.56
■ Notes for use ··· P.58
■ List of products ··· P.59
■ Sales & service network ··· P.62

Graphic Operation Terminal
900
series

A complete line-up, giving a free choice of sizes and functions

The all models are fully compatible with the drawing software

Graphic
Operation
Terminal

NEW

HMI software for personal computer

GT SoftGOT2 P.16

MELSOFT

MELSOFT is a general name of Mitsubishi's integrated FA software that plays an important role in all processes of design, operation and maintenance.
The MELSOFT products include the GT series that supports design work from GOT drawing to debugging and the GX series for PLC programming.

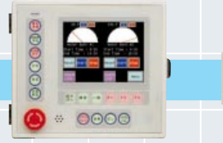
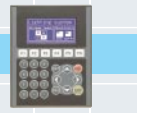
HMI GOT-900 series

Choose the GOT according to its functions

GOT-A900 SERIES

Model		Display	Colors	Dots	Feature	Types	Size
A985 P.18~		TFT display	256 colors	800 x 600 dots	Compact 12" display! Best-selling energy-saving HMI	A985GOT-TBA-V A985GOT-TBD-V A985GOT-TBA A985GOT-TBD A985GOT-TBA-EU	12"
A975 P.22		TFT display	256 colors	640 x 480 dots	This slim HMI is packed with advanced functions	A975GOT-TBA-B A975GOT-TBD-B A975GOT-TBA-EU	10"
A970 P.23~		TFT/D-STN display	16/8 colors/ 2 monochrome colors	640 x 480 dots	Many functions are available as standard	A970GOT-TBA-B A970GOT-TBD-B A970GOT-TBA-EU A970GOT-SBA A970GOT-SBD A970GOT-SBA-EU A970GOT-LBA A970GOT-LBD A970GOT-LBA-EU	10"
A960 P.25		EL	Black and yellowish orange	640 x 400 dots	Inexpensive slim HMI	A960GOT-EBA A960GOT-EBD A960GOT-EBA-EU	9"
A956W P.26		TFT display	256 colors	480 x 234 dots	The industry's first 7" wide display	A956WGOT-TBD	7"
A95□ P.28		TFT/STN display	256 colors/ 8 colors/ 2 monochrome colors	320 x 240 dots	6" high-function type with multiple connections	A95□GOT-(Q)TBD(-M3) A95□GOT-(Q)SBD(-M3) A95□GOT-(Q)LBD(-M3)	6"
A95□HANDY		STN display	8 colors/ 2 monochrome colors	320 x 240 dots	Best suited for an operation terminal dedicated for a machine	A95□GOT-SBD-M3-H A95□GOT-LBD-M3-H *1	6"

GOT-F900 SERIES

Model		Display	Colors	Dots	Feature		Size
F940W		TFT display	256 colors	480 x 234 dots	Inexpensive wide type	*1	7"
F94□		STN display	8 colors/ 2 monochrome colors	320 x 240 dots	For simple and handy display	*1	6"
F94□HANDY		STN display	8 colors/ 2 monochrome colors	320 x 240 dots	For various applications	*1	6"
ET940		STN display	8 colors/ 2 monochrome colors	320 x 240 dots	For standardization of operation panel	*1	6"
F930		STN display	2 monochrome colors	240 x 80 dots	Pursuit of cost performance	*1	4"
F930 New With key pad		STN display	2 monochrome colors	240 x 80 dots	Functions equivalent to those of F930GOT	*1	4"
F920 New With key pad		STN display	2 monochrome colors	128 x 64 dots	Compact unification	*1	3"

Choose the GOT according to its functions!	Product overview P.16~ Function list for each unit P.54~
Choose the GOT according to its connectivity, cable length, and number of units!	Connection configuration P.38~
Choose the GOT according to the controller to be connected!	Connectable model list P.56~

*1: See the GOT-F900 FAMILY catalog.

12" | 10" | 9" — Large size
7" | 6" | 4" — Medium size
3" — small size

Choose it according to its size

Special report 1

New drawing software

MELSOFT MITSUBISHI TOTAL FA SOLUTION

GT Designer2

NEW

Integrated screen development software

Reduction in screen drawing time by half

Features

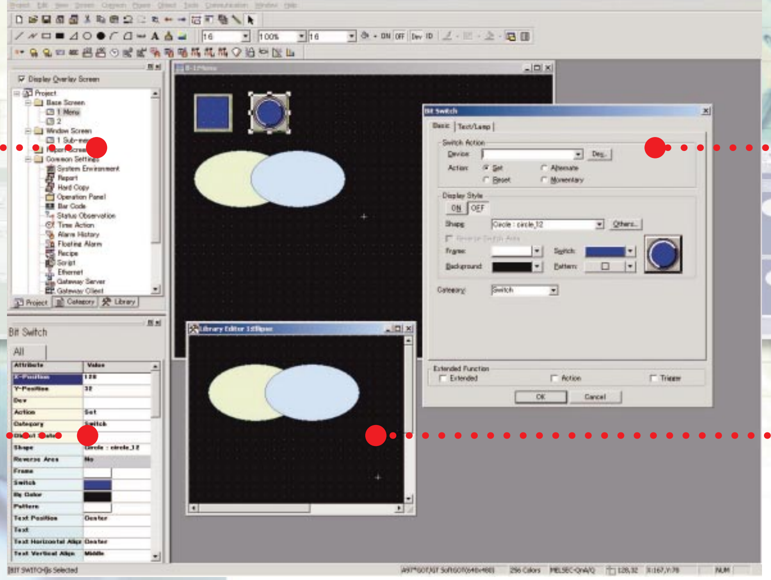
1. *Reduction in screen drawing time by half*
2. *Windows® standard operability and menu configuration*
3. *Data compatibility with GT Designer*

WORK SPACE

- The entire screen's configuration can be viewed in tree format, and the screens can be added, deleted, copied and moved.
- A project unit, category unit or library unit can be selected by changing the tabs.

DIALOG BOX

- This screen is used to set object or figures' display attributes.
- This screen opens when the object or figures are double-clicked on.
- Each setting item can be customized.



PROPERTY SHEET

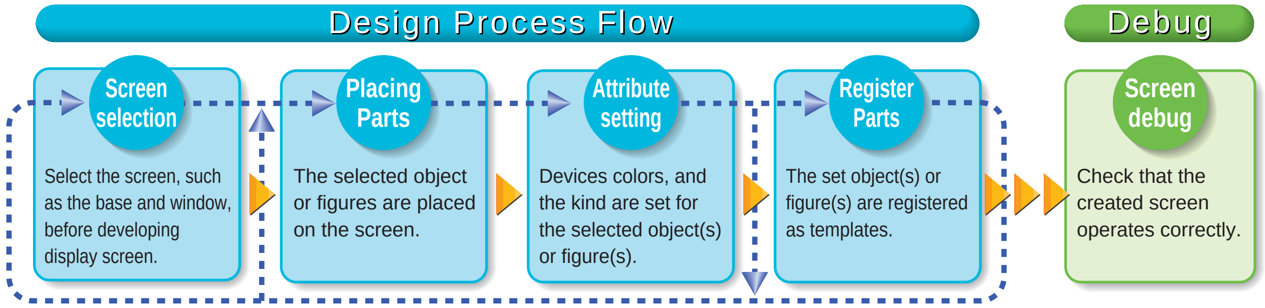
- Attribute setting for the selected object or figures are displayed.
- Various settings can be modified on the property sheet.

LIBRARY EDITOR

- This screen is used to edit template.
- The user-created library can be reedited easily.

Flow of screen development

With GT Designer2, the screen is selected and then created by placing and setting objects and figures.
The screen can also be debugged with GT Simulator2.
The screen development process time can be greatly reduced by using this integrated screen development software.



Design Process Flow

Screen selection: Select the screen, such as the base and window, before developing display screen.

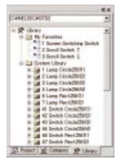
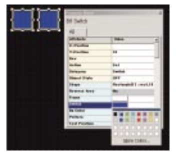
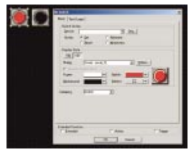
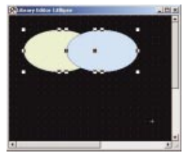
Placing Parts: The selected object or figures placed on the screen.

Attribute setting: Devices colors, and the kind are set for the selected object(s) or figure(s).

Register Parts: The set object(s) or figure(s) are registered as templates.

Debug

Screen debug: Check that the created screen operates correctly.

Screen development process		Function name	Features
Design Process Flow	Screen selection	Project Workspace 	**Easy to select required editing screen** • It's easy to see the entire project so the screen to be edited can be selected right away. • System settings can also be changed right away with common settings.
	Placing Parts	Library Workspace 	**Easy to select, quick to place** • The entire project can be seen easily and the required figures or object can be selected quickly.
	Attribute setting	Property Sheet 	**Fast setting without opening dialog boxes** • Figure and object attributes can be set without opening the object setting screen.
		Property Sheet 	**Set similar objects attributes together** • Similar objects can be selected, and the color and font size can be set in one go.
		Category Workspace 	**Batch change of parts arranged on multiple screens** • Devices/colors/graphics can be batch-changed for each screen or category (where objects and graphics are grouped by purposes).
		View Change directly 	**Direct color change reduces setting mistakes** • Settings can be confirmed on the property sheet or dialog. • Result of setting change is displayed instantly.
	Register Parts	Library Editor 	**Modifying parts is easier!** • Editing a part couldn't be more simpler, just double-click on part to enter the library editor. • Part contents are automatically updated after editing is completed.
Debug	Screen debug	Simulation Debugging *2 	**Debugging on the personal computer** • GOT screens can be simulated on the personal computer and debugged. • The PLC program and GOT screens can be debugged simultaneously.

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*1: Refer to Operating Environment on page 30 and List of Products on page 59 for GT Designer2 and GT Simulator2.
*2: GT Simulator2 and GX Simulator are required for simulation debugging.
*3: Applicable for the Mitsubishi PLC and Mitsubishi motion controller only.

Special report 2

FA integrated functions

Integrate FA products information with the GOT

Fully compatible with PLC

Fast cause search with GOT in an event of machinery malfunction

MELSEC-Q ladder monitor - Touch search function*20 NEW

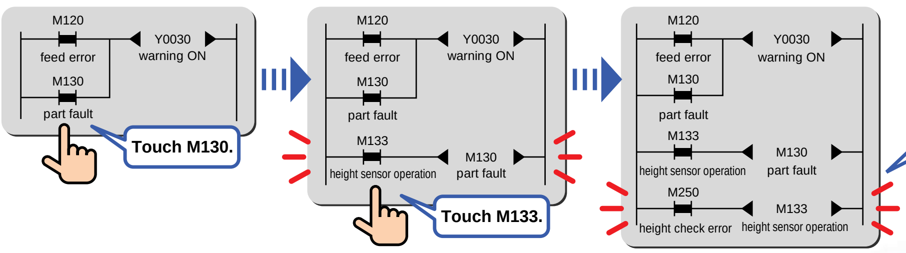
Touch search function is added to the MELSEC-Q ladder monitor function!!

The GOT identifies a cause of error quickly and with accuracy.

What is touch search?

By touching coils on the ladder monitor, corresponding contacts are found quickly. The touch search realizes quick cause search just tracing back form coils to contacts.

How to search for the cause of warning light (Y30)



Warning light turned on due to height check error (M250).

- Part fault (M130) is found as the cause of Part Fault (Y30).
- Height sensor operation (M133) is found as the cause of Part fault (M130).
- The coil of Height sensor operation (M133) is displayed.

Components

【Hardware】

A985GOT(-V), A97☐GOT
A960GOT, A956WGOT

Memory board(A9GT-QFNB(☐M))

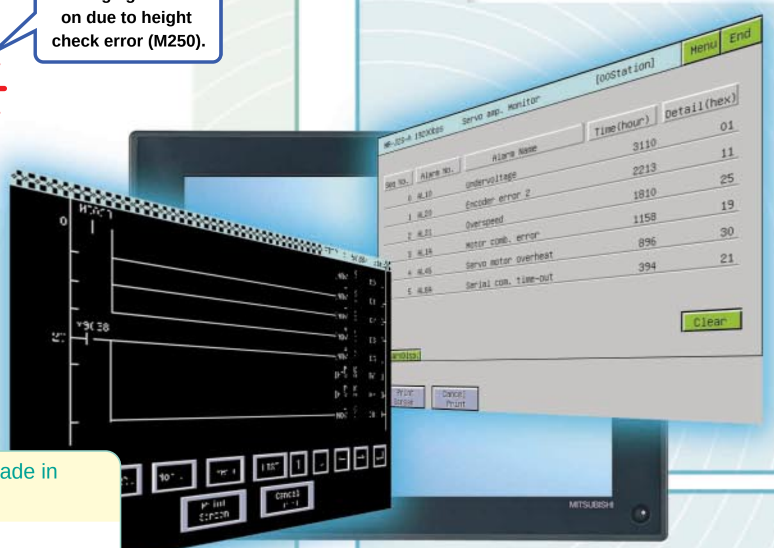
Various communication units/boards

【Software】

GT Works2

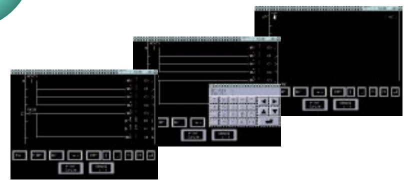
GT Designer2

*1: Either one of the above software programs is required.



Ladder monitor function*20

PLC CPU programs can be monitored in ladder format.



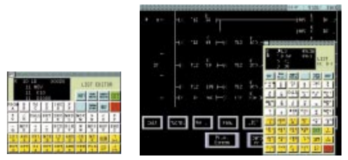
- Applicable GOT ····· **A985(-V)/A975/A970/A960/A956WGOT*2**
- Connected to ····· **Mitsubishi PLC*20**

*2: A956WGOT is compatible with Q series only.

P.36 Refer to "Ladder monitor function".

List program edit function*20

Program changes can be made in instruction list format.



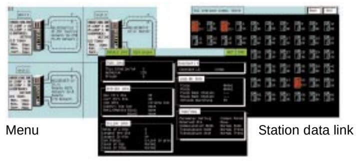
- Applicable GOT ····· **GOT A900 series*3**
- Connected to ····· **Mitsubishi PLC*4*20**

*2: Only M3 type is available for A95☐GOT
*4: MELSEC-A series only

P.37 Refer to "List edit".

Network monitor function*20

The network status of MELSECNET/10, (II) or /B can be monitored.



- Applicable GOT ····· **GOT A900 series*5**
- Connected to ····· **Mitsubishi PLC*6*20**

*5: Only M3 type is available for A95☐GOT
*6: MELSEC-Q/QnA/A series only

P.37 Refer to "Network monitor function".

System monitor function*20

The devices of the PLC CPU and the buffer memory of the special function module can be monitored/changed.

- Applicable GOT ····· **GOT A900 series**
- Connected to ····· **Mitsubishi PLC*20**

P.36 Refer to "System monitor function".

*20: Functions may not be available depending on the connection configuration. Refer to page 58 for details.

Introduction

Support servo amplifier

Pulse train output

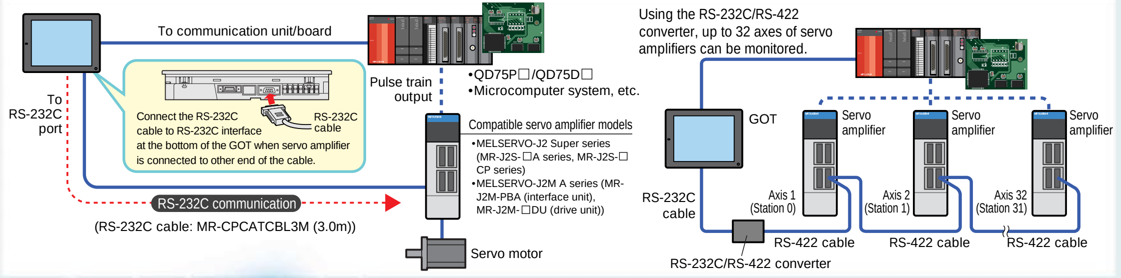
Seting a servo amplifier using the GOT!

Servo amplifier monitor function NEW

By connecting the GOT to the servo amplifier, the parameters can be set and an error history can be browsed/diagnosed. The servo amplifiers can be monitored and set from GOT without using any programing software.

System configuration

When there is one servo amplifier | **When there are multiple servo amplifiers**



Connect the RS-232C cable to RS-232C interface at the bottom of the GOT when servo amplifier is connected to other end of the cable.

(RS-232C cable: MR-CPCATCBL3M (3.0m))

Compatible servo amplifier models
- MELSERVO-J2 Super series (MR-J2S-☐A series, MR-J2S-☐CP series)
- MELSERVO-J2M A series (MR-J2M-PBA (interface unit), MR-J2M-☐DU (drive unit))

Using the RS-232C/RS-422 converter, up to 32 axes of servo amplifiers can be monitored.

*7: When the servo amplifier monitor function is used, the barcode function and transparent function cannot be used.
*8: Communication speed between the servo amplifier and GOT is up to 38400bps.
*9: The parameter setting of servo amplifier can be saved on the PC using MR configurator, but not to GOT.

Function list

○: Available, —: Unavailable (Servo amplifier side specifications)

Function		MR-J2S-☐A series	MR-J2S-☐CP series	MELSERVO-J2M A series	
				MR-J2M-P8A	MR-J2M-☐DU
System setting	Model selection	○	○	○	○
	Station No. selection	○	○	—	—
	Station No. setting	○	○	○	○
	I/F station No. setting	○	○	○	○
Monitor	Batch display	○	○	○	○
Alarm	Alarm display	○	○	○	○
	Alarm history	○	○	○	○
Diagnosis	DI/DO display	○	○	○	—
	Function device display	—	○	○	○
	S/W No. display	○	○	○	○
	Motor information display	○	○	—	○
	ABS data display	○	○	—	○
	Unit configuration list display	—	—	○	○
Parameter	Parameter setting	○	○	—	—
	Parameter (IFU)	—	—	○	○
	Parameter (DRU)	—	—	○	○
Test operation	JOG operation	○	○	—	○
	Positioning operation	○	○	—	○
	Motor-less operation	○	○	—	○
	DO forced output	○	○	○	—

Components

【Hardware】

A985GOT(-V), A97☐GOT
A960GOT, A956WGOT | A95☐GOT-M3

Memory board(A9GT-(Q)FNB(☐M))

Various communication units/boards | Various communication units *10

【Software】

GT Works2 *11

GT Designer2 *11

*10: Only M3 type is available for A95☐GOT.
*11: Either one of the above software programs is required.
*12: Refer to pages from page 59 to 61 for the model names connection cables.
*13: The following functions are not available.

•System setting	Automatic operation	•Parameter setting	ParaTuning / change list display / device settingmeter setting
•Monitor	High speed display / multi-station display / graph	•Test operation	Programmed operation / 1-step feed
•Alarm	Alarm occurrence	•Point data	Point table
•Diagnosis	Unrotated reason / power-on cumulative display / tuning data display / VC automatic offset display / axis name setting	•Advanced function	Machine analyzer / gain search / machine simulation

Support motion/positioning modules

SSCNET

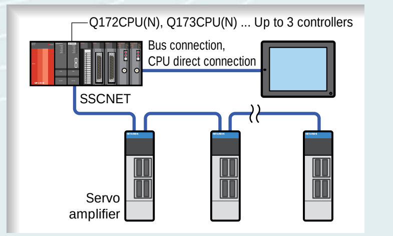
Monitoring servo amplifier and parameter setting of Q series motion controller

Motion monitor function*20 NEW

P.37 Refer to "Motion monitor".

Monitoring servo amplifier and parameter setting of the Q series motion controller (Q172CPU(N), Q173CPU(N)*17) can be performed on the GOT screens.

System configuration


Q172CPU(N), Q173CPU(N) ... Up to 3 controllers
Bus connection, CPU direct connection
SSCNET
Servo amplifier

Function list

Function name	
Motion monitor	Current value monitor
	SFC error history
	Error list
	Error list (Specified Axis)
	Positioning monitor
	Servo amplifier monitor
	Current value history monitor
Servo amplifier parameter setting	Servo amplifier parameter (Basic parameter, adjustment parameter)

Components

【Hardware】

A985GOT(-V), A97☐GOT
A960GOT, A956WGOT | A95☐GOT-M3

Memory board(A9GT-(Q)FNB(☐M))

Various communication units/boards | Various communication units *14

【Software】

GT Works2 *15

GT Designer2 *15

*14: Only M3 type is available for A95☐GOT.
*15: Either one of the above software programs is required.
*16: Refer to pages from 59 to 61 for the names and the connection cables.
*17: Refer to page 56 for restriction on the CPU models.

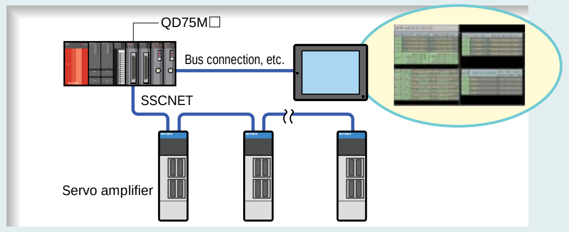
Monitoring/changing buffer memory data of QD75M

Special module monitor function*20 NEW

The QD75M buffer memory can be monitored and changed on the GOT dedicated screen.

P.37 Refer to "Special module monitor".

System configuration



Components

【Hardware】

A985GOT(-V), A97☐GOT
A960GOT

Memory board(A9GT-QFNB(☐M))

Various communication units/boards

【Software】

GT Works2 *18

GT Designer2 *18

*18: Either one of the above software programs is required.
*19: Refer to pages from 59 to 61 for the names and the connection cables.

*20: Functions may not be available depending on the connection configuration. Refer to page 58 for details.

Special report 3 Gateway functions NEW

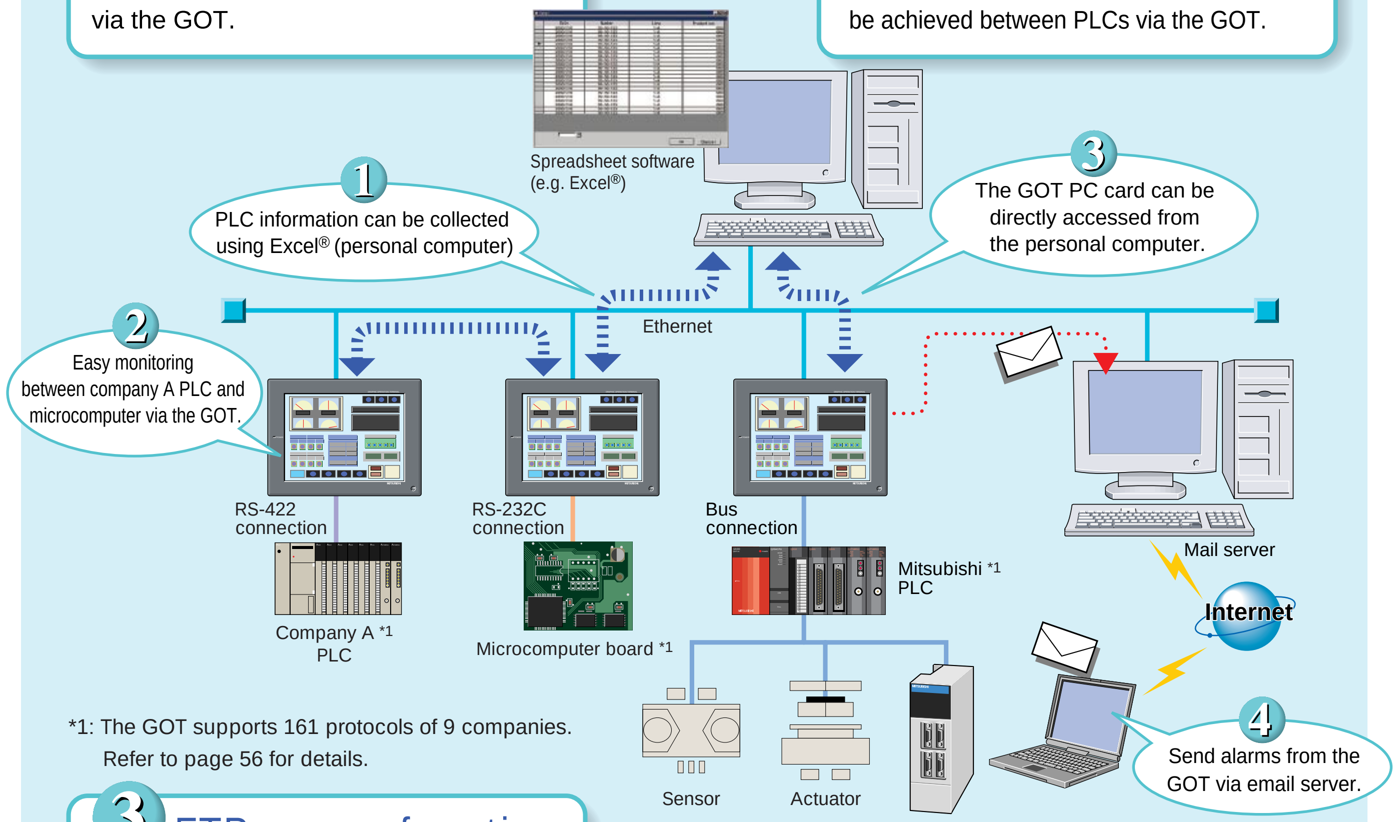
The GOT can handle data transfer between host computer and PLCs, and data and alarm notice can be remotely collected from an office.

1 Server function

Import, monitor, and modify PLC data from MX Component (personal computer) via the GOT.

2 Client function

Data communication between multiple GOTs. Therefore, program-less communication can be achieved between PLCs via the GOT.


Spreadsheet software
(e.g. Excel®)
1
PLC information can be collected using Excel® (personal computer)
3
The GOT PC card can be directly accessed from the personal computer.
Ethernet
2
Easy monitoring between company A PLC and microcomputer via the GOT.
RS-422 connection
RS-232C connection
Bus connection
Company A *1 PLC
Microcomputer board *1
Mitsubishi *1 PLC
Mail server
Internet
Sensor
Actuator
4
Send alarms from the GOT via email server.

*1: The GOT supports 161 protocols of 9 companies.
Refer to page 56 for details.

3 FTP server function

Using the general-purpose FTP client tool or like on the personal computer, you can read/write the PC card data (i.e. recipe, alarm history information) of the GOT.

4 Email sending function*11

Using the alarm display function, error messages can be sent to the Mobile PC or Desktop PC.

■ GOT-900 series and connection configuration where you can use the gateway functions

Connection form	A985 GOT(-V)	A97□ GOT	A960 GOT	A956W GOT	A956 GOT-M3
Bus connection	○	○	○	○	○
CPU direct connection	○	○	○	○	×
Computer link connection	○	○	○	○	×
MELSECNET connection	×	×	×	×	×
CC-Link connection	×	×	×	×	×
Ethernet connection	×	×	×	×	×
Other manufacturer's PLC connection	○	○	○	○	×
Microcomputer connection	○	○	○	○	×

○:Available ×:Unavailable

*2: When A985GOT(-V), A97□GOT, A960GOT or A956WGOT is used, an expansion memory board (A9GT-FNB (1/2/48M) or A9GT-QFNB (4/8M)) is required to the GOT.

*3: A956GOT-M3 (internal memory built-in type) is required for A956GOT.

*4: GT SoftGOT, the A950GOT, A951GOT(-Q), A953GOT, A95□ handy GOT and GOT-F900 series does not support Gateway functions.

■ Equipment/software necessary for the gateway functions

Application	Necessary equipment/software		A985GOT(-V)	A97□GOT	A960GOT	A956WGOT	A956GOT-M3
Connect GOT to Ethernet system (required)	Ethernet communication unit		A9GT-J71E71-T (10BASE-T) hardware version E or later				
Connect GOT to PLC (required)	Communication board	Bus connection (QCPU (Q mode))	A9GT-QBUSS or A9GT-QBUS2S *5*6				
		Bus connection (QnA/ACPU)	A9GT-BUSS or A9GT-BUS2S *5*6				
		RS-232C communication	A9GT-RS2 or A9GT-RS2T			A9GT-50WRS2	Cannot be connected
		RS-422 communication	A9GT-RS4			A9GT-50WRS4	
Execute gateway functions with GOT	Memory board		A9GT-QFNB (4/8M) or A9GT-FNB (1/2/4/8M)				Not required
	Drawing software		GT Designer2 or GT Works2				
Use server function (Collect PLC information by PC)	ActiveX library for communication		MX Component Version 3 or later *10				
Use FTP server function	SRAM PC card		JEIDA Ver 4.2 compliant (PCMCIA 2.1 compliant) SRAM PC card *7				
	Flash PCcard		A9GTMEM-10MF, A9GTMEM-20MF, A9GTMEM-40MF			Unusable	
	Compact flash PC card		Compact Flash TM compliant compact flash PC card *8*9				Unusable

*5: The bus connection unit (A9GT-(Q)BUS(2)SU) is unavailable for the gateway functions. Use the above bus connection board (A9GT-(Q)BUS(2)S) when making Bus.

*6: The bus connection board dedicated to the A956WGOT (A9GT-50WQBUSS, A9GT-50WBUSS) does not support the gateway functions. Use the above bus connection board (A9GT-(Q)BUS(2)S) when connecting A956WGOT via Bus.

*7: A memory card interface unit is required to use the SRAM type PC card with the A956WGOT or A956GOT.

*8: For other than the A956WGOT, a conversion adaptor (compact⇔Type II conversion adaptor) is required.

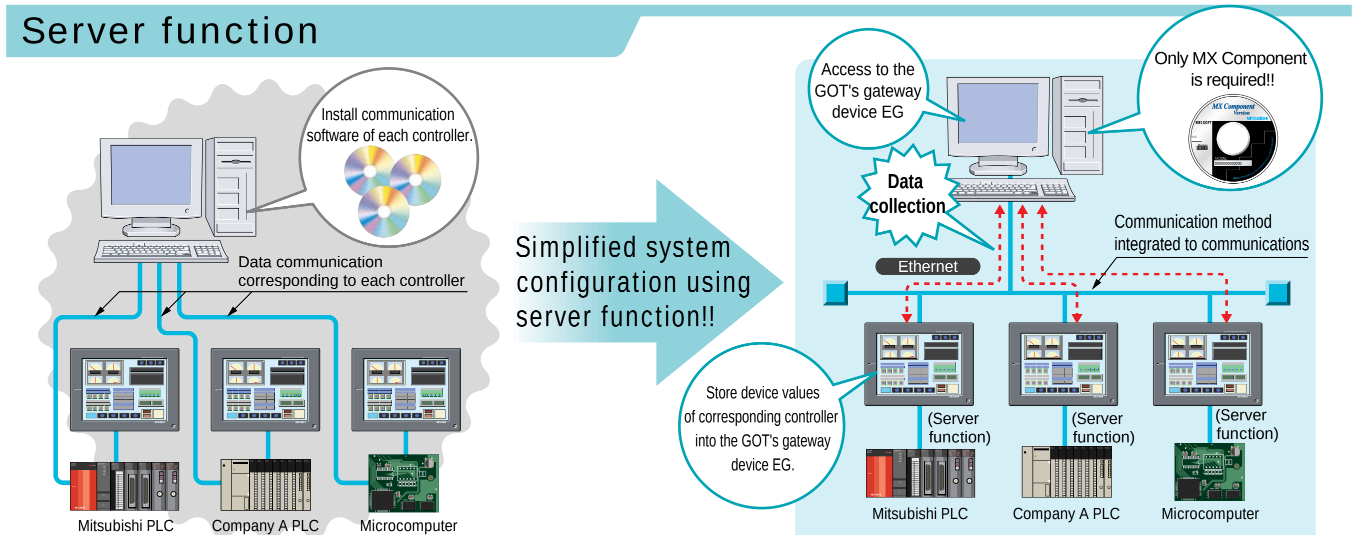
*9: A985GOT-TBA/TBD and A985GOT-TBA-EU does not support Compact Flash PC card.

*10: Applications (for example, MX Sheet) that operates on MX Component are available.

*11: Mail sending function operates within the range of SMTP server specification.

Integrated information system between controllers!

Server function

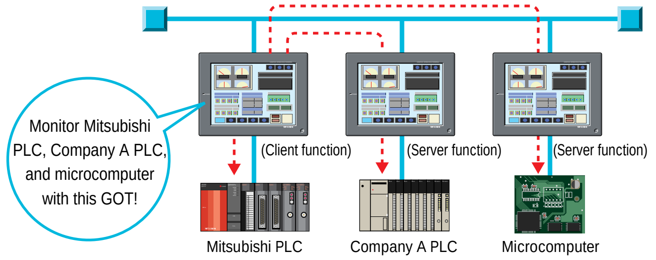

Install communication software of each controller.
Data communication corresponding to each controller
Mitsubishi PLC
Company A PLC
Microcomputer
Simplified system configuration using server function!!
Access to the GOT's gateway device EG
Only MX Component is required!!
Data collection
Ethernet
Communication method integrated to communications
Store device values of corresponding controller into the GOT's gateway device EG.
(Server function)
(Server function)
(Server function)
Mitsubishi PLC
Company A PLC
Microcomputer

Resettings of personal computer is not necessary when PLC is replaced! Only GOT settings need to be changed.

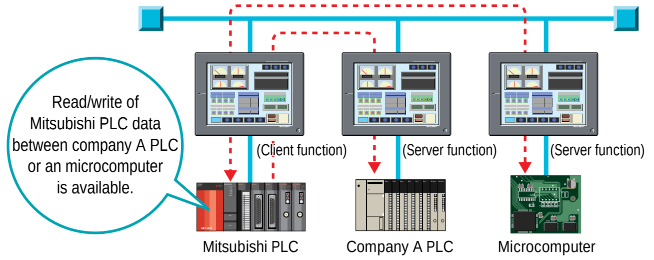
MX Component Version 3 is required when monitoring gateway devices from the computer using the server function.
MX Component is a communication support tool that achieves communication from the personal computer to the PLC without having the knowledge of communication protocols and units. PLC data can be collected by using the Excel® functions if programing is done with VBA. (MX Component is not required for the client function, FTP server function, and e-mail sending function.)

Client function

Monitor of all controller by single GOT

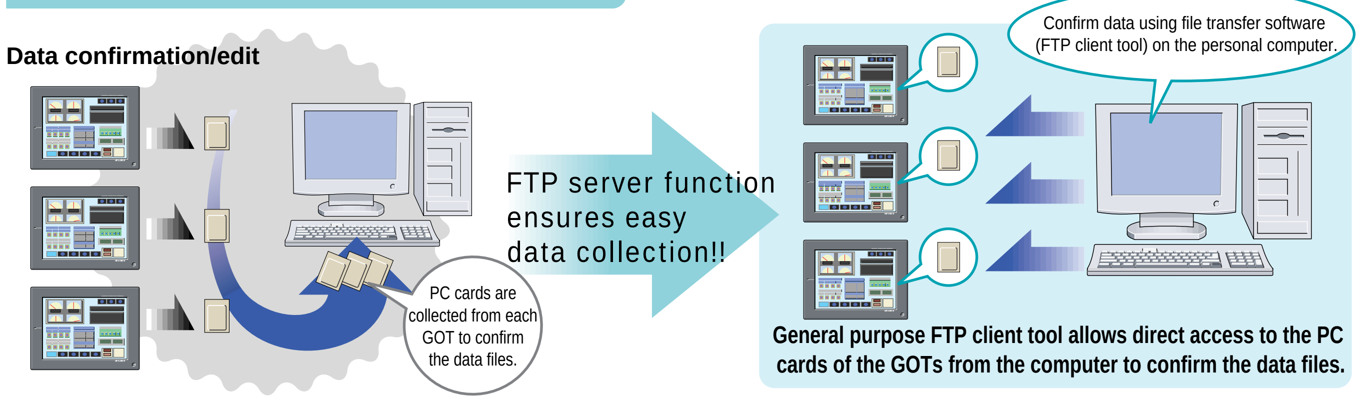

Monitor Mitsubishi PLC, Company A PLC, and microcomputer with this GOT!
(Client function)
(Server function)
(Server function)
Mitsubishi PLC
Company A PLC
Microcomputer

Data communication between PLCs


Read/write of Mitsubishi PLC data between company A PLC or an microcomputer is available.
(Client function)
(Server function)
(Server function)
Mitsubishi PLC
Company A PLC
Microcomputer

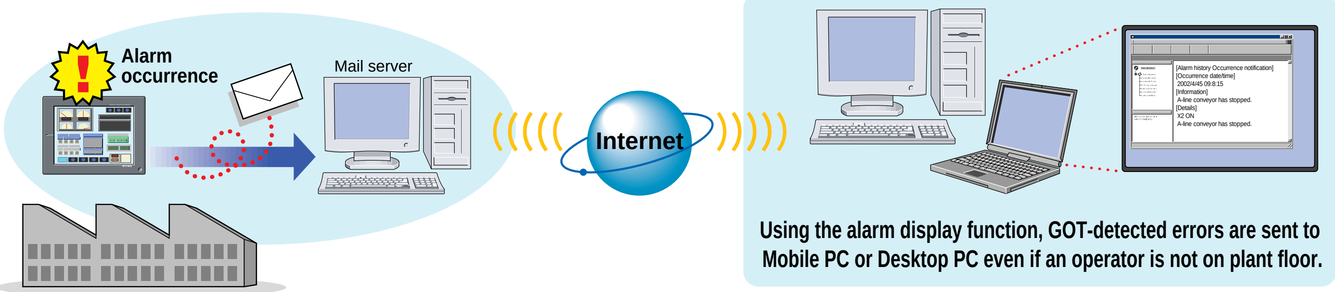
FTP server function

Data confirmation/edit


PC cards are collected from each GOT to confirm the data files.
FTP server function ensures easy data collection!!
Confirm data using file transfer software (FTP client tool) on the personal computer.

General purpose FTP client tool allows direct access to the PC cards of the GOTs from the computer to confirm the data files.

E-mail sending function


Alarm occurrence
Mail server
Internet

Using the alarm display function, GOT-detected errors are sent to Mobile PC or Desktop PC even if an operator is not on plant floor.

Graphic Operation Terminal 900 series

We recommend the GOT with confidence

Recommended for the operator

Improve workability and reduce running costs

Quick response

The GOT can be viewed and operated without stress

If a machine's operation or monitor's response is bothering, the HMI cannot be used comfortably.

QUICK RESPONSE

When you use the GOT

Quick response is made due to bus connection or direct PLC CPU connection. The responses of the monitor display and operation are also quick.

Refer to "Various Connection Configurations" on page 34.

•Applicable GOT··· GOT-A series, GOT-F series, SoftGOT *1

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Unusable	Unusable

*1: The GOT-F900 series supports direct CPU connection only.

Recipe

Initial values for material blending, processing dimensions and positioning can be easily set

A controller (PLC or microcomputer) program (transfer instructions) is normally used to set initial values for material blending, processing dimensions, positioning, etc.

When you use the GOT

The settings (initial values) of different patterns can be saved in the GOT internal memory, and only necessary data can be transferred to the controller as appropriate by the specified condition (trigger), reducing the controller loads (programs and devices). Controller data can be read and saved, so the process control and production control information saved on a PC card can be read and used on a personal computer (e.g. Spreadsheet software).

Refer to "Recipe" on page 35.

•Applicable GOT··· GOT-A series, GOT-F series, SoftGOT *2*3

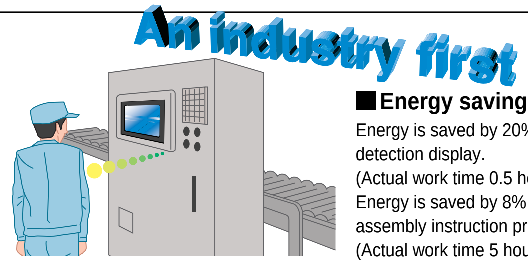
Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Usable	Usable

*2: The functions of the AGOT are different from those of the GOT-F900 series.
Refer to this catalog and the GOT-F900 series catalog for details.
*3: A memory board is necessary.

Human sensor

Energy conservation with Human sensor

The energy saving law was revised in April, 1999, and more efforts must be made to save energy.



■**Energy saving effect**
Energy is saved by 20% in error detection display.
(Actual work time 0.5 hours/day)
Energy is saved by 8% in an assembly instruction process.
(Actual work time 5 hours/day)

When you use the GOT

Using the industry's first person sensor, the HMI can be turned on automatically when a person approaches it. When the HMI is not used, turning the backlight off increases its life, achieving both energy saving and running cost reduction.

Refer to "Human Sensor" on page 34.

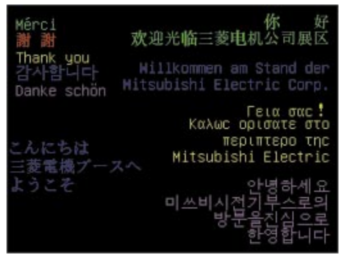
•Applicable GOT ··· A985GOT(-V)

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Usable	Usable

Multi-language

A single GOT can display various languages

Local plant workers can use the GOT as it can display Chinese (Simplified Chinese (China), Traditional Chinese (Taiwan)) and Korean.



Mérci
謝 謝
Thank you
감사합니다
Danke schön

你 好
欢迎光临三菱电机公司展区

Willkommen am Stand der
Mitsubishi Electric Corp.

Γεια σας!
Καλως ορισατε στο
περιπτερο της
Mitsubishi Electric

こんにちは
三菱電機ブースへ
ようこそ

안녕하세요
미쓰비시전기부스로의
방문을진심으로
환영합니다

When you use the GOT

The drawing software GT Designer2 allows users to create screens in various languages using the multi-language function of Windows®. Adopting the Unicode, the GOT can display various languages.

*GOT-A series .... Generic term for A985(-V), A97□, A960, A956W and A95□GOT
GOT-F series .... Generic term for handy GOT, ET-900, F940, F930 and F920GOT(-K)
SoftGOT .... Abbreviation for GT SoftGOT2

Graphic Operation Terminal 900 series

We recommend the GOT with confidence

Recommended for the maintenance personnel

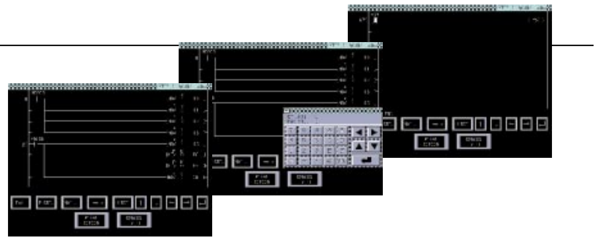
Improved maintainability and reduced running costs

NEW

Ladder monitor
Faultfinding
Touch search
List program edit

Improved maintainability

The maintenance personnel should solve problems as fast as possible when a machine malfunctions or fails.



When you use the GOT

- **Ladder monitor** *3 *4
  You can monitor circuits in a ladder diagram format.
- **Fault cause search/touch search** New *3 *5
  The cause of failure is easily detected by tracing back contacts to coils with Q series PLC. (Touch search)
- **List program edit** *3 *6 *7
  Read/write of list programs (instruction word) format enables users to edit easily on the site.

Refer to "Ladder monitor" and "List edit" on pages 36 and 37.

*Ladder monitor programmed on GX Developer can be monitored via the GOT when the GOT is connected via Bus and CPU direct connections. (Transparent function) **Refer** to "Transparent" on page 34 for details.

*3: A memory board is necessary.
*4: Applicable GOT ··· A985(-V)/A975/A970/A960/A956WGOT
Connected to ··· Mitsubishi PLC (The A956WGOT is supported by the MELSEC-Q series (Q mode) only.)
*5: Applicable GOT ··· A985(-V)/A975/A970/A960/A956WGOT
Connected to ··· Only the MELSEC-A series, Q series are supported.
(The touch search is available for the MELSEC-Q series (Q mode) only.)
*6: Applicable GOT ··· GOT-A900 series (only M3 type for the A95□GOT)
Connected to ··· Only the MELSEC-A series is supported.
*7: Applicable GOT ··· F940(W)/F940 handy/ET940GOT
Connected to ··· Only the MELSEC-FX series is supported.

•Applicable GOT ··· GOT-A series, GOT-F series *4*5*6*7

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable *4*5*6*7	Unusable	Unusable

NEW

Motion monitor
Servo amplifier monitor

Startup and maintenance of motion controller can be performed easily

Previously to monitor/modify motion controller, Servo amplifier and parameter values needed a separate PC on-site.

Motion monitor

Servo amplifier monitor

When you use the GOT

- **Motion monitor** New *3 *8 *9
  Q series motion controller can be monitored and parameters can be done easily on the GOT.
- **Servo amplifier monitor** New *3 *8
  Pulse train output of servo amplifiers and parameters can be monitored.

Refer to "FA integration functions" on pages 8 and 9.
Refer to "Motion monitor", "Servo amplifier monitor" on page 37

*3: A memory board is necessary.
*8: Applicable GOT ··· GOT-Aseries (only M3 type for the A95□GOT)
*9: Connected to ······· Only the motion controller (Q series) is supported.

•Applicable GOT ··· GOT-A series *8

Motion monitor

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Unusable	Unusable

Servo amplifier monitor

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Usable	Usable

System monitor
Special module monitor
Network monitor

Improve machine startup and debugging efficiency

The machine and line startup operation can be streamlined.

When you use the GOT

- **System monitor** *10
  The GOT alone can monitor device values and change current values and timer/counter settings.
- **Special module monitor** *3*11
  The special module operation (buffer memory monitor/change) can be checked easily.
- **Network monitor** *3*12
  The GOT alone can check the network communication status.

*3 :A memory board is necessary.
*10 :Applicable GOT ··· GOT-Aseries, GOT-Fseries
*11 :Applicable GOT ··· A985(-V)/A975/A970/A960GOT
*12 :Applicable GOT ··· AGOT(only M3 type for the A95□GOT)

•Applicable GOT ··· GOT-A series, GOT-F series *10*11*12

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Unusable	Unusable

Refer to "System monitor", "Special module monitor" and "Network monitor" on pages 34 and 35.

The GOT has many other specifications and functions.

Graphic Operation Terminal
900
series

We recommend the GOT with confidence

Recommended for the designer

Design time and initial costs can be reduced

Main unit functions

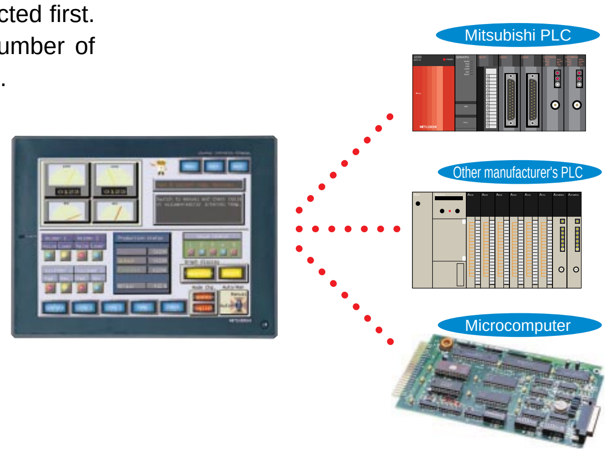
Connection configuration that meets your needs

The GOT can be connected to any device

When a machine is designed, a controller is selected first. If an HMI can only be connected to a limited number of devices, it cannot be used even if it is a good one.

When you use the GOT

The GOT can be connected to the MELSEC or any of the PLCs and microcomputer boards made by other manufacturers.



•Applicable GOT ··· GOT-A series, GOT-F series, SoftGOT *

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Usable *1	Usable

Refer to "Various connection configurations" on page 34.

*1: The GOT supports 161 protocols of 9 companies.

OS installation

The function and performance can be upgraded without changing hardware

If the HMI must be replaced whenever new functions are added, costs increase.

When you use the GOT

The function or performance can be upgraded simply by installing the OS with new drawing software without changing the HMI that you purchased. (PC card reduces OS or screen data transfer time.)

•Applicable GOT ··· GOT-A series

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Usable	Usable

Refer to "OS Installation" on page 34.

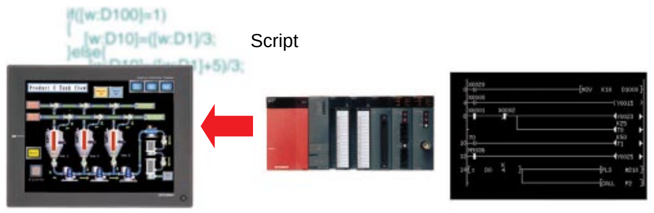
Scripting function

Load on the controller can be reduced

If complicated data is displayed, the HMI control software affects machine control.

When you use the GOT

By executing display related controls on the GOT with the script (GOT-original program similar to C language program), load on the controller (PLC CPU, microcomputer, etc.) can be sharply reduced, improving the controller performance and design efficiency. This function also makes system maintenance easier.



•Applicable GOT ··· GOT-A series, SoftGOT

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Usable	Usable

Refer to "Script" on page 35.

*GOT-A series ..... Generic term for A985(-V), A97□, A960, A956W and A95□GOT
GOT-F series ...... Generic term for handy GOT, ET-900, F940, F930 and F920GOT(-K)
SoftGOT .... Abbreviation for GT SoftGOT2

Development environment

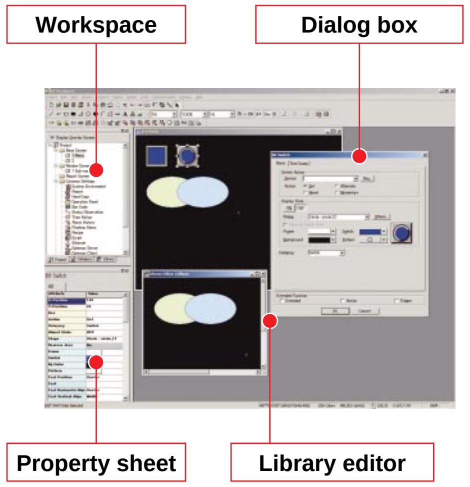
NEW
GT Designer 2

Reduction in developing time by half

When a screen is created, the operability of the drawing software greatly influences design time.

When you use the GOT

- View screen configuration in tree format on the Workspace.
- Object settings without opening each dialog box on the Property sheet.
- Batch edit of multiple parts on the Property sheet.
- Easy parts editing on the Library editor.



•Applicable GOT ··· GOT-A series, GOT-F series, SoftGOT

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Usable	Usable

Refer to "GT Designer 2"*2 on pages 6 and 30.

*2: Screen data created by the conventional drawing software GT Designer can also be used as-is.

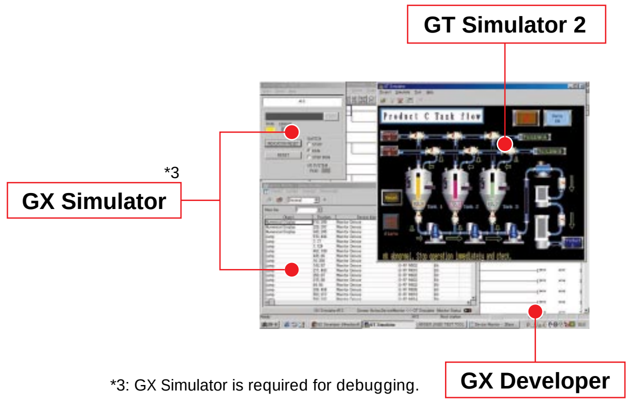
Simulation debugging

Easy debugging without connecting a PLC

It is inconvenient to connect the GOT with a PLC during debugging.

When you use the GOT

A single personal computer can make drawings and perform debugging with GT Works2.



•Applicable GOT ··· GOT-A series, SoftGOT

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Unusable	Unusable

Refer to "GOT Simulation debugging" on pages 31 and 37.

*3: GX Simulator is required for debugging.

Data conversion

Existing data can be fully utilized

By enabling existing drawing data to be used, the design time required for drawing can be reduced and work can be streamlined.

When you use the GOT

The data given on the right can be used for the GOT-900 series.

- •Monitor data of FX-PCS-DU/WIN
- •BMP format data
- •Monitor data of GP series
- •Monitor data of conventional drawing software (GT Designer)
- •Monitor data*5 of conventional display (GOT-A800 series/ A77GOT(-S□)/A64GOT/AD57G-S3)

•Applicable GOT ··· GOT-A series, GOT-F series *4, SoftGOT

Connected to:	Mitsubishi PLC	Other manufacturer's PLC	Microcomputer
	Usable	Usable	Usable

Refer to "Converter" on page 37.

*4: The GOT F series can use only DU data.
*5: To upload monitor data from the GOT, the drawing software is necessary. However, note that monitor data cannot be uploded from A77GOT(-S□) (except S5), A64GOT, and AD57G-S3.

The GOT has many other specifications and functions.

Graphic Operation Terminal
900
series

GT SoftGOT2

MELSOFT

GT SoftGOT2 New

How about using your personal computer as a GOT?

GT SoftGOT2 is the HMI software that implements the GOT functions on a personal computer.

Display colors
256 colors

Resolution
1280 x 1024 dots (SXGA)
1024 x 768 dots (XGA)
800 x 600 dots (SVGA)
640 x 480 dots (VGA)

■GT SoftGOT2 operating environment

Item		Description		
		When DOS/V personal computer is used		When PC CPU is used
Personal computer		Personal computer on which Windows® runs		Contec's MELSEC-Q series compatible PC CPU unit *1
OS		Microsoft® Windows® 98 operating system Microsoft® Windows® Millennium Edition operating system *2 Microsoft® WindowsNT® Workstation 4.0 operating system *3 Microsoft® Windows® 2000 Professional operating system	Microsoft® Windows® XP Professional operating system *4*5 NEW Microsoft® Windows® XP Home Edition operating system *4*5 NEW	WindowsNT® Workstation 4.0 operating system *3 Windows® 2000 Professional operating system
CPU		Pentium 200MHz or higher (Pentium 300MHz or higher recommended)	Pentium 300MHz or higher (Pentium 450MHz or higher recommended)	Pentium 200MHz or higher (Pentium 300MHz or higher recommended)
Required memory	GT SoftGOT2 only	64MB or more (96MB or more recommended)	128MB or more (192MB or more recommended)	64MB or more (96MB or more recommended)
	When GX Developer is used simultaneously or when multiple GT SoftGOT2's are started	96MB or more (128MB or more recommended)		96MB or more (128MB or more recommended)
Free hard disk space	For installation	200MB or more		
	For operation	100MB or more *6		
Disk drive		CD-ROM disk drive		3.5 inch (1.44MB) floppy disk drive, CD-ROM disk drive
Display colors		256 colors		
Display		Resolution 800 x 600 dots or more (640 x 480 dots or more when full screen display function is used)		
Required software		GT Designer2 *7 or GT Designer Version 5 (Ver. 5.03D or later)		
Drawing license key/ license FD *8		A9GTSOFT-LKEY-P *9		SW5D5F-SGLKEY-J (Japanese version) SW5D5F-SGLKEY-E (English version)

*1: Refer to the MELSEC-Q Series Catalog (L(NA)-74108153E) for the PC CPU unit.
*2: The remote device monitor function is not supported by Windows® Millennium Edition.
*3: Windows NT® Workstation 4.0 of Service Pack 3 or later.
*4: "Compatibility mode", "User account", and "desktop appearance" functions are not supported.
*5: Administrator authorization is necessary to use Windows® XP Professional or Windows® XP Home Edition.
*6: When multiple GT SoftGOT2's are started, "the number of started GT SoftGOT2's x 100" MB is required. When the monitor screen data size is large, 200MB or more (30MB or more as a guideline) may be required.
*7: GT SoftGOT does not support the GT Designer2.
*8: When GT SoftGOT2 without its license key/license key FD operates for only about 10 minutes.
*9: To use A9GTSOFT-LKEY-P, the DOS/V personal computer must have a parallel port (Centronics printer connector).

■Main functions (Refer to GOT dictionary on page 34 and Function list for each model on page 54 for details.)

Features/hardware
OS installation | Various connection configurations | 256 colors display | Audio output | Human sensor | Analog RGB output | Analog RGB input | Video input | Transparent | Backlight replacement

Maintenance functions
Ladder monitor | List program edit | System monitor | Special module monitor | Network monitor | Motion monitor | Servo amplifier monitor

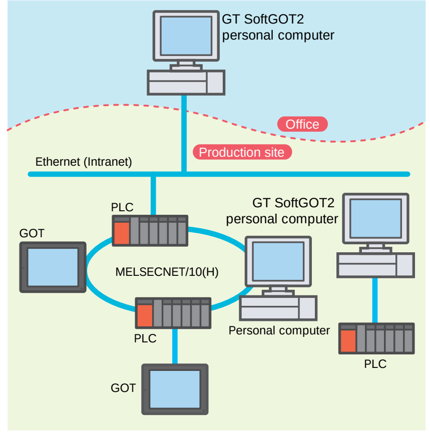
Main unit functions
Recipe | Gateway function | Script | Security | Time action | Alarm history | Alarm flow display | Alarm list | Status monitor | Screen call

Drawing software (including GT Simulator)
Simulation debugging | Device monitor | Documentation assistance | Data conversion

Remote monitoring

Remote monitoring by intranet LAN

Production site conditions can be monitored from the office.



Effective utilization of the Internet by combination with general software

Alarms and on-site status are collected at any time from remote locations (mail function)

Alarm occurrence/recovery, alarm history data, recipe data and screen image can be sent by e-mail.

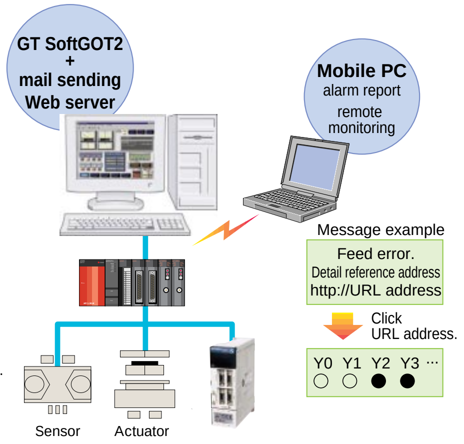
Remote monitoring by the Internet (remote device monitoring function)

The device status being monitored by GT SoftGOT2 can also be monitored on personal computer.

<Example of remote monitoring via the Internet>

By installing the remote control software*10 (commercially available) on the host side (production site) and remote side (office) respectively, host side GT SoftGOT2 can be monitored/operated if GT SoftGOT2 is not installed on the remote side.

*10: The remote control software confirmed by Mitsubishi to operate properly is pcAnywhere 10.0. The firewall setting must be changed depending on the connection.



Reduced design time

Reduced design costs by utilizing screen data

Design costs can be reduced since the screen data of the production site can be shared on all layers from higher-level personal computers to lower-level GOTs.

Monitoring screens can be created simpler and cheaper

A monitoring operation screen can be created more easily and cheaply on the personal computer than the monitoring software such as SCADA or VisualBasic®.

User friendly applications

The memory capacity of the main unit has been substantially increased New

The memory capacity of the main unit has been substantially increased from 9M bytes to 32M bytes*11. Drawing data using many bit maps can also be displayed.

*11: When the screen data is large (30MB or more), a 200MB or more free hard disk area is required for operation.

Easy numeric input and ASCII input

Numeric/ASCII input function entries can be made directly from keyboard.

Full screen display

By hiding the title bar and menu bar, a full screen can be displayed. The menu bar is displayed by right-clicking the mouse.

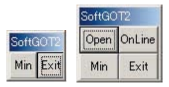
When A985GOT screen is displayed on 800 x 600 dots display

Supporting panel computer without mouse or keyboard!!

As a small dialog and GOT internal device (GS500.b0 ON) displayed on-screen can be used to close GT SoftGOT2, GT SoftGOT2 can also be used on a panel computer without a mouse or keyboard.

Turn on GOT internal device (GS500.b0) with touch switch to close GT SoftGOT2.

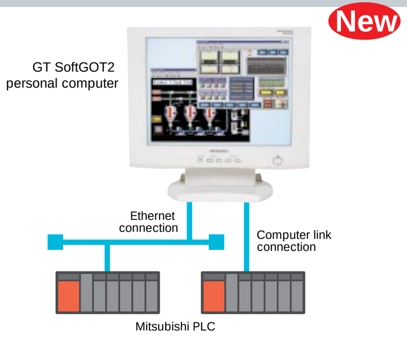
Either dialogs can be selected and displayed.



The dialogs can be used for the following operations.
Open: Opens a project.
On Line: Starts monitoring.
(Cannot be selected while monitoring is executed.)
Min: Minimizes GT SoftGOT2.
Exit: Close GT SoftGOT2.

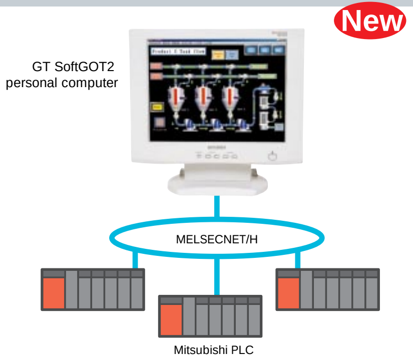
SoftGOT is more user-friendly

Multiple programs*12 of the GT SoftGOT2 can be displayed on a PC New



*12: Up to 99 (4 or less recommended)

Supporting MELSECNET/H, /10 *13 New



Devices that can be connected:

- Mitsubishi PLC, Mitsubishi A series motion controller*13, CPU direct connection, Ethernet connection, MELSEC/10(H) connection, computer link connection, Q bus connection*14

*13: For details of connectable models, refer to Connectable model list on page 56).
*14: Q bus connection is enabled only when the PC CPU unit is connected.

Notes

- Unavailable functions

Function division	Function name
Object function	Test function, barcode function, operation panel function *15
Extended function	System monitor function*16
Optional function	Ladder monitor function*16, special module monitor function, list edition function*16, network monitor function*16, motion monitor function, servo amplifier monitor function
Other function	Transparent function, human sensor function, brightness adjustment function, audio function*17, gateway function

*15: Using the keyboard input function, an equivalent function is enabled.
*16: Using GT SoftGOT2 and GX Developer on the same personal computer, an equivalent function is enabled.
*17: Unavailable only when GT SoftGOT2 is used on the PC CPU unit.

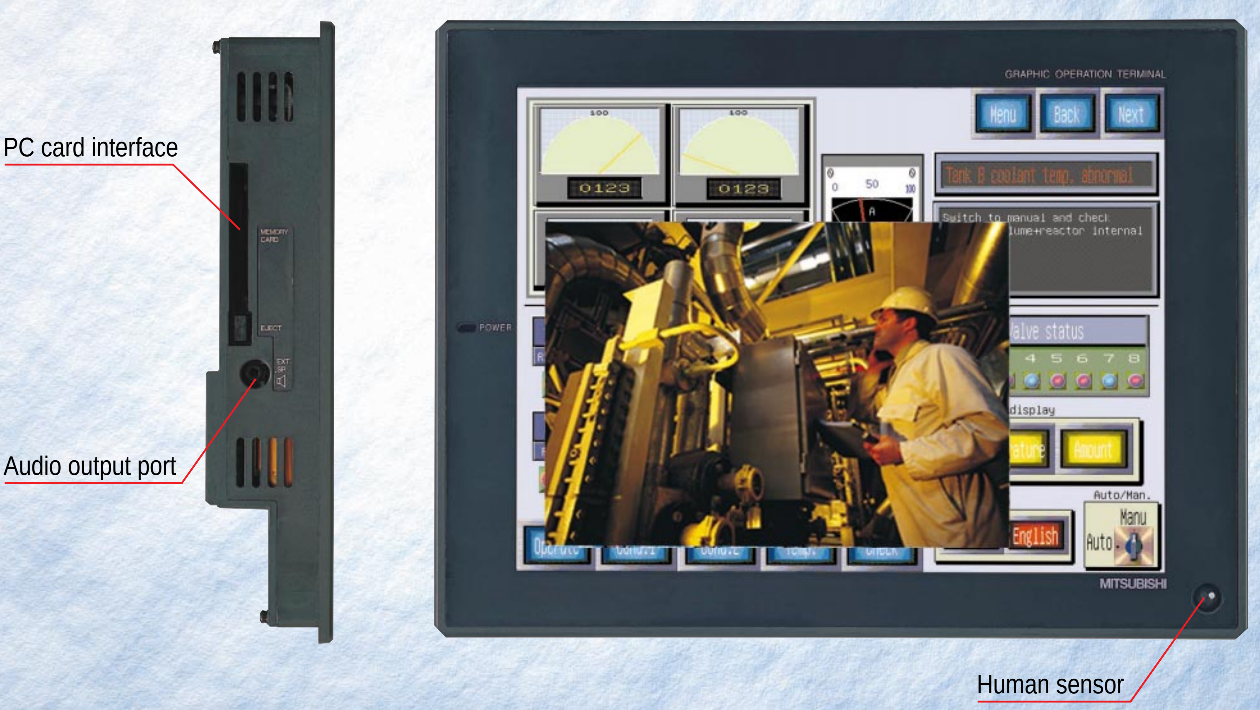
- Refer to page 59 when purchasing the product.

Graphic Operation Terminal
900
series

A985GOT-V

Large size (12") A985GOT-V

Leave screen integration to this GOT!
Animation capture in 65,000 colors



Display device	Intensity	Display colors	Resolution	Printer interface	Barcode reader interface
TFT display	350cd/m²	256 colors	800x600 dots	Built-in	Built-in (RS-232C)

■Communication unit

- Bus connection board

- Serial communication board for CPU direct connection/ microcomputer/computer link connection

- CC-Link connection unit

- Ethernet communication unit NEW

- Bus connection unit

- MELSECNET/10 network unit

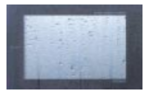
- MELSECNET(II)/B data link unit

■Optional unit (Refer to Options on page 32 for details.)

- Backlight

- Memory board

- Protection sheet



- Video/RGB composite input interface unit *1 NEW

- Stand

- Flash PC card

- RGB input interface unit *1

- Video input interface unit *1

*1: Only one of them can be installed.

■Main functions (Refer to GOT dictionary on page 34 and Function list for each model on page 54 for details.)

Features/hardware
- OS installation
- Various connection configurations
- 256 colors display
- Audio output
- Human sensor
- Analog RGB output
- Analog RGB input
- Video input
- Transparent
- Backlight replacement

Maintenance functions
- Ladder monitor
- List program edit
- System monitor
- Special module monitor
- Network monitor
- Motion monitor
- Servo amplifier monitor

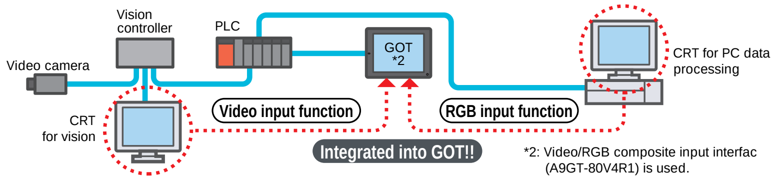
Main unit functions
- Recipe
- Gateway function
- Script
- Security
- Time action
- Alarm history
- Alarm flow display
- Alarm list
- Status monitor
- Screen call

Drawing software (including GT Simulator)
- Simulation debugging
- Device monitor
- Documentation assistance
- Data conversion

Video/RGB screen display supported by one GOT!

Vision CRT and personal computer CRT can be integrated into GOT to achieve space saving and cost reduction

- When using the video input function, either video/RGB composite input interface unit (A9GT-80V4R1) or video input interface unit (A9GT-80V4) should be mounted on the A985GOT-V.
- For RGB function, either video/RGB composite input interface unit (A9GT-80V4R1) or RGB input interface unit (A9GT-80R1) should be mounted on the A985GOT-V.



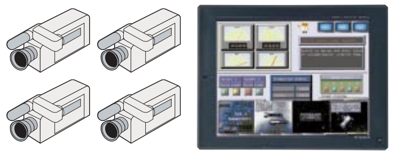
*2: Video/RGB composite input interfac (A9GT-80V4R1) is used.

Video input function

Full screen display

Up to 4 video windows can be displayed at the same time.

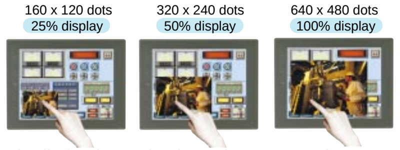
- Up to 4 video cameras can be connected and shot images can be displayed simultaneously.
- Viewing images simultaneously, you can grasp the conditions of the whole system in a short time.



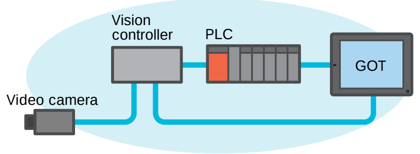
720 x 480 dot wide images can be displayed.

- The video window display size can be varied in three steps as required.
- 720 x 480 or 640 x 480 dot wide images can be displayed at 100%, 50% or 25% size.

*720 x 480 dots and 640 x 480 dots cannot be used at the same time. Four channels are set in the same manner.



The display size can be changed one step at a time every time the screen is touched.



Video image can be paused in freeze mode

Video image can be paused to display a still image.

- This function is useful when checking the situation at the instant when a problem occurs.

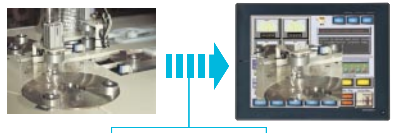
*When several video windows are displayed, the images on all the windows stop.

Partial display in clip mode

An industry first!

You can display a selected part of an image you want to see.

- By displaying a portion of the image, this function is useful when the display area is small.



Required part of an image can be displayed!

Only one video window can be displayed in the clip mode.

Hidden object can be displayed in transparent mode

You can specify a transparent color to display the object or figure under a video window.

- You can use the touch switch or numeric/ASCII input function under the video window.

Touch switch under video window can be displayed and operated!

Images are saved as JPEG format

Images can be saved on a PC card as the JPEG format.

- This function, for example, is useful for checking the immediate condition of production equipment when it fails.
- Since the memory size necessary for saving a file on a PC card in this format is smaller than the BMP format, more images can be saved on the PC card.

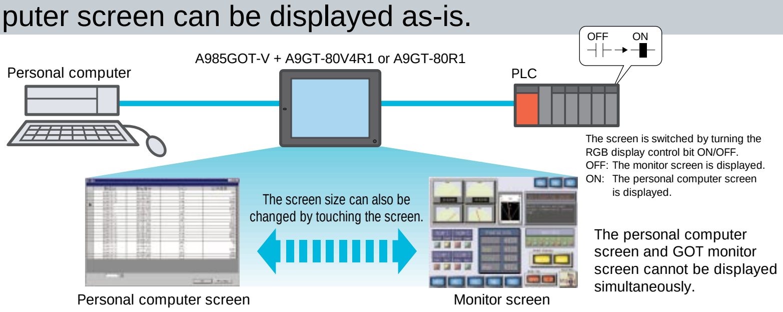
*Example (640 x 480 dot image)
JPEG format: Approx. 90K bytes, BMP format: Approx. 900K bytes
(The compression ratio depends on the image.)

RGB input function

The personal computer screen can be displayed as-is.

- The SVGA (800 x 600 dots) or VGA (640 x 480 dots) personal computer screen can be displayed unchanged on the GOT.
- The monitor screen is normally displayed, and it can be switched to the personal computer screen only when necessary.

*When the personal computer CRT and the GOT are placed side by side, the GOT screen can act as a CRT, reducing CRT costs and saving space.


Personal computer
A985GOT-V + A9GT-80V4R1 or A9GT-80R1
PLC
OFF
ON
The screen size can also be changed by touching the screen.
Personal computer screen
Monitor screen

The screen is switched by turning the RGB display control bit ON/OFF.
OFF: The monitor screen is displayed.
ON: The personal computer screen is displayed.

The personal computer screen and GOT monitor screen cannot be displayed simultaneously.

Model name	Power supply voltage	100~240VAC	A985GOT-TBA-V
		24VDC	A985GOT-TBD-V
Display device			TFT color display
Display colors			256 colors (screen display: 65,536 colors)
Intensity (cd/m²)			350 (8-step intensity adjustment)
Display angle			Right and left: 60 degrees, up: 40 degrees, down: 50 degrees
Resolution (dot)			800 x 600
Number of touch key			1900 (38 lines x 50 columns)
User memory capacity			1MB (Up to 9MB)
External dimensions (mm)			312W x 238H x 49D
Panel width (mm)			43
Panel cut dimensions (mm)			302^{+1}_{0}W x 228^{+1}_{0}H
Regulation compliance		UL/cUL	○
		CE	×

Notes on the Video/RGB input function

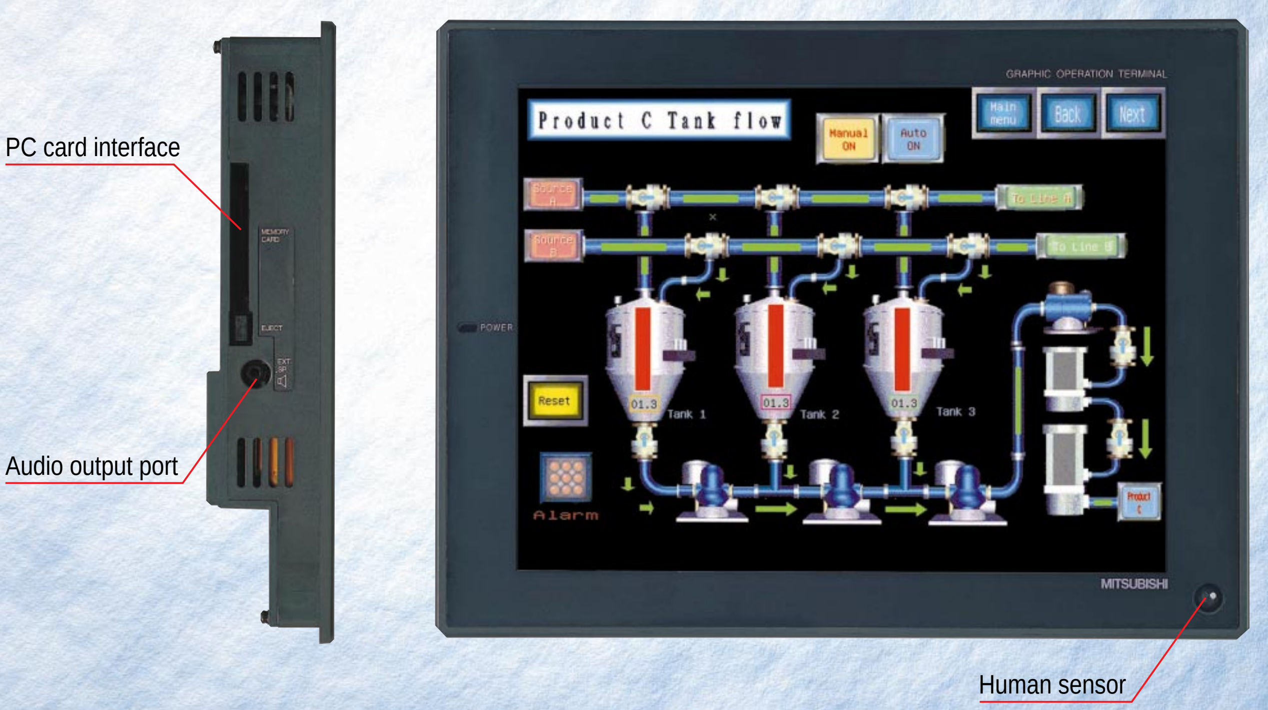
- The A985GOT-V does not have the CRT output interface.
- A985GOT does not support the external input/output unit (A9GT-70KBF).
- Though the video/RGB composite input interface unit (A9GT-80V4R1) can be used for the video input function and RGB input function, it cannot display a video camera image and personal computer screen on the GOT simultaneously.

Graphic Operation Terminal
900
series

A985GOT

Large size (12") A985GOT

12" compact size! Best-selling energy saving HMI



Display device	Intensity	Display colors	Resolution	Analog RGB output interface	Printer interface	Barcode reader interface
TFT display	350cd/m²	256 colors	800x600 dots	Built-in	Built-in	Built-in (RS-232C)

■Communication unit

- Bus connection board

- Serial communication board for CPU direct connection/ microcomputer/computer link connection

- CC-Link connection unit

- Ethernet communication unit NEW

- Bus connection unit

- MELSECNET/10 network unit

- MELSECNET(II)/B data link unit

■Optional unit (Refer to Options on page 32 for details.)

- Backlight

- Memory board

- Protection sheet

- Stand

- Flash PC card

- External input/output interface unit

■Main functions (Refer to GOT dictionary on page 34 and Function list for each model on page 54 for details.)

Features/hardware
- OS installation
- Various connection configurations
- 256 colors display
- Audio output
- Human sensor
- Analog RGB output
- Analog RGB input
- Video input
- Transparent
- Backlight replacement

Maintenance functions
- Ladder monitor
- List program edit
- System monitor
- Special module monitor
- Network monitor
- Motion monitor
- Servo amplifier monitor

Main unit functions
- Recipe
- Gateway function
- Script
- Security
- Time action
- Alarm history
- Alarm flow display
- Alarm list
- Status monitor
- Screen call

Drawing software (including GT Simulator)
- Simulation debugging
- Device monitor
- Documentation assistance
- Data conversion

Recommended points

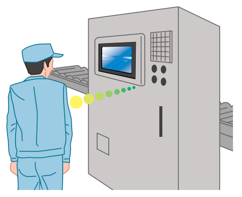
Recommended!

Human sensor incorporated

An industry first!

Energy conservation with the GOT

- The industry's first human sensor is turned on when a person approaches it. When the interface is not used, turning the backlight of increases its life, achieving both energy saving and running cost reduction.



20% less

(Assuming that the actual work time is 0.5 hours/day for error detection display)

Analog RGB output interface incorporated

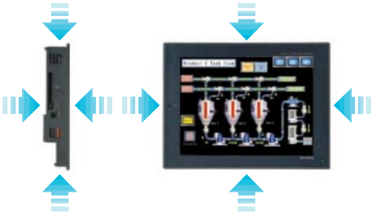
- An 12" GOT image screen can be displayed on a larger CRT screen.

Larger screen!

Compact size

Compact size control panel

- Industry's smallest and thinnest. (See the table below for details.)



User-friendly, multi-media functions

Multimedia

256 colors display

Multi-color vivid display

- The high-intensity (350 cd/m²) TFT display can show 256-color vivid and high-quality images.
- 256-color bitmap (BMP) file data can be read and digital photographs of machines and parts can be displayed clearly.

Audio output

Convenient!

The machine operating status is vocally reported

- Messages and warnings can also be vocally output, so information can be provided audibly.
- An audio message can be created easily by using a Windows® WAV file.

Maintenance function

Compatibility with FA device

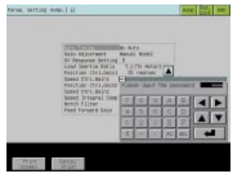
Improved maintainability and reduced running costs

Improved maintainability and reduced running costs

- The GOT has various maintenance functions to troubleshoot and maintain the FA system and streamline maintenance work.
- When the system is connected to a network, all the maintenance functions can be performed on remote terminals from the GOT. (The GOT can perform remote maintenance.)

Motion monitor function New

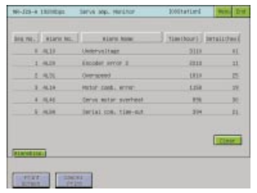
- Q series motion controller monitoring and parameter settings can be done easily on the GOT. (Refer to Special report 2 on page 8 for details.)



Servo amplifier monitor function New

- Pulse train output of servo amplifiers and parameters can be monitored. (Refer to Special report 2 on page 8 for details.)

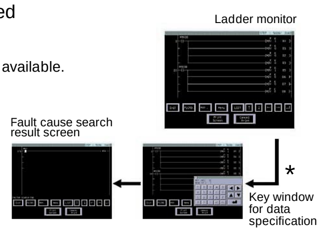
* When the servo amplifier monitor function is used, barcode function and transparent function are not available.



Ladder monitor function

- The PLC CPU program can be monitored in ladder format.

1: The search and comment display functions are available.
2: The fault cause search function can be used to investigate the cause of trouble easily. (MELSEC-QnA series ladder monitor doesn't support.)
3. Touch search is also available for MELSEC-Q series ladder monitor. NEW (Refer to Special report 2 on page 8 for details.)


Ladder monitor
Fault cause search result screen
*
Key window for data specification

* The figures show the GOT-A975 screen images.

The following functions are also available

■List program edit function
(For MELSEC-A series)
Read/write of Instruction list programs can be done easily on a production site.

■Special module monitor function
The special module operation (buffer memory monitor/change) can be checked easily.

■System monitor function
The GOT alone can monitor device values of PLC CPU and monitor/change current values of buffer memory at the special module.

■Network monitor function
The GOT alone can check the network communication status of MELSECNET/10, (II), or /B.

Model name	Power supply voltage	100~240VAC	A985GOT-TBA	A985GOT-TBA-EU
		24VDC	A985GOT-TBD	—
Display device			TFT color display	
Display colors			256 colors	
Intensity (cd/m²)			350 (8-step intensity adjustment)	
Display angle			Right and left: 60 degrees, up: 40 degrees, down: 50 degrees	
Resolution (dot)			800 x 600	
Number of touch key			1900 (38 lines x 50 columns)	
User memory capacity			1MB (Up to 9MB)	
External dimensions (mm)			312W x 238H x 49D	
Panel width (mm)			43	
Panel cut dimensions (mm)			302^{+1}_{0}W x 228^{+1}_{0}H	
Regulation compliance	UL/cUL		○	○
	CE		×	○

Graphic Operation Terminal
900
series

A975GOT

Large size (10") A975GOT

Slim body full of advanced functions

Display device	Intensity	Display colors	Resolution	Printer interface	Barcode reader interface
TFT display	**350cd/m²**	**256 colors**	**640x480dots**	**Built-in**	**Built-in** (RS-232C)

PC card interface
Audio output port

256 colors display

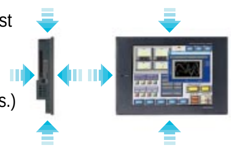
Multi-color vivid display

- The high-intensity (350 cd/m^2) TFT display can show 256-color vivid and high-quality images.
- 256-color bitmap (BMP) file data can be read and digital photographs of machines and parts can be displayed clearly.

Compact size

Compact size control panel

- Industry's smallest and thinnest. (See the table on page 23 for details.)



Recipe function

Convenient!

Initial values, including machine working conditions, can be easily set

- The initial values, such as material blending and processing conditions, can be saved in the GOT memory or on a PC card and can be transferred to a PLC by one operation, conditions can be easily changed.
- The data transfer sequence program is no longer necessary.
- Up to 256 types can be set and the number of words that can be registered is 8K (words/type).

Quick response

The industry's fastest!

Stressless display and operation

- Quick response is realized by bus connection or CPU direct connection.
- Since touch switches, like pushbuttons, can make a quick response, they can be used for inching operation.
- The screens are changed so quickly that it is not irritating during operation.

Maintenance functions

Improved maintainability and reduced running costs

- The GOT has various maintenance functions to troubleshoot and maintain the FA system and streamline maintenance work.

■Ladder monitor (Fault cause search / Touch search NEW) function
■List program edit function
■System monitor function
■Special module monitor function
■Network monitor function
■Motion monitor function NEW
■Servo amplifier monitor function NEW

Recommended

Audio output

The machine operating status is vocally reported

- Messages and warnings can also be vocally output, so information can be provided audibly.
- An audio message can be created easily by using a Windows® WAV file.

Convenient!

■Communication unit

- Bus connection board

- Serial communication board for CPU direct connection/ microcomputer/computer link connection

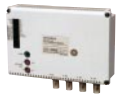
- CC-Link connection unit

- Ethernet communication unit NEW

- Bus connection unit

- MELSECNET/10 network unit

- MELSECNET(II)/B data link unit



■Optional unit (Refer to Options on page 32 for details.)

- Backlight

- Memory board

- Protection sheet

- Stand

- Flash PC card

- External input/output interface unit

■Main functions (Refer to GOT dictionary on page 34 and Function list for each model on page 54 for details.)

Features/hardware
OS installation | Various connection configurations | 256 colors display*1 | Audio output | Human sensor | Analog RGB output | Analog RGB input | Video input | Transparent | Backlight replacement

Main unit functions
Recipe | Gateway function | Script | Security | Time action | Alarm history | Alarm flow display | Alarm list | Status monitor | Screen call

*1: A975GOT only

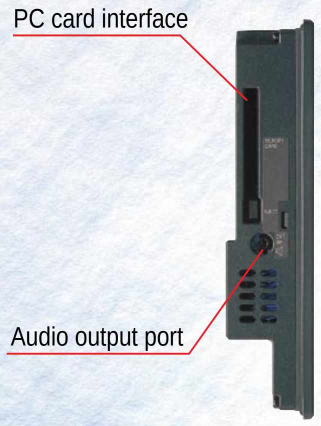
Graphic Operation Terminal
900
series

A970GOT

Large size (10") A970GOT

Many standard features

Display device	Intensity	Display colors	Resolution	Printer interface	Barcode reader interface
TFT display	**350cd/m²**	**16 colors**	**640x480dots**	**Built-in**	**Built-in** (RS-232C)



16 colors with high intensity

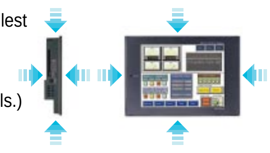
High-intensity and easy-to-see screen display is provided

- The high-intensity (350cd/m^2) TFT display provides clear 16-color display.

Compact size

Compact size control panel

- Industry's smallest and thinnest. (See the table below for details.)



Recipe function

Convenient!

Initial values, including machine working conditions, can be easily set

- The initial values, such as material blending and processing conditions, can be saved in the GOT memory or on a PC card and can be transferred to a PLC by one operation, conditions can be easily changed.
- The data transfer sequence program is no longer necessary.
- Up to 256 types can be set and the number of words that can be registered is 8K (words/type).

Quick response

Stressless display and operation

- Quick response is realized by bus connection or CPU direct connection.
- Since touch switches, like pushbuttons, can make a quick response, they can be used for inching operation.
- The screens are changed so quickly that it is not irritating during operation.

The industry's fastest!

Maintenance functions

Improved maintainability and reduced running costs

- The GOT has various maintenance functions to troubleshoot and maintain the FA system and streamline maintenance work.

■Ladder monitor (Fault cause search / Touch search NEW) function
■List program edit function
■System monitor function
■Special module monitor function
■Network monitor function
■Motion monitor function NEW
■Servo amplifier monitor function NEW

Recommended

Audio output

The machine operating status is vocally reported

- Messages and warnings can also be vocally output, so information can be provided audibly.
- An audio message can be created easily by using a Windows® WAV file.

Recommended

Model name	Power supply voltage	100~240VAC	A975GOT-TBA-B	A975GOT-TBA-EU	A970GOT-TBA-B	A970GOT-TBA-EU
		24VDC	A975GOT-TBD-B	—	A970GOT-TBD-B	—
Display device			TFT color display			
Display colors			256 colors		16 colors	
Intensity (cd/m^2)			350 (8-step intensity adjustment)			
Display angle (contrast ratio)			Right and left: 50 degrees, up: 40 degrees, down: 45 degrees			
Resolution (dot)			640 x 480			
Number of touch key			1200 (30 lines x 40 columns)			
User memory capacity			1MB (Up to 9MB)			
External dimensions (mm)			297W x 208H x 46D			
Panel width (mm)			40			
Panel cut dimensions (mm)			289^{+1}_{0}W x 200^{+1}_{0}H			
Regulation compliance	UL/cUL		○	○	○	○
	CE		×	○	×	○

Maintenance functions
Ladder monitor | List program edit | System monitor | Special module monitor | Network monitor | Motion monitor | Servo amplifier monitor

Drawing software (including GT Simulator)
Simulation debugging | Device monitor | Documentation assistance | Data conversion

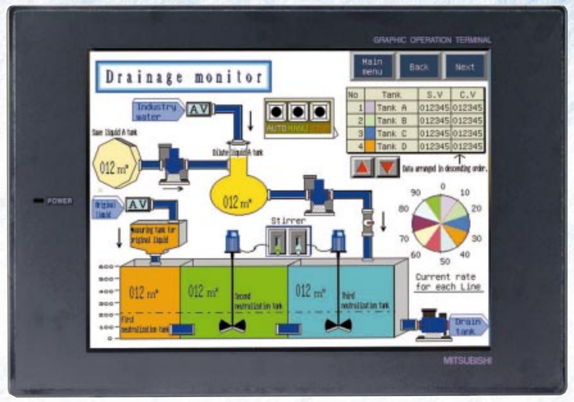
Graphic Operation Terminal
900
series

A970GOT

Large size (10") A970GOT

Many standard features

PC card interface
Audio output port



Display device	**D-STN display**
Intensity	**200cd/m^2**
Display colors	**8 colors/** Monochrome (black and white)
Resolution	**640x480dots**
Printer interface	**Built-in**
Barcode reader interface	**Built-in** (RS-232C)

STN display

Clear screen displays are provided

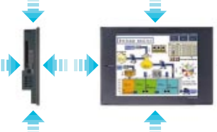
- 8-color and monochrome (white/black) models are available.

Color/ monochrome display!

Compact size

Compact size control panel

- Industry's smallest and thinnest.(See the table on page 25 for details.)



Recipe function

Convenient!

Initial values, including machine working conditions, can be easily set

- The initial values, such as material blending and processing conditions, can be saved in the GOT memory or on a PC card and can be transferred to a PLC by one operation, conditions can be easily changed.
- The data transfer sequence program is no longer necessary.
- Up to 256 types can be set and the number of words that can be registered is 8K (words/type).

Quick response

Stressless display and operation

- Quick response is realized by bus connection or CPU direct connection.
- Since touch switches, like pushbuttons, can make a quick response, they can be used for inching operation.
- The screens are changed so quickly that it is not irritating during operation.

The industry's fastest!

Maintenance functions

Improved maintainability and reduced running costs

- The GOT has various maintenance functions to troubleshoot and maintain the FA system and streamline maintenance work.

■Ladder monitor (Fault cause search / Touch search NEW) function
■List program edit function
■System monitor function
■Special module monitor function
■Network monitor function
■Motion monitor function NEW
■Servo amplifier monitor function NEW

Recommended

Audio output

The machine operating status is vocally reported

- Messages and warnings can also be vocally output, so information can be provided audibly.
- An audio message can be created easily by using a Windows® WAV file.

Convenient!

■Communication unit

- Bus connection board

- Serial communication board for CPU direct connection/ microcomputer/computer link connection

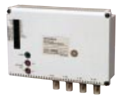
- CC-Link connection unit

- Ethernet communication unit NEW

- Bus connection unit

- MELSECNET/10 network unit

- MELSECNET(II)/B data link unit



■Optional unit (Refer to Options on page 32 for details.)

- Backlight

- Memory board

- Protection sheet

- Stand

- Flash PC card

- External input/output interface unit

A960GOT

Large size (9") A960GOT

Inexpensive model

PC card interface
Audio output port

Display device	**High-intensity EL**
Display colors	Monochrome (black/yellowish orange)
Resolution	**640x400dots**
Printer interface	**Built-in**
Barcode reader interface	**Built-in** (RS-232C)

High-intensity EL display

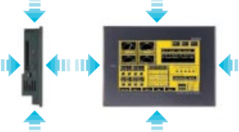
Clear screen displays are provided at a reasonable price

- Monochrome (black/yellowish orange or black/white).

Compact size

Compact size control panel

- Industry's smallest and thinnest.(See the table below for details.)



Recipe function

Convenient!

Initial values, including machine working conditions, can be easily set

- The initial values, such as material blending and processing conditions, can be saved in the GOT memory or on a PC card and can be transferred to a PLC by one operation, conditions can be easily changed.
- The data transfer sequence program is no longer necessary.
- Up to 256 types can be set and the number of words that can be registered is 8K (words/type).

Quick response

Stressless display and operation

- Quick response is realized by bus connection or CPU direct connection.
- Since touch switches, like pushbuttons, can make a quick response, they can be used for inching operation.
- The screens are changed so quickly that it is not irritating during operation.

The industry's fastest!

Maintenance functions

Improved maintainability and reduced running costs

- The GOT has various maintenance functions to troubleshoot and maintain the FA system and streamline maintenance work.

■Ladder monitor (Fault cause search / Touch search NEW) function
■List program edit function
■System monitor function
■Special module monitor function
■Network monitor function
■Motion monitor function NEW
■Servo amplifier monitor function NEW

Recommended

Audio output

The machine operating status is vocally reported

- Messages and warnings can also be vocally output, so information can be provided audibly.
- An audio message can be created easily by using a Windows® WAV file.

Convenient!

Model name	Power supply voltage	100~240VAC	A970GOT-SBA	A970GOT-SBA-EU	A970GOT-LBA	A970GOT-LBA-EU	A960GOT-EBA	A960GOT-EBA-EU
		24VDC	A970GOT-SBD	—	A970GOT-LBD	—	A960GOT-EBD	—
Display device			D-STN color display		D-STN monochrome display		High-intensity EL	
Display colors			8 colors		Monochrome (black and white)		Monochrome (black and yellowish orange)	
Intensity (cd/m^2)			200				—	
Display angle			Right and left: 50 degrees, up: 45 degrees, down: 30 degrees				—	
Resolution (dot)			640 x 480				640 x 400	
Number of touch key			1200 (30 lines x 40 columns)				1000 (25 lines x 40 columns)	
User memory capacity			1MB (Up to 9MB)					
External dimensions (mm)			297W x 208H x 46D				268W x 192H x 49D	
Panel width (mm)			40				43	
Panel cut dimensions (mm)			289$^{+1}_{0}$W x 200$^{+1}_{0}$H				258$^{+1}_{0}$W x 183$^{+1}_{0}$H	
Regulation compliance		UL/cUL	○	○	○	○	○	○
		CE	×	○	×	○	×	○

■Main functions (Refer to GOT dictionary on page 34 and Function list for each model on page 54 for details.)

Features/hardware
- OS installation
- Various connection configurations
- 256 colors display
- Audio output
- Human sensor
- Analog RGB output
- Analog RGB input
- Video input
- Transparent
- Backlight replacement *1

Main unit functions
- Recipe
- Gateway function
- Script
- Security
- Time action
- Alarm history
- Alarm flow display
- Alarm list
- Status monitor
- Screen call

Maintenance functions
- Ladder monitor
- List program edit
- System monitor
- Special module monitor
- Network monitor
- Motion monitor
- Servo amplifier monitor

Drawing software (including GT Simulator)
- Simulation debugging
- Device monitor
- Documentation assistance
- Data conversion

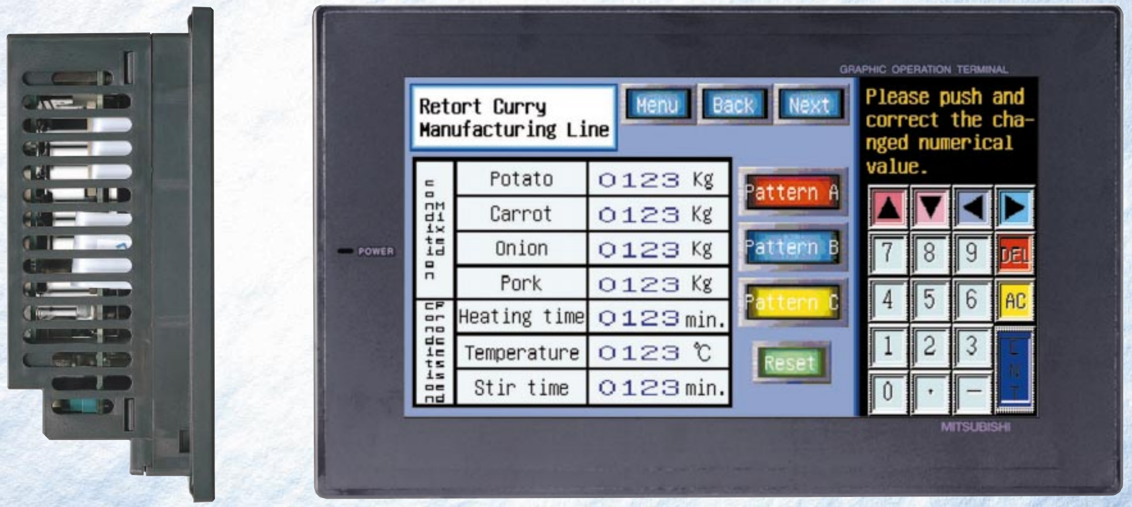
*1: A970GOT only

Graphic Operation Terminal
900
series

A956WGOT

Medium size (7") A956WGOT

The industry's first wide and convenient HMI

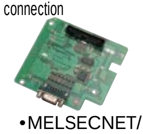


Display device	Intensity	Display colors	Resolution	Barcode reader interface
TFT display	**300cd/m²**	**256 colors**	**480x234 dots**	**Built-in** (RS-232C)

■Communication unit

- Bus connection board

- Serial communication board for CPU direct connection/ microcomputer/computer link connection



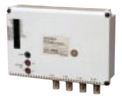
- CC-Link connection unit

- Ethernet communication unit NEW

- Bus connection unit

- MELSECNET/10 network unit

- MELSECNET(II)/B data link unit



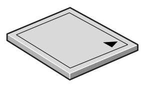
■Optional unit (Refer to Options on page 32 for details.)

- Memory board

- Protection sheet

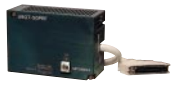
- Stand

- Compact flash PC card *1



- External input/output interface unit *2

- Printer interface unit *2



- PC card interface unit *1*2

*1: When using the compact flash PC card, the PC card interface unit cannot be used.
*2: Only one of them can be installed.

■Main functions (Refer to GOT dictionary on page 34 and Function list for each model on page 54 for details.)

Features/hardware

OS installation | Various connection configurations | 256 colors display | Audio output | Human sensor | Analog RGB output | Analog RGB input | Video input | Transparent | Backlight replacement

Maintenance functions

Ladder monitor *3 | List program edit | System monitor | Special module monitor | Network monitor | Motion monitor | Servo amplifier monitor

Main unit functions

Recipe | Gateway function | Script | Security | Time action | Alarm history | Alarm flow display | Alarm list | Status monitor | Screen call

Drawing software (including GT Simulator)

Simulation debugging | Device monitor | Documentation assistance | Data conversion

*3: Available for ladder monitor of QCPU (Q mode)

Main features

1.5 times larger than the 6" display!

The industry's first wide 7" display

- Higher resolution (480 x 234 dots) compared with the 6" display

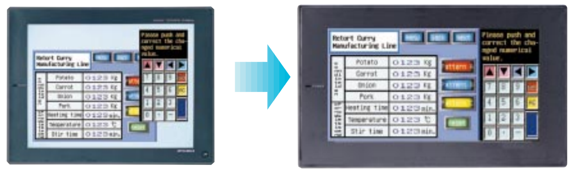
The industry's first wide display!

Effective use of the screen

An industry first!

Utilization of extra space on the 6" control panel

- Since the A956W is a wide type, 6" screen leaves an extra space on either side. Numeric and ASCII keys can be created on the extra space as a fixed screen, therefore window screens and external I/O are not needed. (Numeric and ASCII keys are registered in a template.)

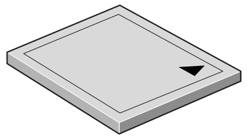


Compact flash PC card interface as standard

Convenient!

Commercially available compact flash PC cards can be used

- When a compact flash PC card is used, screen data and OS can be transferred to the GOT at high speed.
- If the screen needs to be changed at a remote site, it can be done by a compact flash PC card.



High-intensity 256 colors display

The most advanced multi-color display in the industry

Small but vivid display

- The industry's first, high-intensity (300cd/m²), 7" wide, 256-color TFT display can show more vivid and high-quality images.
- 256-color bitmap (BMP) file data and digital photos such as machine parts can be displayed.

Maintenance function

Compatibility with FA device

Improved maintainability and reduced running costs

Improved maintainability and reduced running costs

- The GOT has various maintenance functions to troubleshoot and maintain the FA system and streamline maintenance work.
- When the system is connected to a network, all the maintenance functions can be performed on remote terminals from the GOT. (The GOT can perform remote maintenance.)

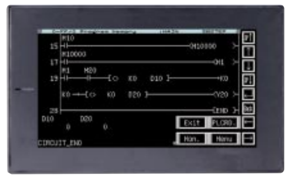
Motion monitor function New

- Q series motion controller monitoring and parameter settings can be done easily on the GOT. (Refer to Special report 2 on page 8 for details.)

Ladder monitor function

- The QCPU (Q mode) program can be monitored in ladder format.*3

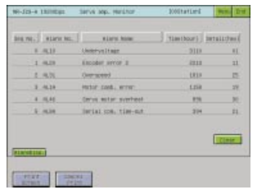
1: The search and comment display functions are available.
2: The fault cause search function can be used to investigate the cause of trouble easily. (Unavailable for QnA ladder monitor.)
3. Touch search is also available. NEW (Refer to Special report 2 on page 8 for details.)



Servo amplifier monitor function New

- Pulse train output of servo amplifiers and parameters can be monitored. (Refer to Special report 2 on page 8 for details.)

* When the servo amplifier monitor function is used, barcode function and transparent function are not available.



The following functions are also available

■List program edit function (For MELSEC-A series)
Read/write of list programs can be done easily on a production site.

■System monitor function
The GOT alone can monitor device values of PLC CPU and monitor/change current values of buffer memory at the special module.

■Network monitor function
The GOT alone can check the network communication status of MELSECNET/10, (II), or /B.

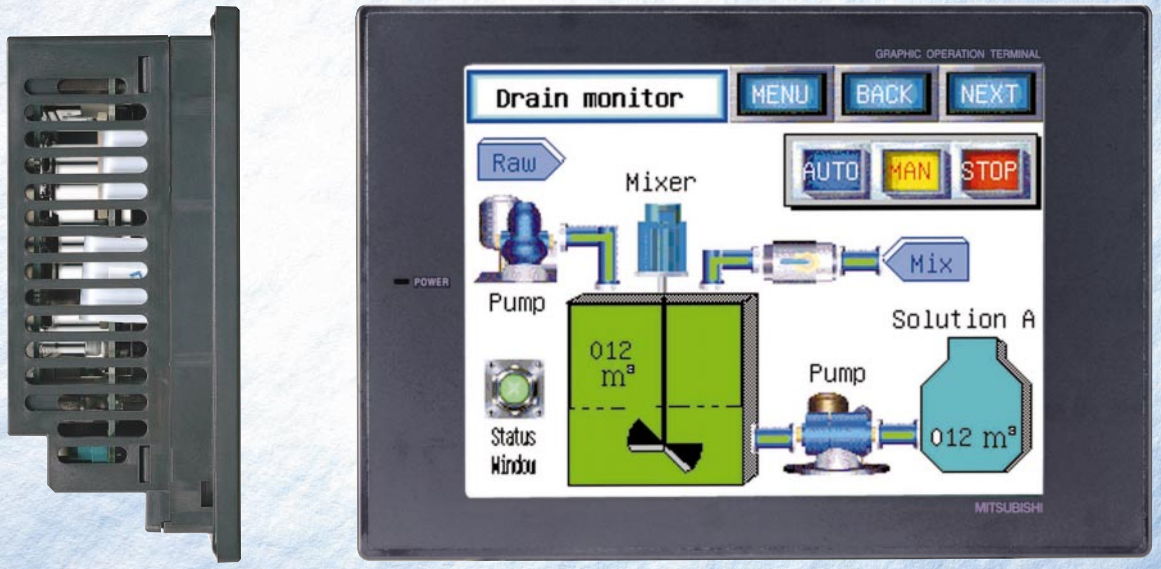
Model name	Power supply voltage	24VDC	A956WGOT-TBD
Display device			TFT color display
Display colors			256 colors
Intensity (cd/m^2)			300 (8-step intensity adjustment)
Display angle			Right and left: 65 degrees, up: 40 degrees, down: 65 degrees
Resolution (dot)			480 x 234
Number of touch key			450 (15 lines x 30 columns)
User memory capacity			1MB (Up to 9MB)
External dimensions (mm)			215W x 133H x 70.8D
Panel width (mm)			65.8
Panel cut dimensions (mm)			205.5^{+1}_{0}W x 123.5^{+1}_{0}H
Regulation compliance		UL/cUL	○
		CE	○

Graphic Operation Terminal
900
series

A95□GOT

Medium size (6") A95□GOT

6" high-function type
supporting various connection methods



Display device	Intensity	Display colors	Resolution	Barcode reader interface
TFT/STN display	350cd/m² 110cd/m² 200cd/m²	256 colors 8 colors monochrome	320x240 dots	Built-in (RS-232C)

■Communication unit

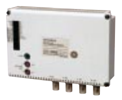
- Bus connection unit *1

- CC-Link connection unit *1

- Ethernet communication unit *1 NEW

- MELSECNET/10 network unit *1

- MELSECNET(II)/B data link unit *1



*1: mounted on GOT-A956 only

■Optional unit (Refer to Options on page 32 for details.)

- Backlight

- Protection sheet

- Stand

- PC card interface unit *2

- External input/output interface unit *2

- Printer interface unit *2

*2: Only one of them can be installed.

■Main functions (Refer to GOT dictionary on page 34 and Function list for each model on page 54 for details.)

Features/hardware

OS installation	Various connection configurations	256 colors display *3	Audio output	Human sensor	Analog RGB output	Analog RGB input	Video input	Transparent	Backlight replacement *4

Maintenance functions

Ladder monitor	List program edit *5	System monitor	Special module monitor	Network monitor *5	Motion monitor *5	Servo amplifier monitor

Main unit functions

Recipe *5	Gateway function *6	Script	Security	Time action	Alarm history	Alarm flow display	Alarm list	Status monitor	Screen call

Drawing software (including GT Simulator)

Simulation debugging	Device monitor	Documentation assistance	Data conversion

*3: A95□GOT-TBD only
*4: Except A95□GOT-TBD
*5: A95□GOT-M3 only
*6: A956GOT-M3 only

Main features of A95□GOT series

Various connection configurations! Many choices!

Supports various connection configurations!

- The A950/A951/A953GOT contains a communication interface for each model, is not necessary to install any communication board or unit on the GOT.
- The A956GOT can be connected to a bus, MELSECNET, or CC-Link by installing a communication unit.
- The A950/A953GOT can be connected with a PLC or microcomputer provided by other manufacturers.

Differentiation between A95□GOT model names

Communication interface type			Enabled connection configurations
Built-in communication interface type	0	RS-422	CPU direct connection, computer link connection, CC-Link connection (via G4)*7, microcomputer connection, other manufacturer's PLC connection
	1	Bus	Bus connection
	3	RS-232C	CPU direct connection, computer link connection, microcomputer connection, other manufacturer's PLC connection
Installed communication interface type	6	Bus	Bus connection
		Network	MELSECNET/10 connection, MELSECNET(II)/B connection, CC-Link connection, Ethernet connection

*7: Connected with CC-Link system via AJ65BT-G4-S3.

Quick response The industry's fastest!

Stressless display and operation

- Quick response is realized by bus connection or CPU direct connection.
- Since touch switches, like pushbuttons, can make a quick response, they can be used for inching operation.
- The screens are changed so quickly that it is not irritating during operation.

Choices of display colors

- Display colors: 2 colors (STN white/black), 8 colors (STN colors), 256 colors (TFT colors)

Supports full graphics

- Figures or objects, such as ovals and arcs, can be displayed in the same way as on a large HMI.

Special features Model: A95□GOT-(Q)TBD-□

Extremely vivid and clear! The most advanced multi-color display in the industry

Though medium-sized, these models support 256 TFT colors

- The high-intensity (350 cd/m², 8-level intensity adjustment) TFT display can show 256-color, clear, high-quality images.
- 256-color bitmap (BMP) file data and digital photos such as machine parts can be displayed.

Backlight replacement is rarely required! Easy maintenance

A maintenance-free system can be implemented easily

- The TFT type has a long-life backlight that lasts 50,000 hours, so the backlight need not be replaced for more than 10 years (Actual work time 12 hours/day, 300 days/year). The service life can be extended further by the backlight off function.

More functions Model: A95□GOT-□-M3

Functions useful for equipment or machine startup and maintenance are available Convenient!

Motion monitor function NEW

- Q series motion controller monitoring and parameter settings can be done easily on the GOT. (Refer to Special report 2 on page 8 for details.)

Servo amplifier monitor function NEW

- Pulse train output of servo amplifiers and parameters can be monitored. (Refer to Special report 2 on page 8 for details.)

* The servo amplifier monitor function cannot be used with barcode function and transparent function.

List program edit (For the MELSEC-A series)

- Read/write of list programs (instruction word) format can be done easily on a production site.

Network monitor

- The alone can check the network communication status of MELSECNET/10, (II), or /B.

Recipe function

- Initial values, including machine working conditions, can be easily set.
- The settings of different patterns can be saved in the GOT internal memory, and only necessary data can be transferred to a PC card or a PLC, resulting in easy trigger changing.
- The data transfer sequence program is no longer necessary.
- Up to 256 recipes can be set and the number of words that can be registered is 8,000words/recipe.

■A95□GOT

Model name		Top (TFT color)	A950GOT-TBD (-M3)	A951GOT-QTBD (-M3)	A951GOT-TBD (-M3)	A953GOT-TBD (-M3)	A956GOT-TBD (-M3)
		Middle (STN color)	A950GOT-SBD (-M3)	A951GOT-QSBD (-M3)	A951GOT-SBD (-M3)	A953GOT-SBD (-M3)	A956GOTSBD (-M3)
		Bottom (STN monochrome)	A950GOT-LBD (-M3)	A951GOT-QLBD (-M3)	A951GOT-LBD (-M3)	A953GOT-LBD (-M3)	A956GOT-LBD (-M3)
Connection configuration			RS-422	Bus (Q series: Q mode) *8	Bus (QnA, A series, motion) *8	RS-232C	Communication unit interface *9
Display device		Top/middle/bottom	TFT color display / STN color display / STN monochrome display				
Display colors		Top/middle/bottom	256 colors / 8 colors/monochrome				
Intensity (cd/m²)		Top/middle/bottom	350 (8-step intensity adjustable) / 110 / 200				
Display angle		Top/middle/bottom	Right and left: 65 degrees, up: 65 degrees, down: 40 degrees / right and left: 50 degrees, up: 45 degrees, down: 60 degrees / right and left, down: 30 degrees, up: 20 degrees				
Power supply voltage			24VDC				
Resolution (dot)			320 x 240				
Number of touch key			300 (15 lines x 20 columns)				
User memory capacity			M3 type: 3MB / others: 1MB				
External dimensions (mm)		Top/middle, bottom	164.5W x 136H x 65D / 164.5W x 136H x 57D				
Panel width (mm)			156^{+1}_{0}W x 123.5^{+1}_{0}H				
Panel cut dimensions (mm)		Top/middle, bottom	59 / 51				
Reguraltion Compliance	UL/cUL		○				
	CE	Top	×	×	×	×	×
		middle	○	×	○	○	○
		bottom	○	×	○	○	○

*8: For a single unit or the last one of several units for bus connection. Use the A956GOT-(Q)-TBD(-M3) to connect multiple units.
*9: The communication unit interface supports bus connection (several units), MELSECNET connection, CC-Link connection and Ethernet connection.

Product overview

Graphic Operation Terminal 900 series

SCREEN DEVELOPMENT SOFTWARE

SOFTWARE

Supporting design tasks ranging from GOT screen creation to debugging

MELSOFT

Integrated screen development software

GT Works2 NEW

GT Works2 is an integrated screen drawing software package containing GOT-900 series drawing software, GT Designer2, GOT simulation software, and GT Simulator2. The requirements, such as drawing time reduction and development efficiency improvement, can be satisfied by integrating the reinforced drawing environment for GT Designer2 and the ultimate debugging environment for GT Simulator2.

GOT drawing software

GT Designer2 NEW

GT Designer is a drawing software package for all GOT900 series, and can be used for drawing with the GOT-A900 and GOT-F900 series.

Main features of GT Designer2

1. Reduction in screen drawing time by half

- GT Designer2 cuts drawing time approximately by half compared to that of GT Designer by using new functions, Workspace, Property sheet and etc. The number of mouse clicks has also reduced.

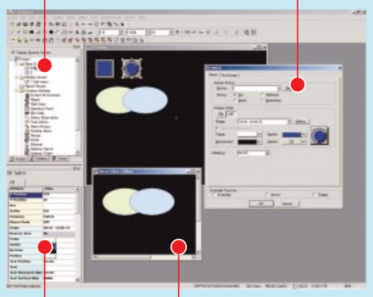
2. Windows® standard operability and menu configuration

- GT Designer2 offers high-performance operability including easy menu configuration, multi language support, and more intuitive operator control.

3. Data compatibility with GT Designer

- Screen data created on GT Designer can be used on GT Designer2 so that the resources can be fully utilized.

* The monitor data created by GT Designer2 cannot be used on the conventional product (GT Designer).



■GT SoftGOT2 operating environment

Item		Description	
Personal computer		Personal computer on which Windows® runs	
OS		Microsoft® Windows® 98 operating system Microsoft® Windows® Millennium Edition operating system Microsoft® WindowsNT® Workstation 4.0 operating system Microsoft® Windows® 2000 Professional operating system	Microsoft® Windows® XP Professional operating system *1 NEW Microsoft® Windows® XP Home Edition operating system *1 NEW
CPU		Pentium 200MHz or higher	
Required memory		64MB or more	Pentium 300MHz or higher
Free hard disk space	For installation	250MB or more	128MB or more
	For operation	50MB or more	
Disk drive		CD-ROM disk drive	
Display colors		256 colors	
Display		Resolution 800 x 600 dots or more	
Others		Internet Explorer Ver. 5.0 or later must be installed.	

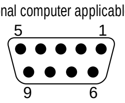
*1: Compatibility, user account, and desktop appearance functions are not supported.

■Connection cable (Cable for connection between GOT and DOS/V personal computer) *2

AC30R2-9SS

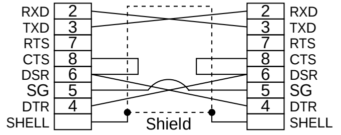
Application

DOS/V personal computer applicable connector



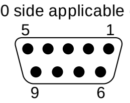
D-SUB 9-pin female
Screwed (inch screw) type

Connection diagram



Application

GOT-A900 side applicable connector



D-SUB 9-pin female
Screwed (inch screw) type

*2: Refer to the "Operation manual (compatible connection system)" for other PC connection cables.

Refer to page 59 for purchasing the GT Designer2.

GOT simulation software

GT Simulator2 NEW

The GOT-A900 series screen can be simulated on a personal computer to debug the screen. If the screen needs to be modified as a result of debugging, it can be done with GT Designer2 and the result can be checked with GT Simulator2 immediately, so debugging time can be reduced drastically.

Main features of GT Simulator2

1. Debugging similar to the actual image can be performed on a personal computer

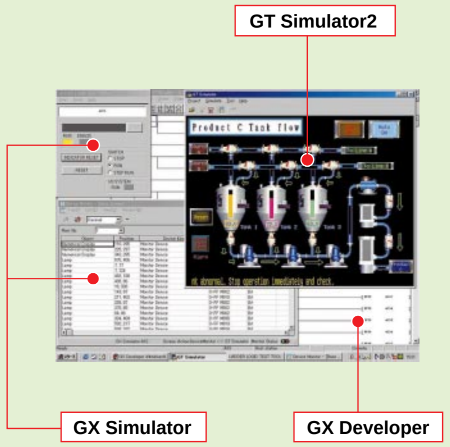
- Device value changes are displayed during simulation of a created sequence program with GT Simulator2 and GX Simulator (ladder logic test tool).
- The device value change function of GT Simulator2 can be used to change device values forcibly and check screen display changes.

2. Touch switch input simulation with a mouse

- The input to a touch switch is simulated by clicking on the touch switch on GT Simulator2 with the mouse.
- The result of input to the touch switch can be confirmed by a display change on GT Simulator2, the device monitor screen on GX Simulator, or the ladder monitor of GX Developer.

3. Manual document and application requirement with screen image shots

- Using GT Simulator2, base and window screens can be saved as a bitmap format. This helps finish the complete operation manuals in short time.
- GT Simulator2 allows users to monitor images just as they appear in the software. This incorporates users application requirements in the debugging of drawing development and reduces editing time later.



<table>
<tr><th colspan="2">Item</th><th colspan="2">Description</th></tr>
<tr><td colspan="2">Personal computer</td><td colspan="2">Personal computer on which Windows® runs</td></tr>
<tr><td colspan="2">OS</td><td>Microsoft® Windows® 98 operating system
Microsoft® Windows® Millennium Edition operating system
Microsoft® WindowsNT® Workstation 4.0 operating system *2
Microsoft® Windows® 2000 Professional operating system</td><td>Microsoft® Windows® XP Professional operating system*4*5 NEW
Microsoft® Windows® XP Home Edition operating system*4*5 NEW</td></tr>
<tr><td colspan="2">CPU</td><td>Pentium 200MHz or higher (Pentium 300MHz or higher recommended)</td><td>Pentium 300MHz or higher (Pentium 450MHz or higher recommended)</td></tr>
<tr><td rowspan="2">Required memory</td><td>GT Simulator2 only</td><td>64MB or more (96MB or more recommended)</td><td rowspan="2">128MB or more (192MB or more recommended)</td></tr>
<tr><td>GT Simulator2+GX Developer+GX Simulator</td><td>96MB or more (128MB or more recommended)</td></tr>
<tr><td rowspan="2">Free hard disk space*1</td><td>For installation</td><td colspan="2">200MB or more</td></tr>
<tr><td>For operation</td><td colspan="2">100MB or more</td></tr>
<tr><td colspan="2">Disk drive</td><td colspan="2">CD-ROM disk drive</td></tr>
<tr><td colspan="2">Display colors</td><td colspan="2">256 colors</td></tr>
<tr><td colspan="2">Display</td><td colspan="2">Resolution 800 x 600 dots or more</td></tr>
<tr><td rowspan="3">Required software cable</td><td>Required</td><td colspan="2">GT Designer2*3 or GT Designer</td></tr>
<tr><td>When GX Simulator is used</td><td colspan="2">•GX Simulator of the following version is required depending on CPU.
<table>
<tr><td>When QCPU (A mode), ACPU or motion controller CPU (A series) is simulated</td><td>SW5D5C-LLT Version A or later</td></tr>
<tr><td>When QCPU (Q mode) (except Q00J/Q00/Q01CPU), QnACPU or FXCPU is simulated</td><td>SW5D5C-LLT Version E or later</td></tr>
<tr><td>When Q00J/Q00/Q01CPU is simulated</td><td>SW6D5C-LLT Version A or later</td></tr>
<tr><td>When Q12PHCPU or Q25PHCPU is simulated</td><td>SW6D5C-LLT Version L or later</td></tr>
</table></td></tr>
<tr><td>When MELSEC PLC is used</td><td colspan="2">•The following converter or cable is required to connect GT Simulator2 and MELSEC PLC.
<table>
<tr><th>PLC</th><th>CPU port</th><th>Converter/cable</th></tr>
<tr><td>FX/A/QnA series</td><td>RS422</td><td>RS-422/RS-232C converter *6</td></tr>
<tr><td>Q series</td><td>RS232</td><td>QC30R2</td></tr>
</table></td></tr>
<tr><td colspan="2">Note</td><td colspan="2">The following GOT functions cannot be simulated. [Print functions (report, hard copy, alarm print), external input/output function, ladder monitor function, system monitor function, special module monitor function, network monitor function, list program edit function, motion monitor function, servo amplifier monitor function]</td></tr>
</table>

*1: Extra free space is required when GT Simulator2 is used with the GX Developer or GX Simulator. For the necessary free space for the GX Developer and the GX Simulator, refer to the Operating manuals (startup/introductory) of GX Developer and GX Simulator.
*2: Use the personal computer where Windows NT® Workstation 4.0 of Service Pack 3 or later is installed.
*3: Use GT Designer2 included in GT Works2.
*4: Compatibility, user account, and desktop appearance functions are not supported.
*5: Administrator authorization is required to use Windows® XP Professional or Windows® XP Home Edition.
*6: RS-422/RS-232C converter for GX Developer is required.

Refer to page 59 for purchasing the GT Simulator2.

Graphic Operation Terminal 900 series

Options

Various options increase your satisfaction!

■Video/RGB composite input interface unit (A9GT-80V4R1) New

Used to input Video or RGB signals to the GOT. These two inputs cannot be displayed at the same time.
- Video input function: Supports up to 4 channels.
- RGB input function: Supports 1 channel (SVGA, VGA).

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
● *1					

*1: A985-V only

■Video input interface unit (A9GT-80V4)

Used to display Video images on the GOT.
Supports up to 4 channels.

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
● *1					

*1: A985-V only

■RGB input interface unit (A9GT-80R1)

Used to display RGB signal on the GOT.
Supports VGA and SVGA.

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
● *1					

*1: A985-V only

■Printer interface unit (A9GT-50PRF)

Used to connect a printer with the A956W/A95☐GOT.
Supports the Centronics parallel interface (20 pins, half pitch).
Functions that require the Printer interface unit are as follows:
- Alarm history print
- Daily/monthly report output (form print)
- Display screen color hardcopy
- Bitmap data output to PC card (snap shot)

*See MELFANSweb home page at http://www.MitsubishiElectric.co.jp/melfansweb for available printers.

Example of hardcopy

Example of Daily/monthly report output (form print)

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
*2	*2	*2	*2	●	●

*2: Built-in printer interface

■External input/output interface unit

Used to perform input/output of the GOT or to operate it with a keyboard. The keyboard can be created by the customer.

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
● *3	●	●	●	●	●

*3: A985 only

■PC card interface unit (A1SD59J-MIF) *For SRAM PC card only

Used to connect a PC card with the A95☐GOT.
Functions that require the PC card interface unit are as follows:
- OS installation or screen data transfer using PC card
- Alarm history (when history data is saved)
- Screen hardcopy (when "PC card" is specified as output destination)
- Recipe (when "PC card is used" is specified)

*The PC card interface unit can use only an SRAM PC card.
*Cable between GOT and PC card interface: A85GT-C05H (50cm) (Optional.)

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
				● *4	●

*4: The PC card interface unit cannot be used with a compact flash PC card.

■Flash PC card

Used to store a large amount of data that cannot be saved in an SRAM PC card. Having a larger capacity than an SRAM PC card, a single PC card can store more data.

*5: Only the A985GOT-V supports commercially available Flash PC card.
(Soon to be supported by the A985-GOT.)
*6: The GOT with function number A or later supports commercially available Flash PC card.
*Commercially available Compact Flash PC card, inserted into an adopter, can be used as Flash PC card.
*7: The compact flash PC card cannot be used with the PC card interface unit (A1SD59J-MIF).

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
● *5 *6	● *6	● *6	● *6	● *7	

■Memory board

Memory board expands the capability of optional functions such as ladder monitor, list edition, and recipe, and GOT internal memory (internal GOT screen data memory).
Note: choose A9GT-(Q)FNB when the optional functions and internal memory are not required. Choose A9GT-FNB2M when the optional functions and internal memory (2M) are required.
Refer to "List of Product" on page 60 for expansion memory board types.

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
●	●	●	●	●	

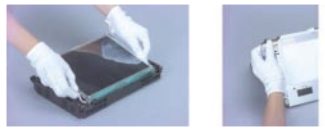
■Protection sheet

Use this sheet to protect the GOT screen (A set of 5 sheets).
The logo on the protection sheet can be removed. (The GOT unit has no logo printed.)

*The HMI is supplied with a protection sheet.

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
●	●	●	●	●	●

■Backlight



See "List of Products" on page 60 for the backlights used with each GOT.

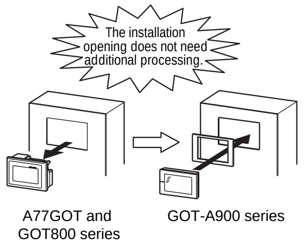
Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
●	●	●			●

■Stand

This stand is used to place the GOT on a desk for debugging.
A9GT-80 STAND········For A985 (-V) GOT
A9GT-70 STAND········For A97☐GOT, A960GOT
A9GT-50WSTAND······For A956WGOT
A9GT-50 STAND········For A95☐GOT

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
●	●	●	●	●	●

■Attachment


The installation opening does not need additional processing.
A77GOT and GOT800 series
GOT-A900 series

Used to replace the A77GOT or GOT800 series with the GOT-A900 series. If an attachment is used, the installation opening does not need to be changed.

■There are the following types of attachments:

Model name	Conventional models	Replaceable models
A77GT-96ATT	A77GOT-L, A77GOT-L-S3, A77GOT-L-S5, A77GOT-CL, A77GOT-CL-S3, A77GOT-CL-S5A85GT-95ATT	A960GOT
A85GT-95ATT	A85☐GOTA87GT-97ATT	A95☐GOT(-M3)
A87GT-96ATT	A77GOT-EL, A77GOT-EL-S3, A77GOT-EL-S5, A870GOT-EWS, A8GT-70GOT-EW, A8GT-70GOT-EB	A960GOT
A87GT-97ATT	A870GOT-SWS, A8GT-70GOT-SW, A8GT-70GOT-SB, A870GOT-TWS, A8GT-70GOT-TW, A8GT-70GOT-LB	A97☐GOT(-B)

- The attachment can be used only when the panel thickness is 1.2 to 3 mm. If the panel thickness exceeds 3 mm, the GOT cannot be replaced by using an attachment.
- If the GOT is replaced using an attachment, it does not comply with the waterproof and dustproof standard, IP65F.

Applicable models					
A985(-V)	A975	A970	A960	A956W	A95☐
	●	●	●		●

Graphic Operation Terminal 900 series

GOT Dictionary

Advanced features increase your satisfaction!

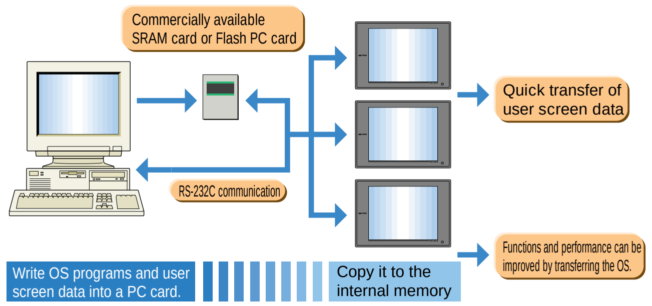
Features / hardware

OS installation

OS/screen data transfer to PC card

In addition to data transfer using RS-232C communication, a PC card (Flash PC card or SRAM card) can be used to replace screen data and OS programs, reducing data transferring time greatly. This allows users to edit or replace data without having personal computers and cables connected to the GOTs. The PC card interface unit is required for the A95□GOT.)

- Download screen data into a PC card on a personal computer, and transfer screen data quickly to the GOT by inserting the PC card into it.
- Download OS programs Including basic OS, communication drives, expanded OS, etc. to PC card. This enables quick data transferring of different settings. (OS programs and screen data can be saved on a single PC card.)


Commercially available SRAM card or Flash PC card
RS-232C communication
Quick transfer of user screen data
Functions and performance can be improved by transferring the OS.
Write OS programs and user screen data into a PC card.
Copy it to the internal memory

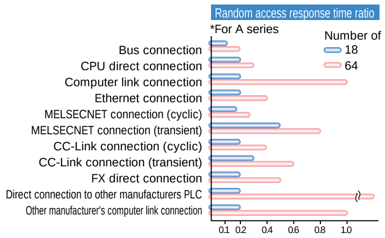
Various connection configurations

Bus connection/CPU direct connection/computer link connection/ Ethernet connection/MELSECNET connection/CC-Link connection

The GOT supports high-speed display and quick response for inching, which is indispensable for control panel operation.

- The fastest bus connections with MELSEC-Q/QnA/A PLCs.*1 The Q series connects up to 5 GOTs, and the QnA/A series, up to 3 GOTs. Also, high performance maintained even when the maximum number of GOTs are connected.
- Quick response with MELSECNET cyclic as same as bus connection.

Random access response time ratio



Reference value when 64 devices in a general computer link connection (random) for the connection method of a HMI are assumed to be 1.0 (numeric display: 16-bit data comparison value) (Random means that device addresses are discontinuous or two or more devices are used.)

*1:The QCPU (A mode) cannot be used.

* For information on features of each connection configuration, the maximum number of GOTs connected, and the maximum connection distance, see pages 38 to 41.
For connectivity with third party PLCs, see Connectable model list on page 57.

Compact size

The industry's smallest size by downsizing the control panel, saving space and cost.

256 colors display

Full 256 and beautiful screen display.

Audio output

A memory board is required

Windows® WAV files supporting by connecting a speaker with a built-in amplifier*1 to the standard audio output connector.
(Not supported by the A95□ /A956WGOT.)

Printer output

Built-in printer port (Centronics parallel interface, 20 pins, half pitch).
(A9GT-50PRF is required for the A95□ /A956WGOT.)
The following printer functions are supported.

- Alarm history printing
- Daily/monthly report output
- Display screen color hard copy
- Bitmap data output to PC card (snapshot)

The following printers*1 can be connected:

- ESC/P24-J84 printer (ESC/P commands, color)

*ESC/P is a control code system standardized by Seiko Epson.

- Hewlett-Packard printer (PCL commands, color)
- Chinese printer (character code GB or BIG5)

Human sensor

Screen is automatically displayed when a user approaches to it, and the backlight of interface is turned off when no one nearby. This function extends the life of the backlight and save energy also.
*A985GOT(-V) only

Analog RGB output

The GOT screens can be displayed on an external CRT.
*A985GOT only

Analog RGB input

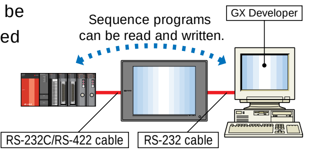
Support screen display on SVGA (800 x 600 dots) and VGA (640 x 480 dots) resolutions of a personal computer. An extra personal computer is needed.
*A985GOT-V only (RGB input interface unit (optional) is required.)

Video input

Up to 4 video animations are displayed on the GOT, simplifying system configuration.
*A985GOT-V only (Video input interface unit (optional) is required.)

Transparent

The GPP function software can be used when the GOT is connected directly with the PLC CPU.
*Via Bus connection
(GX Developer New Version8.00A or later)
*Via CPU connection



Barcode reader

Data read with a barcode reader *1 is stored in a specified device as ASCII code.

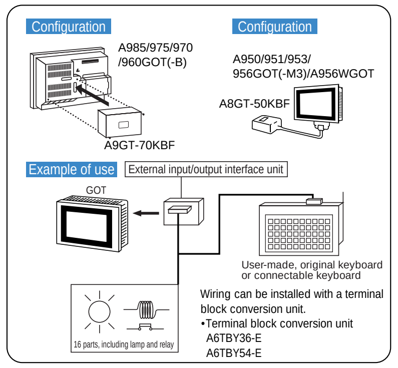
*The barcode reader*1 requires an external power supply.

External input/output interface

When the external input/output unit allows I/O control and keyboard operation on the GOT. The keyboad can be created by users.

A9GT-70KBF
(A985/975/970/960GOT (-B))

A8GT-50KBF
(A950/951/953/956GOT(-M3)/A956WGOT)


Configuration
A985/975/970 /960GOT(-B)
A9GT-70KBF
Configuration
A950/951/953/ 956GOT(-M3)/A956WGOT
A8GT-50KBF
Example of use
External input/output interface unit
GOT
User-made, original keyboard or connectable keyboard
16 parts, including lamp and relay

Wiring can be installed with a terminal block conversion unit.

- Terminal block conversion unit
  A6TBY36-E
  A6TBY54-E

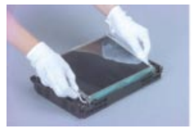
Keyboards that can be connected
A8GT-TK
FP5-MD41-A (Desktop type, Kanaden)
FP5-MD41-B (Panel-mounted, Kanaden)

Number of inputs/outputs

When switches, buzzers, or lamps	8 inputs, 16 outputs (12/24VDC)
When a keyboard	64 inputs, 16 outputs (12/24VDC)

Backlight replacement

The backlight can be replaced easily. The EL has no backlight, so replacement is not required. See the Product List on page 60 for backlight replacement.



Protection sheet (IP67F)

(Set of 5) The logo on the sheet can be removed. (The A985 (-V) / 975 / 970 / 960GOT(-B) / A95□GOT/A956WGOT has no logo.) Be sure to use the protection sheet for screen . The GOT is supplied with a protection sheet.

IP67f *3

The front panel supports the IP67F, so it can be used safely in dusty, humid, or oily places. (However, it may not guarantee any environment of kind.)

Attachment

The attachment is used when replacing A77GOT or GOT800 series with GOT-A900 series; the installation opening does not need to be changed. Refer to the optional parts on page 33 for the attachment types.

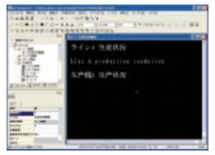
Main unit functions

Multi-language New

Windows® based universal language New

GT Designer2 supports Windows based universal language on the following OS.

- Windows®2000 Professional
- Windows®XP Professional
- Windows®XP Home Edition



When using the other OS, start GT Designer2 English version on Windows® of a corresponding language and create screens in desired language.
(i.e.) When creating a screen in Korean, start GT Designer2 English version on Korean Windows® and enter Korean.

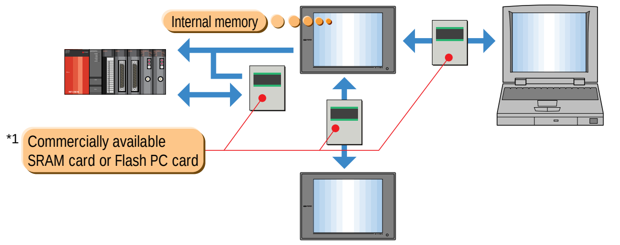
Universal language using Unicode

- The GOT displays various languages, including Japanese, Korean, Simplified Chinese (China), Traditional Chinese (Taiwan), English, German, French, Portuguese, Polish, and Spanish. International standard, Unicode (ISO/IEC10646), is adopted as character sets.

Recipe

*2 A memory board is required

- The GOT stores and transfers several kinds of process data (device values) such as material blending and procession conditions. Thus, the sequence program for data transfer is not necessary.
- Reuse of data read from PLC on another GOT and spreadsheet is available using PC card. This is useful for process control and production management. Users can modify the values on a spreadsheet and transfer to the PC card.
- When only device data is being transferred from the GOT to the PLC, no PC card is required. (Data including initial values is stored in internal memory (flash ROM) of the GOT as screen data)



Monitor condition	Read condition bit	
	Write condition bit	
Maximum number of settings	256 files (A PC card with 4M bytes or more is required.)	
Maximum number of data items registered per file	Number of devices:8K words	

Select PC card capacity by calculating the number of settings and registrations.

[Example of PC card selection]

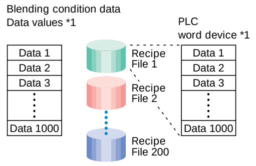
Select the PC card that fulfills the following conditions depending on number of data files and capacity.

1. Available PC card depends on the number of recipe files.

Number of recipe files	PC card
Up to 128	1M bytes or more
Up to 256	4M bytes or more

2. Calculation formula for data capacity stored in PC card
   Data capacity = 117 x number of recipe files + 9 x total number of 16-bit devices in each recipe file + 14 x total number of 32-bit devices in each recipe file

[PC card selection example]



When the number of recipe files is 200 and the number of 16-bit devices in each recipe file is 1000 points

1. As the number of recipe files is 200, a PC card of 4M bytes or more can be used.
2. Calculation formula for data capacity stored in PC card
   Data capacity = 117 x number of recipe files + 9 x total number of 16-bit devices in each recipe file + 14 x total number of 32-bit devices in each recipe file
   = 117 x 200 + 9 x 1000 x 200
   = 1,823,400 (bytes) ≠ 1.8M bytes

The data capacity is 1.8M bytes, however, since the number of files is 200, a PC card of 4M bytes or more can be used.

Gateway function

*1 A memory board is required

- Data acquisition (server function), read and write PC card data including alarm history and recipe files (FTP server function), are available.
- Multiple GOTs can be monitored (server/client function) and error messages can be sent to Mobile PC or Desktop PC.

Refer to Special report 3 on page 10 for details.

Script

The GOT-original program, C language allows users with little knowledge program difficult-to-describe arithmetic/logical operations easily. The C language program can be used under complicated conditions whose device display and control types differ. Using a script on the GOT, load on the PLC CPU, microcomputer, etc. can be sharply reduced, improving the controller performance and program design efficiency. The function also makes system maintenance easy.

- Supporting various commands
  - Control statement (if, while, switch statement, etc.) Logical, arithmetic.
  - Arithmetic operation, assignment operation, etc.
- Device offset specification New
  - Like index qualification of the PLC, a device can be specified indirectly with a script.
- Integer ⇔ real number conversion function New

Security

This function offers controlled operator access by assigning 16 levels of security classifications. (A password is required to change security level.)

Screen level security

- Security level can be applied to full and partial screens, system monitor function, special module, and monitor function.

System level security

- Switching to system screens (utility function), such as setup screen, is protected.
- Reading ladder with the ladder monitor function is protected with a keyword that is registered with the GX Developer.

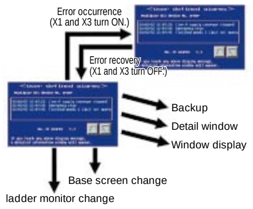
Project level security

- Screen data is protected from uploading.

Time action

Since an action can be carried out at a specified time on a specified day of the week, machine operation instruction and audible communication can easily be performed.

Alarm history


Error occurrence (X1 and X3 turn ON.)
Error recovery (X1 and X3 turn OFF.)
Backup
Detail window
Window display
Base screen change
ladder monitor change

- The dates and time, the descriptions, the recovery and confirmation times are displayed that alarms occurred .
- Either history mode or accumulative mode (time/frequency) can be selected.
- Timing of alarm reset can be specified.
- Up to 3,072 alarms can be stored on alarm history.
- There are two ways to process the 3,073th alarm.
  - Erasing the oldest alarm and collect the 3,073th alarm.
  - Not collecting the 3,073th or later alarms.
- The number of alarms in the history is reported to the CPU. (The number of alarms can be monitored numerically.)
- Alarm history data can be stored to PC card even if the power of GOT is switched off. (A PC card stores up to 3,072 alarm data generated right before GOT is powered off.)
- Alarm history data is stored to hard disk of personal computer when GT SoftGOT2 is used.
- PC card capacity is as follows:

Alarm history mode (CSV format)	Approximately 72 (360) K bytes
Cumulative mode (CSV format)	Approximately 97 (400) K bytes

Alarm flow display

- Alarms are displayed in the order in which they occurred.
- Monitor devices can be registered for all screens, and whether to display them can be specified on each screen.
- The number of current alarms is reported to the CPU. (The number of alarms can be monitored numerically.)

Alarm list

User alarm

- The dates/times alarms occured and its descriptions are displayed.
- Only current alarms are displayed. Restored alarms are automatically cleared from the screen.
- The ascending or descending order can be selected.
- The order in which alarms occurred or order of alarm numbers can be selected.
- The number of current alarms is reported to the PLC. (The number of alarms can be monitored numerically.)
- Row number of alarm can be specified indirectly. New

---

[1] For the cutting-edge information on the models that have been confirmed to operate properly, please contact your local Mitsubishi representatives.
[2] Among the A95□GOTs, only the A95□GOT-M3 is available.
[3] Equivalent to IP65F depending on the GOT hardware version. Refer to the technical news for details.

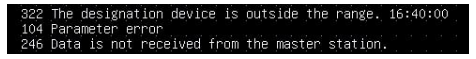
Graphic Operation Terminal 900 series

GOT Dictionary

Advanced features increase your satisfaction!

System alarm

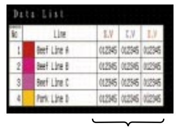
- PLC CPU or network connection errors or GOT errors are displayed by only specifying a display area.
- Predefined error messages are displayed.



```
322 The designation device is outside the range. 16:40:00
104 Parameter error
246 Data is not received from the master station.
```

Data list

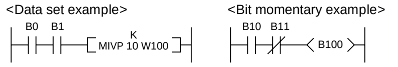
- Data can be displayed as lists.
- Five elements can be displayed on a single line. (Up to 128 lines)
- Data is sorted and displayed in the order of device values to be monitored. Data can be displayed in either the descending order tool using frequency, or failure frequency.



Example of setting 5 elements

Status monitor

- If a combination of ON/OFF conditions for two devices is valid, it is reported to an external unit or PLC CPU. Audio output, bit ON/OFF, bit inversion, momentary, or data set (fixed value/indirect value) can be selected.
- All screens and an individual screen can be used at the same time.
- It is effective as background processing for display conditions, write conditions, or report print conditions.



Display condition specification

- Continuous trigger : The display is always updated.
- Periodical trigger : A display interval can be specified (in seconds).
- Edge trigger : ON/OFF display
  It can be displayed when a specified device is turned on or off.
  It can be displayed forcibly when the screen is switched.
- Level trigger : ON/OFF display
  It is always displayed when a specified device is ON or OFF.
  Whether to retain or clear the display can be specified when a trigger is invalid.

Display switching

- Switching by bit (2 combinations) The display is switched when a monitor device is ON or OFF.
- Switching by word (63 combinations)
  Display color, etc. can be specified by setting a range of values using a comparison equation (inequality).
  A constant or word device can be specified for a comparison term.

Indirect specification (offset device)

- Since several data items can be displayed or input in one location, a setting can be input to multiple devices.
- An offset device can be set for each object.

PLC station number switching

- The PLC station number can be switched and a remote station can be monitored on a screen, so the screen does not need to be changed for each PLC station number. (Effective during transient communication.)
- Since the station number is switched by changing the station number device value, it can be done easily with a touch switch or a sequence program.

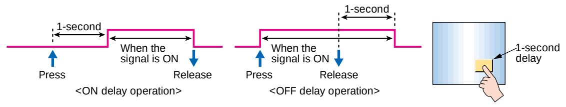
Screen call

- Since the common parts of several screens can be created and displayed as a separate screen, screen data can be reduced.
- Several screens being used can be changed by modifying the call screen only.
- Downloading time can be reduced by transferring screens one at a time.
- There is no limit to the number of screens that can be called.

A variety of touch switches

Time delay switch function

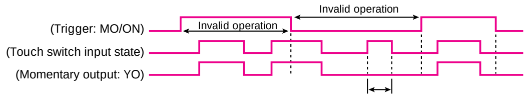
ON delay:This switch works when it is kept pressed for a specified period of time. This protection function prevents a switch from being activated when it is touched by mistake.
OFF delay:This touch switch continues output for a specified period of time after the switch is released.(The time can be set from 1 to 5 seconds.)



Operating condition (trigger) specification (interlock function)

Operation protection can be set easily for the touch switch or numeric input function by specifying operating conditions.

- Works when a bit device is specified (ON/OFF).
- Works when a word device is within a specified range.



Touch switch area specification

- The area of touch switch can be set 16-dot interval, so wrong input of an adjacent touch switches can be avoided.

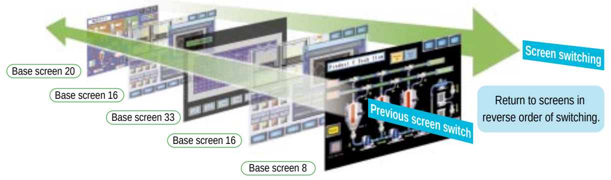
Offset specification

An offset (index qualification) can be specified by writing a word for a touch switch.

Write device: D100

Offset device: W0
If W0 is 0, data is set at D100.
If W0 is 1, data is set at D101.

Previous screen switch function New



To use the previous screen switch function, a screen switch (switch target: upper layer) works as a previous screen switch when its internal device of GS450.b14 is set ON.
PC card is necessary when the power is switched ON again, otherwise the previous screen switch function is lost.

*1: The front screen switch allows to return up to nine previous screens.
*2: This function can be applied only to base screens.
*3: Previous screen switch cannot be saved to PC card.

Maintenance functions (when MELSEC Q/QnA/A/FX CPU or motion controller or Servo amplifier is connected)

System monitor

- Since device values (including timer/counter settings) can be monitored and changed easily, a seperate device check maintenance screen does not need to be created.
- You can toggle between decimal and hexadecimal display, between 16-bit and 32-bit display, and comment display.
- Different PLC devices can be displayed on 4 windows at the same time. The registration monitor, batch monitor, timer/counter monitor, and BM (buffer memory) monitor can be displayed and changed (including timer/counter settings) together with each window.
- This function can be disabled by setting a password.
- The A956W/A95□(W)GOT displays a window screen.

Quick test display
(The device value/bit set/bit RST can be changed by a single operation.)

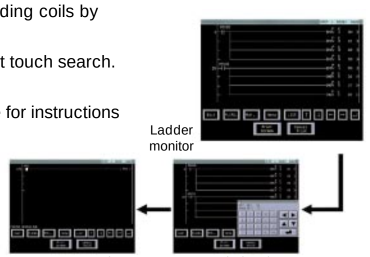
Ladder monitor

A memory board is required

PLC program can be monitored in ladder format. (Either one or Q, QnA, A, FX ladder is shown) A95□GOT does not support the ladder monitor. A956WGOT does not support QnA/A/FX ladder monitor. (Q ladder monitor only)

- Setting and changing of device values/timer/counter.
- Searching includes device search, step searching, contact, coils, etc.
- Device comments of GX Developer are displayed.
- The cause of problems can be investigated easily by the fault cause search function. (QnA ladder monitor does not support.)

This easily finds corresponding coils by touching contacts.
QnA/A/FX does not support touch search.
(Q ladder monitor only)
This function is unavailable for instructions other than contacts and coils and word devices.
The Cause fault search and touch search cannot be used simultaneously.



Cause search result screen
Key window for device specification

Special module monitor

A memory board is required

- Module configuration is automatically determined and a menu is displayed. Information of special module such as I/O information and buffer memory values can be displayed on the GOT, and special X/Y and buffer memory data can be modified.
- It is not necessary to create a screen for I/O check and special function module maintenance.
- It can be used to start a machine or check special function module operation.
- It can be read from the user screen and used freely as a screen library.
- This function can be disabled by setting a password.

[Special function modules that can be monitored]
A series module
<Positioning modules>
For large modules:AD75*2, AD70, AD70D, AD71, AD72
For small modules:A1SD75, A1SD70, A1SD71
<Analog modules>
For large modules:A68AD, A68ADN, A616AD, A616TD, A68RD, A62DA-S1, A616DAV, A616DAI, A84AD
For small modules:A1S64AD, A1S62DA, A1S62RD, A1S63ADA, A1S68DAV, A1S68DAI, A1S68AD
<Others>
For large modules:Input module, output module, AD61, A61LS, A62LS-S5, AJ71PT32-S3 (32/48 points), AJ71ID1-R4, AJ71ID2-R4
For small modules:Input module, output module, A1SD61, A1SJ71PT32-S3 (32/48 points), A1SJ71ID1-R4, A1SJ71ID2-R4, A1S64TCTT-S1, A1S64TCTTBW-S1, A1S64TCRT-S1, A1S64TCRTBW-S1

Q series unit
<Positioning modules>
QD75M□, QD75P□, QD75D□
Input module
Output module
<Analog modules>
Q64AD, Q68ADV, Q68ADI, Q62DA, Q64DA, Q62E, Q62D

*2: The AD75M□ parameter is monitored in the small range AD75P□ parameter.

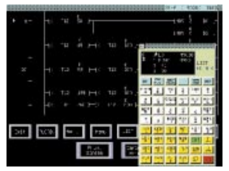
List program edit *1

A memory board is required

Sequence programs can be edited as lists. (The key layout and operation are the same as for the A8UPU.)

Applications

Minor changes can be made to programs in the field. Sequence programs can be edited easily without using peripheral equipment. The customer who used to ship a machine with the A8UPU (programming unit) can reduce costs.



Functions and operations

List: 4-line display

Applicable PLCs: MELSEC-A series

Program edit: Editing is possible when the PLC stops.

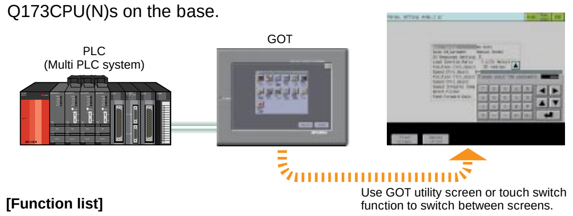
- List programs are displayed in the window of the ladder monitor, and on the base screen of the monitor screen.
- The keyword set for the sequence program is checked, and if it is correct, lists can be edited to assure security.
- Lists can be displayed in English.
- The list program edit screen can be hard copied and stored as history.

Note 1) unavailable for Q/QnA/motion controller/computer link connection.
A sequence program cannot be read with dedicated instructions specified.
Note 2) The photo shows this function used with ladder monitor. (On the A956W/A95□GOT, this function cannot be used with ladder monitor.)

Motion monitor *1

A memory board is required

The servo monitor and parameter setting of the Q series motion controller (Q172CPU(N), Q173CPU(N)) can be performed on the GOT screen. Parameter setting/monitoring is enabled for up to 3 Q172CPU(N)s or Q173CPU(N)s on the base.


PLC
(Multi PLC system)
GOT
Use GOT utility screen or touch switch function to switch between screens.

[Function list]

Motion monitor
- Current value monitor
- Positioning monitor
- SFC error history
- Servo monitor
- Error list
- Current value history monitor
- Error list (axis specification)

Parameter setting
- Servo parameters (basic parameters, adjustment parameters)

- Monitoring of current value history is not supported by the A95□GOT.
- Servo amplifier version B1 or later supports servo parameter setting for the MR-J2S.
- In a multiple CPU system, Q series CPU needs to be used as PLC No.1. Also, Q series PLC CPU should be mounted to the left of the Q172CPU(N) or Q173CPU(N) on the base unit.
- JOG operation, servo test, etc. are not supported.
  Refer to Notes for Use on page 58 for the Q series motion controller CPU versions.

Servo amplifier monitor *1

A memory board is required

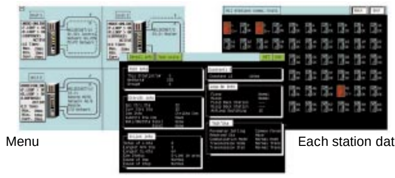
Connecting GOT to servo amplifier in a pulse train output system, parameter setting, error history, and diagnosis functions can be used on the GOT. Without having a programming software, servo amplifiers can be monitored and set from on-site GOT.
Refer to Special report 2 on page 9 for details.

Network monitor *1

A memory board is required

Supporting MELSECNET/10, (II)/B

- Since the line status of each MELSECNET is displayed clearly, the communication status can be easily checked.
- Details on lines and information about local and remote stations is provided from various points of view.
- This function can be disabled by setting a password.
- The A956W/A95□GOTdisplays a window screen.
- The MELSECNET/H cannot use this feature.



MELSECNET/10 control station details

Drawing software (including GT Simulator2)

Simulation debugging

The GOT-A900 series screen can be simulated on a personal computer to debug the screen. If the screen needs to be modified as a result of debugging, it can be done using drawing software (GT Designer2) and the results can be checked immediately with the GT Simulator2, so debugging efficiency can be greatly improved.
Refer to GT Simulator2 in Product overview on page 31 for details.

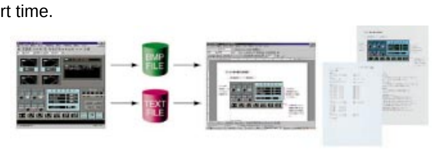
Device monitor

Started from GT Simulator2. A list of devices being used on the screen currently displayed by GT Simulator are displayed.
Since GOT internal devices (GB, GD, GS) can also be monitored, debugging efficiency can be further improved.

Documentation assistance

Screen captures for documentation

- Screen images are printed to several formats.
- Screen images are copied to a BMP and TEXT formats. This allow uses to finish complete operating manuals or documentations in short time.



*1: Supported by the A95□GOT-M3 among the A95□GOTs.
*2: GT Designer is included in SW□D5C-GOTR-PACK(E)(V).
SW3NIW-A8GOTP is not included in GT Designer2/GT Works2.

Data conversion *2

Compatibility with other software data

○: Compatible △: GT Converter is required ×: Not compatible

Used software	Product name	New drawing software for GOT900 series GT Designer2	Drawing software for GOT900 series GT Designer
	Model name	SW□D5C-GTD2-J(V)/E SW□D5C-GTWK2-J(V)/E	SW□D5C-GOTR-PACK(E)(V)
Source data	Data created on FX-PCS-DU/WIN	○	× (Upload from GOT)
	GX Developer device comment read*3	○	○
	BMP format data	○	○
	DXF format data	×	○
	Monitor data of GP series	○ GT Converter is required (included in GT Designer2)	○ GT Converter is required (included in GT Designer2)

*3: GX Developer's device comment helps device setting while creating screens.

Compatibility with GT Designer

GT Designer2 is compatible with GT Designer.

○: Compatible △: GT Converter is required ×: Not compatible

Used software	Product name	New drawing software for GOT900 series GT Designer2	Drawing software for GOT900 series GT Designer
	Model name	SW□D5C-GTD2-J(V)/E SW□D5C-GTWK2-J(V)/E	SW□D5C-GOTR-PACK(E)(V)
Source data	Data created by GT Designer2	○	×
	Data created by GT Designer	○	○
	GT Designer panel kit read*4	○	○
	Monitor data of GOT800 series	○ GT Converter is required (included in GT Designer2)	○ GT Converter is required (included in GT Designer2)
	Monitor data of A77GOT(-S□)	△ Conversion on GT Converter (included in GT Designer2 and GT Works2) is necessary after SW3NIW-A8GOTP(included in optional software, SW□D5C-GOTR-Pack(E)(V)) conversion is done.	○ Conversion on GT Converter (included in GT Designer2 and GT Works2) is necessary after SW3NIW-A8GOTP drawing software for GOT 800 series (included in GT Designer2 and GT Works2) conversion is done.
	Monitor data of A64GOT		
	Monitor data of AD57G-S3		

*4: The panel kit of GT Designer can be used as a parts library.

Graphic Operation Terminal
900
series

Connection configuration

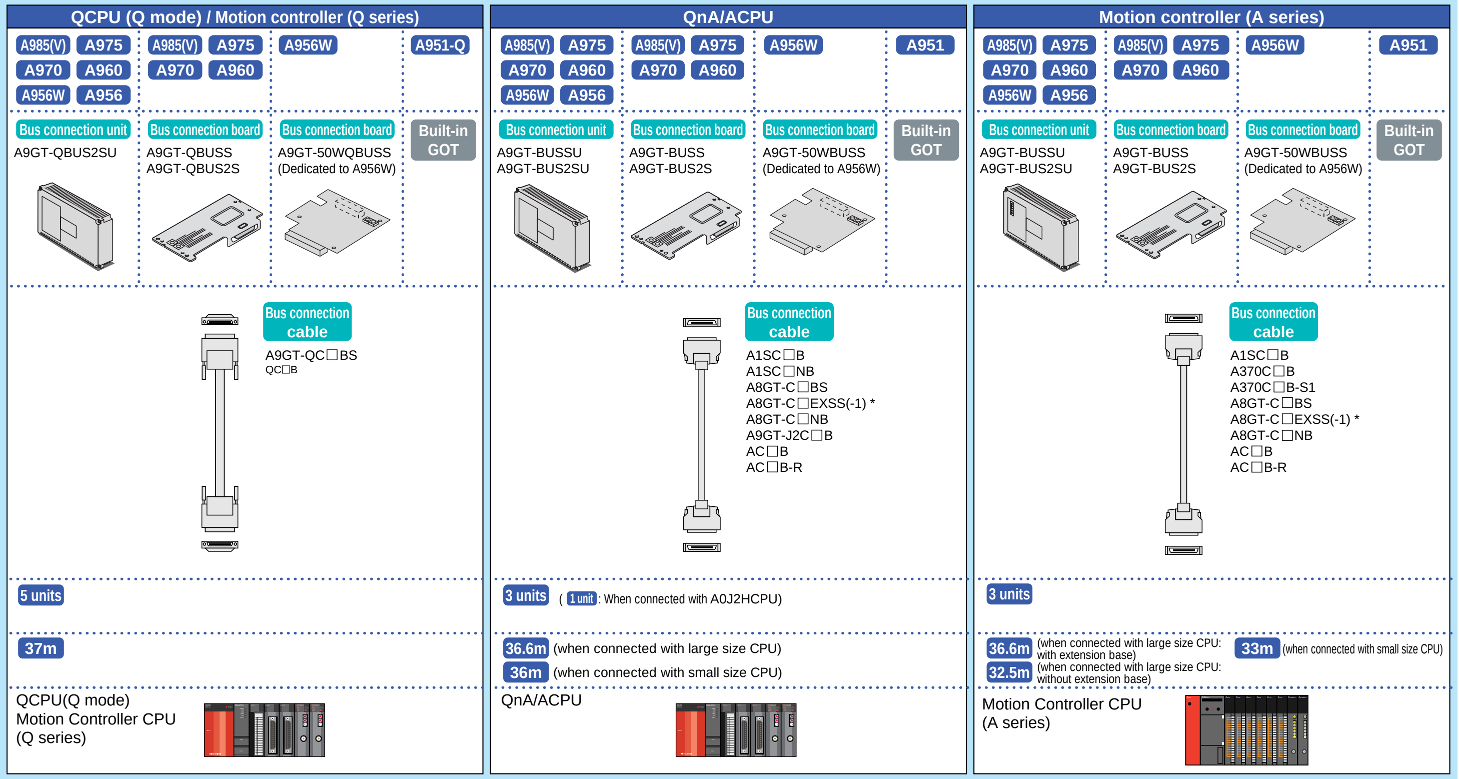
Various connection configurations increase your satisfaction!

AGOT

A985(V)
A975
A970
A960
A956W
A95□

Bus connection

Touch switches achieves response as quick as pushbuttons.



	QCPU (Q mode) / Motion controller (Q series)			
Connection configuration	A985(V) A975 A970 A960 A956W A956	A985(V) A975 A970 A960	A956W	A951-Q
Communication interface installed on GOT side	**Bus connection unit** A9GT-QBUS2SU	**Bus connection board** A9GT-QBUSS A9GT-QBUS2S	**Bus connection board** A9GT-50WQBUSS (Dedicated to A956W)	**Built-in GOT**
Shape and model name of connection cable	**Bus connection cable** A9GT-QC□BS QC□B			
Maximum number of GOTs connected	5 units			
Maximum connection distance	37m			
Connected to	QCPU(Q mode) Motion Controller CPU (Q series)			

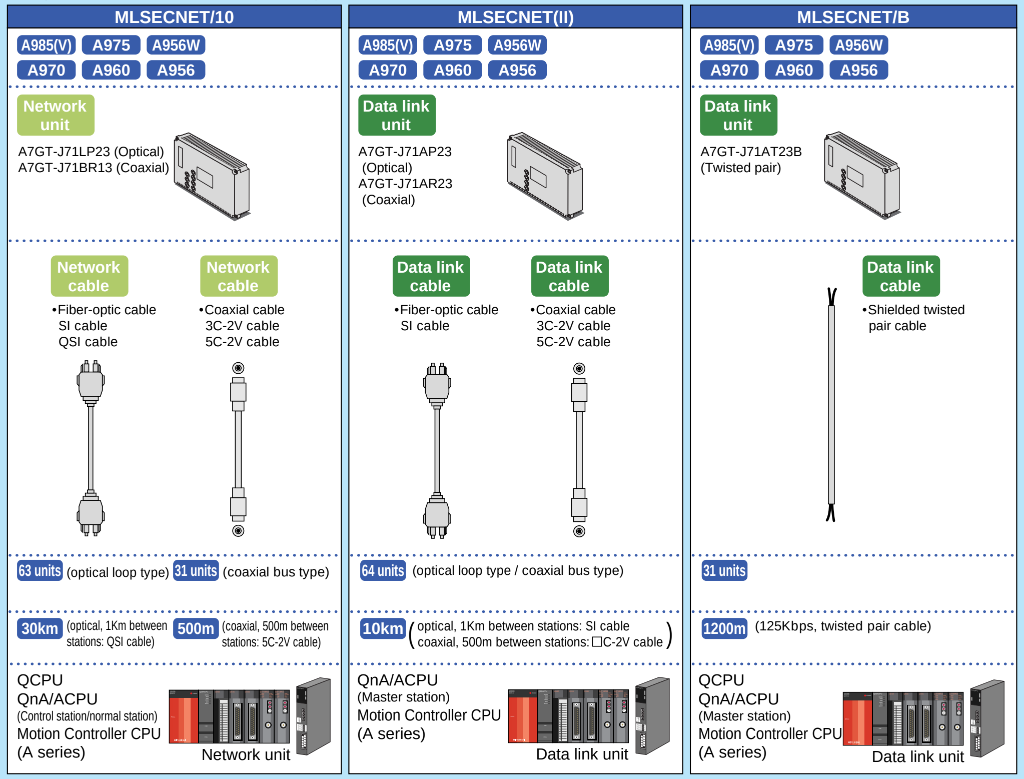
	QnA/ACPU			
Connection configuration	A985(V) A975 A970 A960 A956W A956	A985(V) A975 A970 A960	A956W	A951
Communication interface installed on GOT side	**Bus connection unit** A9GT-BUSSU A9GT-BUS2SU	**Bus connection board** A9GT-BUSS A9GT-BUS2S	**Bus connection board** A9GT-50WBUSS (Dedicated to A956W)	**Built-in GOT**
Shape and model name of connection cable	**Bus connection cable** A1SC□B A1SC□NB A8GT-C□BS A8GT-C□EXSS(-1) * A8GT-C□NB A9GT-J2C□B AC□B AC□B-R			
Maximum number of GOTs connected	3 units (1 unit : When connected with A0J2HCPU)			
Maximum connection distance	36.6m (when connected with large size CPU) 36m (when connected with small size CPU)			
Connected to	QnA/ACPU			

	Motion controller (A series)			
Connection configuration	A985(V) A975 A970 A960 A956W A956	A985(V) A975 A970 A960	A956W	A951
Communication interface installed on GOT side	**Bus connection unit** A9GT-BUSSU A9GT-BUS2SU	**Bus connection board** A9GT-BUSS A9GT-BUS2S	**Bus connection board** A9GT-50WBUSS (Dedicated to A956W)	**Built-in GOT**
Shape and model name of connection cable	**Bus connection cable** A1SC□B A370C□B A370C□B-S1 A8GT-C□BS A8GT-C□EXSS(-1) * A8GT-C□NB AC□B AC□B-R			
Maximum number of GOTs connected	3 units			
Maximum connection distance	36.6m (when connected with large size CPU: with extension base) 32.5m (when connected with large size CPU: without extension base) 33m (when connected with small size CPU)			
Connected to	Motion Controller CPU (A series)			

Refer to Bus connection on page 42 for details. *Refer to External dimensions on page 52 for cable dimensions of A8GT-C□EXSS(-1).

Network connection

Multiple GOTs can be used as remote operation terminals.

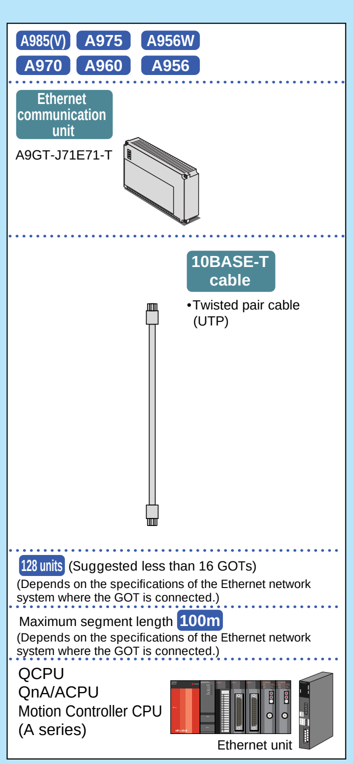


	MLSECNET/10	MLSECNET(II)	MLSECNET/B
Connection configuration	A985(V) A975 A956W A970 A960 A956	A985(V) A975 A956W A970 A960 A956	A985(V) A975 A956W A970 A960 A956
Communication interface installed on GOT side	**Network unit** A7GT-J71LP23 (Optical) A7GT-J71BR13 (Coaxial)	**Data link unit** A7GT-J71AP23 (Optical) A7GT-J71AR23 (Coaxial)	**Data link unit** A7GT-J71AT23B (Twisted pair)
Shape and model name of connection cable	**Network cable** •Fiber-optic cable SI cable QSI cable **Network cable** •Coaxial cable 3C-2V cable 5C-2V cable	**Data link cable** •Fiber-optic cable SI cable **Data link cable** •Coaxial cable 3C-2V cable 5C-2V cable	**Data link cable** •Shielded twisted pair cable
Maximum number of GOTs connected	63 units (optical loop type) 31 units (coaxial bus type)	64 units (optical loop type / coaxial bus type)	31 units
Maximum connection distance	30km (optical, 1Km between stations: QSI cable) 500m (coaxial, 500m between stations: 5C-2V cable)	10km (optical, 1Km between stations: SI cable coaxial, 500m between stations: □C-2V cable)	1200m (125Kbps, twisted pair cable)
Connected to	QCPU QnA/ACPU (Control station/normal station) Motion Controller CPU (A series) Network unit	QnA/ACPU (Master station) Motion Controller CPU (A series) Data link unit	QCPU QnA/ACPU (Master station) Motion Controller CPU (A series) Data link unit

Refer to For Q MELSECNET/10, II, /B Reference Manual for details.

Ethernet connection

Remote maintenance from your office.

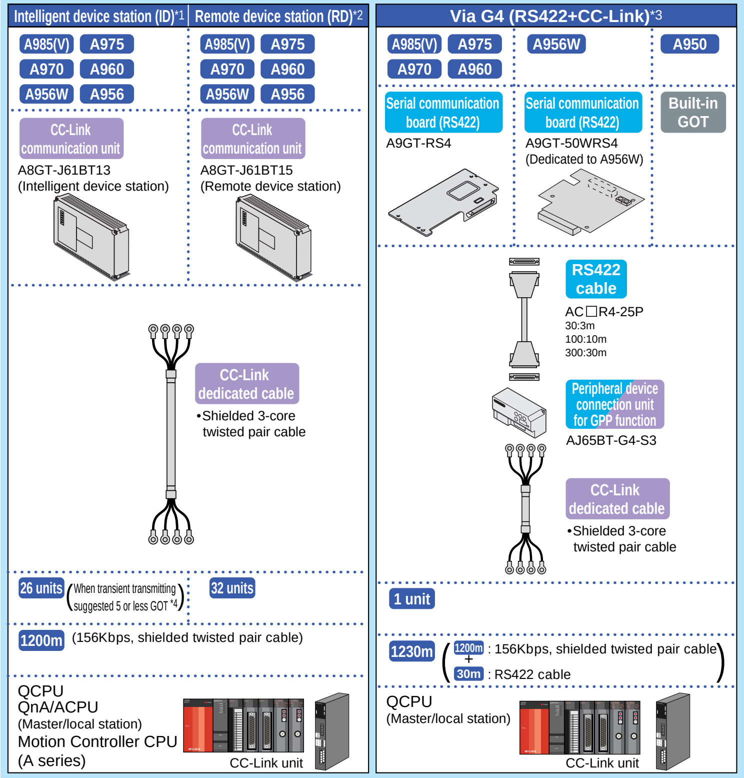


Connection configuration	A985(V) A975 A956W A970 A960 A956
Communication interface installed on GOT side	**Ethernet communication unit** A9GT-J71E71-T
Shape and model name of connection cable	**10BASE-T cable** •Twisted pair cable (UTP)
Maximum number of GOTs connected	128 units (Suggested less than 16 GOTs) (Depends on the specifications of the Ethernet network system where the GOT is connected.)
Maximum connection distance	Maximum segment length 100m (Depends on the specifications of the Ethernet network system where the GOT is connected.)
Connected to	QCPU QnA/ACPU Motion Controller CPU (A series) Ethernet unit

For details of the twisted pair cable (UTP), refer to the user's manual for available Ethernet unit.

CC-Link connection

Multiple GOTs can be connected via CC-Link at the lowest cost.



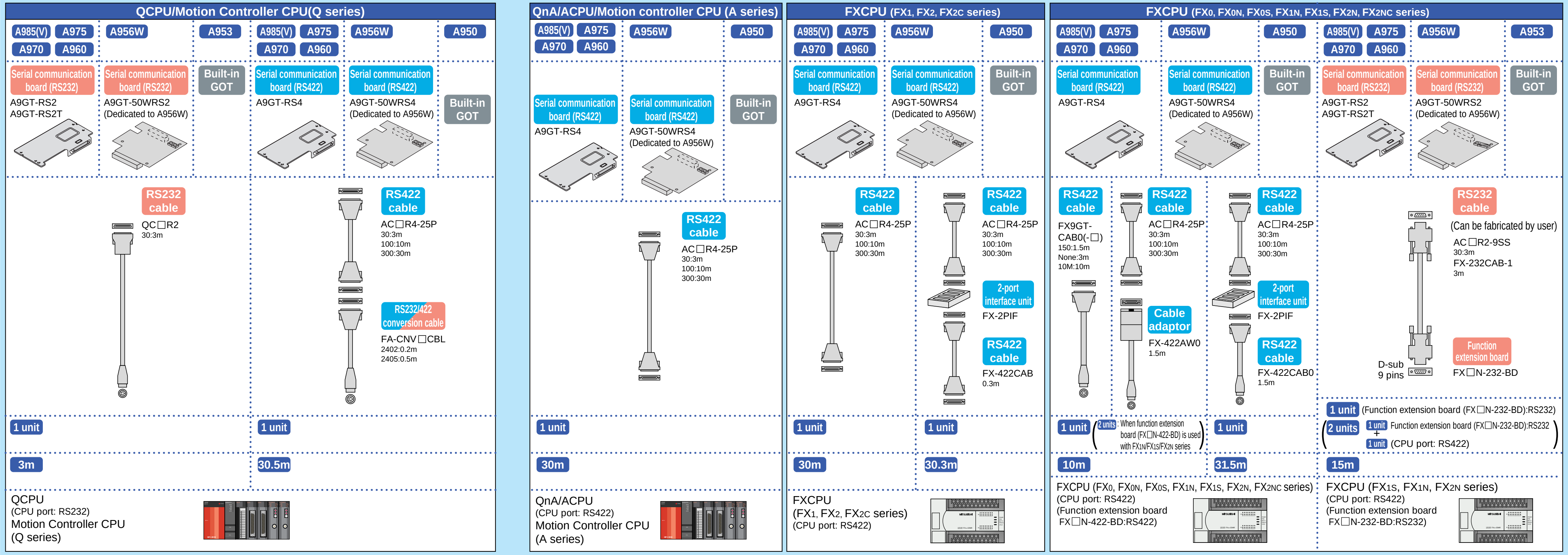
	Intelligent device station (ID)*1	Remote device station (RD)*2
Connection configuration	A985(V) A975 A970 A960 A956W A956	A985(V) A975 A970 A960 A956W A956
Communication interface installed on GOT side	**CC-Link communication unit** A8GT-J61BT13 (Intelligent device station)	**CC-Link communication unit** A8GT-J61BT15 (Remote device station)
Shape and model name of connection cable	**CC-Link dedicated cable** •Shielded 3-core twisted pair cable	
Maximum number of GOTs connected	26 units (When transient transmitting suggested 5 or less GOT *4)	32 units
Maximum connection distance	1200m (156Kbps, shielded twisted pair cable)	
Connected to	QCPU QnA/ACPU (Master/local station) Motion Controller CPU (A series) CC-Link unit	

	Via G4 (RS422+CC-Link)*3		
Connection configuration	A985(V) A975 A970 A960	A956W	A950
Communication interface installed on GOT side	**Serial communication board (RS422)** A9GT-RS4	**Serial communication board (RS422)** A9GT-50WRS4 (Dedicated to A956W)	**Built-in GOT**
Shape and model name of connection cable	**RS422 cable** AC□R4-25P 30:3m 100:10m 300:30m **Peripheral device connection unit for GPP function** AJ65BT-G4-S3 **CC-Link dedicated cable** •Shielded 3-core twisted pair cable		
Maximum number of GOTs connected	1 unit		
Maximum connection distance	1230m (1200m : 156Kbps, shielded twisted pair cable + 30m : RS422 cable)		
Connected to	QCPU (Master/local station) CC-Link unit		

Refer to CC-Link system master/local module user's manual for details of CC-Link dedicated cable.

CPU direct connection

MELSEC-Q/QnA/A/FX series can be connected via CPU direct connection at the lowest cost.



	QCPU/Motion Controller CPU(Q series)					
Connection configuration	A985(V) A975 A970 A960	A956W	A953	A985(V) A975 A970 A960	A956W	A950
Communication interface installed on GOT side	**Serial communication board (RS232)** A9GT-RS2 A9GT-RS2T	**Serial communication board (RS232)** A9GT-50WRS2 (Dedicated to A956W)	**Built-in GOT**	**Serial communication board (RS422)** A9GT-RS4	**Serial communication board (RS422)** A9GT-50WRS4 (Dedicated to A956W)	**Built-in GOT**
Shape and model name of connection cable	**RS232 cable** QC□R2 30:3m			**RS422 cable** AC□R4-25P 30:3m 100:10m 300:30m **RS232/422 conversion cable** FA-CNV□CBL 2402:0.2m 2405:0.5m		
Maximum number of GOTs connected	1 unit			1 unit		
Maximum connection distance	3m			30.5m		
Connected to	QCPU (CPU port: RS232) Motion Controller CPU (Q series)					

	QnA/ACPU/Motion controller CPU (A series)		
Connection configuration	A985(V) A975 A970 A960	A956W	A950
Communication interface installed on GOT side	**Serial communication board (RS422)** A9GT-RS4	**Serial communication board (RS422)** A9GT-50WRS4 (Dedicated to A956W)	**Built-in GOT**
Shape and model name of connection cable	**RS422 cable** AC□R4-25P 30:3m 100:10m 300:30m		
Maximum number of GOTs connected	1 unit		
Maximum connection distance	30m		
Connected to	QnA/ACPU (CPU port: RS422) Motion Controller CPU (A series)		

	FXCPU (FX1, FX2, FX2C series)		
Connection configuration	A985(V) A975 A970 A960	A956W	A950
Communication interface installed on GOT side	**Serial communication board (RS422)** A9GT-RS4	**Serial communication board (RS422)** A9GT-50WRS4 (Dedicated to A956W)	**Built-in GOT**
Shape and model name of connection cable	**RS422 cable** AC□R4-25P 30:3m 100:10m 300:30m	**RS422 cable** AC□R4-25P 30:3m 100:10m 300:30m **2-port interface unit** FX-2PIF **RS422 cable** FX-422CAB 0.3m	
Maximum number of GOTs connected	1 unit	1 unit	
Maximum connection distance	30m	30.3m	
Connected to	FXCPU (FX1, FX2, FX2C series) (CPU port: RS422)		

	FXCPU (FX0, FX0N, FX0S, FX1N, FX1S, FX2N, FX2NC series)					
Connection configuration	A985(V) A975 A970 A960	A956W	A950	A985(V) A975 A970 A960	A956W	A953
Communication interface installed on GOT side	**Serial communication board (RS422)** A9GT-RS4	**Serial communication board (RS422)** A9GT-50WRS4 (Dedicated to A956W)	**Built-in GOT**	**Serial communication board (RS232)** A9GT-RS2 A9GT-RS2T	**Serial communication board (RS232)** A9GT-50WRS2 (Dedicated to A956W)	**Built-in GOT**
Shape and model name of connection cable	**RS422 cable** FX9GT-CAB0(-□) 150:1.5m None:3m 10M:10m	**RS422 cable** AC□R4-25P 30:3m 100:10m 300:30m **Cable adaptor** FX-422AW0 1.5m	**RS422 cable** AC□R4-25P 30:3m 100:10m 300:30m **2-port interface unit** FX-2PIF **RS422 cable** FX-422CAB0 1.5m	**RS232 cable** (Can be fabricated by user) AC□R2-9SS 30:3m FX-232CAB-1 3m D-sub 9 pins **Function extension board** FX□N-232-BD		
Maximum number of GOTs connected	1 unit (2 units : When function extension board (FX□N-422-BD) is used with FX1N/FX1S/FX2N series)		1 unit	1 unit (Function extension board (FX□N-232-BD):RS232) (2 units 1 unit Function extension board (FX□N-232-BD):RS232 + 1 unit (CPU port: RS422))		
Maximum connection distance	10m		31.5m	15m		
Connected to	FXCPU (FX0, FX0N, FX0S, FX1N, FX1S, FX2N, FX2NC series) (CPU port: RS422) (Function extension board FX□N-422-BD:RS422)			FXCPU (FX1S, FX1N, FX2N series) (CPU port: RS422) (Function extension board FX□N-232-BD:RS232)		

Refer to GOT-A900 series user's manual compatible connection system.

---

*1: Monitor of transient and cyclic transmissions are available.
PLC CPU's devices of CC-Link system master stations/local stations devices of system master stations and local stations in PLC CPU, and remote devices allocated to master can be monitored.

*2: Only cyclic transmission is available.
Remote devices allocated to remote device stations such as GOT can be monitored.

*3: RS422 can be connected to CC-Link via AJ65BT-G4-S3.

*4: Refer to GOT-A series User's manual (GT Works2 Version 1/GT Designer2 Version 1 compatible connection system manual) for the details.

Graphic Operation Terminal 900 series

Connection configuration

Various connection configurations increase your satisfaction!

AGOT

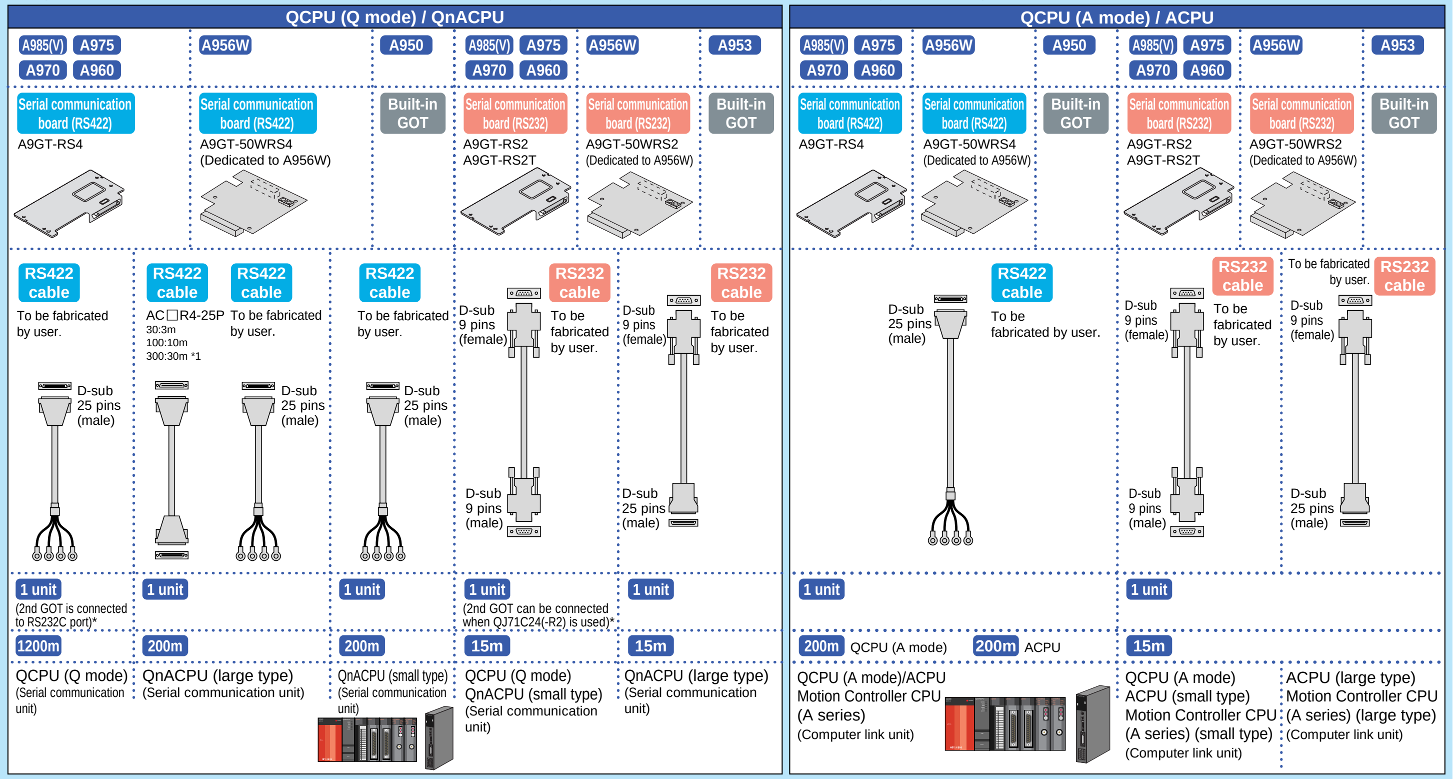
A985(V)
A975
A970
A960
A956W
A95□

SoftGOT

DOS/V personal computer
personal computer CPU

Computer link connection

Multiple GOTs can be connected easily through serial communication (connecting one or two GOTs with one computer link unit).



QCPU (Q mode) / QnACPU

Connection configuration	A985(V) A975 A970 A960	A956W	A950	A985(V) A975 A970 A960	A956W	A953
Communication interface installed on GOT side	Serial communication board (RS422) A9GT-RS4	Serial communication board (RS422) A9GT-50WRS4 (Dedicated to A956W)	Built-in GOT	Serial communication board (RS232) A9GT-RS2 A9GT-RS2T	Serial communication board (RS232) A9GT-50WRS2 (Dedicated to A956W)	Built-in GOT

Shape and model name of connection cable	RS422 cable To be fabricated by user. D-sub 25 pins (male)	RS422 cable AC□R4-25P 30:3m 100:10m 300:30m *1	RS422 cable To be fabricated by user. D-sub 25 pins (male)	RS422 cable To be fabricated by user. D-sub 25 pins (male)	RS232 cable D-sub 9 pins (female) To be fabricated by user. D-sub 9 pins (male)	RS232 cable D-sub 9 pins (female) To be fabricated by user. D-sub 25 pins (male)
Maximum number of GOTs connected	1 unit (2nd GOT is connected to RS232C port)*	1 unit		1 unit	1 unit (2nd GOT can be connected when QJ71C24(-R2) is used)*	1 unit
Maximum connection distance	1200m	200m		200m	15m	15m
Connected to	QCPU (Q mode) (Serial communication unit)	QnACPU (large type) (Serial communication unit)		QnACPU (small type) (Serial communication unit)	QCPU (Q mode) QnACPU (small type) (Serial communication unit)	QnACPU (large type) (Serial communication unit)

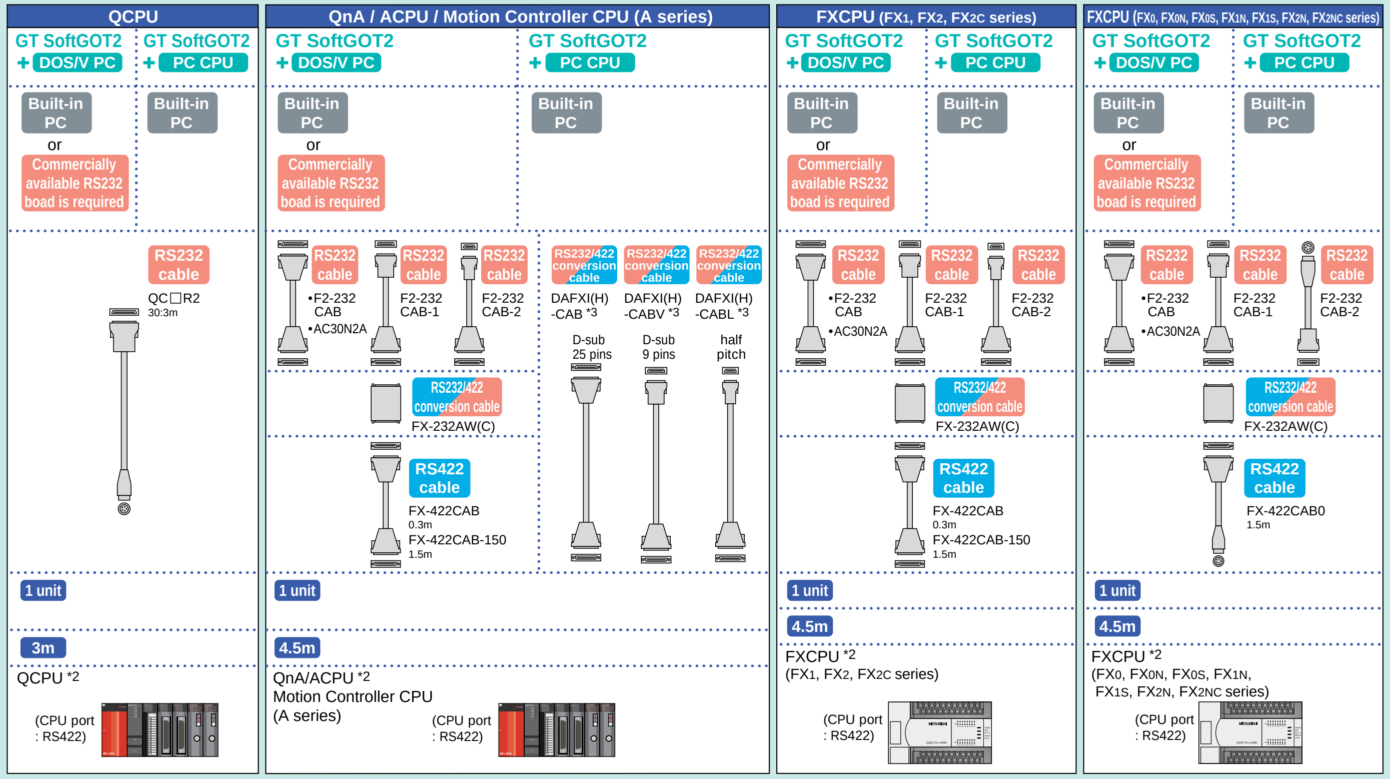
QCPU (A mode) / ACPU

Connection configuration	A985(V) A975 A970 A960	A956W	A950	A985(V) A975 A970 A960	A956W	A953
Communication interface installed on GOT side	Serial communication board (RS422) A9GT-RS4	Serial communication board (RS422) A9GT-50WRS4 (Dedicated to A956W)	Built-in GOT	Serial communication board (RS232) A9GT-RS2 A9GT-RS2T	Serial communication board (RS232) A9GT-50WRS2 (Dedicated to A956W)	Built-in GOT
Shape and model name of connection cable	RS422 cable D-sub 25 pins (male) To be fabricated by user.			RS232 cable D-sub 9 pins (female) To be fabricated by user. D-sub 9 pins (male)	RS232 cable To be fabricated by user. D-sub 9 pins (female) D-sub 25 pins (male)	
Maximum number of GOTs connected	1 unit			1 unit		
Maximum connection distance	200m QCPU (A mode) 200m ACPU			15m		
Connected to	QCPU (A mode)/ACPU Motion Controller CPU (A series) (Computer link unit)			QCPU (A mode) ACPU (small type) Motion Controller CPU (A series) (small type) (Computer link unit)	ACPU (large type) Motion Controller CPU (A series) (large type) (Computer link unit)	

For details of the cable to be fabricated, refer to the GOT-A900 Series User's Manual (Compatible connection system). *For details of computer link unit, refer to page 57.

CPU direct connection

Connecting with MELSEC-Q/QnA/A/FX series at the lowest cost.



QCPU

	GT SoftGOT2 + DOS/V PC	GT SoftGOT2 + PC CPU
Communication interface	Built-in PC or Commercially available RS232 boad is required	Built-in PC
Connection cable	RS232 cable QC□R2 30:3m	
Maximum number of GOTs connected	1 unit	
Maximum connection distance	3m	
Connected to	QCPU *2 (CPU port : RS422)	

QnA / ACPU / Motion Controller CPU (A series)

	GT SoftGOT2 + DOS/V PC	GT SoftGOT2 + PC CPU
Communication interface	Built-in PC or Commercially available RS232 boad is required	Built-in PC
Connection cable	RS232 cable •F2-232CAB •AC30N2A RS232 cable F2-232CAB-1 RS232 cable F2-232CAB-2 RS232/422 conversion cable FX-232AW(C) RS422 cable FX-422CAB 0.3m FX-422CAB-150 1.5m	RS232/422 conversion cable DAFXI(H)-CAB *3 (D-sub 25 pins) RS232/422 conversion cable DAFXI(H)-CABV *3 (D-sub 9 pins) RS232/422 conversion cable DAFXI(H)-CABL *3 (half pitch)
Maximum number of GOTs connected	1 unit	
Maximum connection distance	4.5m	
Connected to	QnA/ACPU *2 Motion Controller CPU (A series) (CPU port : RS422)	

FXCPU (FX1, FX2, FX2C series)

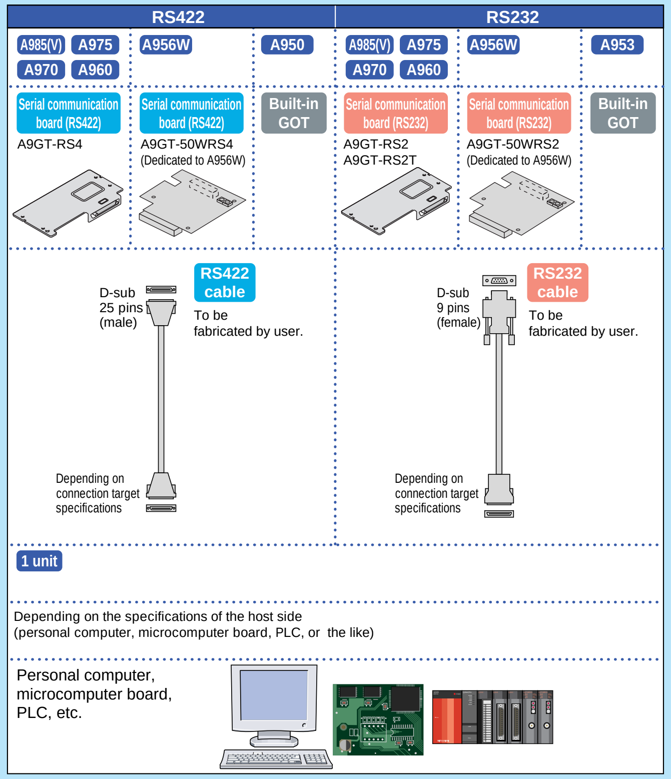
	GT SoftGOT2 + DOS/V PC	GT SoftGOT2 + PC CPU
Communication interface	Built-in PC or Commercially available RS232 boad is required	Built-in PC
Connection cable	RS232 cable •F2-232CAB •AC30N2A RS232 cable F2-232CAB-1 RS232 cable F2-232CAB-2 RS232/422 conversion cable FX-232AW(C) RS422 cable FX-422CAB 0.3m FX-422CAB-150 1.5m	
Maximum number of GOTs connected	1 unit	
Maximum connection distance	4.5m	
Connected to	FXCPU *2 (FX1, FX2, FX2C series) (CPU port : RS422)	

FXCPU (FX0, FX0N, FX0S, FX1N, FX1S, FX2N, FX2NC series)

	GT SoftGOT2 + DOS/V PC	GT SoftGOT2 + PC CPU
Communication interface	Built-in PC or Commercially available RS232 boad is required	Built-in PC
Connection cable	RS232 cable •F2-232CAB •AC30N2A RS232 cable F2-232CAB-1 RS232 cable F2-232CAB-2 RS232/422 conversion cable FX-232AW(C) RS422 cable FX-422CAB0 1.5m	
Maximum number of GOTs connected	1 unit	
Maximum connection distance	4.5m	
Connected to	FXCPU *2 (FX0, FX0N, FX0S, FX1N, FX1S, FX2N, FX2NC series) (CPU port : RS422)	

Microcomputer connection

Connecting microcomputer board or personal computer.

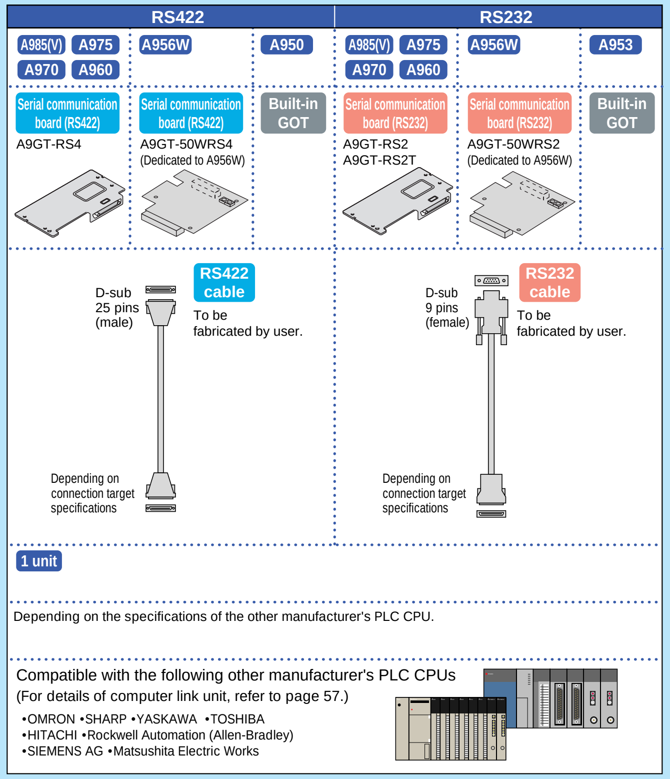


Connection configuration	RS422 A985(V) A975 A970 A960	RS422 A956W	RS422 A950	RS232 A985(V) A975 A970 A960	RS232 A956W	RS232 A953
Communication interface installed on GOT side	Serial communication board (RS422) A9GT-RS4	Serial communication board (RS422) A9GT-50WRS4 (Dedicated to A956W)	Built-in GOT	Serial communication board (RS232) A9GT-RS2 A9GT-RS2T	Serial communication board (RS232) A9GT-50WRS2 (Dedicated to A956W)	Built-in GOT
Shape and model name of connection cable	RS422 cable D-sub 25 pins (male) To be fabricated by user. Depending on connection target specifications			RS232 cable D-sub 9 pins (female) To be fabricated by user. Depending on connection target specifications		
Maximum number of GOTs connected	1 unit					
Maximum connection distance	Depending on the specifications of the host side (personal computer, microcomputer board, PLC, or the like)					
Connected to	Personal computer, microcomputer board, PLC, etc.					

For details of the cable to be fabricated, refer to the GOT-A900 Series User's Manual (Compatible connection system).

Other manufacturer's PLC connection

Supporting other manufacturer's PLC CPU.



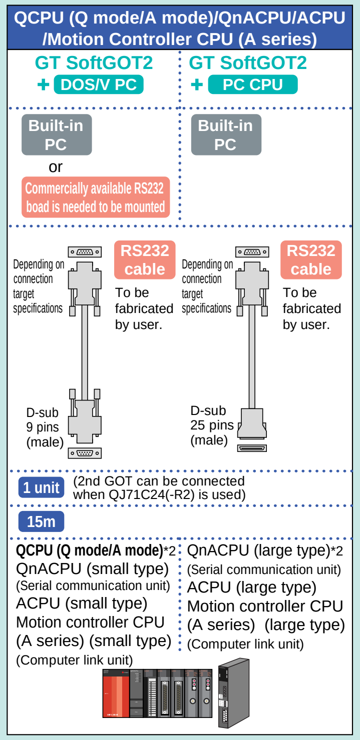
Connection configuration	RS422 A985(V) A975 A970 A960	RS422 A956W	RS422 A950	RS232 A985(V) A975 A970 A960	RS232 A956W	RS232 A953
Communication interface installed on GOT side	Serial communication board (RS422) A9GT-RS4	Serial communication board (RS422) A9GT-50WRS4 (Dedicated to A956W)	Built-in GOT	Serial communication board (RS232) A9GT-RS2 A9GT-RS2T	Serial communication board (RS232) A9GT-50WRS2 (Dedicated to A956W)	Built-in GOT
Shape and model name of connection cable	RS422 cable D-sub 25 pins (male) To be fabricated by user. Depending on connection target specifications			RS232 cable D-sub 9 pins (female) To be fabricated by user. Depending on connection target specifications		
Maximum number of GOTs connected	1 unit					
Maximum connection distance	Depending on the specifications of the other manufacturer's PLC CPU.					
Connected to	Compatible with the following other manufacturer's PLC CPUs (For details of computer link unit, refer to page 57.) •OMRON •SHARP •YASKAWA •TOSHIBA •HITACHI •Rockwell Automation (Allen-Bradley) •SIEMENS AG •Matsushita Electric Works					

For details of the cable to be fabricated, refer to the GOT-A900 Series User's Manual (Compatible connection system).

*1: User fabricates the cable if it exceeds 30 m.

Computer link connection

Multiple GOTs can be connected easily through serial communication (connecting one or two GOTs with one computer link unit).



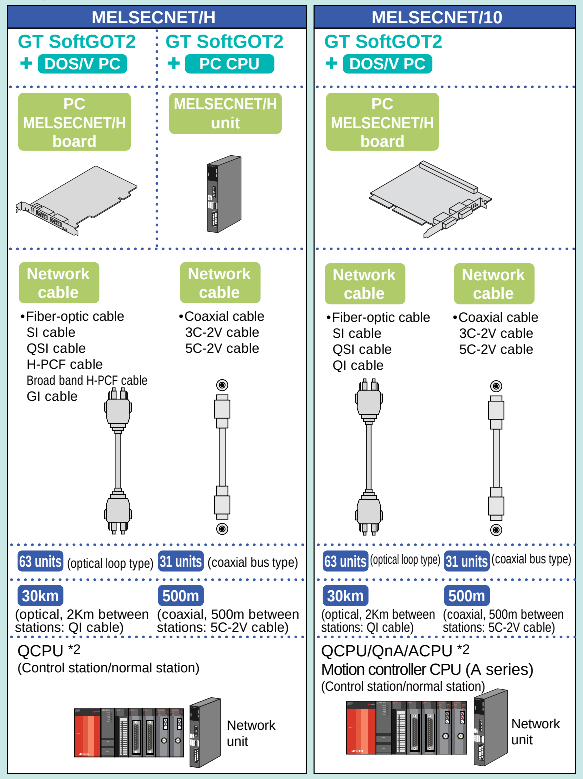
QCPU (Q mode/A mode)/QnACPU/ACPU /Motion Controller CPU (A series)

	GT SoftGOT2 + DOS/V PC	GT SoftGOT2 + PC CPU
Communication interface	Built-in PC or Commercially available RS232 boad is needed to be mounted	Built-in PC
Connection cable	Depending on connection target specifications RS232 cable To be fabricated by user. D-sub 9 pins (male)	Depending on connection target specifications RS232 cable To be fabricated by user. D-sub 25 pins (male)
Maximum number of GOTs connected	1 unit (2nd GOT can be connected when QJ71C24(-R2) is used)	
Maximum connection distance	15m	
Connected to	**QCPU (Q mode/A mode)***2 QnACPU (small type) (Serial communication unit) ACPU (small type) Motion controller CPU (A series) (small type) (Computer link unit)	QnACPU (large type)*2 (Serial communication unit) ACPU (large type) Motion controller CPU (A series) (large type) (Computer link unit)

For details of the cable to be fabricated, refer to the GT SoftGOT2 Operating Manual.

Network connection

Multiple GOTs can be used as remote operation terminals.



MELSECNET/H

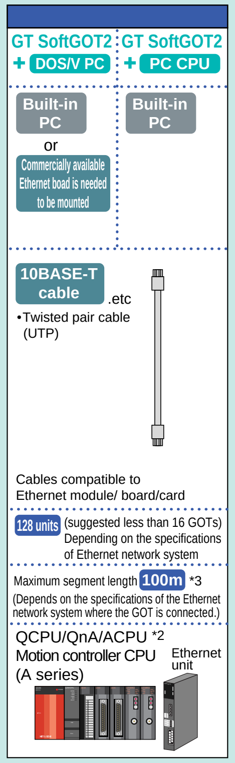
	GT SoftGOT2 + DOS/V PC	GT SoftGOT2 + PC CPU
Communication interface	PC MELSECNET/H board	MELSECNET/H unit
Connection cable	Network cable •Fiber-optic cable SI cable QSI cable H-PCF cable Broad band H-PCF cable GI cable	Network cable •Coaxial cable 3C-2V cable 5C-2V cable
Maximum number of GOTs connected	63 units (optical loop type)	31 units (coaxial bus type)
Maximum connection distance	30km (optical, 2Km between stations: QI cable)	500m (coaxial, 500m between stations: 5C-2V cable)
Connected to	QCPU *2 (Control station/normal station) Network unit	

MELSECNET/10

	GT SoftGOT2 + DOS/V PC	
Communication interface	PC MELSECNET/H board	
Connection cable	Network cable •Fiber-optic cable SI cable QSI cable QI cable	Network cable •Coaxial cable 3C-2V cable 5C-2V cable
Maximum number of GOTs connected	63 units (optical loop type)	31 units (coaxial bus type)
Maximum connection distance	30km (optical, 2Km between stations: QI cable)	500m (coaxial, 500m between stations: 5C-2V cable)
Connected to	QCPU/QnA/ACPU *2 Motion controller CPU (A series) (Control station/normal station) Network unit	

For details of the cable refer to MELSECNET/H and /10 Reference Manual.

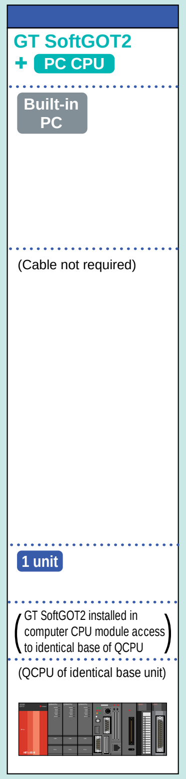
Ethernet connection



	GT SoftGOT2 + DOS/V PC	GT SoftGOT2 + PC CPU
Communication interface	Built-in PC or Commercially available Ethernet boad is needed to be mounted	Built-in PC
Connection cable	10BASE-T cable .etc •Twisted pair cable (UTP) Cables compatible to Ethernet module/ board/card	
Maximum number of GOTs connected	128 units (suggested less than 16 GOTs) Depending on the specifications of Ethernet network system	
Maximum connection distance	Maximum segment length 100m *3 (Depends on the specifications of the Ethernet network system where the GOT is connected.)	
Connected to	QCPU/QnA/ACPU *2 Motion controller CPU (A series) Ethernet unit	

For details of the cables, refer to Ethernet module user's manual.

Q buss connection



	GT SoftGOT2 + PC CPU
Communication interface	Built-in PC
Connection cable	(Cable not required)
Maximum number of GOTs connected	1 unit
Maximum connection distance	(GT SoftGOT2 installed in computer CPU module access to identical base of QCPU)
Connected to	(QCPU of identical base unit)

*2: computer CPU module of different base can be connected.
*3: 10 Base-T cable

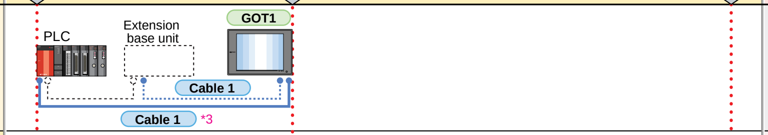
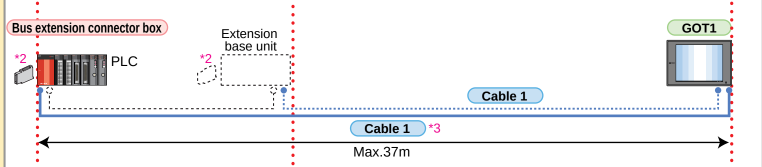
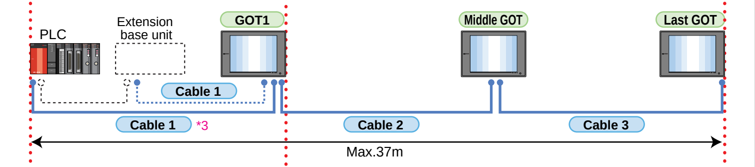
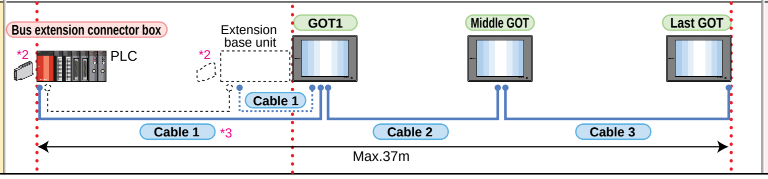
Graphic Operation Terminal
900
series

Bus connection

Bus connection is one way to connect multiple GOTs using extension connector of base unit and to achieve the highest speed response with Mitsubishi PLC's CPU. It allows multiple GOTs to be located away from PLC since computer link module is not required. (Refer to Notes for bus connection on page 48.)

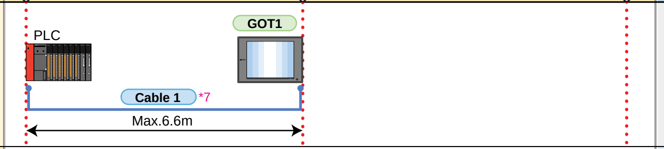
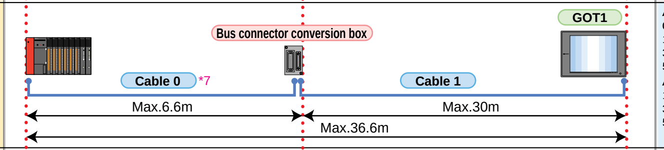
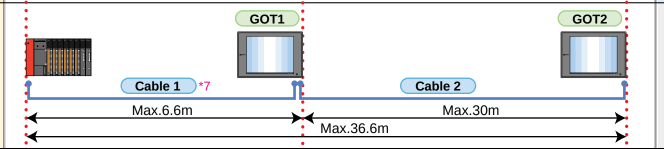
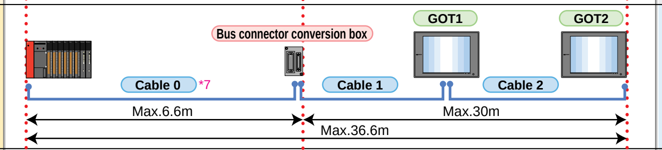
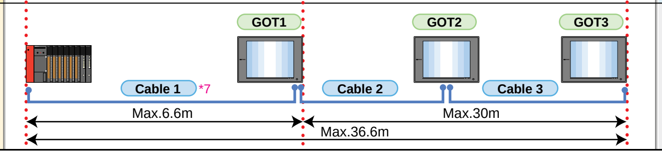
When connected with QCPU (Q mode) / Motion controllerCPU (Q series)

Up to 5 GOTs can be connected.
For connectable CPU modules, refer to Connectable mode list on page 56.

GOT connection conditions		System configuration	Component details															
Number of GOTs	Installation distance of the first unit from base unit *1	Connection distance (0m – 13.2m – 37m)	Bus extension connector box *2	Cable 1 *3 *4	GOT1 GOT main unit Size	GOT1 GOT main unit Model name	GOT1 Communication interface Board type	GOT1 Communication interface Unit type	Cable 2 *4	Middle GOT(GOT2 to GOT4) GOT main unit Size	Middle GOT Model name	Middle GOT Communication interface Board type	Middle GOT Unit type	Cable 3 *4	Last GOT(GOT2 to GOT5) GOT main unit Size	Last GOT Model name	Last GOT Communication interface Board type	Last GOT Unit type
1 unit	Within 13.2m			QC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m 100 : 10m	12"	A985(-V)	A9GT-QBUSS A9GT-QBUS2S	A9GT-QBUS2SU										
					10"	A97□												
					9"	A960												
					7"	A956W	A9GT-50WQBUSS											
					6"	A956	—											
						A951-Q *5	—	—										
	More than 13.2m *2	 Bus extension connector box *2 PLC *2 Extension base unit GOT1 Cable 1 Cable 1 *3 Max.37m	A9GT-QCNB	QC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m 100 : 10m A9GT-QC□BS 150 : 15m 200 : 20m 250 : 25m 300 : 30m 350 : 35m	12"	A985(-V)	A9GT-QBUSS A9GT-QBUS2S	A9GT-QBUS2SU										
					10"	A97□												
					9"	A960												
					7"	A956W	A9GT-50WQBUSS											
					6"	A956	—											
						A951-Q *5	—	—										
2 to 5 units	Within 13.2m	 PLC Extension base unit GOT1 Middle GOT Last GOT Cable 1 Cable 1 *3 Cable 2 Cable 3 Max.37m		QC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m 100 : 10m	12"	A985(-V)	A9GT-QBUS2S	A9GT-QBUS2SU	QC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m 100 : 10m A9GT-QC□BS 150 : 15m 200 : 20m 250 : 25m 300 : 30m 350 : 35m	12"	A985(-V)	A9GT-QBUS2S	A9GT-QBUS2SU	QC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m 100 : 10m A9GT-QC□BS 150 : 15m 200 : 20m 250 : 25m 300 : 30m 350 : 35m	12"	A985(-V)	A9GT-QBUSS A9GT-QBUS2S	A9GT-QBUS2SU
					10"	A97□				10"	A97□				10"	A97□		
					9"	A960				9"	A960				9"	A960		
					7"	A956W	—			7"	A956W	—			7"	A956W	A9GT-50WQBUSS	
					6"	A956	—			6"	A956	—			6"	A956	—	
																A951-Q *5	—	—
	More than 13.2m *2	 Bus extension connector box *2 PLC *2 Extension base unit GOT1 Middle GOT Last GOT Cable 1 Cable 1 *3 Cable 2 Cable 3 Max.37m	A9GT-QCNB	QC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m 100 : 10m A9GT-QC□BS 150 : 15m 200 : 20m 250 : 25m 300 : 30m 350 : 35m	12"	A985(-V)	A9GT-QBUS2S	A9GT-QBUS2SU	QC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m 100 : 10m A9GT-QC□BS 150 : 15m 200 : 20m	12"	A985(-V)	A9GT-QBUS2S	A9GT-QBUS2SU	QC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m 100 : 10m A9GT-QC□BS 150 : 15m 200 : 20m	12"	A985(-V)	A9GT-QBUSS A9GT-QBUS2S	A9GT-QBUS2SU
					10"	A97□				10"	A97□				10"	A97□		
					9"	A960				9"	A960				9"	A960		
					7"	A956W	—			7"	A956W	—			7"	A956W	A9GT-50WQBUSS	
					6"	A956	—			6"	A956	—			6"	A956	—	
																A951-Q *5	—	—

When connected with QnACPU (large type) or ACPU (large type)

Up to 3 GOTs can be connected.
For connectable CPU modules, refer to Connectable mode list on page 56.

GOT connection conditions		System configuration	Component details																
Number of GOTs	Installation distance of the first unit from base unit	Connection distance (0m – 6.6m – 36.6m)	Cable 0 *4	Bus connector conversion box	Cable 1 *4	GOT1 GOT main unit Size	GOT1 GOT main unit Model name	GOT1 Communication interface Board type	GOT1 Communication interface Unit type	Cable 2 *4	GOT2 GOT main unit Size	GOT2 Model name	GOT2 Communication interface Board type	GOT2 Unit type	Cable 3 *4	GOT3 GOT main unit Size	GOT3 Model name	GOT3 Communication interface Board type	GOT3 Unit type
1 unit	Within 6.6m				A8GT-C□NB 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *5	—	—										
	More than 6.6m	 GOT1 Bus connector conversion box Cable 0 *7 Cable 1 Max.6.6m Max.30m Max.36.6m	AC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m AC□B-R 12 : 1.2m 30 : 3m 50 : 5m	A7GT-CNB	A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *6 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *5	—	—										
2 units	Within 6.6m	 GOT1 GOT2 Cable 1 *7 Cable 2 Max.6.6m Max.30m Max.36.6m			A8GT-C□NB 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97□				10"	A97□							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *5	—	—					
	More than 6.6m	 Bus connector conversion box GOT1 GOT2 Cable 0 *7 Cable 1 Cable 2 Max.6.6m Max.30m Max.36.6m	AC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m AC□B-R 12 : 1.2m 30 : 3m 50 : 5m	A7GT-CNB	A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *6 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97□				10"	A97□							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *5	—	—					
3 units	Within 6.6m	 GOT1 GOT2 GOT3 Cable 1 *7 Cable 2 Cable 3 Max.6.6m Max.30m Max.36.6m			A8GT-C□NB 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU
						10"	A97□				10"	A97□				10"	A97□		
						9"	A960				9"	A960				9"	A960		
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU
						6"	A956	—			6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU
																	A951 *5	—	—

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*1: When extension base units are used, the extension cable length is also included.
Length between PLC base unit and last extension base unit should be within 13.2 m. (PLC CPU restriction)
For the cable type between PLC base units and extension base units, refer to PLC MELSEC Q series catalog.

*2: If the length between base unit and first GOT is longer than 13.2 m, use bus extension connector box (A9GT-QCNB) by fitting only one box to the extension connector of the main or extension base unit. Bus extension connector cannot be used on base unit when Q00JCPU is used. (can be used on extension base unit.)
When extension base units are used, fit the bus extension connector box (A9GT-QCNB) to base unit, and if not, amount it to extension cable connector of extension base unit just before GOT.

*3: When extension base units are used, the extension cable length between last extension base unit and the first GOT.

*4: Cable model name (example) QC□B 06: 0.6m, i.e. Model name: QC06B

*5: No communication interface is required.

*6: Use the value of the A8GT-C EXSS to calculate the cable length of the A8GT-C□EXSS-1.

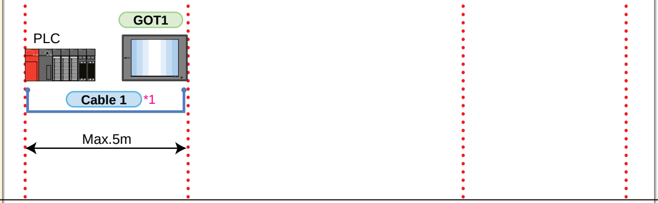
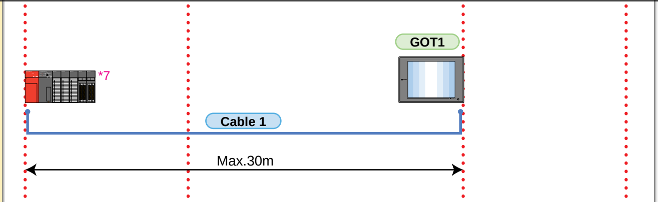
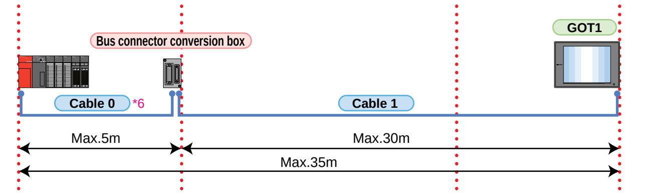
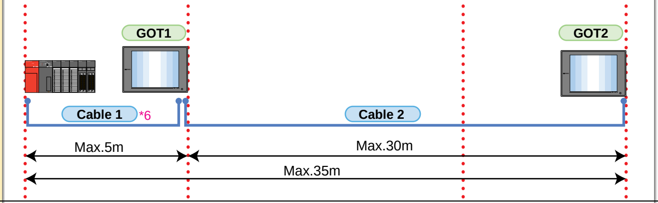
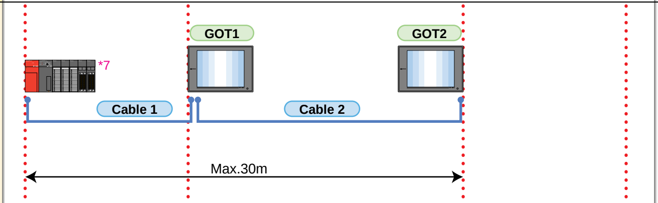
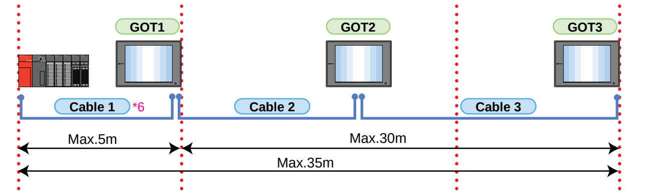
*7: When extension base units are used, the total cable distance between main and extension units should be within 6.6m.

Graphic Operation Terminal 900 series

Bus connection

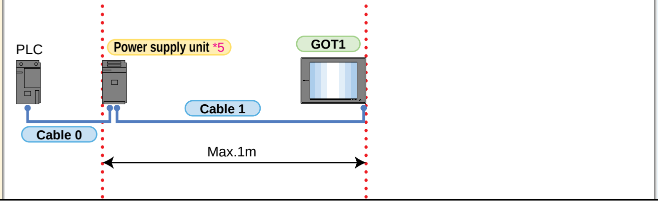
When connected with QnACPU (small type) or ACPU (small type)

Up to 3 GOTs can be connected.
For connectable CPU modules, refer to Connectable mode list on page 56.

GOT connection conditions		System configuration	Component details																
Number of GOTs	Installation distance of the first unit from base unit	Connection distance 0m 5m 30m 35m	Cable 0 *2	Bus connector conversion box	Cable 1 *2	GOT1				Cable 2 *2	GOT2				Cable 3 *2	GOT3			
						GOT main unit		Communication interface			GOT main unit		Communication interface			GOT main unit		Communication interface	
						Size	Model name	Board type	Unit type		Size	Model name	Board type	Unit type		Size	Model name	Board type	Unit type
1 unit	Within 5m				A1SC□B 0.7 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *3	—	—										
	More than 5m, Within 30m				A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *4 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *3	—	—										
	Within 35m	 Bus connector conversion box GOT1 Cable 0 *6 Cable 1 Max.5m Max.30m Max.35m	A1SC□NB 05 : 0.5m 07 : 0.7m 30 : 3m 50 : 5m	A7GT-CNB	A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *4 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *3	—	—										
2 units	Within 5m	 GOT1 GOT2 Cable 1 *6 Cable 2 Max.5m Max.30m Max.35m			A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97□				10"	A97□							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *3	—	—					
	More than 5m				A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *4 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97□				10"	A97□							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *3	—	—					
3 units	Within 5m	 GOT1 GOT2 GOT3 Cable 1 *6 Cable 2 Cable 3 Max.5m Max.30m Max.35m			A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU
						10"	A97□				10"	A97□				10"	A97□		
						9"	A960				9"	A960				9"	A960		
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU
						6"	A956	—			6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU
																	A951	—	—

When connected with A0J2HCPU

Single GOT can be connected.

GOT connection conditions		System configuration	Component details						
Number of GOTs	Installation distance of the first unit from base unit	Connection distance 0m 1m	Cable 0 *2	Power supply unit *5	Cable 1 *2	GOT1			
						GOT main unit		Communication interface	
						Size	Model name	Board type	Unit type
1 unit	Within 1m	 PLC Power supply unit *5 GOT1 Cable 1 Cable 0 Max.1m	A0J2C□ 03: 0.3m (for horizontal installation) 06: 0.55m (for vertical installation) 10: 1m (for extension) 20: 2m (for extension)	A0J2-PW	A9GT-J2C□B 10:1m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU
						10"	A97□		
						9"	A960		
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU
							A951 *3	—	—

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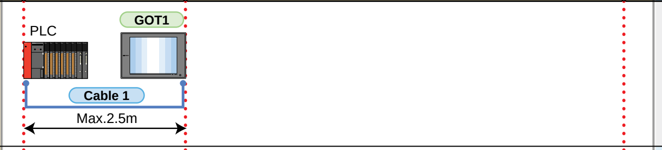
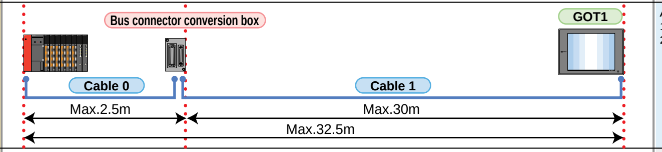
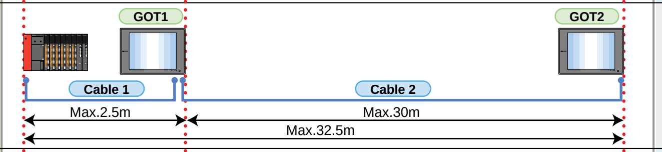
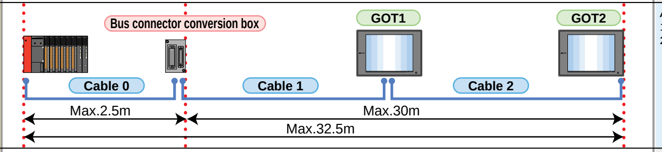
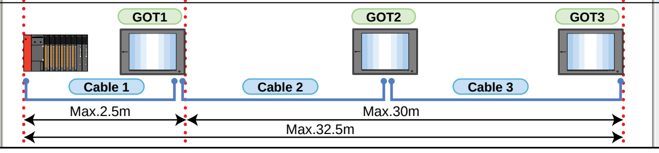
*1: When extension base units are used, the total cable distance between main and extension units should be within 6 m.
*2: Cable model name (example) A1SC□B 07: 0.7m, i.e. Model name: A1SC07B
*3: No communication interface is required.
*4: Use the value of the A8GT-C□EXSS to calculate the cable length of the A8GT-C□EXSS-1.
*5: The power source unit is required for connecting GOT.
*6: When extension base units are used, the extension cable distance between main and extension units should be within 6 m.
*7: When extension bases are used, the extension cable length (between bases) should be within 6m. In this case, the total length of all cables should be within 36m.

Graphic Operation Terminal 900 series

Bus connection

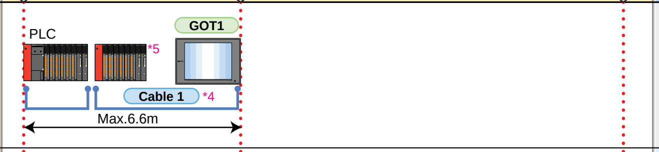
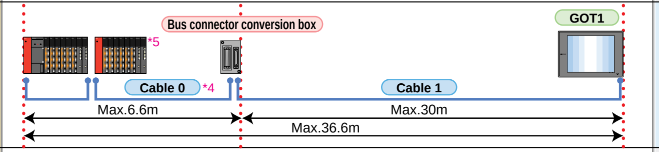
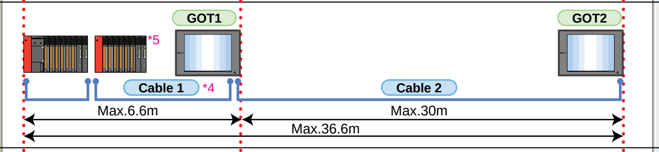
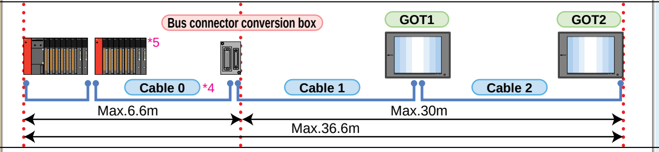
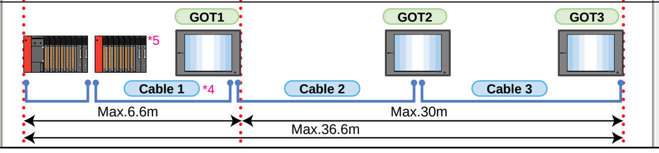
When connected with motion controller CPU (A series) (large type) ● Without extension unit ●

Up to 3 GOTs can be connected.
For connectable CPU modules, refer to Connectable mode list on page 56.

GOT connection conditions		System configuration	Component details																
Number of GOTs	Installation distance of the first unit from base unit	Connection distance 0m 2.5m 32.5m	Cable 0 *1	Bus connector conversion box	Cable 1 *1	GOT1				Cable 2 *1	GOT2				Cable 3 *1	GOT3			
						GOT main unit		Communication interface			GOT main unit		Communication interface			GOT main unit		Communication interface	
						Size	Model name	Board type	Unit type		Size	Model name	Board type	Unit type		Size	Model name	Board type	Unit type
1 unit	Within 2.5m				A370C□B-S1 12 : 1.2m 25 : 2.5m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *2	—	—										
	More than 2.5m	 Bus connector conversion box GOT1 Cable 0 Cable 1 Max.2.5m Max.30m Max.32.5m	A370C□B 12 : 1.2m 25 : 2.5m	A7GT-CNB	A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *3 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *2	—	—										
2 units	Within 2.5m	 GOT1 GOT2 Cable 1 Cable 2 Max.2.5m Max.30m Max.32.5m			A370C□B-S1 12 : 1.2m 25 : 2.5m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97□				10"	A97□							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *2	—	—					
	More than 2.5m	 Bus connector conversion box GOT1 GOT2 Cable 0 Cable 1 Cable 2 Max.2.5m Max.30m Max.32.5m	A370C□B 12 : 1.2m 25 : 2.5m	A7GT-CNB	A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *3 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97□				10"	A97□							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *2	—	—					
3 units	Within 2.5m	 GOT1 GOT2 GOT3 Cable 1 Cable 2 Cable 3 Max.2.5m Max.30m Max.32.5m			A370C□B-S1 12 : 1.2m 25 : 2.5m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *3 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU
						10"	A97□				10"	A97□				10"	A97□		
						9"	A960				9"	A960				9"	A960		
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU
						6"	A956	—			6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU
																	A951 *2	—	—

When connected with motion controller CPU (A series) (large type) ● With extension unit ●

Up to 3 GOTs can be connected.
For connectable CPU modules, refer to Connectable mode list on page 56.

GOT connection conditions		System configuration	Component details																
Number of GOTs	Installation distance of the first unit from base unit	Connection distance 0m 6.6m 36.6m	Cable 0 *1	Bus connector conversion box	Cable 1 *1	GOT1				Cable 2 *1	GOT2				Cable 3 *1	GOT3			
						GOT main unit		Communication interface			GOT main unit		Communication interface			GOT main unit		Communication interface	
						Size	Model name	Board type	Unit type		Size	Model name	Board type	Unit type		Size	Model name	Board type	Unit type
1 unit	Within 6.6m				A8GT-C□NB 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *2	—	—										
	More than 6.6m	 Bus connector conversion box GOT1 *5 Cable 0 *4 Cable 1 Max.6.6m Max.30m Max.36.6m	AC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m AC□B-R 12 : 1.2m 30 : 3m 50 : 5m	A7GT-CNB	A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *3 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97□												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *2	—	—										
2 units	Within 6.6m	 GOT1 GOT2 *5 Cable 1 *4 Cable 2 Max.6.6m Max.30m Max.36.6m			A8GT-C□NB 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97□				10"	A97□							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *2	—	—					
	More than 6.6m	 Bus connector conversion box GOT1 GOT2 *5 Cable 0 *4 Cable 1 Cable 2 Max.6.6m Max.30m Max.36.6m	AC□B 06 : 0.6m 12 : 1.2m 30 : 3m 50 : 5m AC□B-R 12 : 1.2m 30 : 3m 50 : 5m	A7GT-CNB	A8GT-C□EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C□EXSS-1 *3 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97□				10"	A97□							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *2	—	—					
3 units	Within 6.6m	 GOT1 GOT2 GOT3 *5 Cable 1 *4 Cable 2 Cable 3 Max.6.6m Max.30m Max.36.6m			A8GT-C□NB 12 : 1.2m 30 : 3m 50 : 5m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC□B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C□BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU
						10"	A97□				10"	A97□				10"	A97□		
						9"	A960				9"	A960				9"	A960		
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU
						6"	A956	—			6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU
																	A951 *2	—	—

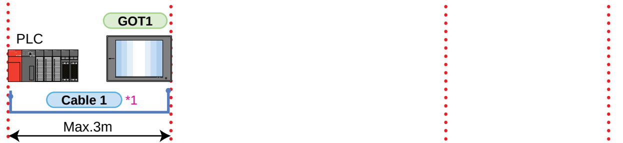
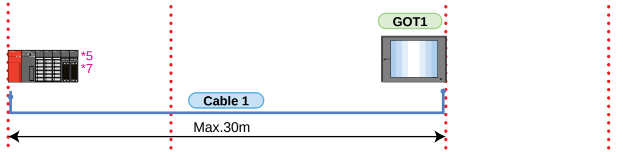
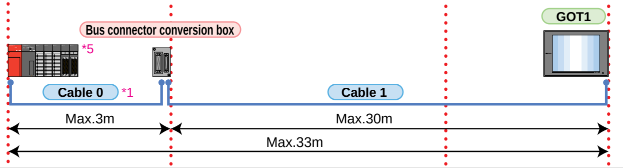
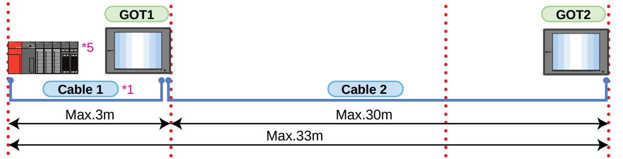
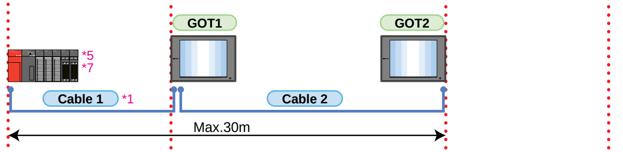
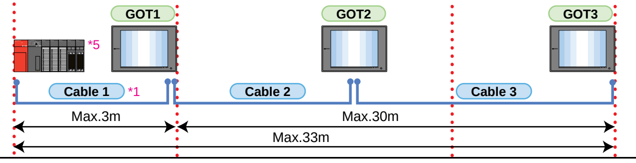
*1: Cable model name (example) A1SC□B 12: 1.2m, i.e. Model name: A1SC12B
*2: No communication interface is required.
*3: Use the value of the A8GT-C□EXSS to calculate the cable length of the A8GT-C□EXSS-1.
*4:The total cable distance between main and extension unit should be with 6.6 m.
*5:Use the A65B/A68B extension base unit.

Graphic Operation Terminal 900 series

Bus connection

When connected with A series motion controller CPU (small type)

When using the A13UHCPU(-S1), up to 3 GOTs can be connected.
When using other CPUs, up to 2 GOTs can be connected.
Refer to “Connectable model list” on page 56.

GOT connection conditions		System configuration	Component details																
Number of GOTs	Installation distance of the first unit from base unit	Connection distance	Cable 0 *2	Bus connector conversion box	Cable 1 *2	GOT1				Cable 2 *2	GOT2				Cable 3 *2	GOT3			
		0m 3m 30m 33m				GOT main unit		Communication interface			GOT main unit		Communication interface			GOT main unit		Communication interface	
						Size	Model name	Board type	Unit type		Size	Model name	Board type	Unit type		Size	Model name	Board type	Unit type
1 unit	Within 3m				A1SC☐B 07 : 0.7m 12 : 1.2m 30 : 3m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97☐												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *3	—	—										
	More than 3m, Within 30m				A8GT-C☐EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C☐EXSS-1 *4 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97☐												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *3	—	—										
	Within 33m	 GOT1 Bus connector conversion box *5 Cable 0 *1 Cable 1 Max.3m Max.30m Max.33m	A1SC☐NB 05 : 0.5m 07 : 0.7m 30 : 3m	A7GT-CNB	A8GT-C☐EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C☐EXSS-1 *4 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU										
						10"	A97☐												
						9"	A960												
						7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU										
						6"	A956	—	A9GT-BUSSU A9GT-BUS2SU										
							A951 *3	—	—										
2 units	Within 3m	 GOT1 GOT2 *5 Cable 1 *1 Cable 2 Max.3m Max.30m Max.33m			A1SC☐B 07 : 0.7m 12 : 1.2m 30 : 3m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC☐B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C☐BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97☐				10"	A97☐							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *3	—	—					
	More than 3m	 GOT1 GOT2 *5 *7 Cable 1 *1 Cable 2 Max.30m			A8GT-C☐EXSS 100 : 10m 200 : 20m 300 : 30m A8GT-C☐EXSS-1 *4 100 : 10.6m 200 : 20.6m 300 : 30.6m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC☐B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C☐BS 100 : 10m 200 : 20m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU					
						10"	A97☐				10"	A97☐							
						9"	A960				9"	A960							
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU					
						6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU					
												A951 *3	—	—					
3 units *6	Within 3m	 GOT1 GOT2 GOT3 *5 Cable 1 *1 Cable 2 Cable 3 Max.3m Max.30m Max.33m			A1SC☐B 07 : 0.7m 12 : 1.2m 30 : 3m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC☐B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C☐BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUS2S	A9GT-BUS2SU	A1SC☐B 07 : 0.7m 12 : 1.2m 30 : 3m 50 : 5m A8GT-C☐BS 100 : 10m 200 : 20m 300 : 30m	12"	A985(-V)	A9GT-BUSS A9GT-BUS2S	A9GT-BUSSU A9GT-BUS2SU
						10"	A97☐				10"	A97☐				10"	A97☐		
						9"	A960				9"	A960				9"	A960		
						7"	A956W	—	A9GT-BUS2SU		7"	A956W	—	A9GT-BUS2SU		7"	A956W	A9GT-50WBUSS	A9GT-BUSSU A9GT-BUS2SU
						6"	A956	—			6"	A956	—			6"	A956	—	A9GT-BUSSU A9GT-BUS2SU
																	A951	—	—

*1: When using extension base unit(s), make sure that the total length of the main cable and extension cables (between base units) is within 3m.
*2: (Example) A cable of 0.7m for A1SC☐B is A1SC07B.
*3: No communication interface is required.
*4: Use the value of the A8GT-C☐EXSS to calculate the cable length of the A8GT-C☐EXSS-1.
*5: Use the A168B extension base unit.
*6: Only the A173UHCPU(-S1) is applicable.
*7: When using extension base unit(s), make sure that the extension cable length (between base units) is within 3m, and the total length of all cables is within 33m.

Notes for bus connection

When using Q CPU (Q mode)

Only Q CPU (Q mode) supports bus connection, but Q CPU (A mode) does not.

GOT is recognized as an intelligent communication module by QCPU (Q mode), requiring 16 I/O points. GOT cannot be connected anywhere between the base unit and extension base unit.

GOT should be connected to the last of the extension base units and be included within the maximum allowable number of extension base units.

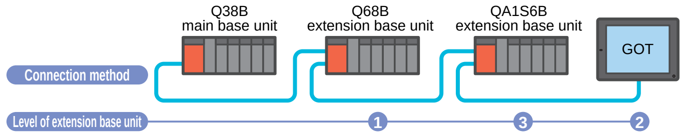
In addition, GOT needs to be assigned to I/O slots of the last extension base unit, but not to the base unit.

It occupies one full extension base (16 points X 10 slots), thus cannot share the same extension base unit with others. However, it can be shared with other GOTs.

Although GOT is usually connected to the last of extension base units, it is assigned as the second from the last when extension base QA1S6☐B is used, with QA1S6☐B being the last extension base unit. (See the diagram below.)

If 10 slots cannot be left open for GOT, the number of slots can be reduced by using GX Developer.

Up to 5 GOTs can be connected.



When using QnA/ACPU/A series motion controller

GOT is recognized as an intelligent communication module by QnA/ACPU/A series motion controller, requiring 32 I/O points. GOT cannot be connected anywhere between the base unit and extension base unit.

GOT should be connected to the last of the extension bases and be included within the maximum allowable number of extension base units. In addition, GOT needs to be assigned to one slot of the extension base, but not to the base unit. The extension base unit cannot share with I/O module, special function module, or the kind.

<For Q4A(R)CPU, Q3ACPU, A3☐CPU, A4UCPU>

When maximum number of the extension base units (7 base units) is connected, vacant slots are necessary.

<For A0J2HCPU>

GOT is assigned as follows:

Number of extension base units: 1, I/O slots: 0 to 3

<Others>

GOT can be connected within the range of I/O points even if maximum extension base units (2 or 3) are installed and there is not vacant slot.

i.e. ACPU (small type) Number of extension base units: 2, I/O slots: 0

- Restrictions on the number of GOTs that can be connected
  - Restrictions on the number of GOTs that can be connected depends on the PLC CPU and the number of special function module to be installed.

	QnA(R), QnAS(H)CPU	AnU, AnA, A2US, A2USHCPU	CPUs not shown on the left
Number of GOTs that can be connected	Up to 3 units	Up to 3 units	Up to 2 units
GOT + number of special function units to be installed	No limit when GOT + special function units as shown in *4 Up to 6 units when GOT special function units as shown in *5	Up to 6 units when GOT special function units as shown in *5	Up to 2 units when GOT special function units as shown in *5

	A0J2HCPU	A series Motion controller A173UH(-S1), A273U, A273UH(-S3), A373U(-S3)CPU	A series Motion controller CPUs not shown on the left
Number of GOTs that can be connected	Up to 1 units	Up to 3 units	Up to 2 units
GOT + number of special function units to be installed	Up to 2 units when GOT special function units as shown in *5	Up to 6 units when GOT special function units as shown in *5	Up to 2 units when GOT special function units as shown in *5

*4: The special function unit with the following model is shown.
AJ71QC24(R2/R4)

*5: The special function unit with the following models are shown.
AD51(S3), AD51H(S3), AD51FD(S3), AD57G(S3), AJ71C21(S1), AJ71C22(S1), AJ71C23, AJ71C24(S3/S6/S8), AJ71E71(-S3), AJ71UC24, A1SJ71C24(-R2/PRF/R4), A1SJ71UC24(-R2/PRF/R4), A1SJ71E71-B2/B5(-S3), AJ61BT11, A1SJ61BT11

Notes for when power is switched on

Make sure to power on the PLC CPU and GOT as instructed below.

When multiple GOTs are connected, they may be powered on in any sequence.

<For the Q/QnA/ACPU/A series motion controller (Except the Q4ARCPU)>

(a) Switch the power on of the PLC CPU and GOT simultaneously.

(b) Switch the power on of the PLC CPU first, then GOT.

When multiple GOTs are connected, the PLC CPU starts to run when all the GOTs powers are switched on.

<For the Q4ARCPU>

Power on the GOT first. Then, switch the power on of the Q4ARCPU redundancy system after 1 or 2 seconds.

When multiple GOTs are connected, switch the power on of all GOTs first. Then, power on the Q4ARCPU redundancy system after 1 or 2 seconds.

Notes for system configuration

For bus connection, the PLC power unit supplies the amount of current equivalent to that consumed by the connected GOTs.

When calculating the current consumption, make sure to include the current to be consumed by the GOTs. Note that the current consumption must not exceed the amount of the current supplied by the PLC power supply unit. The following shows the current consumed by one GOT.

- When connected to the QCPU (Q mode): 255mA per GOT
- When connected to other than QCPU (Q mode): 220mA per GOT

Graphic Operation Terminal
900 series

Specifications
Large size

General specification

Item		Specification				
		A985GOT-TBA(-V), A975GOT-TBA-B, A970GOT-TBA-B, A970GOT-SBA, A970GOT-LBA, A960GOT-EBA			A985GOT-TBD(-V), A975GOT-TBD-B, A970GOT-TBD-B, A970GOT-SBD, A970GOT-LBD, A960GOT-EBD	
Operating ambient temperature	Display	0 to 40 °C (A975/A970GOT-TBA-B / TBD(-B): 0 to 50 °C)				
	Other than display	0 to 55°C				
Storage ambient temperature		-20 to 60°C				
Operating/storage ambient humidity		10 to 90% RH, no condensing				
Vibration resistance	Based on JIS B 3502, IEC61131-2		Frequency	Acceleration	Amplitude	Sweep count
		If intermittent vibration occurs	10 to 57Hz	—	0.075mm	10 times in each of X, Y, and Z directions (80 minutes)
			57 to 150Hz	9.8m/s^2	—	
		If continuous vibration occurs	10 to 57Hz	—	0.035mm	
			57 to 150Hz	4.9m/s^2	—	
Impact resistance		Based on JIS B 3502, IEC 61131-2 (147 m/s^2, 3 times in X, Y and Z directions)				
Operating atmosphere		No corrosive gas				
Altitude		2000 m or less				
Overvoltage category		II or lower				
Contamination		2 or less				
Noise resistance		By noise simulation with noise voltage 1,500 Vp-p, noise width 1 µs, and noise frequency 25 to 60 Hz			By noise simulation with noise voltage 500 Vp-p, noise width 1 µs, and noise frequency 25 to 60 Hz	
Dielectric Withstand Voltage		Apply 1500VAC to between AC external pins and ground for one minute.			Apply 500VAC to between DC external pins and ground for one minute.	
Insulation resistance		10 MΩ or higher with an insulation resistance tester				
Grounding		D class ground (class 3 ground) If it cannot be grounded, connect it to the panel.				

Main unit

Item		Specification					
		A985GOT-TBA/TBD(-V)	A975GOT-TBA/TBD-B	A970GOT-TBA/TBD-B	A970GOT-SBA/SBD	A970GOT-LBA/LBD	A960GOT-EBA/EBD
Display	Type	High-intensity TFT color LCD	High-intensity TFT color LCD		D-STN color LCD	D-STN monochrome LCD	High-intensity EL
	Resolution(dot)	800 x 600	640 x 480				640 x 400
	Display size(mm)	246 x 184.5	211 x 158				192 x 120
	Display color(color)	256		16	8	2 (black and white)	2 (yellowish orange and black)
Backlight		Cold cathode tube backlight (Backlight OFF/screen save time can be set.)					—
Touch panel	Number of touch keys (points)	1900 (38 lines x 50 columns)	1200 (30 lines x 40 columns)				1000 (25 lines x 40 columns)
	Key size (Dot)	Minimum 16 x 16 (one key) (Bottom line only 8 x 16)	Minimum 16 x 16 (one key)				
	Repeat function	None					
Buzzer output		Single tone (tone can be adjusted.)					
Environmental resistant protection structure		IP67F or equivalent (front)[*1]					
Memory	Type	Flash ROM					
	Applications	Monitor screen data storage, OS storage					
	Capacity	Internal 1M bytes (user area). It can be upgraded to 9M bytes.					
Cooling method		Self cooling					
Weight (g)		2500	1700		1800		1600

Life

Item		Specification					
		A985GOT-TBA/TBD(-V)	A975GOT-TBA/TBD-B	A970GOT-TBA/TBD-B	A970GOT-SBA/SBD	A970GOT-LBA/LBD	A960GOT-EBA/EBD
Life	Display (h)[*2][*3]	50,000	41,000		50,000		30,000
		(Operating ambient temperature: 25°C)					(Operating ambient temperature:25°C, initial intensity 70%)
	Backlight (h)	40,000					—
		Time for display intensity to become 50% at operating ambient temperature of 25°C					
	Touch key	1,000,000 times or more (Operation force 0.98 N or less)					
	Internal memory	Number of writes: 100,000 times					
	Expansion memory	Number of writes: 100,000 times					

Main unit (Power supply)

Item		Specification		
		A985GOT-TBA(-V), A975GOT-TBA-B, A970GOT-TBA-B, A970GOT-SBA, A970GOT-LBA, A960GOT-EBA		A985GOT-TBD(-V), A975GOT-TBD-B, A970GOT-TBD-B, A970GOT-SBD, A970GOT-LBD, A960GOT-EBD
Input power supply voltage		100 to 240VAC (+10%, -15%)		24VDC (+25%, -20%)
Input frequency [Hz]		50 / 60 3Hz		—
Input maximum voltampere		Bus/RS-422/RS-232C connection	Other than on the left	—
	100VAC	50VA or less (61VA or less for A985GOT-V)	60VA or less (71VA or less for A985GOT-V)	
	200VAC	63VA or less (76VA or less for A985GOT-V)	75VA or less (88VA or less for A985GOT-V)	
Power consumption		—		40W
Rush current		40A or less (264VAC, maximum load)		61A or less (30VDC, maximum load)
Permissible instantaneous failure time		20ms (100VAC or more)		1ms (19.2VDC or more)
RUN/OUTPUT pin		Transistor output 12/24VDC, 0.1A, 1 point		

*1: Equivalent to IP65F depending on the hardware version of the GOT main unit. Refer to the technical news for details.

*2: The screen save/backlight OFF function helps prevent monitor from burn-in and extend backlight life.

*3: On the liquid crystal panel, bright dots (dots normally lit) and dark dots (dots not lit) occurs as its characteristic. Therefore it is impossible to completely prevent bright and dark dots from occurring since there are many display elements on the panel. Note that the occurrence of bright and dark dots is not a product fault or failure but a characteristic.

Graphic Operation Terminal
900 series

Specifications
Medium size

Note: For the A95□handy GOT, see the GOT-F900 FAMILY Catalog (HIME-B-183).

General specification

Item		Specification				
		A956WGOT-TBD, A95□GOT-(Q)TBD(-M3), A95□GOT-(Q)SBD(-M3), A95□GOT-(Q)LBD(-M3)				
Operating ambient temperature	Display	0 to 40°C(0 to 55°C for A956WGOT)				
	Other than display	0 to 55°C				
Storage ambient temperature		-20 to 60°C				
Operating/storage ambient humidity		10 to 90% RH, no condensing				
Vibration resistance	Based on JIS B 3502, IEC61131-2		Frequency	Acceleration	Amplitude	Sweep count
		If intermittent vibration occurs	10 to 57Hz	—	0.075mm	10 times in each of X, Y, and Z directions (80 minutes)
			57 to 150Hz	9.8m/s^2	—	
		If continuous vibration occurs	10 to 57Hz	—	0.035mm	
			57 to 150Hz	4.9m/s^2	—	
Impact resistance		Based on JIS B 3502, IEC 61131-2 (147 m/s^2, 3 times in X, Y and Z directions)				
Operating atmosphere		No corrosive gas				
Altitude		2000 m or less				
Overvoltage category		II or lower				
Contamination		2 or less				
Noise resistance		By noise simulation with noise voltage 500 Vp-p, noise width 1 µs, and noise frequency 25 to 60 Hz				
Dielectric Withstand Voltage		Apply 500VAC to between DC external pins and ground for one minute.				
Insulation resistance		10 MΩ or higher with an insulation resistance tester				
Grounding		D class ground (class 3 ground) If it cannot be grounded, connect it to the panel.				

Main unit

Item		Specification			
		A956WGOT-TBD	A95□GOT-(Q)TBD(-M3)	A95□GOT-(Q)SBD(-M3)	A95□GOT-(Q)LBD(-M3)
Display	Type	High-intensity TFT color LCD		STN color LCD	STN monochrome LCD
	Resolution(dot)	480 x 234	320 x 240		
	Display size(mm)	155.52 x 87.75	115 x 86		
	Display color(color)	256		8	2 (black and white)
Backlight		Cold cathode tube backlight (Backlight OFF/screen save time can be set.)			
Touch panel	Number of touch keys (points)	450 (15 lines x 30 columns)	300 (15 lines x 20 columns)		
	Key size(Dot)	Minimum 16x16 (one key)(Bottom line only 10x16)	Minimum 16 x 16 (one key)		
	Repeat function	None			
Buzzer output		Single tone (tone can be adjusted.)			
Environmental resistant protection structure		IP65F or equivalent (front)[*1]			
Memory	Type	Flash ROM			
	Applications	Monitor screen data storage, OS storage			
	Capacity	Internal 1M bytes (user area). It can be increased up to 9M bytes.	A95□GOT-(Q)□BD		A95□GOT-(Q)□BD-M3
			Internal 1M bytes (user area)		Internal 3M bytes (user area)
Cooling method		Self cooling			
Weight (g)		1050	710	670	

Life

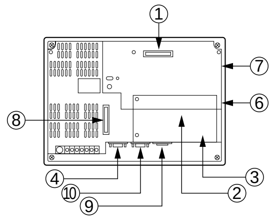
Item		Specification			
		A956WGOT-TBD	A95□GOT-(Q)TBD(-M3)	A95□GOT-(Q)SBD(-M3)	A95□GOT-(Q)LBD(-M3)
Life	Display (h)[*2][*3]	50,000 (Operating ambient temperature:25°C)			
	Backlight (h)	50,000		40,000	
		Time for display intensity to become 50% at operating ambient temperature of 25°C			
	Touch key	1,000,000 times or more (Operation force 0.98 N or less)			
	Internal memory	Number of writes: 100,000 times			
	Expansion memory	Number of writes: 100,000 times			

Main unit (Power supply)

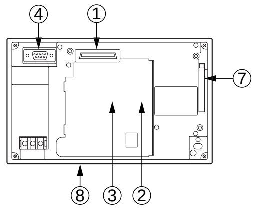
Item	Specification		
	A956WGOT-TBD	A950GOT-□BD(-M3), A951GOT-(Q)□BD(-M3), A953GOT-□BD(-M3)	A956GOT-□BD(-M3)
Input power supply voltage	24VDC(+10%, -15%)		
Power consumption	22W	12W	16W
Rush current	40 A or less (30VDC, maximum load)		
Permissible instantaneous failure time	1ms (19.2VDC or more)		

• External interface

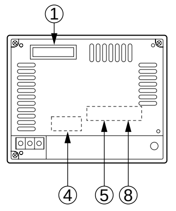
① Communication unit interface
(Except A950/A951/A953GOT)
② Communication board interface
③ Memory board interface
④ RS-232C interface
(Except A985GOT-V)
⑤ Communication interface
⑥ Audio output port
⑦ PC card interface unit
⑧ Optional unit interface
⑨ Printer interface
⑩ Analog RGB output interface
(A985GOT only)
RS-232C interface
(A985GOT-V only)



A985(-V)/A975/A970/A960GOT



A956WGOT



A95□GOT

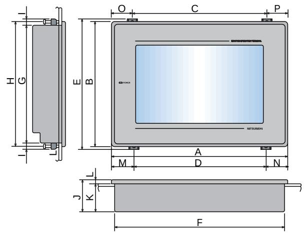
External dimensions

GOT main unit

A985GOT(-V), A97□GOT(-B), A960GOT, A956WGOT, A95□GOT(-M3)

Note: For the A95□handy GOT, see the GOT-F900 FAMILY Catalog (HIME-B-183).

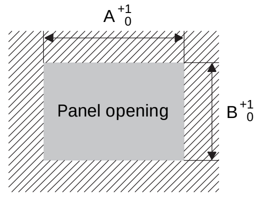
■External dimensions


O
C
P
H
G
E
B
A
M
D
N
J
K
L
I
F

(Unit: mm)

GOT main unit type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
A985GOT(-V)	312	238	245	245	247	301	227	237	10	49	43	6	33.5	33.5	33.5	33.5
A975/970GOT(-B)	297	208	235	229	219	288	199	209	10	46	40	6	34	34	31	31
A960GOT	268	192	204	198	202	257	182	192	10	49	43	6	35	35	32	32
A956WGOT	215	133	168	168	143	205	123	133	10	70.8	65.8	5	23.5	23.5	23.5	23.5
A95□GOT-(Q)TBD(-M3)	164.5	136	125.5	130.1	143	155.5	123	133	10	65	59	6	14.9	19.5	19.5	19.5
A95□GOT-(Q)SBD/LBD(-M3)	164.5	136	125.5	130.1	143	155.5	123	133	10	57	51	6	14.9	19.5	19.5	19.5

■Panel cut dimensions

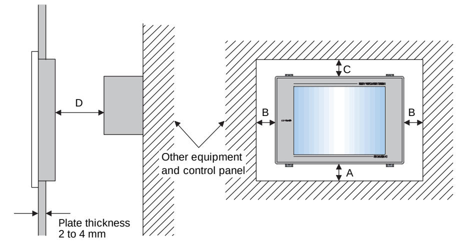

A +1 0
Panel opening
B +1 0

(Unit: mm)

GOT main unit type	A	B
A985GOT(-V)	302	228
A975/970GOT(-B)	289	200
A960GOT	258	183
A956WGOT	205.5	123.5
A95□GOT(-M3)	156	123.5

■Product installation interval

When a GOT is installed, the spaces must be provided between other equipment as shown below.


D
C
B
B
A
Other equipment and control panel
Plate thickness 2 to 4 mm

GOT main unit type + communication interface	A
A985GOT(-V) + communication board	140mm or more
A975/970GOT(-B) + communication board	130mm or more
A960GOT + communication board	140mm or more
A985GOT(-V)/A960GOT + A9GT-BUSSU/(Q)BUS2SU	30mm or more
A975/970GOT(-B) + A9GT-BUSSU/(Q)BUS2SU	15mm or more
A956WGOT/A956GOT(-M3)	130mm or more (When MELSECNET fiber-optic cable is used: 165mm or more)
A950/951(-Q)/953GOT(-M3)	130mm or more

- Dimension of part A:Leave the space required for connection cable's routing radius shown on the table above.
- Dimension at part B:When a memory card or audio output is used, leave 100 mm or more clearance for connecting cables and install/remove memory cards. (Otherwise, 50 mm or more is required.)
- Dimension at part C:Leave a minimum of 80 mm or more clearance above the unit to ensure proper ventilation.
- Dimension at part D:Leave 100 mm or more for back and 50 mm or more for each side clearance to provide proper ventilation and prevent noise from interfering when equipment, which generates much radiation noise, is nearby.

* Install the GOT at ambient temperature of 55 ˚C or less.

Bus connection cable

Bus connection cable and connector

■External dimensions

Cable model name	Cable thickness (mm)	Connector dimensions (mm) and shape	
		GOT side	PLC side
A1SC□B	7	Fig. 1	Fig. 1
*1 A8GT-C□BS	9	Fig. 6	Fig. 6
*1 A8GT-C□EXSS	8	Fig. 1	Fig. 2
*2 A8GT-C□EXSS-1	9	Fig. 6	Fig. 6
A8GT-C□NB	8	Fig. 1	Fig. 3
A9GT-QC□BS	10	Fig. 5	Fig. 5
AC□B	17	Fig. 3	Fig. 3
AC□B-R	17	Fig. 4	Fig. 4
QC□B	10	Fig. 5	Fig. 5
A8GT-EXCNB	9	Fig. 7	Fig. 6

*The A8GT-C□EXSS/C□BS cable has a grounding wire (1 m). Be sure to connect the wire to the control panel.

*2: The A8GT-C□EXSS-1 is a set product consisting of the A8GT-EXCNB and A8GT-C□BS. (See Fig. A)

Fig.1

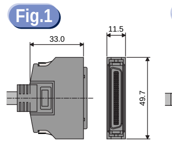


Fig.2

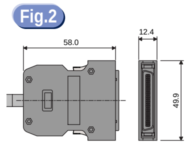


Fig.3

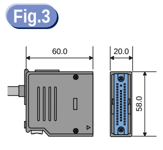


Fig.4

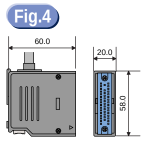


Fig.5

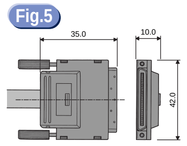


Fig.6

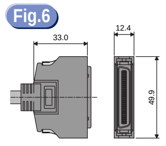


Fig.7

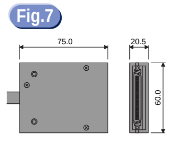
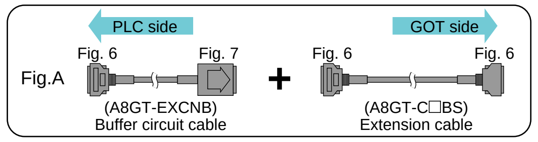


Fig.A


PLC side
GOT side
Fig. 6
Fig. 7
Fig. 6
Fig. 6
+
(A8GT-EXCNB)
Buffer circuit cable
(A8GT-C□BS)
Extension cable

Communication unit

■External dimensions

(Unit: mm)

Product name	Model name	External dimensions
Bus connection board	A9GT-(Q)BUSS	Fig. 1
	A9GT-(Q)BUS2S	Fig. 2
Bus connection unit	A9GT-BUSSU	Fig. 3
	A9GT-(Q)BUS2SU	
Serial communication board	A9GT-RS2(T)	Fig. 4
	A9GT-RS4	
Network connection unit	A7GT-J71LP23	Fig. 5
	A7GT-J71BR13	Fig. 6
Data link connection unit	A7GT-J71AP23	Fig. 7
	A7GT-J71AR23	Fig. 8
	A7GT-J71AT23B	Fig. 9
CC-Link connection unit	A8GT-J61BT13	Fig. 10
	A8GT-J61BT15	
Ethernet communication unit	A9GT-J71E71-T	Fig. 11
Video/RGB composite input interface unit	A9GT-80V4R1	Fig. 12
Video input interface unit	A9GT-80V4	Fig. 13
RGB input interface unit	A9GT-80R1	Fig. 14
External input/output interface unit	A9GT-70KBF	Fig. 15
	A9GT-50KBF	Fig. 16
Bus extension connector box	A9GT-QCNB	Fig. 17
Bus/connector conversion box	A7GT-CNB	Fig. 18

Fig.1

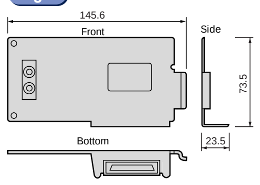

145.6
Front
Side
73.5
Bottom
23.5

Fig.2

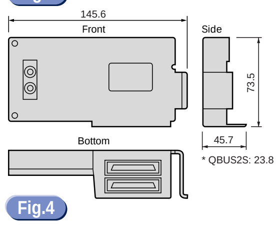

145.6
Front
Side
73.5
Bottom
45.7
* QBUS2S: 23.8

Fig.3

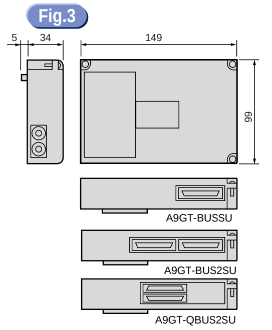

5
34
149
99
A9GT-BUSSU
A9GT-BUS2SU
A9GT-QBUS2SU

Fig.4

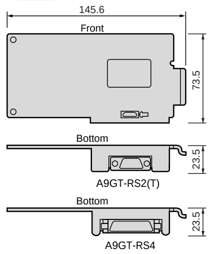

145.6
Front
73.5
Bottom
23.5
A9GT-RS2(T)
Bottom
23.5
A9GT-RS4

Fig.5

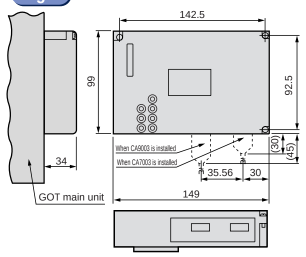

142.5
99
92.5
34
When CA9003 is installed
When CA7003 is installed
(30)
(45)
35.56
30
GOT main unit
149

Fig.6

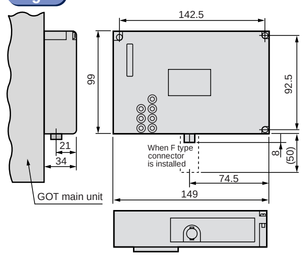

142.5
99
92.5
21
34
When F type connector is installed
8
(50)
74.5
GOT main unit
149

Fig.7

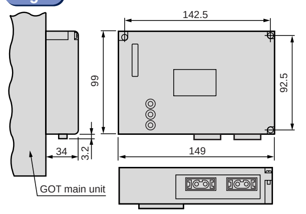

142.5
99
92.5
34
3.2
149
GOT main unit

Fig.8

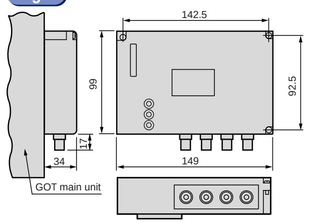

142.5
99
92.5
34
149
GOT main unit

Fig.9

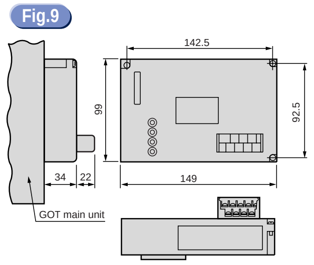

142.5
99
92.5
34
22
149
GOT main unit

Fig.10

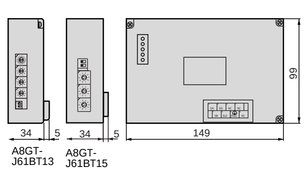

99
34
5
34
5
149
A8GT-J61BT13
A8GT-J61BT15

Fig.11

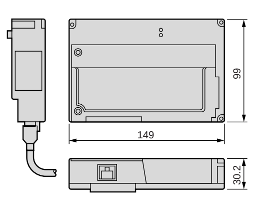


Fig.12

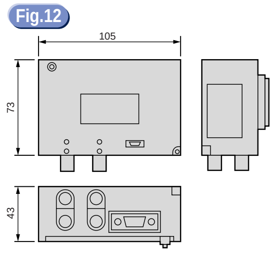


Fig.13

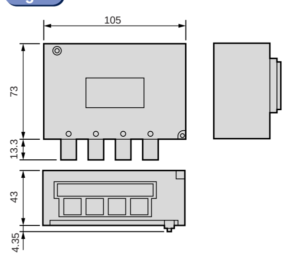

105
73
13.3
43
4.35

Fig.14

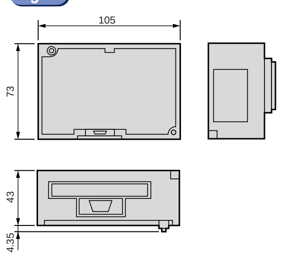

105
73
43
4.35

Fig.15

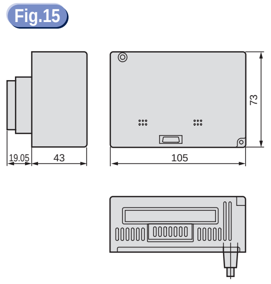

73
19.05
43
105

Fig.16

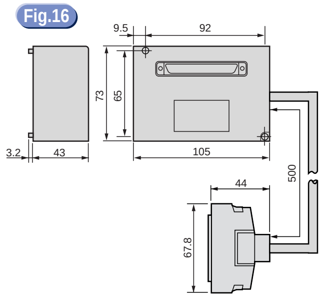

9.5
92
73
65
3.2
43
105
44
500
67.8

Fig.17

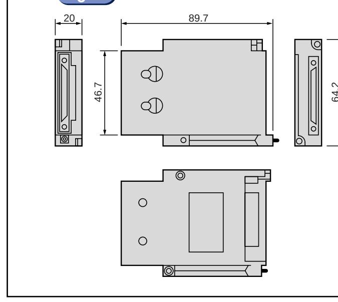
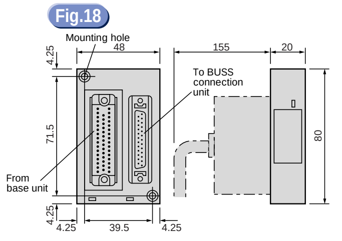

20
89.7
46.7
64.2

Fig.18


Mounting hole
4.25
48
155
20
To BUSS connection unit
71.5
80
From base unit
4.25
4.25
39.5
4.25

- There are two different bus connection communication interfaces, bus connection board and bus connection unit.
- The bus connection board (A9GT-(Q)BUSS, A9GT-(Q)BUS2S) is a depth-saving type communication board interface. (Fig. A)
- The bus connection unit (A9GT-BUSSU, A9GT-(Q)BUS2SU) is a cable space-saving type communication unit interface, and has the same shape as the network connection unit.

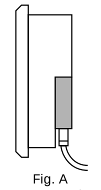


Fig. A
Bus connection board

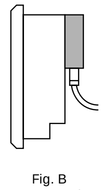


Fig. B
Bus connection unit

Function list for each model

Category	Function details	Memory board	Extended function OS	Related icons	Pages	Model							
						GT SoftGOT2	A985		A97□		A960	A956W	A95□
							A985GOT-V	A985GOT	A975GOT	A970GOT	A960GOT	A956WGOT	A95□GOT
Connection configuration	Bus connection			Various connection configurations	P.34 P.38 ~P.49	●*1	●	●	●	●	●	●	●*2*4
	CPU direct connection					●	●	●	●	●	●	●	●*3
	Computer link connection					●	●	●	●	●	●	●	●*3
	Ethernet connection					●	●	●	●	●	●	●	●*4
	CC-Link connection						●	●	●	●	●	●	●*4
	MELSECNET connection					●	●	●	●	●	●	●	●*4
	Microcomputer connection						●	●	●	●	●	●	●*3
Max. user memory capacity	32MB					●							
	9MB (Main unit internal memory 1M + expansion memory max.8M)	Required					●	●	●	●	●	●	
	3MB												●*12
	1MB												●
Display colors	256 colors			256 colors display	P.34	●	●	●	●			●	●*5
	16 colors									●			
	8 colors									●			●
	Monochrome (black and white)									●			●
	Monochrome (black and yellowish orange)										●		
Resolution	1280 x 1024 dots					●							
	1024 x 768 dots					●							
	800 x 600 dots					●	●	●					
	640 x 480 dots					●			●	●			
	640 x 400 dots										●		
	480 x 234 dots											●	
	320 x 240 dots												●
Number of touch keys	Number of touch keys (line, row)					5120 (64 x 80)	1900 (38 x 50)	1900 (38 x 50)	1200 (30 x 40)	1200 (30 x 40)	1000 (25 x 40)	450 (15 x 30)	300 (15 x 20)
External interface	Communication board interface or communication unit interface				P.51		●	●	●	●	●	●	●*6
	RS-232C interface (Screen data upload/download/barcode reader/servo amplifier)						●	●	●	●	●	●	●
	Memory board interface						●	●	●	●	●	●	
	PC card interface						●	●	●	●	●	●*7	●*10
	Audio output port						●	●	●	●	●		
	Printer interface						●	●	●	●	●	●*9	●*9
	Analog RGB output interface (SVGA)							●					
	Optional unit interface						●	●	●	●	●	●	●
Features/ hardware	OS installation			OS installation	P.34		●	●	●	●	●	●	●
	OS/screen data transfer to PC card						●	●	●	●	●	●	●*10
	Compact size			Compact size	P.34		●	●	●	●	●	●	●
	Audio output	Required	Required	Audio output	P.34		●	●	●	●	●		
	Printer output		Required	Printer output	P.34		●	●	●	●	●	●*9	●*9
	Human sensor			Human sensor	P.12 P.34		●	●					
	Analog RGB output			Analog RGB output	P.34			●					
	Analog RGB input		Required	Analog RGB input	P.19 P.34		●						
	Video input		Required	Video input	P.19 P.34		●						
	Transparent			Transparent	P.34		●	●	●	●	●	●	●
	Barcode reader input		Required	Barcode reader	P.34		●	●	●	●	●	●	●
	External input/output		Required	External input/output interface	P.34			●	●	●	●	●	●
	Backlight replacement			Backlight replacement	P.34		●	●	●	●			●*8
	Protection sheet			Protection sheet (IP67F)	P.34		●	●	●	●	●	●	●
	Attachment			Attachment	P.33				●	●	●		●
Main unit functions	Gateway functions	Required	Required	Gateway functions	P.10		●	●	●	●	●	●	●*4
	Script			Script	P.14 P.35	●	●	●	●	●	●	●	●
	Multi-language			Multi-language	P.35	●	●	●	●	●	●	●	●
	Time action			Time action	P.35	●	●	●	●	●	●	●	●
	Display condition specification			Display condition specification	P.36	●	●	●	●	●	●	●	●
	Display switching			Display switching	P.36	●	●	●	●	●	●	●	●

Category	Function details	memory board	Extended function OS	Related icons	Pages	Model							
						GT SoftGOT2	A985		A97□		A960	A956W	A95□
							A985GOT-V	A985GOT	A975GOT	A970GOT	A960GOT	A956WGOT	A95□GOT
Main unit functions	Indirect specification (offset device)			Indirect specification (offset device)	P.36	●	●	●	●	●	●	●	●
	PC station number switching			PC station number switching	P.36	●	●	●	●	●	●	●	●
	Touch switch			A variety of touch switches	P.36	●	●	●	●	●	●	●	●
	Numeric display					●	●	●	●	●	●	●	●
	ASCII display					●	●	●	●	●	●	●	●
	Numeric input					●	●	●	●	●	●	●	●
	ASCII input					●	●	●	●	●	●	●	●
	Data list display			Data list	P.36	●	●	●	●	●	●	●	●
	Clock display					●	●	●	●	●	●	●	●
	Comment display					●	●	●	●	●	●	●	●
	Alarm history display		Required when stored as CSV file	Alarm history	P.35	●	●	●	●	●	●	●	●
	Alarm flow display			Alarm flow display	P.35	●	●	●	●	●	●	●	●
	Alarm list display			Alarm list	P.35	●	●	●	●	●	●	●	●
	Component display					●	●	●	●	●	●	●	●
	Component movement display					●	●	●	●	●	●	●	●
	Lamp display					●	●	●	●	●	●	●	●
	Trend graph					●	●	●	●	●	●	●	●
	Line graph					●	●	●	●	●	●	●	●
	Locus chart display					●	●	●	●	●	●	●	●
	Scatter graph					●	●	●	●	●	●	●	●
	Bar graph					●	●	●	●	●	●	●	●
	Statistical graph					●	●	●	●	●	●	●	●
	Level display					●	●	●	●	●	●	●	●
	Superimposed window display					●	●	●	●	●	●	●	●
	Overlap window display					●	●	●	●	●	●	●	●
	Screen reading			Screen call	P.36	●	●	●	●	●	●	●	●
	System information					●	●	●	●	●	●	●	●
	Status monitor			Status monitor	P.36	●	●	●	●	●	●	●	●
	Password (Security)			Security	P.35	●	●	●	●	●	●	●	●
	Recipe	Required *13	Required	Recipe	P.35	●	●	●	●	●	●	●	●*12
Maintenance functions	Ladder monitor *14 (including cause search function/ touch search function)	Required	Required	Ladder monitor	P.8 P.36	*15	●	●	●	●	●	●*11	
	List program edit	Required	Required	List program edit	P.37	*15	●	●	●	●	●	●	● *12
	System monitor		Required	System monitor	P.36	*15	●	●	●	●	●	●	●
	Special module monitor	Required	Required	Special module monitor	P.9 P.37	*15	●	●	●	●	●		
	Network monitor	Required	Required	Network monitor	P.37	*15	●	●	●	●	●	●	● *12
	Motion monitor	Required	Required	Motion monitor	P.9 P.37	*15	●	●	●	●	●	●	● *12
	Servo amplifier monitor	Required	Required	Servo amplifier monitor	P.9 P.37	*15	●	●	●	●	●	●	● *12
Drawing software	GT Works 2				P.30	●	●	●	●	●	●	●	●
	GT Designer 2				P.6, 30	●	●	●	●	●	●	●	●
Drawing software functions	Simulation debugging			Simulation debugging	P.31 P.37	●	●	●	●	●	●	●	●
	Device monitor			Device monitor	P.37	●	●	●	●	●	●	●	●
	Documentation assistance			Documentation assistance	P.37	●	●	●	●	●	●	●	●
	GX Developer device comment read			Data conversion	P.37	●	●	●	●	●	●	●	●
	Use of other software data					●	●	●	●	●	●	●	●
	Use of conventional display/ drawing software data					●	●	●	●	●	●	●	●

*1: Only when connected with PC CPU
*2: A951GOT(-Q) only
*3: A950/A953GOT only
*4: A956GOT only
*5: A95□GOT-TBD only
*6: The type of the built-in interface varies depending on the model. See page 28 for details.
*7: Compact Flash PC card interface
*8: Except A95□GOT-TBD
*9: The A9GT-50PRF printer interface unit (option) is required.
*10: The A1SD59J-MIF PC card interface unit (option) is required.
*11: Only when connected with MELSEC-Q series CPU (Q mode)
*12: A95□GOT-M3 only
*13: The expansion memory board is not required for GT SoftGOT2.
*14: The capacity of the expansion memory board varies depending on the PLC CPU when ladder monitor is performed.
MELSEC-Q series CPU (Q mode)/QnACPU ··· A9GT-QFNB(□M)
MELSEC-Q series CPU (Q mode)/Q/QnA/A/
A series motion controller /FXCPU ··· A9GT-FNB(□M)
*15: Enabled by dedicated software.

Graphic Operation Terminal
900
series

Connectable model list

Mitsubishi PLCs/motion controllers

Series	Model name *1	AGOT(A985(-V)/A97□/A960/A956W/A95□GOT)									SoftGOT(GT SoftGOT2)					
		Connection configuration									Connection configuration					
		Bus connection	CPU direct connection	Computer link connection*19	Ethernet connection*19	MELSECNET /10 *1, 2	MELSECNET /B, II *1	CC-Link (ID) *5	CC-Link (RD) *5	CC-Link (via G4) *5	CPU direct connection	Computer link connection*19	Ethernet connection*19	MELSECNET /H	MELSECNET /10	Q bus connection*16
MELSEC-Q series (Q mode)	Q00JCPU	○*8	○ *21	○	○	○*3, 4	×	○	○	○	○	○	○	○	○	○ *20
	Q00CPU	○														
	Q01CPU															
	Q02CPU *6	○	○	○	○	○*3	×	○	○	○						○ *17
	Q02HCPU *6															
	Q06HCPU *6															
	Q12HCPU *6															
	Q25HCPU *6															
	Q12PHCPU	○	○	○	○	○*3	×	○	○	○						○
	Q25PHCPU															
MELSEC-Q series (A mode)	Q02CPU-A	×	○	○	○	○	○	○	○	○				×		×
	Q02HCPU-A															
	Q06HCPU-A															
MELSEC-QnA series (large type)	Q2ACPU	○	○	○	○	○*3	○	○	○	×	○	○	○	×	○	×
	Q2ACPU-S1															
	Q2AHCPU															
	Q2AHCPU-S1															
	Q3ACPU															
	Q4ACPU															
	Q4ARCPU	○*9														
MELSEC-QnA series (small type)	Q2ASCPU	○														
	Q2ASCPU-S1															
	Q2ASHCPU															
	Q2ASHCPU-S1															
MELSEC-A series (large type)	A2UCPU	○	○	○	○	○	○	○	○	×	○	○	○	×	○	
	A2UCPU-S1															
	A3UCPU															
	A4UCPU															
	A2ACPU															
	A2ACPU-S1															
	A3ACPU															
	A1NCPU		○*7								○*18	○*18	○*18		○*18	
	A2NCPU															
	A2NCPU-S1															
	A3NCPU															
MELSEC-A series (small type)	A2USCPU	○	○	○	○	○	○	○	○	×	○	○	○	×	○	
	A2USCPU-S1															
	A2USHCPU-S1															
	A1SCPU															
	A1SCPUC24-R2										×		×		×	
	A1SHCPU										○		○		○	
	A2SCPU		○*7	○*7		○*7	○*7	○*7			○*18	○*18	○*18		○*18	
	A2SCPU-S1															
	A2SHCPU		○	○		○	○	○			○	○	○		○	
	A2SHCPU-S1															
	A1SJCPU	○*10														
	A1SJCPU-S3															
	A1SJHCPU															
MELSEC-A series	A0J2HCPU	○	○*7	○	○	×	○	○	○	×	○*18	○*18	○*18	×	×	
	A2CCPU	×		×	×		×	×	×			×	×			
	A2CCPUC24		○	○							○	○				
	A2CJCPU			×								×				
	A1FXCPU															
Motion controller CPU (Q series)	Q172CPU *11	○*12	○*12	○*13	○*13	×	×	○*13	×	○*13	×	×	×	×	×	
	Q173CPU *11															
	Q172CPUN *11	○*14	○*14	○*14	○*14			○*14		○*14						
	Q173CPUN *11															
Motion controller CPU (A series) (large type)	A273UCPU	○	○	○	○	○	○	○	○	×	×	×	×	×	×	
	A273UHCPU										○	○	○		○	
	A273UHCPU-S3															
	A373UCPU										×	×	×		×	
	A373UCPU-S3															
Motion controller CPU (A series) (small type)	A171SCPU	○*15														
	A171SCPU-S3										○	○	○		○	
	A171SCPU-S3N															
	A171SHCPU															
	A171SHCPUN															
	A172SHCPU															
	A172SHCPUN															
	A173UHCPU															
	A173UHCPU-S1															
MELSEC-FX series	FX0 series	×	○	×	×	×	×	×	×	×	○	×	×	×	×	
	FX0S series															
	FX0N series															
	FX1 series															
	FX1S series															
	FX1N series															
	FX1NC series															
	FX2 series															
	FX2C series															
	FX2N series															
	FX2NC series															

*1: Cannot be connected to the remote I/O stations regardless of connection configuration.

*2: Including the case where MELSECNET/H is used as NET/10 mode. Cannot be connected to the remote I/O net mode.

*3: The device range that can be monitored is the A3ACPU range. However, in the A3ACPU range, there is a device range that cannot be monitored. For details, refer to the "GOT-A900 Series User's Manual Compatible Connection System SH(NA)-080255-B".

*4: For the functions that use the calendar and clock data (e.g. alarm history function and time action function), correct clock display and operation may not be performed.

*5: CC-Link (ID): CC-Link (Intelligent device station)
CC-Link (RD): CC-Link (Remote device station)
CC-Link (via G4): Connected to a CC-Link system via AJ65BT-G4-S3.

*6: In a multiple CPU system, CPU function version B or later should be used.

*7: Word specification (word device/word specification of bit device) cannot be written from the GOT to the CPUs of software versions earlier than the followings.
A1NCPU/A2NCPU(-S1)/A3NCPU [with link]: Software version L
A1NCPU/A2NCPU(-S1)/A3NCPU [without link]: Software version H
A2CCPU/A2SCPU(-S1): Software version H
A0J2HCPU: Software version E

*8: Cannot be used on the main base when a bus extension connector box is used. (Can be used on the extension base.)

*9: GOT should be connected to the A68RB extension base of hardware version B or later in the last stage of the system. (Cannot be connected to the A3□RB main base.)

*10: The GOT cannot be connected when an extension base is used.

*11: Only the Q series motion controller CPU where the peripheral software package SV13 or SV22 is installed can be connected. The QCPU (Q mode) (CPU function version B or later) is also required. (Multiple CPU configuration)
When using the Q00CPU or Q01CPU (function version B or later), the following OS versions should be used.

Application	Q173CPU(N)	Q172CPU(N)	Version
For transfer/assembly (SV13)	SW6RN-SV13QB	SW6RN-SV13QD	00M or later
For automatic machine (SV22)	SW6RN-SV22QA	SW6RN-SV22QC	00M or later

*12: Available OS versions:
Q172CPU serial number: K******** and software package OS version: 00E or later
Q173CPU serial number: J******** and software package OS version: 00E or later

*13: Available OS versions:
Q172CPU serial number: N******** and software package OS version: 00H or later
Q173CPU serial number: M******** and software package OS version: 00H or later

*14: Available OS versions:
Peripheral software package OS version: 00H or later

*15: Use the A168B when using an extension base.

*16: Can be used only when GT SoftGOT2 is connected using the PC CPU unit. Use the PC CPU unit of PC setting utility Ver 1.02 or later.

*17: For Q bus connection, use the QCPU with first 5 digits of serial No. of "03051" or later.

*18: Use the CPU of the following software version.
The CPU versions earlier than the followings version cannot be used.
A1NCPU/A2NCPU(-S1)/A3NCPU [with link]: Software version L or later
A1NCPU/A2NCPU(-S1)/A3NCPU [without link]: Software version H or later
A2CCPU: Software version H or later
A2SCPU(-S1): Software version C or later
A0J2HCPU: Software version E or later

*19: Refer to page 57 "Other manufactures' PLCs/motion controllers".

*20: Use the CPU function version B or later.

*21: Cannot be connected with Q00CPU, and Q01CPU via RS232 serial communication using the interface unit.

Modules that can be connected with Mitsubishi PLC

• Serial communication module / computer link module

CPU series	Computer link modules / serial communication modules*1			○:Available ×:Not available	
	Model	CH1	CH2	AGOT	SoftGOT*4
MELSEC-Q series (Q mode)	QJ71C24 *2	RS-232C	RS-422/485	○	○
	QJ71C24-R2 *2	RS-232C	RS-232C	○	○
	QJ71CMO *5	Module connector	RS-232C	○	○
MELSEC-Q series (A mode)	A1SJ71UC24-R2	RS-232C	–	○	○
	A1SJ71UC24-R4	RS-422/485	–	○	×
MELSEC-QnA series	AJ71QC24 *6	RS-232C	RS-422/485	○	○
	AJ71QC24-R2 *6	RS-232C	RS-232C	○	○
	AJ71QC24-R4 *6	RS-422	RS-422/485	○	×
	AJ71QC24N *6	RS-232C	RS-422/485	○	○
	AJ71QC24N-R2 *6	RS-232C	RS-232C	○	○
	AJ71QC24N-R4 *6	RS-422	RS-422/485	○	×
	A1SJ71QC24 *6	RS-232C	RS-422/485	○	○
	A1SJ71QC24-R2 *6	RS-232C	RS-232C	○	○
	A1SJ71QC24N *6	RS-232C	RS-422/485	○	○
	A1SJ71QC24N-R2 *6	RS-232C	RS-232C	○	○
MELSEC-A series Motion controller CPU (A mode)	AJ71UC24 *3 *6	RS-232C	RS-422/485	○	○
	AJ71C24-S8 *6	RS-232C	RS-422	○	○
	A1SJ71UC24-R2 *3	RS-232C	—	○	○
	A1SJ71UC24-R4 *3	RS-422/485	—	○	×
	A1SJ71C24-R2 *3 *7	RS-232C	—	○	○
	A1SJ71C24-R4 *3 *7	RS-422/485	—	○	×
	A1SCPUC24-R2	RS-232C	—	○	○
	A2CCPUC24 *6	RS-232C	RS-422/485	○	○

*1: RS-485 communication is not possible; therefore, J2-C214-S1 is not available.

*2: With function version A, CH1 or CH2 can be connected. With function version B or later, both CH1 and CH2 can be connected.

*3: When connecting to A1SHCPU, A2SCPU(S1), A2HCPU(S1), A1SJHCPU, A0J2HCPU, A171SHCPU(N), A172SHCPU(N), use computer link module software version U or later version.

*4: GOT2 can be connected via RS-232, but not via RS-422 communication.

*5: Only CH2 can be connected.

*6: Either CH1 or CH2 can be connected.

*7: Computer link module/serial communication module operate within the range of An ACPU devices. (R device cannot be recognized.)

• Ethernet module

CPU series	Ethernet module	○:Available ×:Not available	
	Model	AGOT *8	SoftGOT
MELSEC-Q series (Q mode)	QJ71E71	○	○
	QJ71E71-B2	○	○
	QJ71E71-100	○	○
MELSEC-QnA series	AJ71QE71	○	○
	AJ71QE71-B5	○	○
	AJ71QE71-B2	○	○
	AJ71QE71N-B5T	○	○
	AJ71QE71N-B2	○	○
	A1SJ71QE71-B5	○	○
	A1SJ71QE71N-B2	○	○
	A1SJ71QE71N-B5T	○	○
MELSEC-Q series (A mode) MELSEC-A series Motion controller CPU (A mode)	AJ71E71-S3	○	○
	AJ71E71N-B2	○	○
	AJ71E71N-B5T	○	○
	A1SJ71E71-B2-S3	○	○
	A1SJ71E71-B5-S3	○	○
	A1SJ71E71N-B2	○	○
	A1SJ71E71N-B5T	○	○

*8: When using Ethernet module which supports data transmission speed of 100Mbps, connect with GOT after converting the data transmission speed to 10Mbps using a hub.

Other manufacturers' PLCs/motion controllers *9

Series		CPU Model		Computer link connection		CPU direct connection	
				RS-422	RS-232	RS-422	RS-232
OMRON PLC		C200HS		○	○	×	
		C200H					
		C200Hα series	C200HX	○	○	×	○
			C200HG				
			C200HE			×	×
		CQM1		×		×	○
		C1000H		○ RS-422 or RS-232 can be selected		×	
		C2000H					
		CV500		×		○ RS-422 or RS-232 can be selected	
		CV1000					
		CV2000					
		CVM1-CPU01					
		CVM1-CPU11					
		CVM1-CPU21					
		CS1		○	○	×	○
		CJ1		○ RS-422 or RS-232 can be selected		×	○
SHARP PLC		JW-21CU		○	×	×	
		JW-31CUH					
		JW-50CUH					
		JW-22CU				○ RS-422 or RS-232 can be selected	
		JW-32CUH					
		JW-33CUH					
		JW-70CUH					
		JW-100CUH					
YASKAWA Electric PLC		GL60S		○	○	×	×
		GL60H					
		GL70H					
		GL120		○	○	×	○
		GL130					
YASKAWA Electric motion controller		CP-9200SH		×	○	×	×
		CP-9300MS		×	×	×	○
		MP-920/930					
		MP-940				○	○
		PROGIC-8				×	○
		CP-9200 (H)					
TOSHIBA PLC	PROSEC T series	T2 (PU224 type)		×	×	○	×
		T2E				○ RS-422 or RS-232 can be selected	
		T2N					
		T3				○	×
		T3H					
	PROSEC V series	Model3000 (S3)					
Matsushita Electric Works PLC		FP0-C16CT		×	×	×	○
		FP0-C32CT					
		FP1-C24C					○ *13
		FP1-C40C					
		FP2			○		○
		FP3					○ *13
		FP5					
		FP10 (S)					
		FP10SH					○
		FP-M (C20TC)			×		
		FP-M (C32TC)					

Series		CPU Model	Computer link connection		CPU direct connection	
			RS-422	RS-232	RS-422	RS-232
HITACHI PLC (HIDIC H series)	Large size H series	H-302 (CPU2-03H)	○ RS-422 or RS-232 can be selected		×	○
		H-702 (CPU2-07H)				
		H-1002 (CPU2-10H)				
		H-302 (CPU-06H)				
		H-2002 (CPU2-20H)				
		H-4010 (CPU3-40H)				
		H-300 (CPU-03Ha)				
		H-700 (CPU-07Ha)				
		H-2000 (CPU-20Ha)				
	H200~252 series	H-200 (CPU-02H, CPE-02H)	×			
		H-250 (CPU21-02H)				
		H-252 (CPU22-02H)				
		H-252B (CPU22-02HB)				
		H-252C (CPU22-02HC, CPE22-02HC)				
	H series board type	H-20DR				
		H-28DR				
		H-40DR				
		H-64DR				
		H-20DT				
		H-28DT				
		H-40DT				
		H-64DT				
		HL-40DR				
		HL-64DR				
	EH-150 series	EH-CPU104				
		EH-CPU208				
		EH-CPU308				
		EH-CPU316				
Rockwell Automation PLC (Allen-Bradley) *12	SLC500 series	SLC500-20	×	×	×	○
		SLC500-30				
		SLC500-40				
		SLC5/01				
		SLC5/02				
		SLC5/03				
		SLC5/04				
		SLC5/05				
	MicroLogix 1000 series Digital CPU	1761-L10BWA				
		1761-L10BWB				
		1761-L16AWA				
		1761-L16BWA				
		1761-L16BWB				
		1761-L16BBB				
		1761-L32AWA				
		1761-L32BWA				
		1761-L32BWB				
		1761-L32BBB				
		1761-L32AAA				
	MicroLogix 1000 series Analogue CPU	1761-L20AWA-5A				
		1761-L20BWA-5A				
		1761-L20BWB-5A				
	MicroLogix 1500 series	1764-LSP				
SIEMENS AG PLC		S7-300 series	×	×	×	○ *11
		S7-400 series				

*9: Motion controller can be connected with only AGOT, but not with GT SoftGOT2.

Modules that can be connected to other manufacturer’s computer link module

	RS-422	RS-232C
OMRON Upper-level link unit / communication board	C-500-LK201-V1	C500-LK201-V1
	C200HW-COM03	C200HW-COM02
	C200HW-COM06	C200HW-COM05
	C200H-LK202-V1	C200HW-COM06
	C120-LK202-V1	C200H-LK201-V1
	CS1W-SCU41	C120-LK201-V1
	CS1W-SCB41	CS1W-SCU21
		CS1W-SCB21
		CS1W-SCU41
		CS1W-SCB41

	RS-422	RS-232C
SHARP Link unit	JW-21CM	—
	JW-10CM	
	ZW-10CM	
YASKAWA Electric Memory bus unit	JAMSC-IF612	JAMSC-IF60
	120 NOM 271 00	JAMSC-IF61
		120 CPU 341 00
		CP-217IF *10
Matsushita Electric Works PLC	—	AFP2462
		AFP3462
		AFP5462
HITACHI PLC	COMM-H	COMM-H
	COMM-2H	COMM-2H

*10: CP-217 is indispensable for CP9200SH to be connected with GOT.

*11: HMI adaptor is necessary when connected with GOT.

*12: Able to connect with CPU in DH485 network configured with SLC 500 series, MicroLogix1000/1500 series. Refer to a manual for the details.

*13: When connecting with TOOL port, AFP8550 adaptor is necessary between FP peripheral unit cable and RS-232 cable.

Notes for Use

(1) Some functions are unavailable depending on the GOT models. See Product overview on page18 and later and Function list on page 54.
(2) There are some functions and restrictions unavailable depending on the connection target and connection configuration. For details, refer to the following "Restrictions on maintenance functions" or the following manuals.

Maintenance functions	GOT-A900 Series Operating Manual (Extended Functions/Option Functions: SH-080244)
Gateway functions	GOT-A900 Series Operating Manual (Gateway Functions: SH-080352)
Object functions	GOT-A900 Series Reference Manual (SH-080242)

(3) For the connectable CPU models, see Connectable model list on page 56.
(4) The access range that can be monitored changes depending on the connected CPU type and connection configuration. For details, refer to the "GOT-A900 Series User's Manual (Connection: SH-080246)".

Restrictions on maintenance functions

AGOT

(A985(-V)/A97□/A960/A956W/A95□GOT)

The restrictions on the maintenance functions are as indicated below. (Refer to page 56 for the restrictions on versions.)

Connection configuration	Bus connection						CPU direct connection						Computer link connection					
Connection target	MELSEC-Q series (Q mode)	Motion controller CPU (Q series)	MELSEC-Q series (A mode)	MELSEC-QnA series	MELSEC-A series	Motion controller (A series)	MELSEC-Q series (Q mode)	Motion controller CPU (Q series)	MELSEC-Q series (A mode)	MELSEC-QnA series	MELSEC-A series	Motion controller (A series)	MELSEC-Q series (Q mode)	Motion controller CPU (Q series)	MELSEC-Q series (A mode)	MELSEC-QnA series	MELSEC-A series	Motion controller (A series)
System monitor	○ *1	○	—	○	○	○	○ *1	○	○	○	○	○	○*1*3	○	○ *4	○ *3	○ *4	○
Ladder monitor	○	×	—	○	○	○	○	×	○	○	○	○	○	×	○ *5	○	○ *5	○
(Fault cause search)	○	×	—	×	○	○	○	×	○	×	○	○	○	×	○	×	○	○
(Touch search)	○	×	—	×	×	×	○	×	×	×	×	×	○	×	×	×	×	×
List program edit	×	×	—	×	○	×	×	×	○	×	×	×	×	×	×	×	×	×
Network monitor	○	×	—	○	○	○	○	×	○	○	○	○	○	×	○	○	○	○
Special module monitor	○	×	—	○	○	○	○	×	○	○	○	○	○	×	×	○	×	○
Motion monitor	○ *2	○	—	×	×	×	○ *2	○	×	×	×	×	×	○	×	×	×	×

Connection configuration	MELSECNET connection						Ethernet connection						CC-Link connection(BT13)					
Connection target	MELSEC-Q series (Q mode)	Motion controller CPU (Q series)	MELSEC-Q series (A mode)	MELSEC-QnA series	MELSEC-A series	Motion controller (A series)	MELSEC-Q series (Q mode)	Motion controller CPU (Q series)	MELSEC-Q series (A mode)	MELSEC-QnA series	MELSEC-A series	Motion controller (A series)	MELSEC-Q series (Q mode)	Motion controller CPU (Q series)	MELSEC-Q series (A mode)	MELSEC-QnA series	MELSEC-A series	Motion controller (A series)
System monitor	×	×	○	×	○	○	○ *1	○	○	○	○	○	○ *7	○	○	○	○	○
Ladder monitor	×	×	○	×	○	○	○	×	○	○	○	○	○ *8	×	○	○	○	○
(Fault cause search)	×	×	○	×	○	○	○	×	○	×	○	○	○	×	○	×	○	○
(Touch search)	×	×	×	×	×	×	○	×	×	×	×	×	○	×	×	×	×	×
List program edit	×	×	○	×	○	×	×	×	○	×	○	×	×	×	○	×	○	×
Network monitor	○	×	○ *6	×	○ *6	○	○	×	○	○	○	○	○	×	○	○	○	○
Special module monitor	×	×	○	×	○	○	○	×	○	○	○	○	○	×	○	○	○	○
Motion monitor	×	×	×	×	×	×	○ *2	○	×	×	×	×	○ *2	○	×	×	×	×

Connection configuration	CC-Link connection(BT15)						CC-Link connection(G4)	
Connection target	MELSEC-Q series (Q mode)	Motion controller CPU (Q series)	MELSEC-Q series (A mode)	MELSEC-QnA series	MELSEC-A series	Motion controller (A series)	MELSEC-Q series (Q mode)	Motion controller CPU (Q series)
System monitor	○ *9	×	○ *9	○ *9	○ *9	○ *9	○	○
Ladder monitor	×	×	×	×	×	×	○	×
(Fault cause search)	×	×	×	×	×	×	○	×
(Touch search)	×	×	×	×	×	×	○	×
List program edit	×	×	×	×	×	×	×	×
Network monitor	×	×	×	×	×	×	○	×
Special module monitor	×	×	×	×	×	×	○	×
Motion monitor	× *2	×	×	×	×	×	○*2	○

Connection target	MELSEC FX series	Other manufacturer's PLC	Microcomputer
System monitor	○ *10	×	×
Ladder monitor	○	×	×
(Failure cause search)	○	×	×
(Touch search)	×	×	×
List edition	×	×	×
Network monitor	×	×	×
Special unit monitor	×	×	×
Motion monitor	×	×	×

*1: The timers/counters and BM cannot be monitored for Q172CPU(N) or Q173PU(N) monitor.
*2: Motion monitor function is supported by Q172CPU and Q173CPU with either SV13 or SV22 peripheral software packages pre-installed.
*3: The current values of V and Z cannot be changed.
*4: The current values of V and Z and the set values of the timers/counters cannot be changed.
*5: Subprograms 2, 3 of the A4UCPU cannot be monitored.
*6: When the MELSECNET/10 network card is mounted, monitor cannot be executed if the connection target CPU is the AnU type.
*7: When the A8GT-J61BT13 of software version W or earlier is used, the timer/counter set values cannot be monitored/changed and device comments cannot be displayed.
*8: Monitor cannot be executed when the A8GT-J61BT13 of software version W or earlier is used.
*9: Only the link device assigned to the GOT can be monitored.
*10: The timer/counter coils and set values cannot be monitored/changed, BM cannot be monitored, and device comments cannot be displayed.

•Ladder monitor When any timer/counter set value was changed by the test function of the ladder monitor, the new value is not reflected on the display. Therefore, read it to the PLC again. Fault cause search and touch search cannot be used simultaneously.

•List program edit When the A2USH-S1/A2SH-S1/A2SH/A1SH/A1SJHCPU is used, there are the following restrictions on the list program edit range.
- When A2USHCPU-S1 is used: Within the A3UCPU range
- When A2SH/A1SH/A1SJHCPU is used: Within the A3NCPU range

•System monitor When using the MELSEC-QnA series to monitor or change the timer/counter settings or display device comments, use the CPU of version B or later. (Except the Q4ARCPU)

•Special unit monitor The AD75M□/A1SD75M□ special module can be monitored in the AD75P□/A1SD75P□ range.

•Servo amplifier monitor The servo amplifier monitor function can be used regardless of the connection configuration. Refer to Special report 2 "FA integrated functions" on page 8 for details.

SoftGOT

(GT SoftGOT2)

The maintenance functions cannot be used on GT SoftGOT2. For ladder monitor, list program edit, and network monitor, equivalent functions can be executed by using GX Developer on the same personal computer.

Selection of memory board

A memory board should be mounted when using the optional function or increasing the user area. As monitor data and special data (necessary when the special module monitor, motion monitor or servo amplifier monitor function is used) are stored into the user area, it may be necessary to increase the user area according to the amount of data. Confirm the capacity of monitor data/special data on the drawing software when they are

•When A985(-V)/A97□/A960/A956WGOT is used

Requirement of the memory board is shown on table A①

When using the memory board required functions

1. When the memory board required functions are used, a memory board must be mounted regardless of the free user area.
2. Calculate the total number of extended function OS installations in [Table A]②, and confirm the free user area in [Table B].
   * The extended function OS must be installed to use the functions given in [Table A]. Installation of the extended function OS reduces the free user area that stores monitor data.
3. Consider the free user area and the monitor data + special data capacity, and select the memory board type.

When not using the memory board required functions

After confirming the free user area on table B, check whether a memory board is required or not, and when it is required, select the memory board type according to the monitor data capacity.

<Note 1> When using the QCPU (Q mode)/QnACPU ladder monitor function, use the A9GT-QFNB(□M). The A9GT-FNB(□M) cannot be used. For the other functions, both the A9GT-QFNB(□M) and A9GT-FNB(□M) are available.
<Note 2> The A9GT-QFNB and A9GT-FNB are memory boards for the optional functions. Note that the free user area will not be added by mounting memory board.

•When A95□GOT is used

When using the memory board required functions, use the A95□GOT-□BD-M (equivalent to memory board mounting) regardless of the free user area.
When not using the memory board required function, select either the A95□GOT-□BD-M3 (3M byte user area) or A95□GOT-□BD (1M byte user area) according to the monitor data capacity.

[Table A]

Functions	① Memory board required/not required	② Number of extended function OS installations	
Video input/analog RGB input or external I/O	Not required	1	1 installation in all
Printer output (including file output by hard copy function)	Not required		
Barcode reader input	Not required		
Alarm history when CSV file is used	Not required		
Recipe function when CSV file is used	Required		
Audio output function	Required	1	1 installation in all
Recipe function	Required		
Special module monitor function	Required		
Gateway function	Required	2	—
Ladder monitor function (for QCPU (Q mode))	Required	2	Select any
Ladder monitor function (for QnACPU)	Required	2	
Ladder monitor function (for ACPU)	Required	1	
Ladder monitor function (for FXCPU)	Required	1	
List program edit function (for ACPU)	Required	2	—
System monitor function	Not required	1	—
Network monitor function	Required	1	—
Motion monitor function	Required	2	—
Servo amplifier monitor function	Required	2	—

[Table B]

Total number of extended function OS installations	Free user area (k bytes)							
	A985(-V)/A97□/A960/A956WGOT						A95□GOT	
	When memory board is not mounted	When memory board is mounted					Model name of GOT main unit	
		A9GT-QFNB*3 A9GT-FNB*3	A9GT-FNB1M	A9GT-FNB2M	A9GT-QFNB4M A9GT-FNB4M	A9GT-QFNB8M A9GT-FNB8M	A95□GOT-□BD	A95□GOT-□BD-M3
No function on [Table A] is used	1152	1152	2176	3200	5248	9344	1152	3200
1	896	896	1920	2944	4992	9088	896	2944
2	768	768	1792	2816	4864	8960	768	2816
3	512	512	1536	2560	4608	8704	512	2560
4	384	384	1408	2432	4480	8576	384	2432
5	128	128	1152	2176	4224	8320	128	2176
6	0	0	1024	2048	4096	8192	0	2048

List of products

GOT main units

Model name		Screen size [resolution]	Display device	Display color	Power source	Memory size		Regulation compliance*1
						1M	3M	
A985GOT-V	A985GOT-TBA-V	12 [800 x 600 dots]	High-intensity TFT color display	256 (When graphic is displayed: 65536)	100-240VAC	○		
	A985GOT-TBD-V				24VDC	○		
A985GOT	A985GOT-TBA			256	100-240VAC	○		
	A985GOT-TBD				24VDC	○		
	A985GOT-TBA-EU				100-240VAC	○		○
A975GOT	A975GOT-TBA-B	10 [640 x 480 dots]	High-intensity TFT color display	256	100-240VAC	○		
	A975GOT-TBD-B				24VDC	○		
	A975GOT-TBA-EU				100-240VAC	○		○
A970GOT	A970GOT-TBA-B		High-intensity TFT color display	16	100-240VAC	○		
	A970GOT-TBD-B				24VDC	○		
	A970GOT-TBA-EU				100-240VAC	○		○
	A970GOT-SBA		D-STN color display	8	100-240VAC	○		
	A970GOT-SBD				24VDC	○		
	A970GOT-SBA-EU				100-240VAC	○		○
	A970GOT-LBA		D-STN monochrome display	Monochrome (Black and white)	100-240VAC	○		
	A970GOT-LBD				24VDC	○		
	A970GOT-LBA-EU				100-240VAC	○		○
A960GOT	A960GOT-EBA	9 [640 x 400 dots]	High-intensity EL	Monochrome (Black and yellowish orange)	100-240VAC	○		
	A960GOT-EBD				24VDC	○		
	A960GOT-EBA-EU				100-240VAC	○		○
A956WGOT	A956WGOT-TBD	7 [480 x 234 dots]	High-intensity TFT color display	256	24VDC	○		○
A956GOT	A956GOT-TBD-M3	6 [320 x 240 dots]	High-intensity TFT color display	256	24VDC (Communication unit is required)		○	
	A956GOT-TBD					○		
	A956GOT-SBD-M3		STN color display	8			○	○
	A956GOT-SBD					○		○
	A956GOT-LBD-M3		STN monochrome display	Monochrome (Black and white)			○	○
	A956GOT-LBD					○		○
A953GOT	A953GOT-TBD-M3		High-intensity TFT color display	256	24VDC (Built-in RS-232C communication interface)		○	
	A953GOT-TBD					○		
	A953GOT-SBD-M3		STN color display	8			○	○
	A953GOT-SBD					○		○
	A953GOT-LBD-M3		STN monochrome display	Monochrome (Black and white)			○	○
	A953GOT-LBD					○		○
A951GOT	A951GOT-QTBD-M3		High-intensity TFT color display	256	24VDC (Built-in Q bus communication interface)		○	
	A951GOT-QTBD					○		
	A951GOT-QSBD-M3		STN color display	8			○	
	A951GOT-QSBD					○		
	A951GOT-QLBD-M3		STN monochrome display	Monochrome (Black and white)			○	
	A951GOT-QLBD					○		
	A951GOT-TBD-M3		High-intensity TFT color display	256	24VDC (Built-in QnA/A bus communication interface)		○	○
	A951GOT-TBD					○		○
	A951GOT-SBD-M3		STN color display	8			○	
	A951GOT-SBD					○		
	A951GOT-LBD-M3		STN monochrome display	Monochrome (Black and white)			○	○
	A951GOT-LBD					○		○
A950GOT	A950GOT-TBD-M3		High-intensity TFT color display	256	24VDC (Built-in RS-422 communication interface)		○	
	A950GOT-TBD					○		
	A950GOT-SBD-M3		STN color display	8			○	○
	A950GOT-SBD					○		○
	A950GOT-LBD-M3		STN monochrome display	Monochrome (Black and white)			○	○
	A950GOT-LBD					○		○

*1: Some combinations of GOT main unit and communication interface do not conform to the safety standards (UL/cUL/CE).

Software

Software	Software Versions	Included product				Remarks
		Drawing Software GT Designer2	Simulator function GT Simulator2	Easy data convert function GT Converter	SoftGOT function GT SoftGOT2	
GT Designer2 Version□	SW□D5C-GTD2-J New	○	—	○	○	Japanese version
	SW□D5C-GTD2-E New	○	—	○	○	English version
	SW□D5C-GTD2-JV New	Version upgrade software (upgrade GT Designer 2 to the latest version)				Japanese version
GT Works2 Version□	SW□D5C-GTWK2-J New	○	○	○	○	Japanese version
	SW□D5C-GTWK2-E New	○	○	○	○	English version
	SW□D5C-GTWK2-JV New	Version upgrade software (upgrade GT Works 2 to the latest version)				Japanese version
License key for GT SoftGOT *2	A9GTSOFT-LKEY-P	DOS/V License key (for Dsub 25 pin and parallel port)				
License key FD for GT SoftGOT2 *2	SW5D5F-SGLKEY-J New	7. License registration package for computer CPU module				Japanese version
	SW5D5F-SGLKEY-E New					English version

*2: GT Soft GOT2 License key is required for every DOS/V computer, and GT SoftGOT2 license key FD is required for every computer CPU unit.

Graphic Operation Terminal
900
series

List of products

Communication interface

Product name	Model name	Specifications			Regulation compliance*1
Bus connection board	A9GT-QBUSS	QCPU (Q mode) bus connection	For A985(-V)/975/970/960GOT	1 connector	
	A9GT-QBUS2S			2 connectors	
	A9GT-50WQBUSS		For A956WGOT	1 connector	
	A9GT-BUSS	QnA/ACPU bus connection	For A985(-V)/975/970/960GOT	1 connector	○
	A9GT-BUS2S			2 connectors	○
	A9GT-50WBUSS		For A956WGOT	1 connector	○
Bus connection unit	A9GT-QBUS2SU	QCPU (Q mode) bus connection	For A985(-V)/975/970/960/956(W)GOT	2 connectors	
	A9GT-BUSSU	QnA/ACPU bus connection		1 connector	○
	A9GT-BUS2SU			2 connectors	○
Serial communication board	A9GT-RS4	RS-422 connection (QnA/A/FXCPU direct connection, computer link connection, microcomputer connection)	For A985(-V)/975/970/960GOT	Without clock function	○
	A9GT-50WRS4		For A956WGOT		○
	A9GT-RS2	RS-232C connection (QCPU direct connection, computer link connection, microcomputer connection)	For A985(-V)/975/970/960GOT		○
					○
	A9GT-RS2T	RS-232C connection (microcomputer connection)	For A985(-V)/975/970/960GOT	Built-in clock function	
	A9GT-50WRS2	RS-232C connection (QCPU direct connection, computer link connection, microcomputer connection)	For A956WGOT	Without clock function	○
					○
Network connection unit	A7GT-J71LP23	MELSECNET/10	Inter-PC optical loop		
	A7GT-J71BR13		Inter-PC coaxial bus		
Data link connection unit	A7GT-J71AP23	MELSECNET (II)	Optical loop		
	A7GT-J71AR23		Coaxial loop		
	A7GT-J71AT23B	MELSECNET/B	Twisted pair bus		
CC-Link connection unit	A8GT-J61BT13	CC-Link (intelligent device station)	Twisted pair		○
	A8GT-J61BT15	CC-Link (remote device station)			○
	AJ65BT-G4-S3	CC-Link peripheral connection	RS-422 + CC-Link		
Ethernet communication unit	A9GT-J71E71-T New	Ethernet	10BASE-T		○

*1: Some combinations of GOT main unit and communication interfaces do not conform to safety standards (UL/cUL/CE).

Options

Product name	Model name	Specifications	
Video/RGB composite input interface unit	A9GT-80V4R1 New	For A985GOT-V (Required when using the video display function, RGB display function)	Video display function: NTSC/PAL input system, 4CH RGB display function: Analog RGB input system, 1CH
Video input interface unit	A9GT-80V4	For A985GOT-V (Required when using the video display function)	NTSC/PAL input system
RGB input interface unit	A9GT-80R1	For A985GOT-V(Required when using the RGB display function)	analog RGB input system
Backlight	A9GT-80LTT	For A985GOT(-V)	TFT color LCD HMI replacement backlight (1)
	A9GT-70LTTB	For A975/970GOT-TB□-B	
		For A975/970GOT-TBA (hardware version D or later)	
		For A975/970GOT-TBD (hardware version B or later)	
	A9GT-70LTT	For A975/970GOT-TBA (hardware version C or earlier)	
		For A975/970GOT-TBD (hardware version A)	
	A9GT-70LTS	For A970GOT-SB□/LB□	D-STN color/monochrome LCD HMI replacement backlight (a set of 2)
	A9GT-50LT	For A95□GOT-(Q)SBD/(Q)LBD(-M3)	STN color/monochrome LCD HMI replacement backlight (1)
Memory board (For A985(-V)/975/970/A960GOT(-B)/A956WGOT) *Refer to Memory board selection on page 58.	A9GT-FNB	Memory for optional function (A/FX ladder monitor compatible)	(Without expansion memory)
	A9GT-FNB1M		1MB expansion memory
	A9GT-FNB2M		2MB expansion memory
	A9GT-FNB4M		4MB expansion memory
	A9GT-FNB8M		8MB expansion memory
	A9GT-QFNB	Memory for optional functions (Q/QnA/A/FX ladder monitor compatible)	(Without expansion memory)
	A9GT-QFNB4M		4MB expansion memory
	A9GT-QFNB8M		8MB expansion memory
Protection sheet	A9GT-80PSC	For A985GOT(-V)	A Set of 5 (logo removable, The HMI is supplied with one)
	A9GT-70PSC	For A975/970GOT(-B)	
	A9GT-60PSC	For A960GOT	
	A9GT-50WPSC	For A956WGOT	
	A9GT-50PSC	For A95□GOT(-M3)	
Stand	A9GT-80STAND	For A985GOT(-V)	
	A9GT-70STAND	For A975/970/960GOT(-B)	
	A9GT-50WSTAND	For A956WGOT	
	A9GT-50STAND	For A95□GOT(-M3)	
Flash PC card	A9GTMEM-10MF	Memory capacity 16MB	For A985(-V)/A975/A970/A960GOT(-B) JEIDA Ver. 4.2 compliant (PCMCIA2.1 compliant)
	A9GTMEM-20MF	Memory capacity 32MB	
	A9GTMEM-40MF	Memory capacity 64MB	
PC card interface unit	A1SD59J-MIF	For A95□GOT(-M3)/A956WGOT	For SRAM PC card (optional)
External input/output interface unit	A9GT-70KBF	For A985/975/970/A960GOT(-B)	Proximity input/output: 8 DC inputs or Keyboard: 64 DC inputs, 16 transistor outputs
	A8GT-50KBF	For A95□GOT(-M3)/A956WGOT	
Numerical keypad	A8GT-TK	For external input/output interface unit connection	
Printer interface unit	A9GT-50PRF	For A95□(-M3)/A956WGOT	For parallel printer connection (1CH)
Attachment		**Conventional models**	**Replaceable models**
	A87GT-97ATT	A870GOT-TWS/SWS A8GT-70GOT-TW/TB/SW/SB	A97□GOT(-B)
	A87GT-96ATT	A870GOT-EWS, A8GT-70GOT-EW/EB A77GOT-EL-S5/EL-S3/EL	A960GOT
	A77GT-96ATT	A77GOT-CL-S5/CL-S3/CL/L-S5/L-S3/L	
	A85GT-95ATT	A85□GOT(-M3)	A95□GOT(-M3)

Cables

Product name		Model name	Cable length	3rd party products*1	Applications
Q bus connection cable *2 (For QCPU (Q mode))	Q extension cable Inter-GOT connection cable	QC06B	0.6m	–	For connection between QCPU and GOT
		QC12B	1.2m		For connection between GOT and GOT
		QC30B	3m		
		QC50B	5m		
		QC100B	10m		
	Q long-distance connection cable Inter-GOT long-distance connection cable	A9GT-QC150BS	15m	○	For connection between QCPU and GOT
		A9GT-QC200BS	20m		(A9GT-QCNB is required)
		A9GT-QC250BS	25m		For connection between GOT and GOT
		A9GT-QC300BS	30m		
		A9GT-QC350BS	35m		
Bus extension connector box		A9GT-QCNB	–	–	*Used for QCPU long-distance bus connection
A bus connection cable *2 (For QnA/ACPU/motion controller (A series))	Large CPU extension cable	A8GT-C12NB	1.2m	○	For connection between QnA/ACPU/motion controller (A series/extension base)
		A8GT-C30NB	3m		and GOT
		A8GT-C50NB	5m		
		AC06B	0.6m	–	For connection between QnA/ACPU/motion controller (A series/extension base)
		AC12B	1.2m		and A7GT-CNB
		AC30B	3m		
		AC50B	5m		
		AC12B-R	1.2m	○	For connection between QnA/ACPU/motion controller (A series/extension base)
		AC30B-R	3m		and A7GT-CNB (one-end right angle connector)
		AC50B-R	5m		
		A370C12B-S1	1.2m	–	For connection between motion controller (A series/main base) and GOT
		A370C25B-S1	2.5m		
		A370C12B	1.2m		For connection between motion controller (A series/main base) and A7GT-CNB
		A370C25B	2.5m		
	Small CPU extension cable Inter-GOT connection cable	A1SC07B	0.7m	–	For connection between QnAS/AnSCPU/motion controller (A series) and GOT
		A1SC12B	1.2m		For connection between GOT and GOT
		A1SC30B	3m		
		A1SC50B	5m		
	Small CPU extension cable	A1SC05NB	0.5m	–	For connection between QnAS/AnSCPU and A7GT-CNB
		A1SC07NB	0.7m		
		A1SC30NB	3m		
		A1SC50NB	5m		
	Small CPU long-distance connection cable	A8GT-C100EXSS-1	10.6m	○	For connection between QnAS/AnSCPU/motion controller (A series) and GOT
		A8GT-C200EXSS-1	20.6m		For connection between A7GT-CNB and GOT
		A8GT-C300EXSS-1	30.6m		*Combination of A8GT-EXCNB and A8GT-C□BS
	Inter-GOT long-distance connection cable	A8GT-C100BS	10m	○	For connection between GOT and GOT
		A8GT-C200BS	20m		
		A8GT-C300BS	30m		
	A0J2HCPU connection cable	A9GT-J2C10B	1m		For connection between A0J2HCPU power supply unit (A0J2-PW) and GOT
Bus connector conversion box		A7GT-CNB	–	–	*Used for QnA/ACPU long-distance bus connection
Buffer circuit cable		A8GT-EXCNB	0.5m		*Can be used with A8GT-C□BS as A8GT-C□EXSS-1.
RS-422 cable	A/FXCPU direct connection cable	AC30R4-25P	3m	○	For connection between QnA/A/FX(FX1, FX2, FX2C)CPU and GOT, for connection between FA-CNV□CBL and
	Computer link connection cable	AC100R4-25P	10m		GOT, for connection between FX-2PIF and GOT, for connection between FX-422AW0 and GOT, for connection
	AJ65BT-G4 cable	AC300R4-25P	30m		between serial communication unit (AJ71QC24(N)-R4) and GOT, for connection between AJ65BT-G4-S3 and GOT
	FXCPU direct connection cable FX function extension board connection cable	FX9GT-CAB0-150	1.5m	–	For connection between FXCPU (FX0, FX0S, FX0N, FX1S, FX1N, FX2N, FX2NC) and GOT,
		FX9GT-CAB0	3m		for connection between FXCPU extension board (FX1N-422-BD, FX2N-422-BD) and GOT
		FX9GT-CAB-10M	10m		
	RS232C/422 conversion cable	FA-CNV2402CBL	0.2m	–	For connection between QCPU and AC□R4-25P
		FA-CNV2405CBL	0.5m		
	Cable adaptor	FX-422AW0	1.5m		For connection between FXCPU and AC□R4-25P
	2PIF connection cable	FX-422CAB0	1.5m		For connection between FXCPU and FX-2PIF
	Junction adaptor	AC006-25PEXT	6cm	○	For junction connection (horizontal extension) between GOT (D-sub 25 pins: male) and RS422 cable (D-sub 25 pins: female)
2-port interface		FX-2PIF	–	–	*Used for FXCPU direct connection
RS-232C cable	QCPU direct connection cable	QC30R2	3m	–	For connection between QCPU and GOT
	FX function extension board connection cable	AC30R2-9SS	3m	○	For connection between FXCPU extension board (FX1N-232-BD) and GOT
	Data transfer cable	FX-232CAB-1	3m	–	For connection between personal computer (drawing software) (D-sub 9 pins: female) and GOT (D-sub 9 pins: female)
	Data transfer cable	AC30R2-9P	3m	○	For connection between personal computer (drawing software) (D-sub 25 pins: male) and GOT (D-sub 9 pins: female)
		F2-232CAB-1	3m	–	
		AC30R2	3m	–	For connection between personal computer (drawing software) (D-sub 25 pins: male)
		AC30N2A	3m		and GOT(D-sub 25 pins: male *25 pin-9 pin converter is required)
	Junction adaptor	AC006-9PEXT	6cm	○	For junction connection (horizontal extension) between GOT (D-sub 9 pins: female) and RS232C cable (D-sub 9 pins: male)
Printer cable		AC30PIO-20P	3m	–	For connection between GOT and parallel printer
PC card interface unit connection cable		A85GT-C05H	0.5m	○	For connection between GOT and PC card interface unit (A1SD59J-MIF)
CRT connection cable		AC50VG	5m	–	For connection between GOT and CRT
		AC300VG	30m	–	
A800 series → A900 series conversion cable		A7GT-CNB-BUS-1 New	0.3m	○	Bus connector conversion cable package (connector conversion module A7GT-CNB-BUS and conversion cable A8GT-C03BS)
		A7GT-CNB-RS4-1 New	0.1m	○	RS422 connector conversion cable package (connector conversion module A7GT-CNB-RS4 and conversion cable A9GT-C01R4-25P)

*1: Recommend products are available at Mitsubishi Electric System Service. Please contact your local sales office for details.
*2: Confirm the connector dimensions/shapes of the bus connection cables on page 52 "Bus connection cables".

Related manuals

All manuals are shipped as an optional product. Please contact your local Mitsubishi representatives.

Manual title	Overview
GT Works2 Version1/GT Designer2 Version1 Operating Manual (Startup·Introductory Manual)	Installing method of GT Designer2, screen creation guide for beginner.
GT Designer2 Version1 Operating Manual	GT Designer2 operation, data transmitting method, etc.
GT Designer2 Version1 Reference Manual	Objects specification, functions, settings, etc.
GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Extended·Option Functions Manual)	Extended functions and optional functions including utility, ladder monitor, special module monitor, network monitor, list program edit, motion monitor, and servo amplifier.
GOT-A900 Series User's Manual (GT Works2 Version1/GT Designer2 Version1 compatible Connection System Manual)	System configuration, cabling procedure, etc.
GOT-A900 Series Operating Manual (GT Works2 Version1/GT Designer2 Version1 compatible Gateway Functions Manual)	Gateway function, system configuration, settings, etc.
GT Simulator2 Version1 Operating Manual	GT Simulator2's screen configuration, specification, etc.
GT SoftGOT2 Version1 Operating Manual	GT SoftGOT2's screen configuration, specification, etc.
A985GOT/A975GOT/A970GOT/A960GOT User's Manual	Specification, Installation procedure, communication board/communication unit Installation.
A950GOT/A951GOT/A953GOT/A956GOT User's Manual	Specification, Installation procedure, communication board/communication unit Installation.

Safety Standards

Safety Standards

Beginning with UL Certification, we have met the safety standards of regulatory agencies.

Standard	Type of Certification	Products Covered
UL	UL508 (America)	A GOT
cUL	CSA (Canada)	A GOT
CE	LVD, EMC (Europe)	A GOT

Global Service Network

Global FA Center

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Mitsubishi Graphic Operation Terminal

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- To use the products given in this catalog properly, always read the "manuals" before starting to use them.
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- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
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