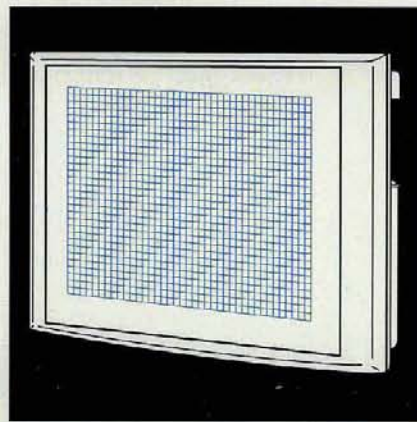# MITSUBISHI

Additional Explanation for

A810GOT Graphic Operation Terminal

GRAPHIC OPERATION TERMINAL

800

Series

GOT
MELSEC

Mitsubishi Graphic Operation Terminal

● SAFETY PRECAUTIONS ●

When using Mitsubishi equipment, thoroughly read this manual and the associated manuals introduced in the manual. Also pay careful attention to safety and handle the module properly.

These precautions apply only to Mitsubishi equipment. Refer to the CPU module user's manual for a description of the PC system safety precautions

These ● SAFETY PRECAUTIONS ● classify the safety precautions into two categories "DANGER" and "CAUTION".

⟨!⟩DANGER	Procedures which may lead to a dangerous condition and cause death or serious injury if not carried out properly.
⚠CAUTION	Procedures which may lead to a dangerous condition and cause superficial to medium injury, or physical damage only, if not carried out properly.

Depending on circumstances, procedures indicated by ⚠CAUTION may also be linked to serious results

In any case, it is important to follow the directions for usage.

Store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.

[DESIGHN PRECAUTIONS]

⟨!⟩DANGER

- A malfunction in the GOT main module, communication module, bus connection module, communication cable, and bus connection cable may keep the output ON or OFF. Add a circuit to externally monitor the output which could lead to a serious accident
  An accident may occur by a false output or a malfunction.

- If a communication error (including by a disconnected cable) occurs while the monitor is running on the GOT, the communication between the GOT and the PC CPU is interrupted, and the GOT stops running
  When using the bus connection. PC CPU goes down and the GOT stops running.
  When not using the bus connection: GOT is not operational.
  For a system configuration using a GOT, design the system such that the crucial switching to the system is performed by the equipment other than the GOT with the assumption that a communication error could occur in the GOT.
  An accident may occur by a false output or a malfunction

⚠CAUTION

- Do not bunch the communication cables and bus connection cables with the main circuit or power wires, or install them close to each other They should be installed 100 mm (3.9 inch) or more from each other, Failure to do so may result in noise that would cause malfunctioning.

[INSTALLATION PRECAUTIONS]

⟨!⟩DANGER

- Make sure to switch all phases of the external GOT's power supply off before installing or removing the GOT main module to/from the base
  If you do not switch off the external power supply, it will cause failure or malfunction of the module.

- Make sure to switch all phases of the external GOT's power supply off before mounting or removing the power supply module, communication module, bus connection module, optional module, memory cassette, and memory card to/from the GOT main module.
  If you do not switch off the external power supply, it will cause failure or malfunction of the module.

- Make sure to switch all phases of the external GOT and PC CPU side power supply off before connecting the communication cable and bus connection cable to the communication module and bus connection module.
  If you do not switch off the external power supply, it will cause failure or malfunction of the module.

⚠CAUTION

- Use the GOT in the environment given in the general specifications of the GOT User's Manual.
  Using the GOT outside the range of the general specifications may result in electric shock, fire or malfunctioning, or may damage or degrade the module

- Tighten the attachment screws for installing the GOT main module to the base within the range of specified torque.
  If the attachment screws are loose, it may result in fallout, short circuits, or malfunctions.
  Tightening the attachment screws too far may cause damages to the screws and/or the module, resulting in fallout, short circuits, or malfunctions.

- When using a bus connection, bus connection cables should be securely connected to the connectors of the GOT main module bus connection module, bus connector conversion module, and base unit. After connecting the connector, check to make sure they are securely tightened and not loose. Defective contact could cause a false input and output

- The communication cable should be connected securely to the connector on the GOT main module communications module and PC CPU side and the terminal block. After connecting the connector, check to make sure they are securely tightened and not loose. Defective contact could cause a false input and output

- When the power supply module, communication module, bus connection module, and the optional module are installed to the GOT main module, attach them to the GOT attachment part by aligning to the screw guide, then tighten the module fixed screws within the range of specified torque.
  If the module fixed screws are loose, it may result in fallout, short circuits, or malfunctions.
  Tightening the module fixed screws too far may cause damages to the screws and/or the module, resulting in fallout, short circuits, or malfunctions.

- Make sure the memory cassette and memory card are installed securely in their connector. After connecting the connector, check to make sure they are securely tightened and not loose. Defective contact could cause malfunctions.

- Turn off the memory access switch when connecting and disconnecting the memory card to the GOT.
  Doing this work while the switch is on results in damage of the data in the memory card.

[WIRING PRECATIONS]

◇DANGER

- Before wiring work, make sure all phases of the power supply have been obstructed from the outside. Failure to completely shut off the power-supply phases may cause electrical shock and/or damage to the module.

⚠CAUTION

- The FG and LG terminals should always be grounded using the class-3 or higher grounding designed specially for the GOT. Failure to ground these terminals may cause electric shock or malfunctioning.

- When wiring the GOT, check the rated voltage and terminal layout of the wiring, and make sure the wiring is done correctly. Connecting a power supply that differs from the rated voltage or wiring it incorrectly may cause fire or breakdown.

- Tighten the GOT terminal screws with the specified torque. If the terminal screws are loose, it may result in fallout short circuits, or malfunctioning.
  If the terminal screws are too tight, it may result in fallout short circuits or malfunctioning due to damage of the screws or module.

- Be careful not to let foreign matter such as shield's cutting chips or wire chips get in side the GOT main module, power supply module, communication module, bus connection module or optional module when wiring the GOT power supply module.
  This may result in fire, breakdowns or malfunctioning.

[PRECAUTIONS WHEN PERFORMING THE TEST OPERATION]

◇DANGER

- Read the manual carefully and fully understand the operation before the test operation (ON/OFF of bit devices, modifying current value of a word device, modifying timer/counter setting, modifying the current value, or modifying the current value of a buffer memory) of the user created monitor screen, system monitor, special module monitor, and circuit monitor.
  In addition, never modify data in a test operation to a device which performs a crucial operation to the system.
  It may cause an accident by a false output or malfunction.

[STARTING AND MAINTENANCE PRECAUTIONS]

◇DANGER

- Do not touch the connector while the power is on. Doing so could cause malfunction.

- Make sure to switch all phases of external power supply off before cleaning or re-tightening screws. If you do not switch off the external power supply, it will cause failure or malfunctions of the module. If the screws are loose, it may result in fallout, short circuits, or malfunctions. Tightening the screws too far may cause damages to the screws and/or the module, resulting in fallout, short circuits, or malfunctions.

[STARTING AND MAINTENANCE PRECAUTIONS]

⚠ CAUTION
• Never disassemble or modify the GOT main module, power supply module, communication module, optional module, memory cassette, and memory card. This may cause failure, malfunctions, injury, and/or fire. • Don't touch the conductive parts and electronic parts of the GOT main module, power supply module, communication module, optional module, or the memory cassette directly. This may cause the module to malfunction or failure. • Because they are made of resin, don't drop or give a strong shock to the GOT main module, power supply module, communication module, optional module, and memory cassette. This may cause failure.

[DISPOSAL PRECAUTIONS]

⚠ CAUTION
• When disposing of this product, treat it as industrial waste.

Revisions

Print Date	*Manual Number	Revision
Jun , 1997	IB (NA)-66766-A	First printing

Introduction

Thank you for choosing a Mitsubishi Graphic Operation Terminal
Before using your new PC, please read this manual thoroughly to gain an understanding of its functions so you can use it properly.
Please forward a copy of this manual to the end user.

Table of Contents

| 5. | **INSTALLATION** | **5- 1 to 5- 3** |

| **APPENDIX** | **Appendix- 1** |

About This Manual

The following product manuals are available. Please use this table as a reference to request the appropriate manual as necessary

Related Manuals

Manual Name	Manual No. (Model Code)
SW2NIW-A8GOTP Graphic Settings Software Package Operating Manual (Introductory Manual) This manual is designed for the first-time user of the A810GOT It describes how to create monitor screens with the A8GOTP, how to send monitor data to the GOT, and what the various screen displays mean (Included in the Software Package)	IB-66679 (13J900)
SW2NIW-A8GOTP Graphic Settings Software Package Operating Manual (Startup Manual) This describes the configuration of the A8GOTP system, precautions regarding the configuration, and the specifications of the various functions, as well as the installation procedures, startup procedures, screen configurations, and basic operation procedures (Included in the Software Package)	IB-66680 (13J901)
SW2NIW-A8GOTP Graphic Settings Software Package Operating Manual (Monitor Screen Creation Manual) This describes procedures for creating monitor screens, monitor functions that can be used with the A810GOT, procedures for setting the monitor functions, precautions to be observed when creating monitor screens, and precautions when utilizing the conventional GOT monitor data. (Included in the Software Package)	IB-66681 (13J902)
SW2NIW-A8GOTP Graphic Settings Software Package Operating Manual (Data Transmission/Debugging/Document Creation Manual) This manual describes the following items. (1) Procedures for downloading project data to the A810GOT and uploading data from the A810GOT (2) Procedures for installing the operating system in the A810GOT (3) Procedures for using the A8GOTP as a virtual sequencer and for debugging the A810GOT (4) Procedures for outputting created monitor data as a completed document (Included in the Software Package)	IB-66682 (13J903)
A870/A850/A851GOT Graphic Operation Terminal Operating Manual (Expanded Functions Manual) This manual describes the operation procedures for using system monitor functions, monitor functions for special function modules, and the dedicated monitor screens used with the circuit monitor functions. (Included in the Software Package)	IB-66683 (13J904)
A7GT-BUS Bus Connection Interface Module User's Manual (Hardware Manual) This describes the specifications of the bus connection module, the names of parts, and how to enter settings (Included in the A7GT-BUS)	IB-66556 (13JE92)
A7GT-BUS2 Multidrop Bus Connection Interface Module User's Manual (Hardware Manual) This describes the specification of the multidrop bus connection module, the names of parts, and how to enter settings. (Included in the A7GT-BUS2)	IB-66672 (13J849)
A7GT-BUSS Bus Connection Interface Module User's Manual (Hardware Manual) This describes the specification of the bus connection module, the names of parts, and how to enter settings. (Included in the A7GT-BUSS)	IB-66760 (13JL07)
A7GT-BUS2S Multidrop Bus Connection Interface Module User's Manual (Hardware Manual) This describes the specification of the multidrop bus connection module, the names of parts, and how to enter settings (Included in the A7GT-BUS2S)	IB-66761 (13JL08)

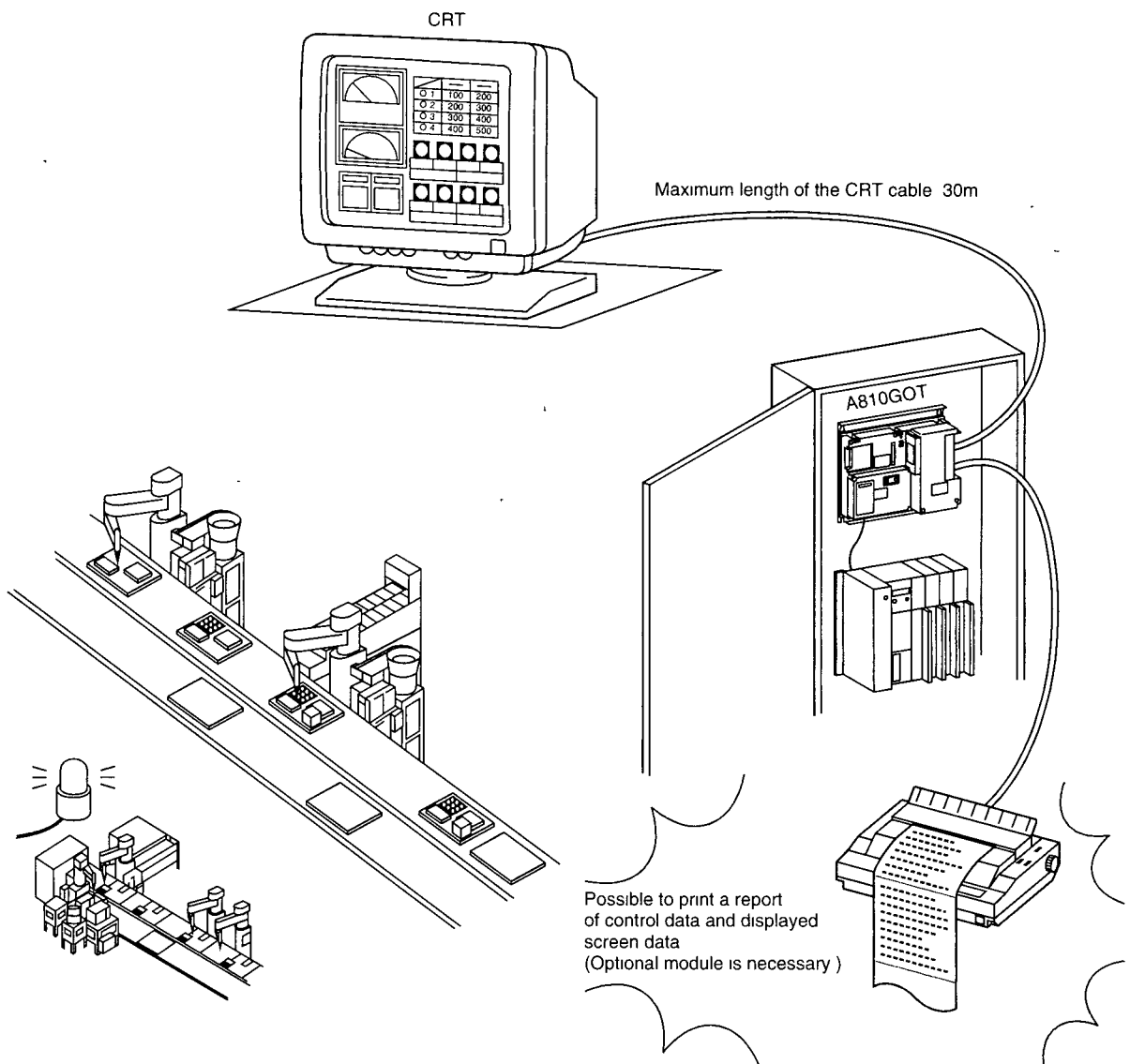| Manual Name	Manual No. (Model Code)
A8GT-70PRF Printer Interface Module User's Manual (Hard Ware Manual) This describes the specification of the printer interface module and how to enter settings (Included in the A8GT-70PRF)	IB-66706 (13J867)
A8GT-70KBF Operation Panel Interface Module User's Manual (Hardware Manual) This describes the specification, names of the parts, installation method and external dimensions for use the module (Included in the A8GT-70KBF)	IB-66769 (13JL17)
A8GT-RS4 Serial Communication Module User's Manual (Hardware Manual) This manual describes the specification, names of the parts, installation method for use the module (Included in the A8GT-RS4)	IB-66635 (13J832)
A8GT-PW24 Power Module User's Manual (Hardware Manual) This manual describes the specification, names of the parts, installation method for use the module (Included in the A8GT-PW24)	IB-66707 (13J868)
A7GT-J71AT23B/R23 Data Link Module User's Manual This contains the specifications for the MELSECNET(II)Optical Data Link Module MELSECNET(II) Coaxial Data Link Module, as well as the names and settings for the various parts. (Included in each Data Link Module)	IB-66438 (13JE26)
A7GT-J71AT23B Data Link Module User's Manual This manual explains the specification of the MELSECNET/B data link module, the names of parts, and how to enter settings (Included in the A7GT-J71AT23B)	IB-66439 (13JA81)
A7GT-J71LP23/BR13 Network Module User's Manual This manual contains the specifications for the MELSECNET/10 Optical Loop Network Module/MELSECNET/10 Coaxial Bus Network Module , as well as the names and settings for the various parts (Included) (Included in each Network Module)	IB-66558 (13JE94)
MELSECNET, MELSECNET/B Data Link System Reference Manual This manual contains an overview of the MELSECNET(II) and MELSECNET/B, as well as the specifications, names of parts, and various settings (Sold separately)	IB-66350 (13JF70)
Melsecnet/10 Network System Reference Manual (for PC networks) This manual contains an overview of the MELSECNET/10, along with the specifications, names of parts, and the settings (Sold separately)	IB-66440 (13JE33)
Computer Link/Multidrop Link Module User's Manual (Computer Link Functions/Printer Functions Manual) This manual describes the module settings, wiring, programming, troubleshooting procedures, and other information concerning communication with external equipment using the dedicated protocol, the no-protocol mode and the bi-directional mode for the computer link module, as well as printer functions. This manual can be used with the following computer link modules A1SJ71UC24-R2, A1SJ71UC24-R4, A1SJ71UC24-PRF, AJ71UC24, A2CCPUC24, A2CCPUC24-PRF, and A1SCPUC24-R2 (Sold separately)	SH-3511 (13JE77)
AJ71UC24 Computer Link/Multidrop Link Module User's Manual (Hardware Manual) This manual explains the system configuration when using the module, the module specifications, and the names of parts and the settings, and contains diagrams of the external (Included in the AJ71UC24)	IB-66559 (13JE95)
A1SJ71UC24-R4 Computer Link/Multidrop Link Module User's Manual (Hardware Manual) This manual explains the system configuration when using the module, the module specifications, and the names of parts and the settings, and contains diagrams of the external dimensions (Included in the A1SJ71UC24-R4)	IB-66582 (13J805)

1. OVERVIEW

This is an additional manual which explains the system configuration, specifications, installation, etc of A810GOT Graphic Operation Terminal (abbreviated as A810GOT hereafter).

This is an additional manual which explains only the different items from contents in the A870GOT Graphic Operation Terminal User's Manual included in this package
Read the User's Manual in this package for the items not covered in this manual
(Refer to Section 1 4 for details how to use this manual).
A810GOT is a dedicated monitor display device, which can display on a large screen monitor by connecting to a CRT

CRT

Maximum length of the CRT cable 30m

A810GOT

Possible to print a report
of control data and displayed
screen data
(Optional module is necessary)

Point
A810GOT is a display driver dedicated to the use with a monitor display driver, thus sprite functions and utility functions which are performed from the operator console cannot be used.
Refer to Section 3 7 for the functions available and not available

1.1 Software Packages for A810GOT

When creating screens for A810GOT or installing the OS, use software of versions shown below or later.

|	
Drawing software	SW2NIW-A8GOTP software version J or later
OS program	SW2NIW-A8SYSP software version J or later
Special module monitor data	· SW2NIW-A8GMDP (Special module monitor functions cannot be used)

Point

For the OS, install the A870GOT basic OS

Install a proper communication driver for the connection type to be made

Functions as the system monitor, circuit monitor and special module monitor cannot be used with the A810GOT, so do not install the OS program designated for the extended functions to A810GOT

Set the GOT type to A870GOT when creating screen data

1.2 How to Check the Version of the Software Package

(1) How to check the version of SW2NIW-A8GOTP, SW2NIW-A8SYSP

How to check the version of the software package is described below

To check the version, see the label on the product floppy disk

MITSUBISHI
MELSEC   3 5inch
SOFTWARE PACKAGE
MODEL SW2NIW-A8GOTP
DATE   9704A J 1/4
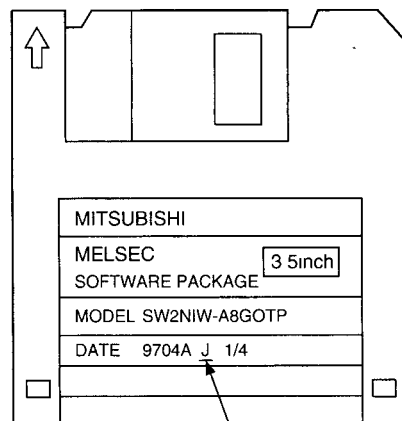
Indicates the software version

(2) How to check the version after the OS installation to A810GOT

How to check the version after the OS SW2NIW-A8SYSP J version or later version is installed to GOT is described below

The version can be displayed by the internal memory information (OS) function of the SW2NIW-A8GOTP drawing software as shown below.

Refer to the SW2NIW-A8GOTP Operation Manual (Data Transfer, Debug and Document Editing) for the operation

- Basic functions   Ver5.0 *
- PC communication driver   Ver5 0 *
- Option driver   Ver5.0. *

1.3   Features

(1) **Can display on a large screen monitor with a general-use CRT.**

CRT
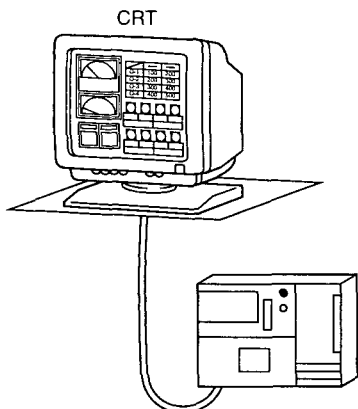
(2) **Various connection modes**

User can select the connection mode most suitable for individual need from bus connection, which enables high speed communication, MELSECNET connection, CPU direct connection, computer link connection, and more

(The connection modes are equivalent to A870GOT)

When multiple display devices are used in the system, A810GOT can be used combined with other display devices (such as A870GOT and A850GOT)
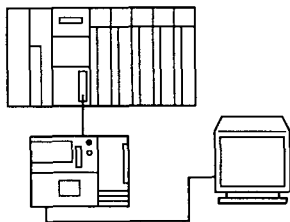
① Bus connection   ② MELSECNET connection
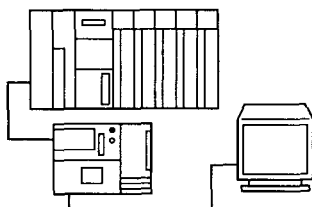
| Connect using the extension connector of the base module |
| Up to three modules can be connected |
| Maximum distance 30m |

③ CPU direct connection
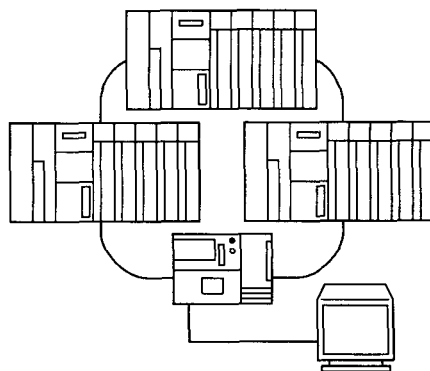
| Connect as a local station or a normal station of MELSECNET(II)/B/10 |
| Number of modules that can be connected is determined based on the specifications of the data link and the network |

| Connect to the CPU with the RS-422 cable |
| Maximum distance 30m |

④ Computer connection

⑤ Connection to the MELSEC-FX series
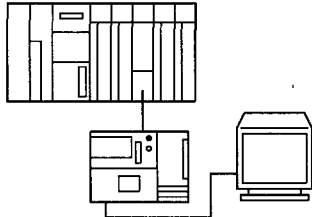
Connect to a computer link module with 1 1 relationship Can connect GOT up to the maximum number allowed for the computer link module connection Maximum distance 200m
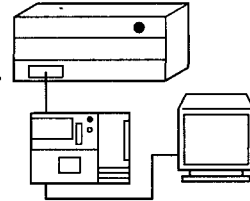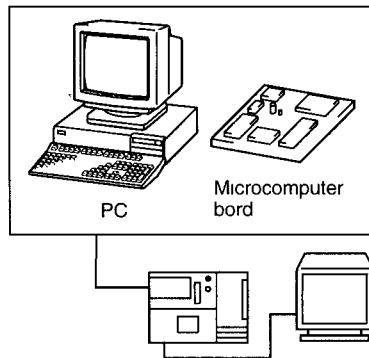
Connect to the CPU of FX series with an RS-422 cable Maximum distance 30m

⑤ Connection to a PLC of other vendors

⑥ Microcomputer connection

Microcomputer bord

PC
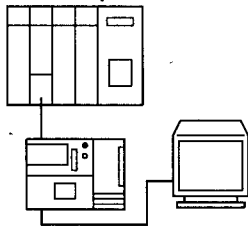
Monitors via the Omron upper link   Maximum distance 200m

Monitors GOT's virtual devices by means of data communication via the RS-422 communication from a personal computer or a microcomputer board   Maximum distance 200m

(3) Improved maintenance access and resistance to environmental factors

The GOT is configured of a main display module, a power supply module, and a communications module which connect to the PC CPU. This modular configuration makes maintenance much easier when required by any of the modules

A810GOT

Power supply module

Communication module
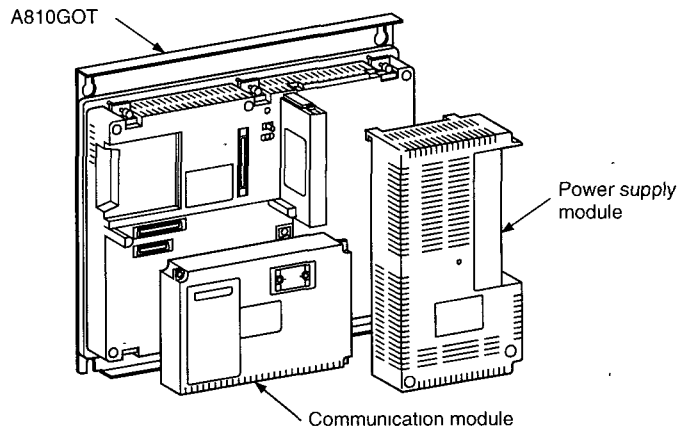
(4) Screen debugging without connecting PC CPU

The graphics software supports a screen debugging function, so screens can be debugged simply by connecting the GOT and computer, without connecting the PC CPU
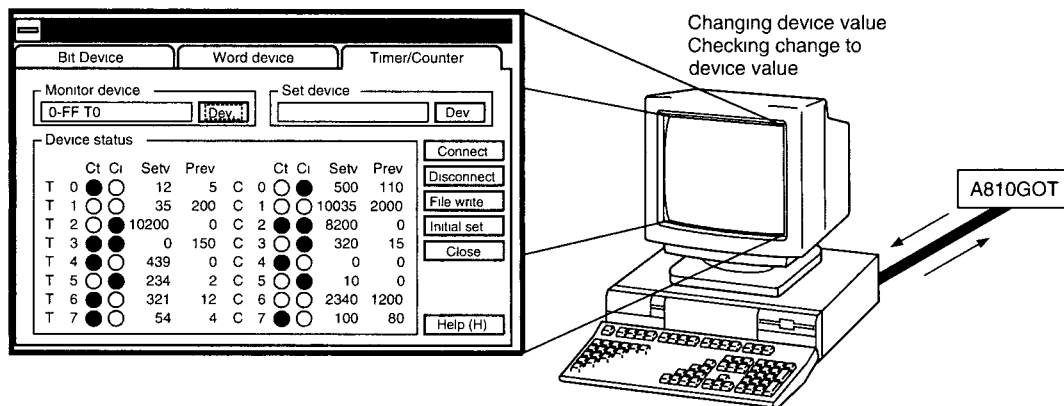
**(5) Worldwide access through multi-language capability**

The Unicode[2] system is used to enable approximately 26,000 characters to be used making it possible to accommodate languages from all over the world, including Japanese, Korea, Chinese (Mandarin), English, Italian, and French.

[2] Unicode = a standard international character code

(6) Graphics software is easier to use than ever before

The graphics software runs on Windows 3.1, Windows95[3] (DOS/V[4]), so it can be used in a variety of development environments Both Japanese and English can be used on-screen

Through, operation Windows is easier than ever before
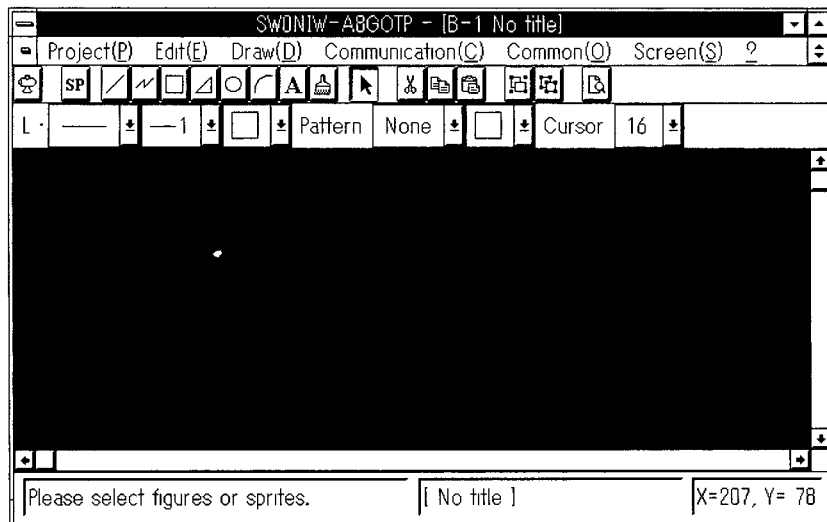
In addition, a panel kit library significantly reduces the amount of time required to create screens

[3] Windows 3 1, Windows 95 is a registered trademark of Microsoft Corporation (U S.).

[4] DOS/V is a registered trademark of IBM Corporation (Japan)

1.4   How to Use This Manual

As mentioned in the overview, this manual explains only the topics not covered the A870GOT User's
Manual supplied with the product package
The following are the items which are not explained in this manual. For descriptions on these items,
refer to the A870GOT User's Manual supplied with the package.

System configuration of A810GOT
for each connection mode..   .. .. Refer to Section 2.4 of this manual and Chapters 2 and
                                                12 of A870GOT User's Manual
Handling of components ...   . Refer to Chapter 3 of A870GOT User's Manual.
List of error codes and error messages .... Refer to Chapter 11 of A870GOT User's Manual

1.5   Supplied Parts in the Package

Check that all devices listed below are included in the product package after unpacking

(1) A810GOT-CS

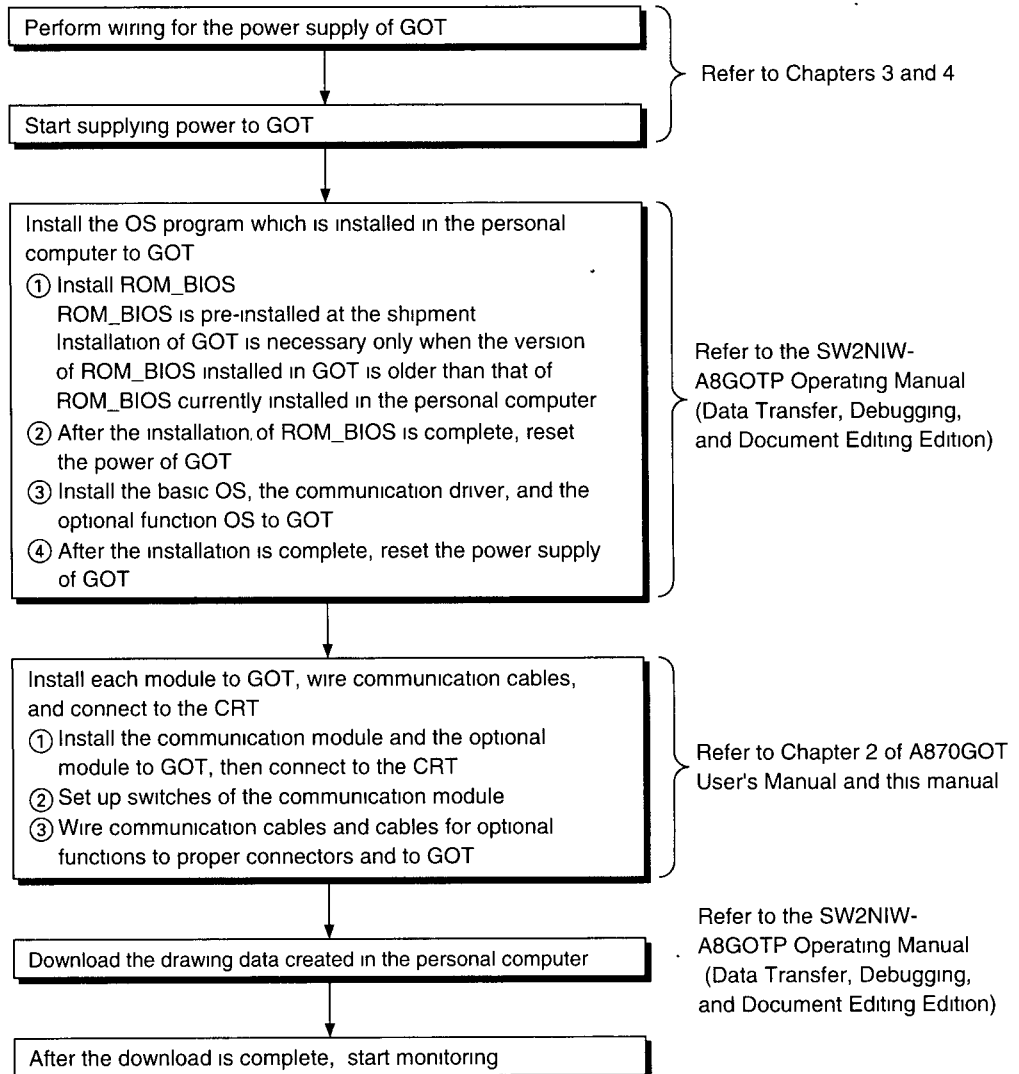|	
A810GOT main module	1
Power supply module (A8CT-PWTF)	1
This manual (A810GOT Additional User's Manual)	1
A870GOT User's Manual	1

*1 Power supply module is pre-installed to A810GOT

(2) A8GT-10GOT-C

A810GOT main module	1
This manual (A810GOT Additional User's Manual)	1
A870GOT User's Manual	1

1.6   Preparation Procedures Before Operation

```
┌─────────────────────────────────────────────┐  ⎫
│ Perform wiring for the power supply of GOT    │  ⎬  Refer to Chapters 3 and 4
└─────────────────────────────────────────────┘  │
                      ↓                            │
┌─────────────────────────────────────────────┐  │
│ Start supplying power to GOT                  │  ⎭
└─────────────────────────────────────────────┘
```

```
┌─────────────────────────────────────────────┐  ⎫
│ Install the OS program which is installed in  │  │
│ the personal computer to GOT                  │  │
│  ① Install ROM_BIOS                           │  │
│     ROM_BIOS is pre-installed at the shipment │  │  Refer to the SW2NIW-
│     Installation of GOT is necessary only     │  │  A8GOTP Operating Manual
│     when the version                          │  │  (Data Transfer, Debugging,
│     of ROM_BIOS installed in GOT is older     │  ⎬  and Document Editing Edition)
│     than that of                              │  │
│     ROM_BIOS currently installed in the       │  │
│     personal computer                         │  │
│  ② After the installation of ROM_BIOS is      │  │
│     complete, reset the power of GOT          │  │
│  ③ Install the basic OS, the communication    │  │
│     driver, and the optional function OS to   │  │
│     GOT                                       │  │
│  ④ After the installation is complete, reset  │  │
│     the power supply of GOT                   │  ⎭
└─────────────────────────────────────────────┘
```

```
┌─────────────────────────────────────────────┐  ⎫
│ Install each module to GOT, wire              │  │
│ communication cables, and connect to the CRT  │  │
│  ① Install the communication module and the   │  │  Refer to Chapter 2 of A870GOT
│     optional module to GOT, then connect to   │  ⎬  User's Manual and this manual
│     the CRT                                   │  │
│  ② Set up switches of the communication module│  │
│  ③ Wire communication cables and cables for    │  │
│     optional functions to proper connectors   │  │
│     and to GOT                                │  ⎭
└─────────────────────────────────────────────┘
```

```
                                                    Refer to the SW2NIW-
┌─────────────────────────────────────────────┐   A8GOTP Operating Manual
│ Download the drawing data created in the      │   (Data Transfer, Debugging,
│ personal computer                             │   and Document Editing Edition)
└─────────────────────────────────────────────┘
                      ↓
┌─────────────────────────────────────────────┐
│ After the download is complete, start         │
│ monitoring                                    │
└─────────────────────────────────────────────┘
```

2. SYSTEM CONFIGURATION

2.1 System Configuration When Creating Monitor Screens

This shows the system configuration when using the graphics software to create monitor screens.
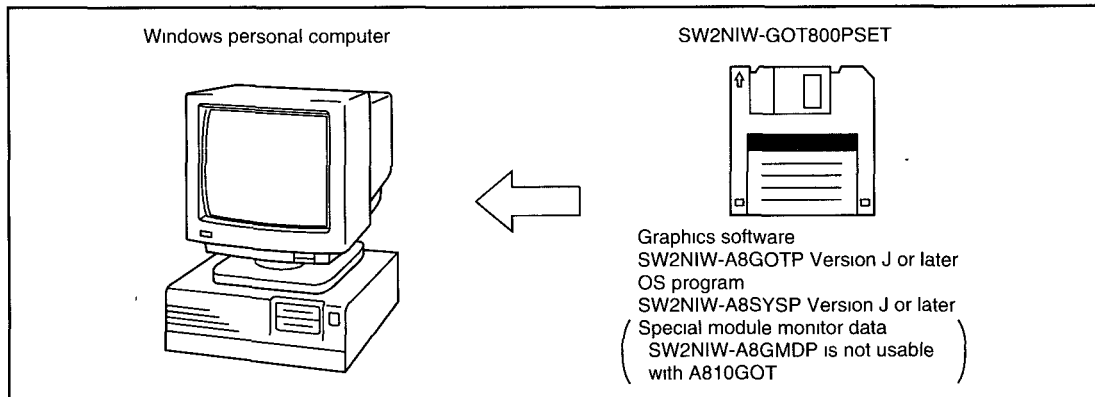
Main module : Personal computer which runs Microsoft Windows Ver. 3.1
       Personal computer which runs Microsoft Windows 95
Main memory · At least 4 MB is required (8 MB or more is strongly recommended)
Hard disk At least 10 MB of space must be available when the program is installed
CRT   · Must be able to connect to main module and be used with Microsoft Windows
Mouse   : Any mouse which can be used with a Windows computer

- Windows 3.1, Windows 95 is a trademark of Microsoft Corporation.

2.2 System Configuration Used for Data Transmission, Debugging, and Document Creation

2.2.1 System configuration

This shows the system configuration used transmitting data, debugging, and creating documents

Windows personal computer

RS-232C cable

A810GOT

SW2NIW-GOT800PSET
Graphics software
SW2NIW-A8GOTP Version
J or later
OS program
SW2NIW-A8SYSP Version
J or later
(Special module monitor data
SW2NIW-A8GMDP is not
usable with A810GOT)

Printer cable

Windows-Compatible printer
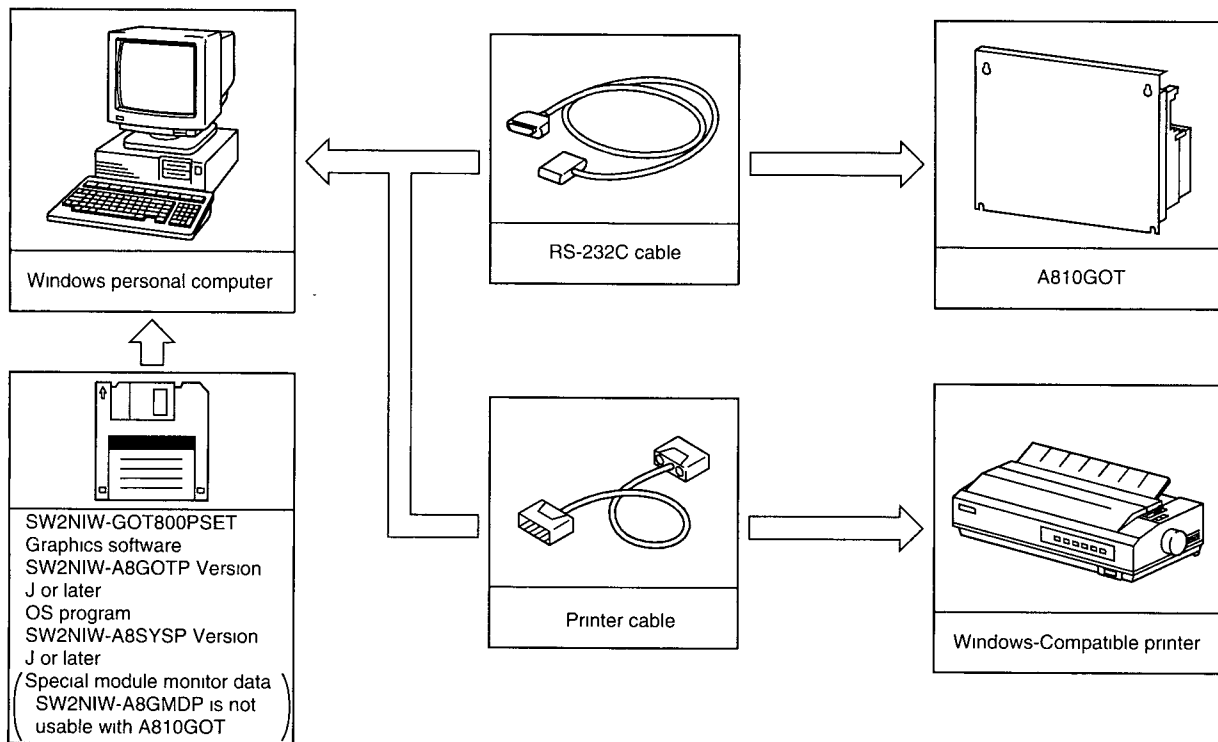
2.2.2 RS-232C cables used for data transmission

The cable used when transmitting data is the same cable used for data transmission of A870GOT.

(1) For the D-sub 9pin which the interface is RS-232C and the operation system is DOS/V.

The cable shown in the internal connections drawing below, or a cable with model name noted below, is required.
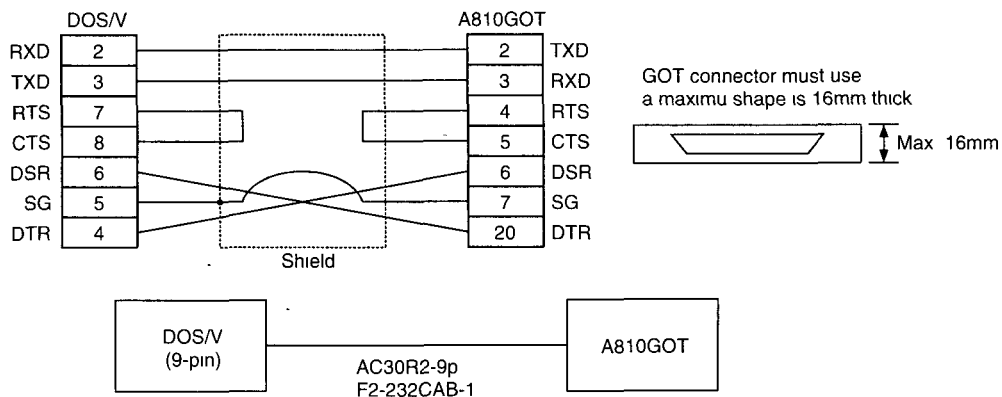
Maker	Model Name
Mitsubishi Electric	AC30R2-9P
	F2-232CAB-1 (introductory product)

2.3   Things to know about the A810GOT System Configuration

2.3.1   Connection modes available for A810GOT

Connection modes available for A810GOT are shown below
Connection modes available for A810GOT are the same as those for A870GOT.
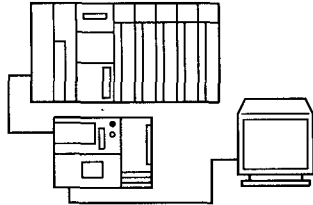
① Bus connection   ② MELSCNET connection   ③ CPU direct connection
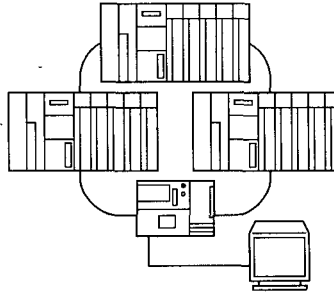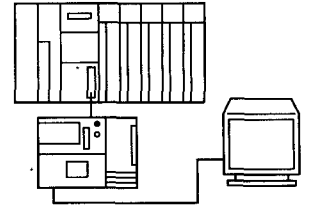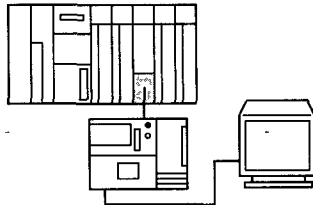
④ Computer link connection   ⑤ MELSEC-FX series connection   ⑥ Connection to a PLC of other vendors
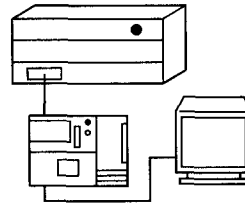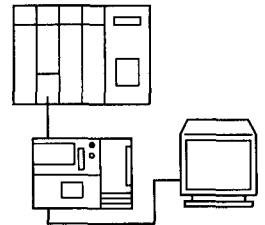
⑦ Microcomputer connection

PC   Microcomputer bord
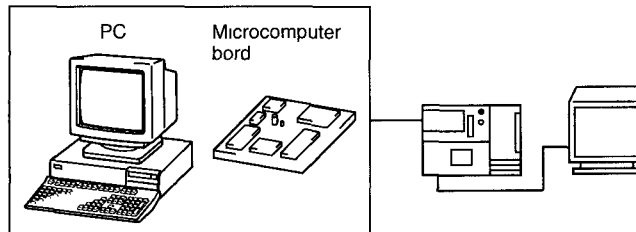
2.4　System Configuration for Monitoring

2.4.1　System configuration

CRT	Power supply module
	A8GT-PWTF A8GT-PW24

Connection cable	GOT	Communication module
		The communication module differs depending on a connection status Refer to the A870GOT User's regarding a system configuration of the connection destination from the communication module
AC50VG AC300VG Creationable with user	A810GOT	

Memory cassette Requirs when extending the memories	Printer interface module Requirs when using the functions	External I/O interface module Requirs when using the external I/O function
A8GT-MCA□MFDW	A8GT-70PRF	A8GT-70KBF

Connection cable	Refer to the A8GT-70KBF Users Manual regarding the system configuration hereafter
AC30PIO-20P AC300PIO-20P	

Printer
ESC/P-Compatible printer

There is only one channel for the optional module Therefore, only one of the above can be connected at a time

2.4.2 Precautions for the system configuration

(1) Power supply module
For the power supply module, use A8GT-PWTF (100V power supply for TFT type AG70GOT) or A8GT-PW24 (24V power supply).

(2) Memory cassette
User a memory cassette when expanding the built-in memory capacity (up to 4,864 Kbytes) The memory cassettes supported are equipped with the circuit monitor function, but the circuit monitoring cannot be performed.

(3) Prevention of CRT display flicker
If the CRT is equipped with a grounding terminal, always ground on the CRT side

(4) Printer interface module
This is used for the hardcopy function, in which the contents of the current A810GOT display are printed out and the report function, in which a report of the status of the PC CPU device is printed out
Note that ABGT-70KBF cannot be used while this module is in use
Refer to the ABGT-70PRF User's Manual for the installation of this module, cables and printer

(5) Operation panel interface module
This is used to control external input (ON/OFF of relays) and output (lamps and buzzers).
Note that when A8GT-70RPF cannot be used while this module is in use
Refer to the A8GT-70KBF User's Manual for the installation of this module, cables and the operation panel

(6) When grounding is not available for the PC CPU, the FG terminal of A810GOT and the LG terminal
When the PC CPU and A810GOT does malfunction by grounding the FG or LG terminal of A810GOT on the PC CPU side, connect the FG terminals on the PC CPU and on the A810GOT as shown below

Each FG terminal of the PC CPU and
the A810GOT is to be connected
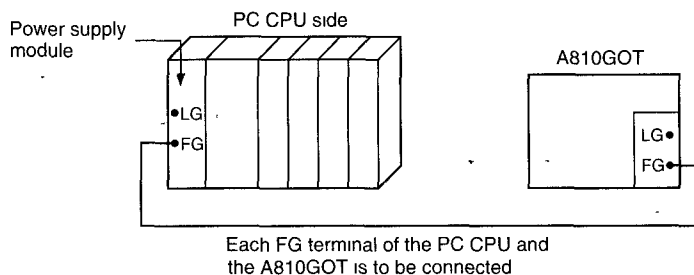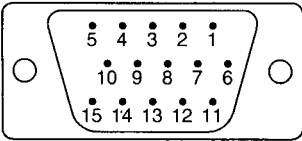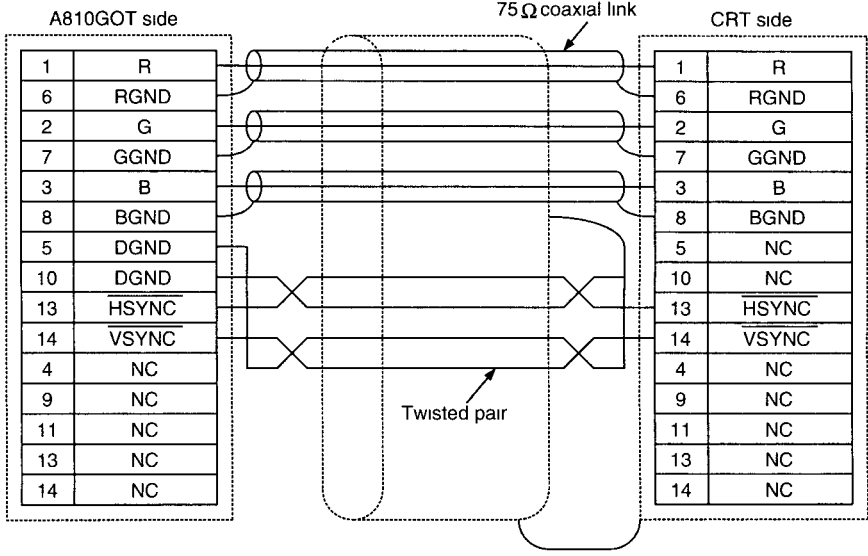
2.4.3 When the CRT connection cable for the A810GOT is made by the user

The connector on the A810GOT side and the pin orders, and connection charts are shown below for users to make cables by themselves.
Keep the length of the cable at 30m or shorter when making cables
Refer to the CRT User's Manual for the connector on the CRT side

Model		15 pin shrink D sub-screw female type DDK-17HE-R13150-73MC2		
Connector (on the A810GOT side)	Pin order 5 4 3 2 1 10 9 8 7 6 15 14 13 12 11	**No.**	**Signal name**		**director of Signal GOT↔CRT**

No.	Signal name		director of Signal GOT↔CRT
1	Analog R (red)	R	———►
2	Analog G (green)	G	———►
3	Analog B (blue)	B	———►
4	—	NC	—
5	Return R (red)	DGND	◄———
6	Return G (green)	RGND	◄———
7	Return B (blue)	GGND	◄———
8	—	BGND	—
9	Digital GND	NC	—
10	—	DGND	—
11	—	NC	—
12	—	NC	—
13	Horizontal cycle signal	$\overline{\text{HSYNC}}$	———►
14	Vertical cycle signal	$\overline{\text{VSYNC}}$	———►
15		—	

Connection chart

A810GOT side

1	R
6	RGND
2	G
7	GGND
3	B
8	BGND
5	DGND
10	DGND
13	$\overline{\text{HSYNC}}$
14	$\overline{\text{VSYNC}}$
4	NC
9	NC
11	NC
13	NC
14	NC

75 Ω coaxial link   CRT side

1	R
6	RGND
2	G
7	GGND
3	B
8	BGND
5	NC
10	NC
13	$\overline{\text{HSYNC}}$
14	$\overline{\text{VSYNC}}$
4	NC
9	NC
11	NC
13	NC
14	NC

Twisted pair

Maximum cable length   Maximum 30m

2.4.4 Supported CRTs

Supported CRTs (CRT with analogue RGB input for DOS/V is also supported) are listed below.
Refer to the CRT User's Manual for specifications and handling of CRT's

RD15M		15 inch	1280 × 1024 dot	Introductory product
RD17M	Manufactured by Mitsubishi Electric Co.	17 inch	1024 × 1024 dot	
RD17V		17 inch	1280 × 1024 dot	

Introductory products mean that they have passed our regulated inspection

2.4.5 Troubleshooting

When an error such as a communication error occurs and an error message is displayed on the CRT, remove the cause of the error and perform the reset operation to A810GOT (push the reset button, or turn on the power again)
Refer to the A870GOT User's Manual for error messages.

Check the communication line
(communication module,
communication cable)

OK

Error message display

Check the error contents and cancel the cause

Reset the A810GOT
(Press the reset buttom, or turn on the power again)
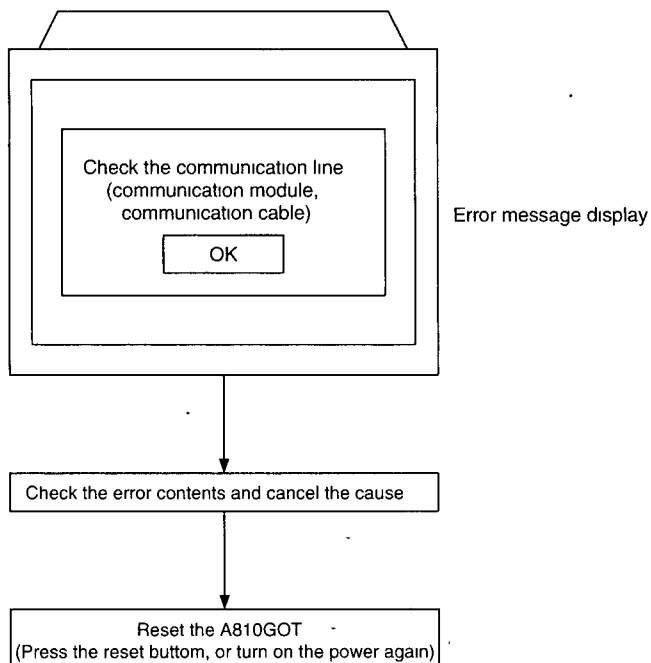
3. SPECIFICATIONS

3.1   General Specifications

Item	Specifications			
Usage environment temperature	0 to 55°C			
Storage environment temperature	-20 to 75°C			
Usage environment humidity	10 to 90%RH, No condensation formation			
Storage environment humidity	10 to 90%RH, No condensation formation			
Vibration resistance	Complies with JIS B 3501, IEC 1131-2	When there is intermittent vibration		
		Frequency	Acceleration	Amplitude	Sweep count
		10 to 57Hz	—	0 075mm (0 003in)	10 times in each direction for X, Y, Z (80 minutes)
		57 to 150Hz	9 8m/s² (1G)	—	
		Where there is continuous vibration			
		10 to 57Hz	—	0 035mm (0 001in)	
		57 to 150Hz	4 9m/s² (0 5G)	—	
Shock resistance	Complies with JIS B3501, IEC1131-2 (147m/s² (15G), 3 times in the direction for each of X, Y, Z)			
Usage environment	No corrosive gas, etc			
Usage altitude	2000m or less			
Installation location	Inside the control panel			
Over voltage category *1	II or less			
Pollution level *2	2 or less			

*1   Shows if an estimate has been made for which distribution areas the connections will be done for the equipment from the public power grid to the equipment installation area inside the configuration
Category II applies to equipment that receives its power from fixed facilities. The surge resistance voltage for equipment rated to 300V is 2500V

*2   Shows the index for inductive matter generation in the environment in which the equipment is used   Pollution level 2 is for dirt that is non-inductive   However, occasionally inductance can be generated in the environment by condensation.

3.2 Performance Specifications

Item		Specifications
		A8GT-10GT-C
Display	Resolution	640dots × 480dots
	Screen size	Depends on the CRT connected
	Colors	15 colors
	Number of screens	Max 1024 screens each for the base and window screens (Screens are switched from the sequence program)
	Message language	Japanese only
Memory	Type*1	Built-in memory (Flash ROM)
	Usage	Storage for the project data
	Capacity	Max 768Kbytes (Max 512Kbytes when the optional drive is installed)
Sprite function		Refer to Section 3 8
Analogue RGB interface		For CRT connection One channel
RS-232C interface		For personal computer connection One channel
Memory card interface		For the connection of SRAM memory card based on JEIDA Ver 4 0 or later One channel
Communication module connection interface		For communication module connection One channel
Memory cassette interface		For the connection of the expansion memory cassette One channel
Optional module connecting interface		For the connection of a printer interface module/operation panel interface module One channel
Life	Internal memory*2	Number of writes 100,000 times
I/O allocation		Special 32 points (for bus connection only)
External dimensions		227mm(H) x 269 5mm(W) x 86 9mm(D)
Weight		1 3 Kg (Main unit only)

*1   The internal memory is a ROM on which new data can be written without deleting existing data
    (the power supply for data backup is not necessary)

*2   When a part replacement is necessary, consult one of our agencies in your area.

Remark

When a momentary power failure occurs, GOT will erase the display from the screen
However, if the power failure is less than 20ms, functions such as monitoring work properly

3.3   Power Supply Module

Item	Specifications
	A8GT-PWTF
Input power supply voltage	100 to 120VAC (+10%, -15%)/200 to 240V (+10%, -15%)
Input frequency	50/60Hz (±3%)
Max input apparent power	100VA
Inrush current	20A max (264VAC, max load)
Allowable momentary power failure	Within·20ms
Noise withstand resistance	Noise voltage 1500 Vpp, noise width 1 s, noise frequency 25 to 60Hz, based on noise simulation
Voltage withstand resistance	Between AC external group and ground 1500VAC, for 1 minute Between DC external terminal group and ground 500VAC, for 1 minute
Insulation resistance	Between AC external terminal group and ground 500VDC, 5M min by means of insulation resistance
External output *3	Transistor output 2 points (RUN, OUTPUT)
Compatible power cable size	0 75 to 2 mm²
Compatible crimping terminal	V1 24-4, V1 25-YS4A, V2-S4, V2-YS4A
Compatible tightening torque	118 N cm (12kg cm)
External dimensions	182mm (7 2 inch)(H) × 98mm(3 9 inch)(W) × 50mm(2 0 inch)(D)
Weight	450g(1 0 lb)

*3 ① External output specifications

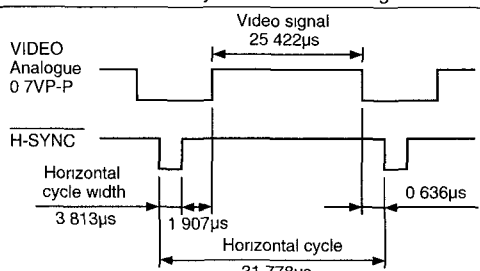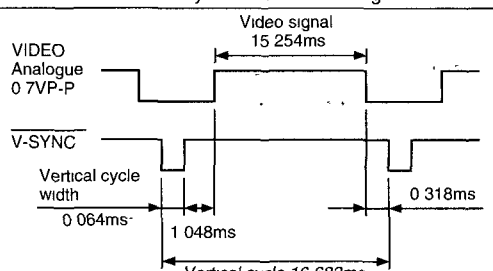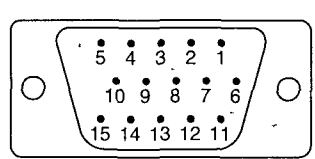| Item		Specifications
Insulation method		Photocopier insulation
Usable load voltage range		10 2 to 30VDC
Max load current		0 5 A/point, 1A/1 common
Max surge current		1a, 100 s max
Leakage current when off		0 1mA max
Max drop in voltage when on		0 9VDC(typ), 0 5A, 1 5VDC(max), 0 5A
Response time	OFF → ON	2 ms max
	ON → OFF	2ms max (resistance load)
Surge killer		Zener diode built into photocoupler
Externally supplied power	Voltage	12/24CDC (10 2 to 3VDC)
	Current	7mA(typ , 24VDC, per common)

② Using external output
  • RUN . .. This outputs a signal indicating whether or not the GOT is operating normally.
         Output status)
         ON . when operating normally
         OFF · when an error occurs
         (wiring diagram: see Section 4 2)
    This should be used in instances where the GOT operation is being monitored by the PC CPU This function is used by having the external output read by an input module and then having it check by the sequence program.

  • OUTPUT   By turning on the GOT's internal bit device GB1 using the status monitoring function or the touch switch (bit) function, an external output (lamp illumination, buzzer) is available.

3.4   Analog RGB Specifications

Item	Specifications		
Process method	Analog RGB video signal		
Screen display	80 characters x 25 lines		
Screen color	15 colors		
Maximum cable length	30 m		
Dot clock	25 175 MHz		
Horizontal scan frequency	31 468 KHz		
Vertical scan frequency	60 Hz		
Timing chart	Horizontal synchronization timing		Vertical synchronization timing

	Model type	15 pin Shrink D sub (female) screw stopper type DDK product 17HE-R13150-73MC2		
Usable connector	Pin order			

No.	Signal name		Signal director GOT↔CRT
1	Analog R (red)	R	⟶
2	Analog G (green)	G	⟶
3	Analog B (blue)	B	⟶
4	—	NC	—
5	Return R (red)	DGND	⟵
6	Return G (green)	RGND	⟵
7	Return B (blue)	GGND	⟵
8	—	BGND	—
9	Digital GND	NC	—
10	—	DGND	—
11	—	NC	—
12	—	NC	—
13	Horizontal cycle signal	$\overline{HSYNC}$	⟶
14	Vertical cycle signal	$\overline{VSYNC}$	⟶
15	—		

Connecting diagram	Refer to 2 4 3

3.5   Applicable CPUs

(1)   Applicable CPUs

Large-size MELSEC-A series QnA series CPUs	Q2ACPU, Q2ACPU-S1
	Q3ACPU, Q4ACPU
	Q4ARCPU
	A1NCPU, A2NCPU, A2NCPU P21/R21
	A3NCPU, A3NCPU P21/R21
	(With a link of AnNCPU, version L or later Version H of later without links)
	A2UCPU, A2UCPU-S1
	A3UCPU, A4UCPU
	A2ACPU, A2ACPU P21/R21
	A2ACPU-S1, A2ACPU-S1 P21/R21
	A3ACPU, A3ACPU P21/R21
Compact-size MELSEC-A series QnA series CPUs	Q2ASCPU, Q2ASHCPU,
	A2USCPU, A2USCPU-S1
	A2USHCPU-S1
	A1SCPU
	A2SCPU (version C or later for A2SCPU) *1
	A1SJCPU-S3, A0J2HCPU (version E or later)
	A2CCPU (version H or later) *2
	A2CJCPU *2
FA controller*3	LM610, LM7600, LM8000
Multiple axis controller CPU	A273UCPU, A273UHCPU
	A373UCPU
	A373CPU (SW0SRX-SV12H(I, J, K) or later) *1
	A171SCPU, A171SCPU-S3
MELSEC-FX series CPU	FX0 series, FX0N series, FX0S series
	FX1 series, FX2 series, FX2C series, FX2N series *4
PC made by Omron	C200H series, C200HS series, C200Hα series
	CQM1 series, C1000H series
	C2000H series
	CV1000 series *5
PC made by Yasukawa Electric Co	GL60S, GL60H, GL70H
Microcomputer connection	Personal computer, microcomputer board, PC, etc

    *1 A2S and A373CPU do not support the computer link connection
    *2 A2C and A2CJCPU do not support the bus connection.
    *3 Only the MELSECNET connection is supported as the connection mode.
    *4 The monitor range of the FX2N series is the same as that of FX2C series CPUs.
    *5 Use CV1000 with a PC of version V1 or later

(2) Restrictions in clock functions

(1) The CPUs which do not support clock functions among applicable CPUs are shown below.

① Restricted functions

- Clock setup function in the utility screen
- Day/time display in the alarm list display function
- Day/time display in the alarm history display
- Clock display function
- Print day/time in the reporting function

② CPUs which do not support above clock functions

MELSEC-A series

A0J2HCPU, A2CCPU, A2CJCPU

MELSEC-FX series, PC made by Omron, PC made by Yasukawa Electric, and microcomputer connection

Model			Clock function
MELSEC-FX series	FX₀ series, FX₀N series, FX₀S series, FX₁ series		Not usable
	FX₂N series		Usable
	FX₂ series, FX₂C series		The clock function is supported if a cassette for the real time clock is used
PC made by Omron	C200H series	C200H-CPU11 C200H-CPU31	Usable
		C200H-CPU21 C200H-CPU22 C200H-CPU23	The clock function is supported if a cassette with clock function is used.
		C200H-CPU01 C200H-CPU02 C200H-CPU03	Not usable
	C200HS series		Usable
	C200H α series	C200HE-CPU11	Not usable
		Other PCs	Usable
	CQM1 series		The clock function is supported if a cassette with clock function is used
	C1000H, C2000H series		Not usable
	CV1000		Not usable
PC made by Yasukawa Electric	GL60S, GL60H, GL70H		Not usable
Microcomputer connection			Not usable

3.6 Table of Component Equipment Modules

Component	Model	Remark	
GOT set component (A810GOT + power supply module)	A810GOT-SC	A810GOT and A8GT-PWTF (power supply) set component	
GOT main module	A8GT-10GOT-C	—	
Power supply module	A8GT-PWTF	100/200VAC input	
	A8GT-PW24	12/24VDC input	
Expanded memory cassette	A8GT-MCA1MFDW	Internal memory expansion 1M byte (For OS and user screen)	One of these is necessary when monitoring circuit
	A8GT-MCA2MFDW	Internal memory expansion 2M byte (For OS and user screen)	
	A8GT-MCA4MFDW	Internal memory expansion 4M byte (For OS and user screen)	
Bus connection interface module	A7GT-BUS	For bus connection	
	A7GT-BUSS	For bus connection	
Multidrop bus connection module	A7GT-BUS2	For bus connection to multiple modules	
	A7GT-BUS2S	For bus connection to multiple modules	
Data link module	A7GT-J71AP23	For MELSECNET(II) optical link connection, for local station only	
	A7GT-J71AR23	For MELSECNET(II) coaxial link connection, for local station only	
	A7GT-J71AT23B	For MELSECNET/B link connection, for local station only	
Network module	A7GT-J71LP23	For MELSECNET/10 loop network connection, for ordinary station only	
	A7GT-J71BR13	For MELSECNET/10 loop network connection, for ordinary station only	
Serial communication module	A8GT-RS4	For CPU direct connection, for calculator link connection	
External output interface module	A8GT-70KBF	For operation panel connection	
Printer interface module	A8GT-70PRF	For printer connection	
CTR connection cable	AC50VG	For connecting GOT and CRT cable length 5m (16 41ft)	
	AC300VG	For connecting GOT and CRT cable length 30m (98 43ft)	
Pinter connection cable	AC30P10-20P	For connecting printer and printer interface cable length 3m (9 84ft)	
	AC300P10-20P	For connecting printer and printer interface cable length 30m (98 43ft)	
RS-422 cable	AC30R4	For connecting GOT and PC CPU, cable length 3m (9 84ft) For connecting GOT and serial communication module	
	AC100R4	For connecting GOT and PC CPU, cable length 10m (32 81ft) For connecting GOT and serial communication module	
	AC300R4	For connecting GOT and PC CPU, cable length 30m (98 43ft) For connecting GOT and serial communication module	
Expansion cable	AC06B	For connecting GOT and base module, cable length 0 6m (1 97ft)	For connecting large type base unit and A7GT-BUS/BUS2
	AC12B	For connecting GOT and base module, cable length 1 2m (3 94ft)	
	AC30B	For connecting GOT and base module, cable length 3m (9 84ft)	
	AC50B	For connecting GOT and base module, cable length 5m (16 41ft)	
	AC12B-R	Right-angle cable for connecting GOT and base module, cable length 1 2m (3 94ft)	
	AC30B-R	Right-angle cable for connecting GOT and base module, cable length 3m (9 84ft)	
	AC50B-R	Right-angle cable for connecting GOT and base module, cable length 5m (16 41ft)	
	A1SC07B	For connecting GOT and base module, cable length 0 7m (2 3ft)	For connecting compact type base unit and A7GT-BUSS/BUS2S
	A1SC12B	For connecting GOT and base module, cable length 1 2m (3 9ft)	
	A1SC30B	For connecting GOT and base module, cable length 3m (9 84ft)	
	A1SC60B	For connecting GOT and base module, cable length 6m (19 6ft)	
	A1SC05NB	For connecting GOT and base module, cable length 0 5m (1 64ft)	For connecting compact type base unit and A7GT-BUS/BUS2S
	A1SC07NB	For connecting GOT and base module, cable length 0 7m (2 3ft)	
	A1SC30NB	For connecting GOT and base module, cable length 3m (9 84ft)	
	A1SC50NB	For connecting GOT and base module, cable length 5m (16 41ft)	
	A8GT-C12NB	Cable length 1 2m (3 9ft)	For connecting large type base unit and A7GT-BUSS/BUS2S
	A8GT-C30NB	Cable length 3m (9 84ft)	
	A8GT-C50NB	Cable length 5m (16 4ft)	

Component	Model	Remark	
Long-distance bus connection cable	A7GT-C100EXS	For connecting GOT and base module, cable length 10m (32 81ft)	For connecting compact type base unit and A7GT-BUS/BUS2S
	A7GT-C200EXS	For connecting GOT and base module, cable length 20m (66ft)	
	A7GT-C300EXS	For connecting GOT and base module, cable length 30m (98ft)	
	A8GT-C100EXSS	For connecting GOT and base module, cable length 10m (32 81ft)	For connecting compact type base unit and A7GT-BUSS/BUS2S
	A8GT-C200EXSS	For connecting GOT and base module, cable length 20m (66ft)	
	A8GT-C300EXSS	For connecting GOT and base module, cable length 30m (98ft)	
Long-distance GOT connection cable	A7GT-C100B	For connecting GOT to GOT, cable length 10m (32 81ft)	For connecting A7GT-BUS and A7GT-BUS/BUS2
	A7GT-C200B	For connecting GOT to GOT, cable length 20m (66ft)	
	A7GT-C300B	For connecting GOT to GOT; cable length 30m (98ft)	
	A8GT-C100BS	For connecting GOT to GOT; cable length 10m (32 81ft)	For connecting A7GT-BUSS and A7GT-BUSS/BUS2S
	A8GT-C200BS	For connecting GOT to GOT, cable length 20m (66ft)	
	A8GT-C300BS	For connecting GOT to GOT, cable length 30m (98ft)	
Bus connector conversion box	A7GT-CNB	For converting from the large connector to the small connector	
Computer link module connection cable	A7GT-AC30R4	For connecting GOT and calculator link module, cable length 3m (9 84ft)	
	A7GT-AC100R4	For connecting GOT and calculator link module, cable length 10m (32 81ft)	
	A7GT-AC300R4	For connecting GOT and calculator link module, cable length 30m (98ft)	
Fiber-optic cable	—	For connecting MELSECNET (II) optical link module or MELSECNET/10 optical loop net work	
Coaxial cable	—	For connecting MELSECNET (II) coaxial link module or MELSECNET/10 coaxial loop net work	
Twisted pair cable	—	For connecting MELSECNET/B	
Corresponding software package	SW2NIW-GOT800SET	SW2NIW-A8GOTP Version J or later, SW2NIW-A8SYSP Version J or later	

3.7   Available Sprite Functions

List of available sprite functions for A810GOT is shown below
For the details of each function and the accessible range of monitoring, refer to the SW2NIW-A8GOTP Operating Manual (Create Monitor Screen Edition)

Point

A810GOT is a display device dedicated to a monitor equipment, and the following functions available for A870GOT cannot be used.
• Utility functions
  System monitoring, special module monitoring, screen copy, setup, self diagnostics, memory data, circuit monitor, clock setup, screen cleaning, file
• Sprite functions
  Touch switch function, value entry function, ASCII input function

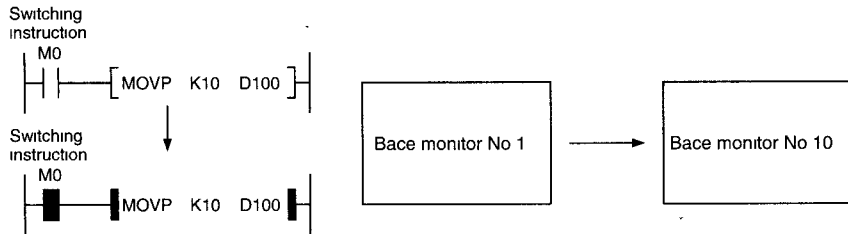## (1)   List of available sprite functions

Function		Availability (○: available, △: available with restrictions, ×: not available)
Numeric value display function		○
Data list display function		△ (Scroll display is not available)
ASCII display function		○
Clock display function		○
Comment display	Bit	○
	Word	
Alarm list display	System alarm	○
	User alarm	△ (Scroll display is not available)
Parts	Bit	○
	Word	
Part movement display		○
Lamp display	Bit	○
	Word	
Panel meter display function		○
Trend graph display function		○
Line chart display function		○
Bar chart display function		○
Level display function		○
Touch switch function	Bit	×
	Word	
	Base screen switching	
	Window screen switching	
	Expansion	
	Setup of key codes	
Value entry function		×
ASCII input function		×
System data function		○
Hardcopy function		△ (Cannot start the hardcopy function from the touch switch)
Report function		○
Status monitoring function		○
Alarm history function		△ (Cannot display the alarm history cursor or detailed description, and cannot setup the alarm history touch switch)
External I/O function		○

3.8   Screen switching of AB10GOT

(1)   Base screen switching

Screens are switched by storing the screen number of the screen to be displayed in the base screen switching device from the sequence program

When the base screen switching device is D100:

Switching
instruction
M0

───┤ ├────[MOVP   K10   D100]───

Switching
instruction
M0

───┤■├────┤MOVP   K10   D100 ├─

Bace monitor No 1   ────▶   Bace monitor No 10
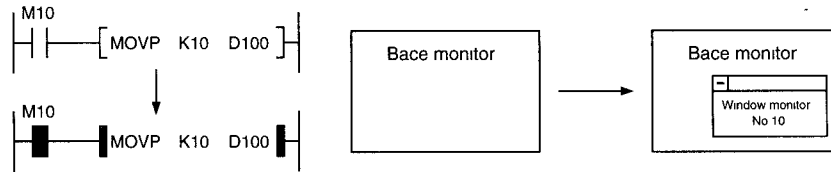
(2)   Window screen switching

Screens are switched by storing the screen number of the screen to be displayed in the window screen switching device from the sequence program

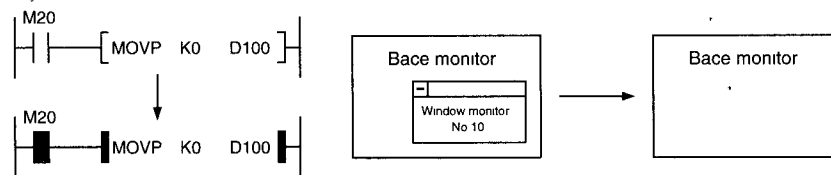If "0" is stored in the window screen switching device, the window screen is erased

The display position of the window screen is set in the window setup.

For details of the window setup, refer to the SW2NIW-A8GOTP Operating Manual (Create Monitor Screen Edition).

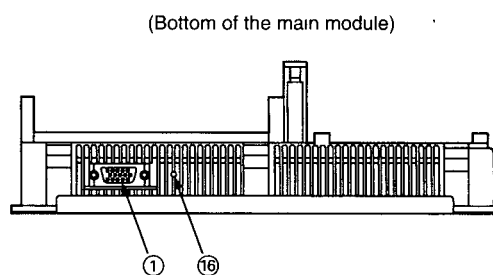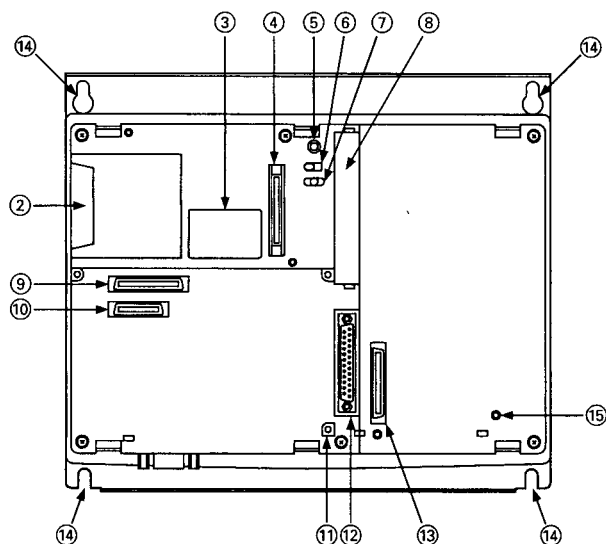When the window screen switching device is D100

M10

───┤ ├────[MOVP   K10   D100]──
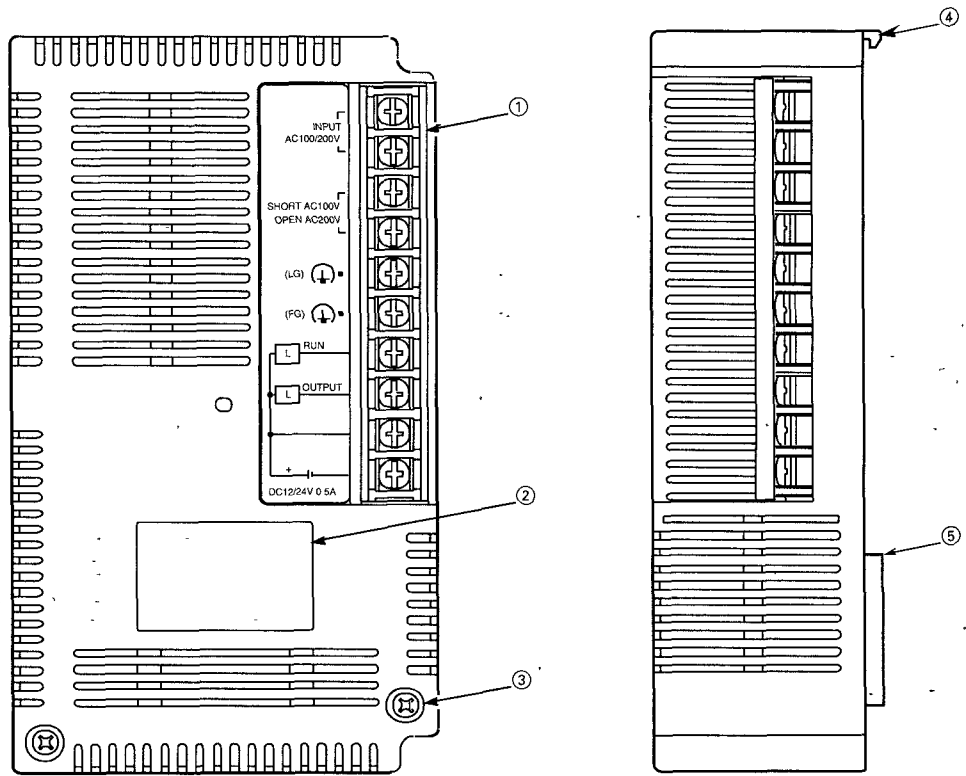
M10

───┤■├───┤MOVP   K10   D100 ├─

Bace monitor   ────▶   Bace monitor
                              Window monitor
                              No 10

To erase the window screen

M20

───┤ ├────[MOVP   K0   D100]──

M20

───┤■├───┤MOVP   K0   D100 ├─

Bace monitor
Window monitor
No 10   ────▶   Bace monitor

4. NAME OF PARTS AND THEIR SETTINGS

4.1 Main module A810GOT

(Bottom of the main module)

No.	Name	Contents	Remarks
①	Analog RGB interface	Interface for connecting CRT	—
②	Memory card interface	Interface for installing memory card	—
③	Rating plate	—	—
④	Interface for connecting optional module	For connecting printer interface module/operation panel interface module	—
⑤	Memory card LED	Not usable	—
⑥	Memory card access switch	Not usable	—
⑦	Reset switch	Reset GOT hardware	With cassette cover
⑧	Memory cassette interface	Interface for connecting memory cassette	—
⑨	Communication module interface-1	Interface for connecting communication module	—
⑩	Communication module interface-2	Interface for connecting communication module	—
⑪	Screw holes for mounting communication module	Screw holes to mount communication module	—
⑫	RS-232C interface	RS-232C interface for connecting PC	—
⑬	Power supply interface module	Interface for connecting power supply module	—
⑭	Screw holes for mounting the main module	Bell-shaped holes for mounting to control panel (for M5 screw)	—
⑮	Screw holes for mounting power supply module	Screw holes to mount power supply module	—
⑯	Adjusting switch for manufacture	Adjusting switch for manufacture , not usable	—

4.2   Power Supply Module

No.	Name	Contents	Remarks
①	Terminal base	For 100/200VAC power supply input and external output • When shorted 100 VAC setting • When open 200 VAC setting	Use the short bar that comes with the product to set the 100VAC setting
②	Rating plate	—	—
③	Power supply module mounting screw	Screw used to mount a power supply module to the GOT main module The tightening torque range is 36 to 48 N-cm (3 7 to 4 9kg-cm)	—
④	Power supply module securing hook	Hook used to secure the power supply module to the GOT main module	—
⑤	GOT main module connector	Connector used to connect the power supply interface of the GOT main module	—

5. INSTALLATION

5.1 Installation Precautions

(1) Precautions when installing the A810GOT

◇DANGER	• Before installing GOT, various module device or connecting cable, make sure all phases of the power supply have been obstructed from the outside Failure to completely shut off the power-supply phases may cause electrical shock and/or damage to the module

⚠CAUTION	• Use the GOT in the environment given in the general specifications and installation method of this manual. Using the GOT outside the range of the general specifications may result in electric shock, fire or malfunctioning, or may damage or degrade the module. • Make sure GOT is fixed securely to the base, within the rated torque range. Loose screws could cause the GOT to fallout and cause injury. • Securely install each module to designated installation area of GOT. For modules with screws, securely tighten the screws with specified torque Check if the installation of the module is not loose. False contact may cause a malfunction. • Securely connect the communication cable to the connectors on the communication module and on the connected module, and to the terminal block. Also, securely connect the cable to the base unit connector when using the bus connection, and check if the installation is not loose. False contact may cause a malfunction. • The GOT is made of resin do not fall or apply a strong shock to the module. Doing so may damage the product • Securely connect the CRT connection cable to the connector on the GOT, and securely tighten the screws with specified torque. False contact may cause a malfunction

(2) Screw size and tightening torque for installation on the panel
The screw size and tightening torque for installation on the A810GOT panel are as follows. Refer to Appendix 1 for the external dimensions of A810GOT

| Size of installation screw	M5 × 25 screw (4 screws)
Size of installation hole	φ 6 bell-shaped hole (for M5 screw)

5.2   Installation Environment

(1)   Avoid the following conditions for the installation location of A810GOT
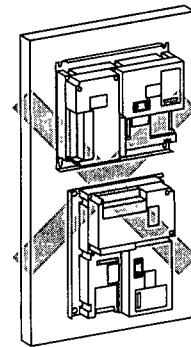- Location where the ambient temperature exceeds the range of 0 to 55°C.
- Location where the ambient humidity exceeds the range of 10 to 90%RH
- Location where condensation occurs due to a sudden temperature change.
- Location where corrosive gas or flammable gas exists
- Location where a lot of conductive powdery substance such as dust and iron filing, oil mist, salt, or organic solvent exists.
- Location exposed to direct sunlight
- Location where strong electric fields or magnetic fields form
- Location where vibration or impact is directly applied to the main unit.

(2)   Installation location and direction
The module must be installed vertically to the ground in the correct direction
Also, some clearance must be secured against other device
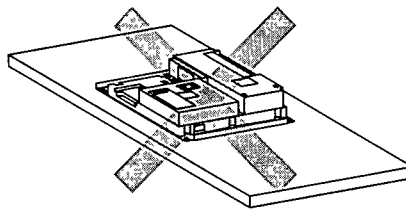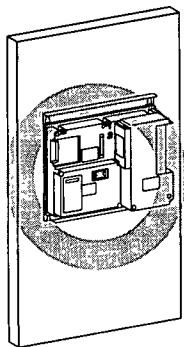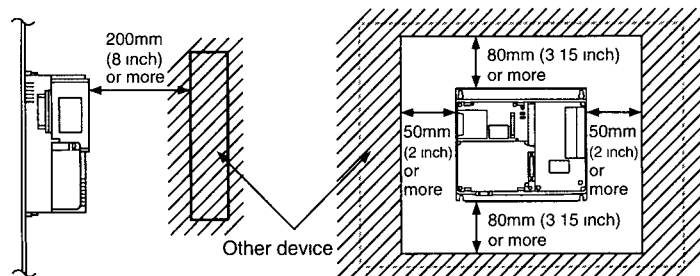
Horizontal installation   Wrong direction
                                                 (up-side-down, top facing right)

5.3　Wiring Precautions

◇DANGER	• Before beginning any installation or wiring work, make sure all phases of the power supply have been obstructed from the outside. Failure to completely shut off the power-supply phases may cause electrical shock and/or damage to the module.

⚠CAUTION	• The FG and LG terminals should always be grounded using the class-3 or higher grounding designed specially for the GOT Failure to ground these terminals may cause electric shock or malfunctioning.
	• When wiring the Power supply module, check the rated voltage and terminal layout of the wiring, and make sure the wiring is done correctly. Connecting a power supply that differs from the rated voltage or wiring it incorrectly may cause fire or breakdown
	• Tighten the GOT terminal screws with the specified torque. If the terminal screws are loose, it may result in short circuits, fire or malfunctioning
	• Be careful not to let foreign matter such as filings or wire chips get inside the GOT module, These can cause fire, breakdowns and malfunctioning

APPENDIX

APPENDIX.1 Diagram of External Dimensions

4-M5 screw
mounting holl

250 (9 84)

269 5 (10 61)

Unit mm (inch)
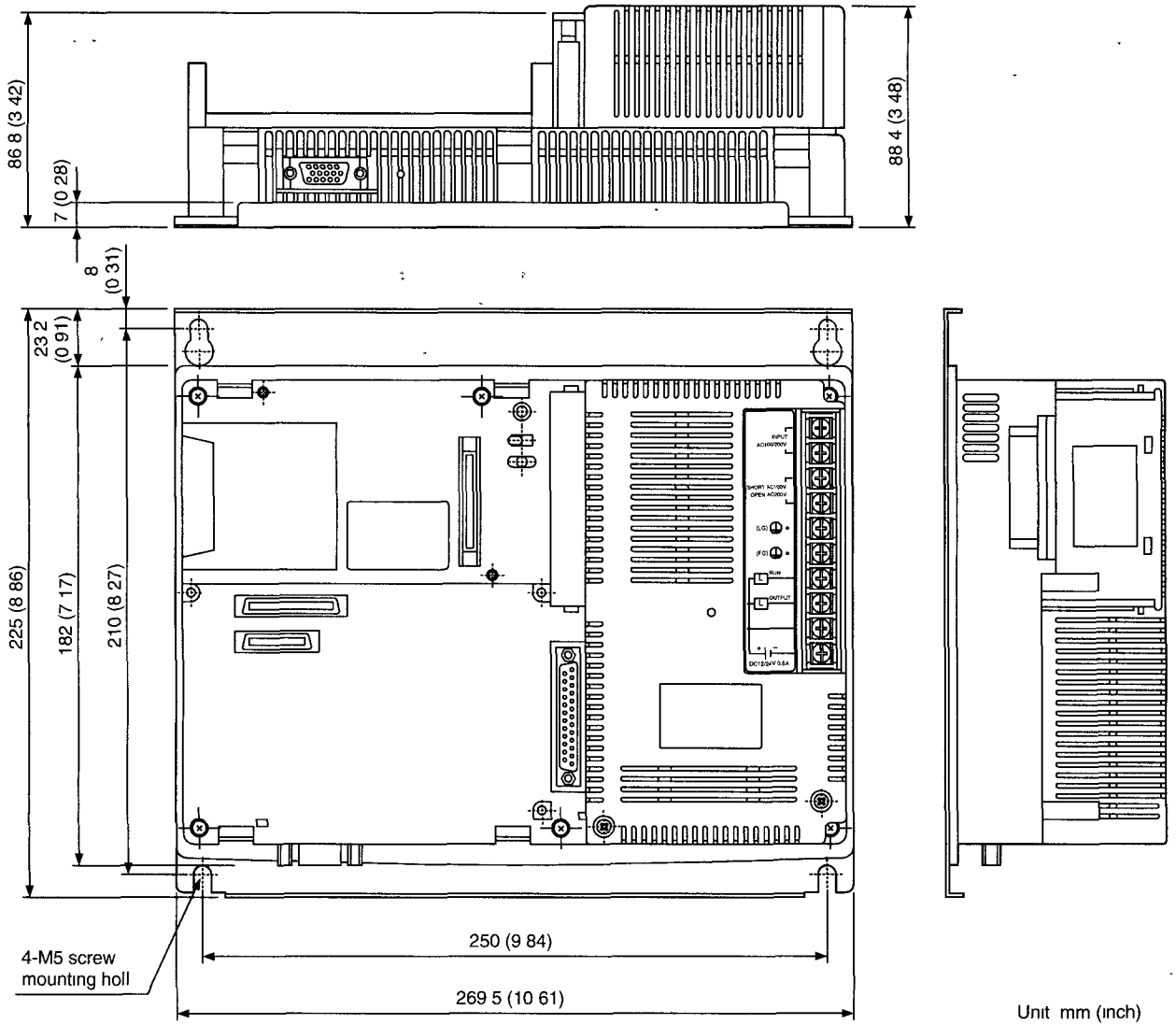
Additional Explanation for

A810GOT Graphic Operation Terminal

MODEL	A810GOT-TUIKA-E
MODEL CODE	13JL14

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