MITSUBISHI

MELSEC-FX Series and Omrom Co. product PLC

Connection Manual
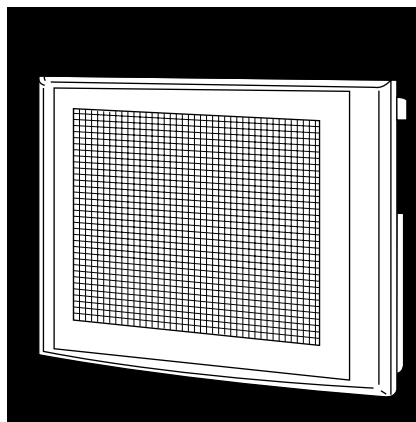
GRAPHIC OPERATION TERMINAL

800
Series

GOT
MELSEC

Mitsubishi Graphic Operation Terminal

Precautions Regarding Safety

(Please read carefully before using your equipment)

When using the Graphic Operation Terminal, please read the manuals that are supplied with each of the products, as well as any related manuals available as supplementary manuals. Make sure careful attention is paid to safety, and that the equipment is handled correctly.

In this manual, safety precautions concerning more hazardous items are labeled "DANGER", and those concerning more general safety items are labeled "CAUTION".

| ⟨!⟩ DANGER | Improper handling could cause hazardous conditions resulting in severe injury or death. |
| ⚠ CAUTION | Improper handling could cause hazardous conditions resulting in moderate or light injury, or in physical damage. |

Items marked with an exclamation point in a triangle ⚠ could also cause severe consequences, depending on the circumstances, if not handled properly. They indicate information that should be taken seriously and observed conscientiously.

Manuals supplied with the products should be stored carefully where they can be accessed whenever necessary, and should always be passed on to the end user along with the equipment.

⚠ CAUTION

[Precautions Regarding Design]

● Communications cables should not be bundled with main circuits and power lines, or installed in the vicinity of these. As a rule, there should be at least 100 mm (4 inch) of space between communications cables and main circuits or power lines, as noise can cause malfunctioning.

⚠ CAUTION

[Precautions Regarding Assembly]

● The Graphic Operation Terminal should be used under the environmental conditions listed under the general specifications in the manual. Using it under any other environmental conditions could cause problems such as electrical shock, fire, malfunctioning, and damage to or deterioration of the product.

● When using a bus connection, expansion cables should be securely connected to the connectors of the base unit and the Graphic Operation Terminal. After connecting the connectors, check to make sure they are securely tightened and not loose. Defective contact could cause input and output errors.

● The communications cable should be connected securely to the connector on the communications unit. Defective contact could cause input and output errors.

◇ DANGER

[Precautions Regarding Wiring]

● Before beginning any installation or wiring work, make sure all phases of the power supply have been obstructed from the outside. Failing to completely shut out the power supply phases could cause electrical shock and/or damage to the product.

● Following installation or wiring work, when turning on the power supply and operating the equipment, make sure the terminal cover provided as an accessory has been attached to the product.

⚠ CAUTION

[Precautions Regarding Wiring]

● The FG and LG terminals should always be grounded using the Class 3 ground designed especially for the Graphic Operation Terminal, or a higher class of ground. Failing to ground these terminals sufficiently could cause electrical shock and/or malfunctioning.

● Before wiring the Graphic Operation Terminal, check the rated voltage and terminal layout of the wiring, and make sure wiring is done correctly. Connecting a power supply that differs from the rated voltage, or wiring it incorrectly, could cause fire and/or breakdowns.

● Tighten terminal screws to the rated torque.
Failing to tighten terminal screws adequately could cause short-circuits, fire, and/or malfunctioning.

● Be careful never to let foreign matter such as filings or wiring scraps get inside the unit. These can cause fire, breakdowns, and malfunctioning.

◇ DANGER

[Precautions Regarding Startup and Maintenance]

● Never touch terminals while conductivity is being supplied. This could cause electrical shock and/or malfunctioning.

● When cleaning the terminals and tightening the screws, make sure the power supply has been turned off. Cleaning the terminals or tightening screws while conductivity is being supplied could cause electrical shock.

⚠ CAUTION

[Precautions Regarding Startup and Maintenance]

● Before using forced output to the sequencer CPU or making changes to the data while the equipment is in operation, be sure to read the manual carefully and observe all safety precautions conscientiously. Incorrect operation could damage the machinery and cause accidents.

● Never disassemble or renovate the unit. This could cause breakdowns, malfunctioning, injury, and/or fire.

● Always turn off the power supply before attaching or detaching the unit. Doing this while conductivity is being supplied could cause the unit to break down, or could cause malfunctioning.

⚠ CAUTION

[Precautions Regarding Discarding]

● When discarding this product, it should be handled as an industrial discard.

About the Manuals

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)
A870GOT Graphic Operation Terminal User's Manual This describes the specifications and performance of the A870GOT main unit, as well as the hardware configuration, procedures for installing optional units, operation in on-line mode, error codes, and troubleshooting guidelines. (Sold separately)	IB-66628 (13J830)
A850GOT Graphic Operation Terminal User's Manual This describes the specifications and performance of the A850GOT main unit, as well as the hardware configuration, procedures for installing optional units, operation in on-line mode, error codes, and troubleshooting guidelines. (Sold separately)	IB-66659 (13JF33)

Introduction

Thank you for purchasing the Mitsubishi Graphic Operation Terminal.

Before using the equipment, please read this manual carefully to develop full familiarity with the functions and performance of the graphic operation terminal you have purchased, so as to ensure correct use.

Please forward a copy of this manual to the end user.

Contents

1. Overview

This manual explains the system configuration and system configuration precaution items when connecting the A870GOT/A850GOT (Hereafter GOT) and the MELSEC-FX series and the PLC made by Omron Co., Ltd. (Hereafter Omron PLC) and conducting monitoring.

The GOT that conducts monitoring when connected to the MELSEC-FX series or Omron PLC is the A870GOT or A850GOT.

1.1 Preparation for Conducting Monitoring by Connecting to the MELSEC-FX Series and Omron PLC

When conducting monitoring by connecting to the MELSEC-FX series and Omron PLC be sure to install the SW2NIW-A8SYSP in the GOT.

1 | When connecting to the MELSEC-FX series

Install the SW2NIW-A8SYSP's basic OS and communication driver (MELSEC-FX) in the GOT.

2 | When connecting to the Omron PLC

Install the SW2NIW-A8SYSP's basic OS and communication driver (SYSMAC C200H) in the GOT.

Refer to the SW2NIW-A8GOTP Operating Manual (Data transmission/Debugging/Document Creation Manual) for information regarding the SW2NIW-A8SYSP installation method.

1.2 MELSEC-FX Series and Omron PLC that Can Conduct Monitoring

The following MELSEC-FX series and Omron PLC models can conduct monitoring. CPUs and PLCs other than those shown below cannot conduct monitoring.

1 | MELSEC-FX series

FX0 series CPU	FX0N series CPU	FX0S series CPU
FX1 series CPU	FX2 series CPU	FX2C series CPU

2 | Omron PLC

When conducting monitoring using the Omron PLC, conduct monitoring by connecting the upper link module and the GOT.
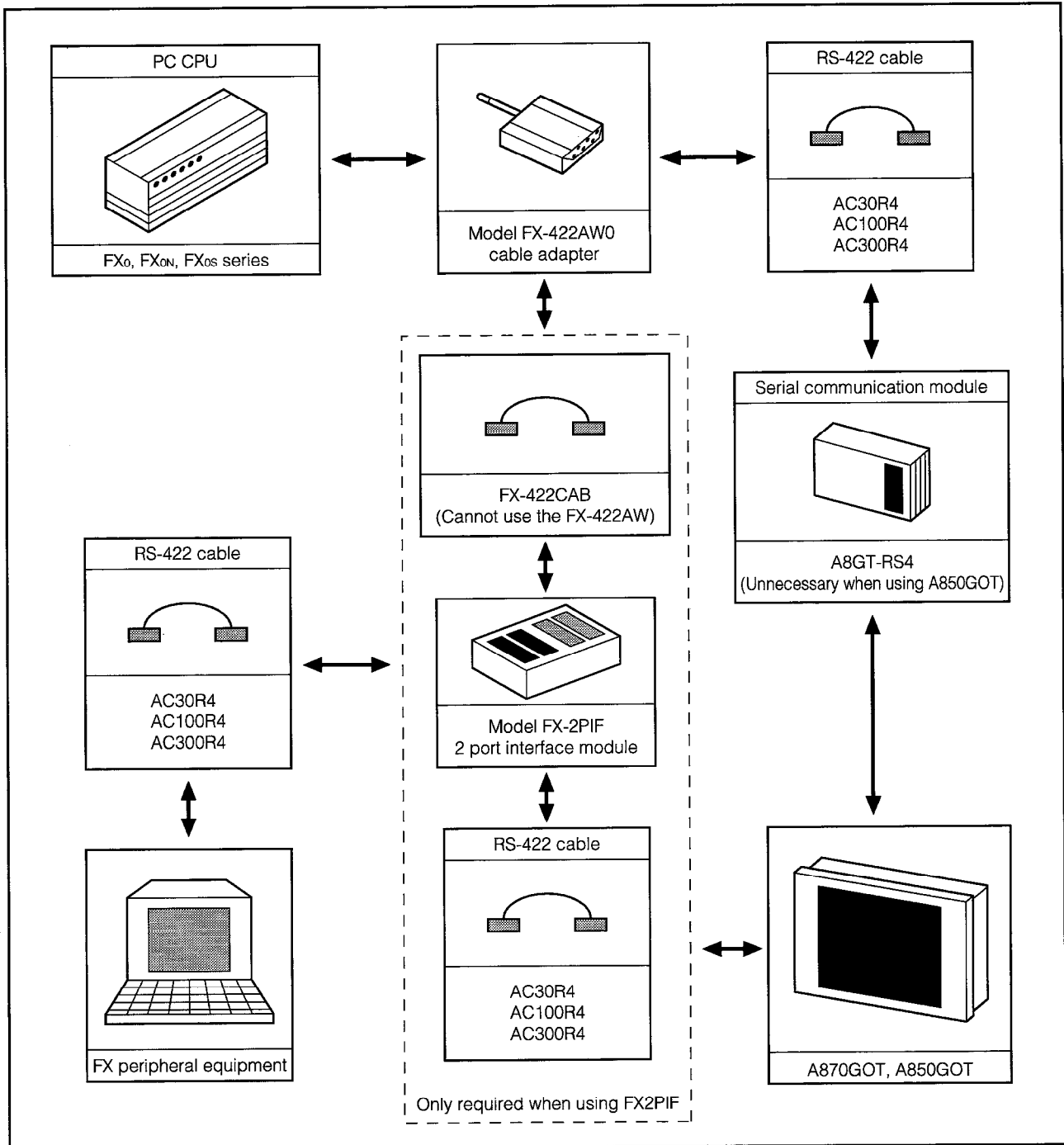
Monitoring cannot be conducted by directly connecting the Omron PLC to the GOT.

① Upper link module that can be connected
C200H-LK202-V1   C120-LK202-V1
② PLC that can conduct monitoring
Omron C200H series
C200H PLC   C200HS PLC
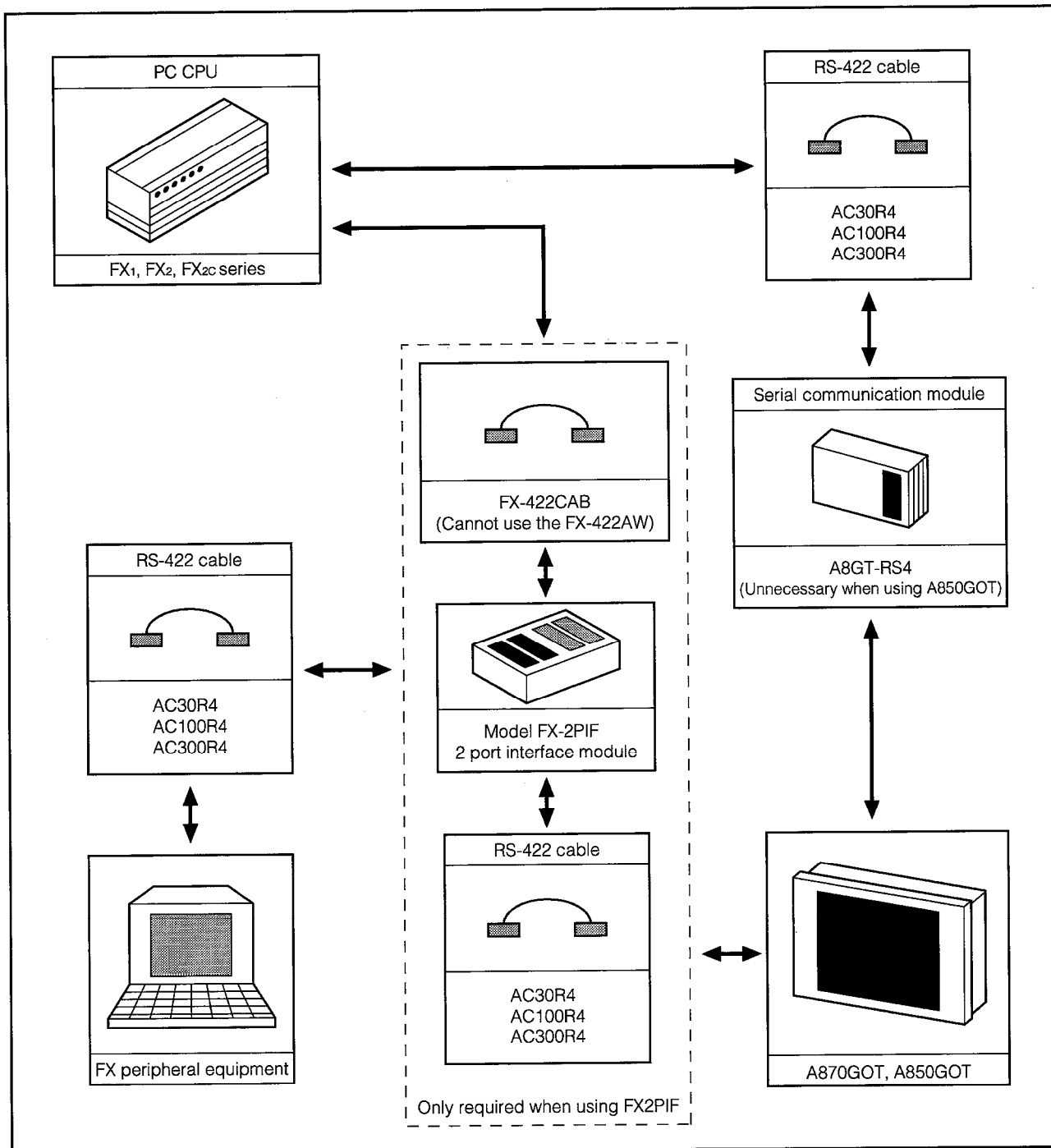
2. System Configuration

2.1   System Configuration When Connecting to the MELSEC-FX Series

2.1.1   When connected to the FX0 and FX0N series

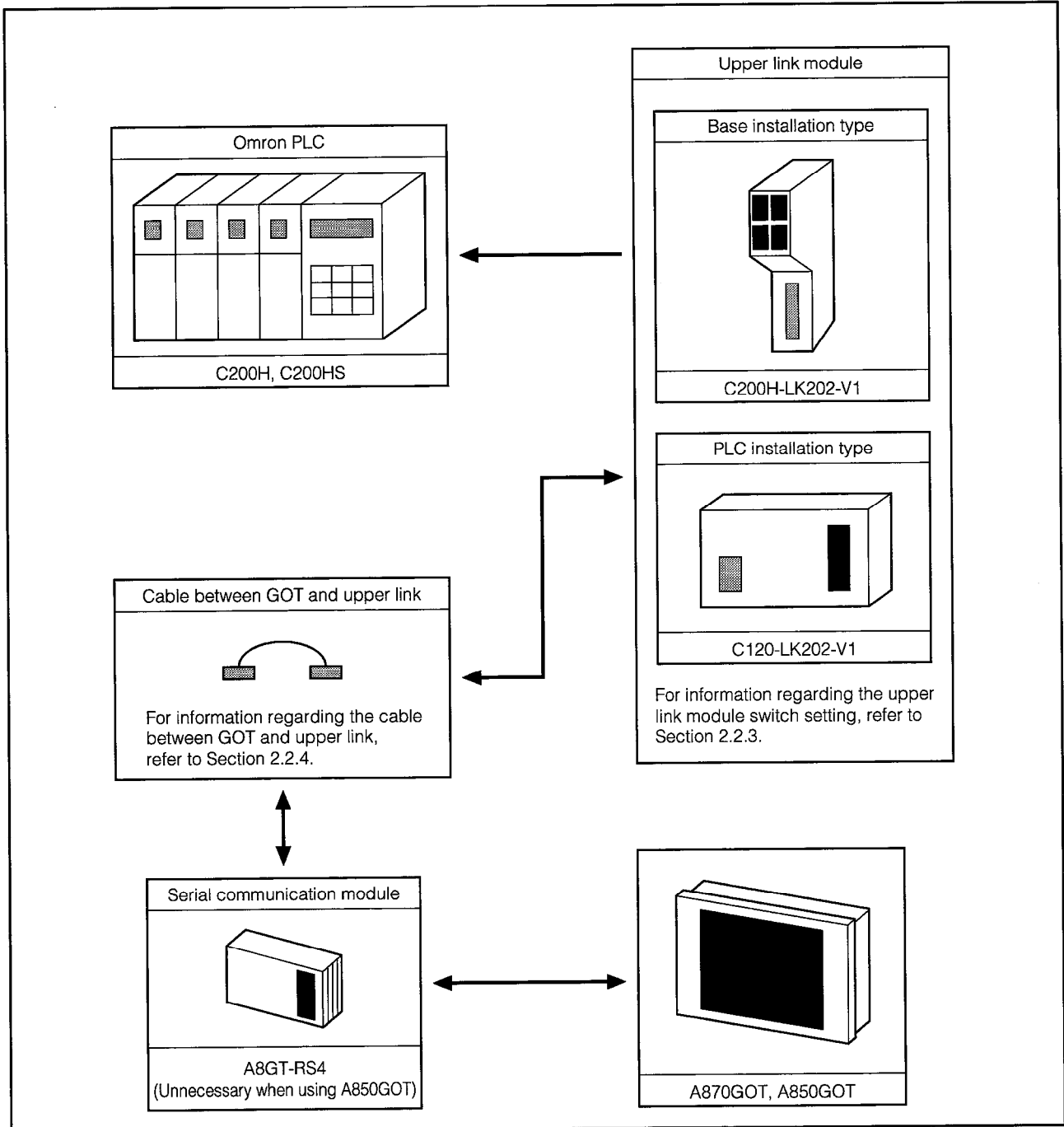## 2.1.2   When connected to the FX1 and FX2, FX2c series

2.1.3   System Configuration Precaution Items

(1) For information regarding the devices and access ranges that can be monitored, refer to the SW2NIW-A8GOTP Operating Manual (Monitor Screen Creation Manual).

(2) For details regarding connecting the CPU, refer to the products instruction manual.

2.2 System Configuration When Connecting to the Omron PLC

2.2.1 System configuration

2.2.2 System Configuration and Configuration Precaution Items

(1) Only the C200H and the C200HS PLCs can conduct monitoring. Other PLCs cannot conduct monitoring so be aware of this.

(2) The only upper link modules that can conduct monitoring while connected to the GOT are the C200H-LK202-V1 and the C120-LK202-V1. Other upper link modules cannot be connected, so be aware of this.

(3) Monitoring cannot be conducted by directly connecting the PLC to the GOT.

(4) For information regarding the devices and access ranges that can be monitored, refer to SW2NIW-A8GOTP Operating Manual (Monitor Screen Creation Manual).

(5) For details regarding the connected upper link modules and connection destination PLC, refer to the products instruction manual.

2.2.3 Upper Link Module Switch Setting

Make the following switch settings in the upper link module.

| 1 | C200H-LK202-V1 switch setting

Front side switch setting
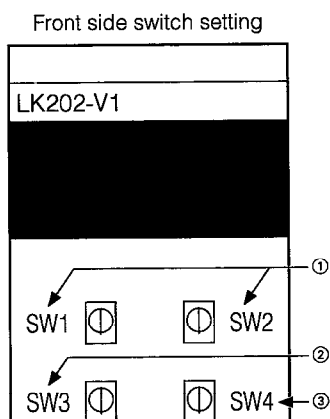
① SW1 and SW2 setting (Station No. setting)
  Set SW1:0, and SW2:0.
  (Set the station No. to 00.)

② SW3 setting (Transmission speed setting)
  Set SW3:6
  (Sets to 19.2 KBPS)

③ SW4 setting (Command level, parity, transmission code setting)
  Set to SW4:2.
  (Parity: Even, transmission code: ASCII 7 bits, 2 stop bits)

Backside switch setting
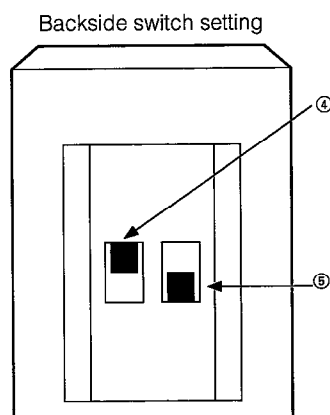
④ Set the end terminal resistance connection yes/no setting switch
  Set to ON (Yes).

⑤ 1 procedure/N procedure setting switch setting
  Set to OFF (N procedure).

2 | **C120-LK202-V1 switch setting**

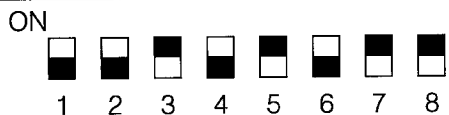Set the setting DIP switches (SW1, SW2, SW3) on the back side of the main unit as follows.

SW1 setting

ON
1 2 3 4 5 6 7 8
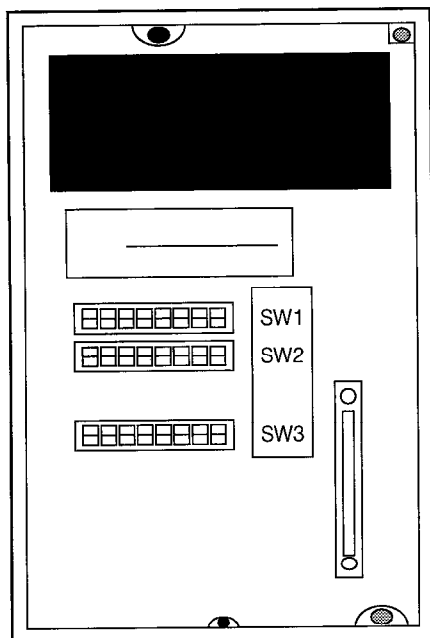
① Sets the station No. (SW1-1 to 5)
  Set all to the OFF side (0 station).

② Start/stop setting (SW1-8)
  Set to the ON side (Start).

  Setting SW1-6, 7 is not required.

SW2 setting

ON
1 2 3 4 5 6 7 8

① Transmission speed setting
  (SW2-1 to 4)
  Set to
  SW2-1: OFF side, SW2-2: OFF side
  SW2-3: ON side, SW2-4: OFF side.
                        (Set 19.2 KBPS.)

② 1:1 procedure/1:N procedure setting
  (SW2-6)
  Set to OFF side (1:N procedure).

③ Level setting (SW2-7, 8)
  Set to
  SW2-7: ON side, SW2-8: ON side.
        (Set to make level 1, 2, and 3 valid.)
  Setting SW2-5 is unnecessary.

SW3 setting

ON
1 2 3 4 5 6 7 8

① Terminal resistor turn on setting
  (SW3-1 to 6)
  Set to
  SW3-1: ON side, SW3-2: OFF side
  SW3-3: ON side, SW3-4: OFF side
  SW3-5: ON side, SW3-6: OFF side.
                  (Set the terminal resistor)

  Setting SW3-7, 8 is unnecessary.

2.2.4   Cable between the GOT and Upper Link Module

The connection diagram and connector that connects the cable between the GOT and upper link module are shown below.

▭1▯ Connection diagram

Upper link module side		Cable connection and Signal direction	GOT side		Remarks
Signal	Pin No.		Pin No.	Signal name	
SDA	5		8	RDA	Reception data
SDB	9		14	RDB	Reception data
RDA	1		10	SDA	Transmission data
RDB	6		16	SDB	Transmission data
			11	RSA	Transmission request
			17	RSB	Transmission request
			9	CSA	Transmission possible
			15	CSB	Transmission possible
			5		
SG	3		12	SG	Signal ground
			6	SG (Shield)	

▭2▯ Connectors and connector covers used

① Connectors and connector covers connected to the GOT side

Name	Model name	Manufacturer
Connector cover	P1620A-CA (20)	Hirose Electric Co., Ltd.
Housing	SC-1620	
Contact	SC-1620	

The connector, housing and connector cover connect to the GOT side are Mitsubish Electric Corporation products AC**R4 cable's connector, housing and connector cover. If you can not arrange for these connector, housing and connector cover described above, process AC**R4 cable in order to make connection cables.

② Connectors and connector covers connected to the upper link module side

Name	Model name	Manufacturer
Connector	XM2A-0901	Installed in the upper llink module
Connector cover	XM2S-0911	

▭3▯ Precaution items when creating cables

① The cable length must be within 200m (656.2 ft).

② Use electric wires of 20 core shield cable, and create cables by connecting two electric wires as shown in the ▭1▯ connection diagram.

MEMO

MELSEC-FX Series and Omrom Co. product PLC

Connection Manual

MODEL	FX, OMRON-U-E
MODEL CODE	13J869
IB(NA)66709-A(9609)MEE	

MITSUBISHI ELECTRIC CORPORATION

When exported from Japan, this manual does not require application to the Ministry of International Trade and Industry for service transaction permission.

Specifications subject to change without notice.