


Mitsubishi <8> Mitsubishi Electric Corporation

QnA Series + Link Unit (Medium) Connection





System Structure



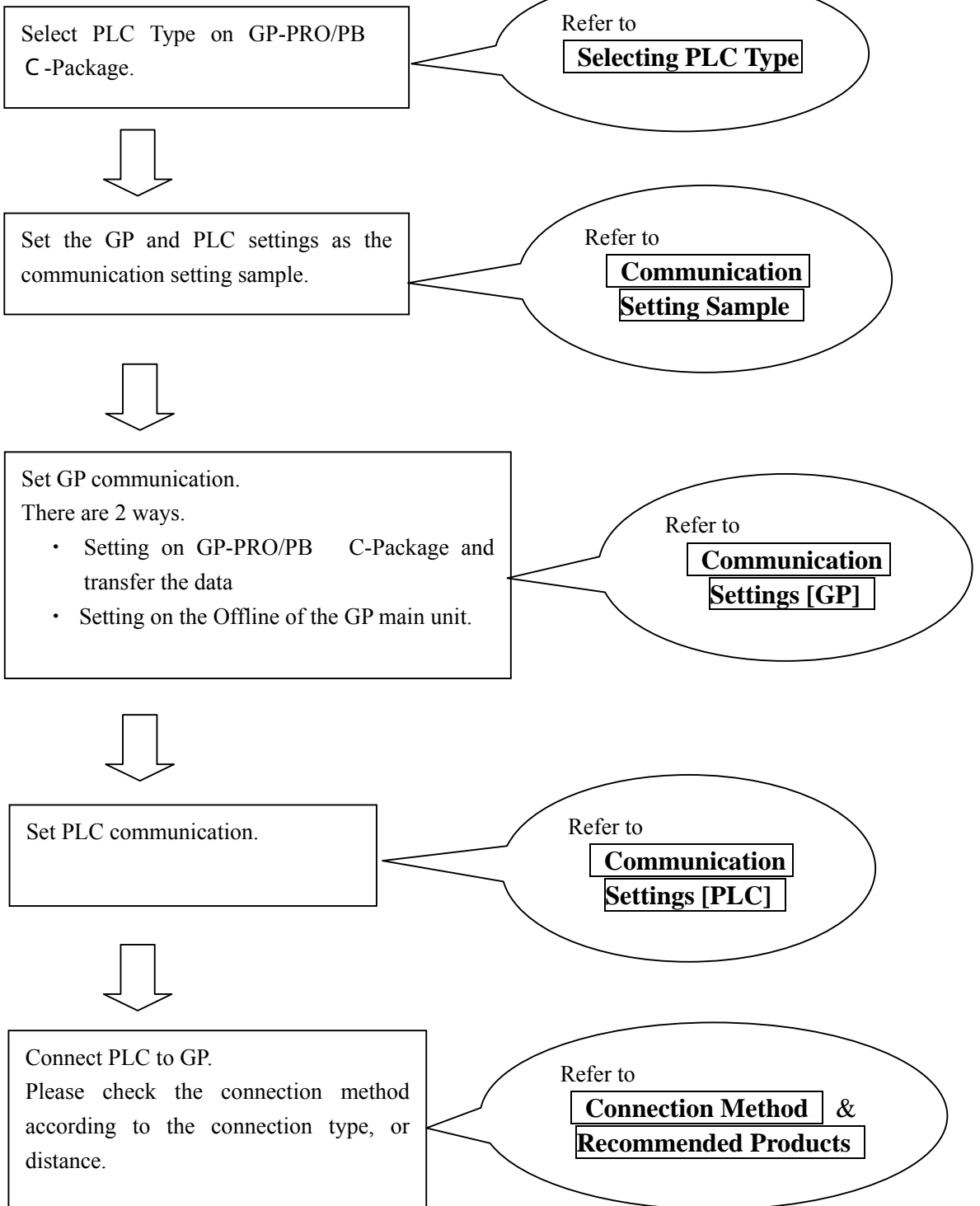
GP

Machine 	Model	Remark
GP	GP70 Series GP77/77R Series GP2000 Series	Excepting for handy types.
GLC	GLC2000 Series	

PLC

CPU 	Computer Link Unit Serial Communication Unit 	Communication Method	Connection Cable 	GP 
Q2AS Q2ASH	A1SJ71QC24 (Serial Communication Unit)	RS-232C	Connection Method [1]	
	A1SJ71UC24 (Computer Link Unit)	RS-422	Connection Method [2]	
Q2AS-S1	A1SJ71UC24-R2 (Computer Link Unit)	RS-232C	Connection Method [1]	
	A1SJ71UC24-R4 (Computer Link Unit)	RS-422	Connection Method [2]	
	A1SJ71QC24N (Computer Link Unit)	RS-232C	Connection Method [1]	
RS-422		Connection Method [2]		

Procedure to Connect PLC



Selecting PLC Type

Start up GP-PRO /PBIII.

Select the following PLC Type when creating the project file.

[Connecting via Serial Communication Unit]

(A1SJ71QC24, A1SJ71QC24N)



MITSUBISHI MELSEC QnA (LINK)

[Connecting via Computer Link Unit]

(A1SJ71UC24, A1SJ71UC24-R2, A1SJ71UC24-R4)



MITSUBISHI MELSEC AnA (LINK)

Communication Setting Sample

GP Setup		Serial Communication Unit Settings	
Baud Rate	19200 bps *1	Baud Rate	19200 bps
Data Length	7 bits	Data Bit	7 bits
Stop Bit	2 bits	Stop Bit	2 bits
Parity Bit	Even	Parity Check Parity setting even/odd	Yes Even
Data Flow Control	ER Control	---	
Communication Format (RS-232C)	RS-232C	Mode Setup (RS-232C)	4 (Format 4 Protocol Mode)
Communication Format (RS-422)	4-wire type	Mode Setup (RS-422)	4 (Format 4 Protocol Mode)
---		Sum Check	Yes
Unit No.	0	Station Number	0

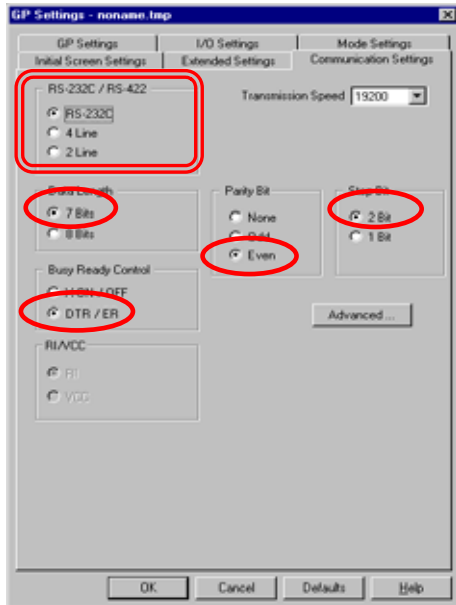
*1 A1SJ71QC24N can use a baud rate of 115200bps.

Communication Settings [GP]

1 [GP-PRO/PB C-Package Setting]

Select [GP Setup] on Project Manager.

1) Communication Settings



1) Communication Settings

Transmission Speed : 19200bps *1

Data Length : 7 Bits

Stop Bit: 2 Bits

Parity Bit: Even

Busy Ready Control : DTR / ER

RS-232C/ RS-422

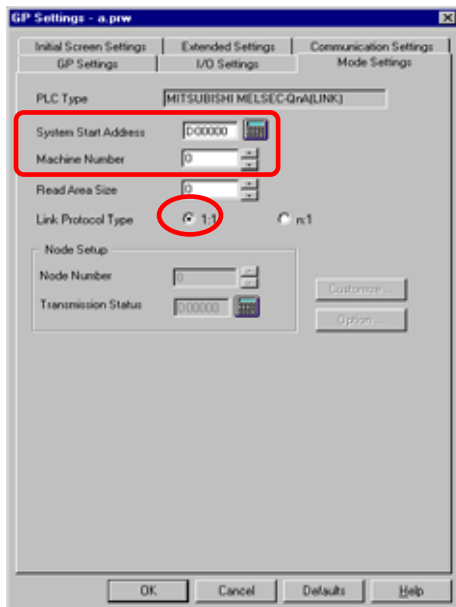
RS-232C Connection: RS-232C

RS-422 Connection: 4 Line

*1 A1SJ71QC24N can use a baud rate of 115200bps.

* Select one in depending on the communication method.

2) Mode Settings



2) Mode Settings

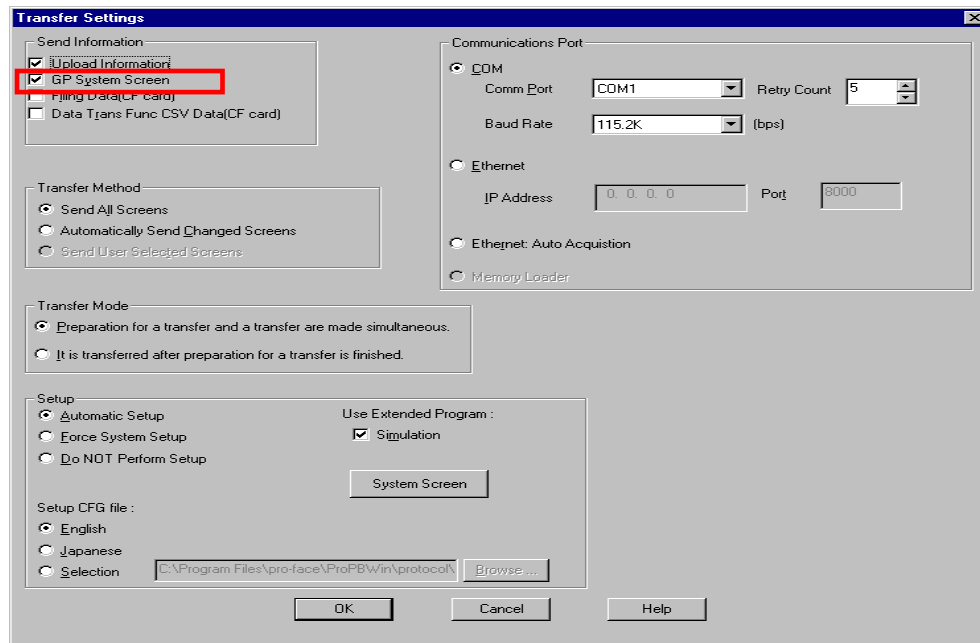
System Start Address: Arbitrary Address

Machine No.: 0

Link Protocol Type: 1:1

Select [Transfer] --> [Setup] --> [Transfer Settings].

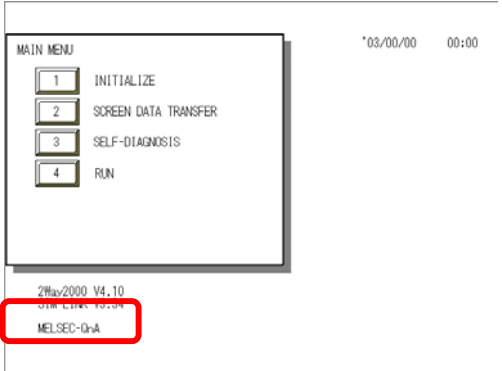
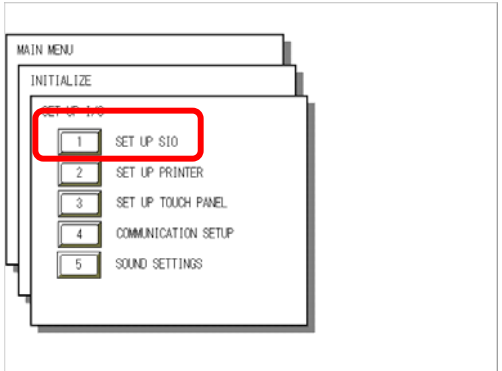
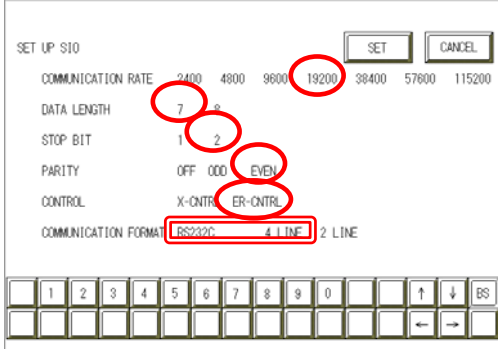
3) Transfer Settings

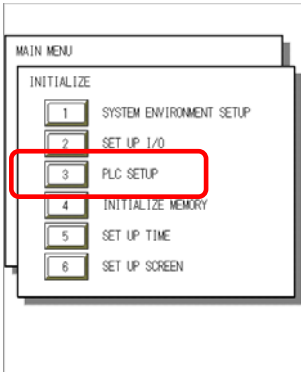
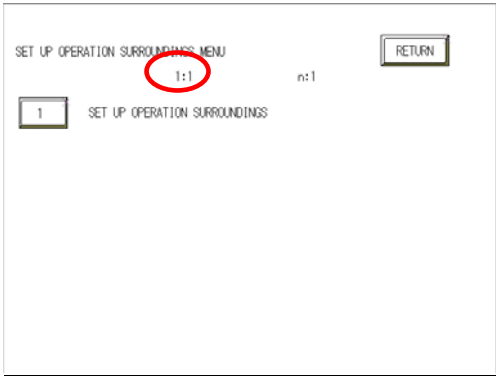
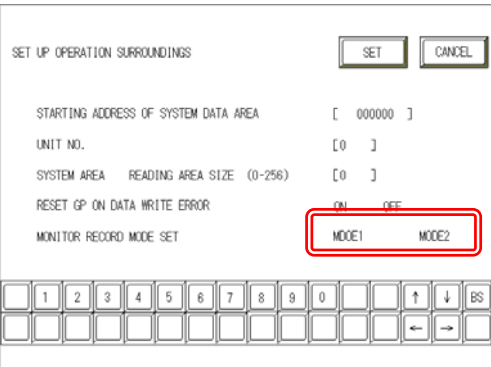


3) Transfer Settings GP System Settings: Checked

Transfer to GP after settings completed.

2 [GP Settings]

<p><u>1) Checking GP Type</u></p> 	<p><u>1) Checking GP Type</u></p> <p>[Connecting via Serial Communication Unit] If you have selected Mitsubishi MELSEC-QnA (LINK), the following will be shown. “MELSEC-QnA”</p> <p>[Connecting via Computer Link Unit] If you have selected Mitsubishi MELSEC-AnA (LINK), the following will be shown. “MELSEC-AnA”</p>
<p><u>2) Communication Settings</u></p> 	<p><u>2) Communication Settings</u></p> <p>[MAIN MENU] ↓ [INITIALIZE] ↓ [SET UP I/O] ↓ [SET UP SIO]</p>
	<p>Communication Rate: 19200bps *1 Data Length: 7 Bits Stop Bit: 2 Bits Parity: Even Control: ER Cntrl Communication Format RS-232C Connection :RS-232C RS-422 Connection :4 Line</p> <p>*1 A1SJ71QC24N can use a baud rate of 115200bps.</p> <p>* Select one in <input type="text"/> depending on the communication method.</p>

<p>3) Setting up Operation Surroundings</p> 	<p>3) Setting up Operation Surroundings</p> <p>[MAIN MENU] ↓ [INITIALIZE] ↓ [PLC SETUP] ↓ [PLC SETUP]</p>
	<p>SET UP OPERATION SURROUNDINGS MENU: 1:1</p>
	<p>Starting Address of System Data Area: Arbitrary Address Unit No.: 0</p> <p>* Select one in <input type="text"/>.</p>

NOTE


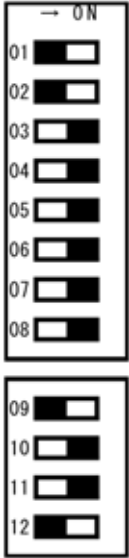
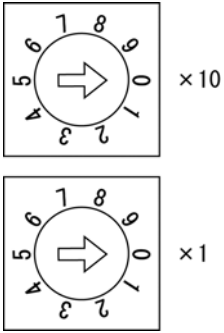
Monitor Record Mode Set

- **Mode 1:** This mode is valid when the number of the devices of the tags set on one screen is 64 or more. The communication speed is improved by this mode. Select this mode when using 64 or more devices.
- **Mode 2:** This mode is valid when the number of the devices of the tags set on one screen is less than. The communication speed is improved by this mode. Select this mode when using less than 64 devices.

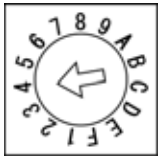
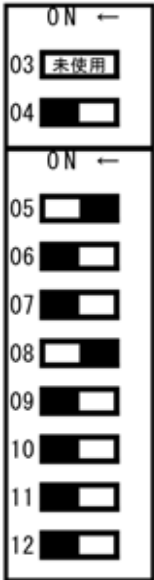
Communication Settings [PLC]

1. RS-232C Connection

1-1 [Connecting via Serial Communication Unit A1SJ71QC24 / A1SJ71QC24N]

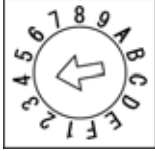
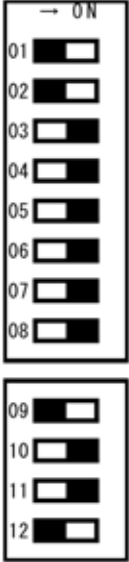
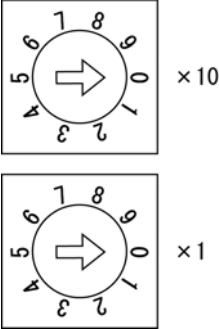
<p>1) <u>Mode Setup</u></p> <p>MODE</p> 	<p>1) <u>Mode Setup</u></p> <p>4 (Format 4 Protocol)</p>
<p>2) <u>Communication Settings</u></p> <p>Set switches to the black.</p> 	<p>2) <u>Communication Settings</u></p> <p>Baud Rate :19200bps Data Bit :7 Bits Stop Bit :2 Bits Parity Check :Yes Parity Setting Even/Odd :Even Write Possible in RUN Mode: Possible Sum Check :Yes</p>
<p>3) <u>Node Settings</u></p> <p>STATION NO</p> 	<p>3) <u>Node Settings</u></p> <p>Station Number: 0</p>

1-2 [Connecting via Computer Link Unit A1SJ71UC24-R2]


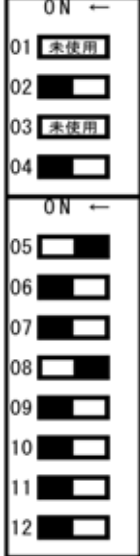
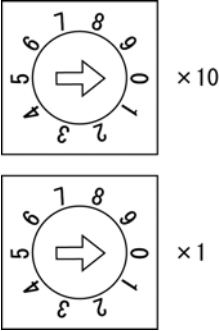
<p>1) Mode Setup</p> <p>MODE</p> 	<p>1) Mode Setup</p> <p>4 (Format 4 Protocol)</p>
<p>2) Communication Settings</p> <p><u>Set switches to the black.</u></p> 	<p>2) Communication Settings</p> <p>Baud Rate :19200bps Data Bit :7 Bits Stop Bit :2 Bits Parity Check :Yes Parity Setting Even/Odd :Even Write Possible in RUN Mode: Possible Sum Check :Yes</p>

2. RS-422 Connection

2-1 [Connecting via Serial Communication Unit A1SJ71QC24N]

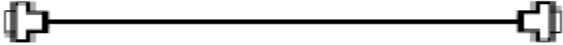
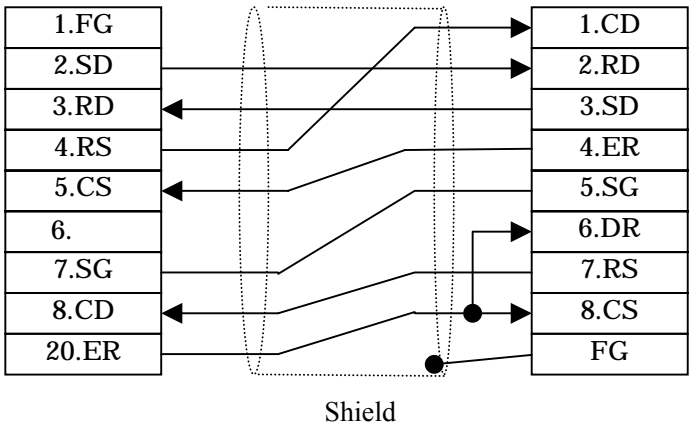
<p><u>1) Mode Setup</u></p> <p>MODE</p> 	<p><u>1) Mode Setup</u></p> <p>4 (Format 4 Protocol)</p>
<p><u>2) Communication Settings</u></p> <p><u>Set switches to the black.</u></p> 	<p><u>2) Communication Settings</u></p> <p>Baud Rate :19200bps Data Bit :7 Bits Stop Bit :2 Bits Parity Check :Yes Parity Setting Even/Odd :Even Write Possible in RUN Mode: Possible Sum Check :Yes</p>
<p><u>3) Node Settings</u></p> <p>STATION NO</p> 	<p><u>3) Node Settings</u></p> <p>Station Number: 0</p>

2-2 [Connecting via Computer Link Unit A1SJ71UC24, A1SJ71UC24-R4]

<p>1) Mode Setup</p> <p>MODE</p> 	<p>1) Mode Setup</p> <p>8 (Format 4 Protocol)</p>
<p>2) Communication Settings</p> <p>Set switches to the black.</p> 	<p>2) Communication Settings</p> <p>Baud Rate :19200bps Data Bit :7 Bits Stop Bit :2 Bits Parity Check :Yes Parity Setting Even/Odd :Even Write Possible in RUN Mode: Possible Sum Check :Yes</p>
<p>3) Node Settings</p> <p>STATION NO</p> 	<p>3) Node Settings</p> <p>Station Number: 0</p>

Connection Method

1. RS-232C Connection

Type	Connection Method	Distance
Using GP000-IS02-MS		3m
Creating Cable	<p>To GP (25p Male) To PLC (9p Male)</p>  <p style="text-align: center;">Shield</p>	Within 15m



*** If a communication cable is used, it must be connected to the SG.**



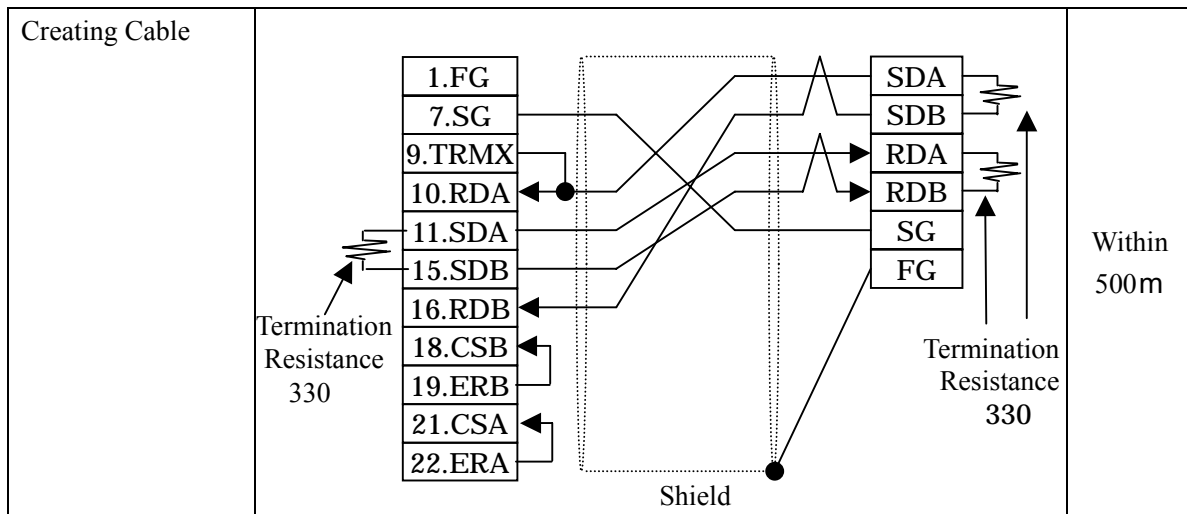
The optional cable, GP000-IS02-MS is 3m long. If you need a longer cable or shorter, please use a User-Created cable to connect.

Recommended Products

Connector/Cover for GP	D-sub 25 pin Plug	XM2A-2501 <OMRON Co.>
	Cover for D-sub 25 pin	XM2S-2511 <OMRON Co.>
	Jack Screw	XM2Z-0071 <OMRON Co.>
Cable	CO-MA-VV-SB5P × 28AWG <Hitachi Cable Ltd.>	
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45	

2. RS-422 Connection

Type	Connection Method	Distance
Using GP230-IS11-O	<p>To GP (25p Male) Cable with 6 wires PLC Terminal Block with 6 contacts</p> <p>GP230-IS11-O</p> <p>Termination Resistance 330</p>	5m
Extending GP230-IS11-O	<p>Cable with 6 wires PLC Terminal Block with 6 contacts</p> <p>GP230-IS11-O (3m) User-Created Cable</p> <p>Termination Resistance 330</p> <p>Termination Resistance 330</p>	5 - 500 m
Using GP070-CN10-O	<p>Conversion Adapter PLC Terminal Block</p> <p>GP070-CN10-O</p> <p>Termination Resistance 330</p> <p>Shield</p> <p>Termination Resistance 330</p>	Within 500m



* If a communication cable is used, it must be connected to the SG.

* Termination Resistance

PLC / between SDA and SDB, between RDA and RDB : 330
(with wattage specified on PLC)

GP Unit / as required (Refer to Cable Diagrams) : 330
(with wattage specified on PLC)

Recommended Products

Connector/Cover for GP	D-sub 25 pin Plug	XM2A-2501	<OMRON Co.>
	Cover for D-sub 25 pin	XM2S-2511	<OMRON Co.>
	Jack Screw	XM2Z-0071	<OMRON Co.>
Cable	SPEV(SB)-MPC-0.2*3P <Mitsubishi Cable Ind.>		
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45		