Personal Computer Link SIO Driver

Introduction

This manual describes how to connect the Display (GP3000 series) and the External Device (target PLC).

In this manual, the connection procedure will be described by following the below sections:

| 1 | System Configuration
This section shows the types of External Devices which can be connected and SIO type. | ☞ "1 System Configuration" (page 3) |

| 2 | Selection of External Device
Select a model (series) of the External Device to be connected and connection method. | ☞ "2 Selection of External Device" (page 4) |

| 3 | Example of Communication Settings
This section shows setting examples for communicating between the Display and the External Device. | ☞ "3 Example of Communication Setting" (page 5) |

| 4 | Communication Settings
This section describes communication setup items on the Display.
Set communication settings of the Display with GP-Pro EX or in off-line mode. | ☞ "4 Setup Items" (page 17) |

| 5 | Cable Diagram
This section shows cables and adapters for connecting the Display and the External Device. | ☞ "5 Cable Diagram" (page 23) |

Operation

1　System Configuration

The system configuration in the case when the External Device of YOKOGAWA Electric Corp. and the Display are connected is shown.

| IMPORTANT	• You cannot connect more than 2 Display units simultaneously by using CPU Direct and Personal Computer Link Module.

1.1　CPU Direct

| Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
FA-M3	F3SP21-0N F3SP25-2N F3SP28-3N F3SP35-5N F3SP38-6N F3SP53-4H F3SP58-6H F3SP28-3S F3SP38-4S F3SP53-4S F3SP58-6S F3SP59-7S	PROGRAMMER port on CPU	RS232C	Setting Example 1 (page 5)	Cable Diagram1 (page 23)

1.2　Personal Computer Link Module

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
FA-M3	F3SP21-0N	RS232C port on F3LC01-1N	RS232C	Setting Example 4 (page 14)	Cable Diagram 3 (page 29)
	F3SP25-2N F3SP28-3N F3SP35-5N F3SP38-6N F3SP53-4H F3SP58-6H F3SP28-3S F3SP38-4S F3SP53-4S F3SP58-6S F3SP59-7S	F3LC11-1N, F3LC11-1F, RS232C port on F3LC12-1F	RS232C	Setting Example 4 (page 14)	Cable Diagram 3 (page 29)
		RS422/485 (4Wire) port on F3LC11-2N	RS422/485	Setting Example 3 (page 11)	Cable Diagram 2 (page 24)
		RS422/485 (2Wire) port on F3LC11-2N	RS422/485	Setting Example 2 (page 8)	Cable Diagram 4 (page 30)

■ Connection Configuration

• 1:1 Connection
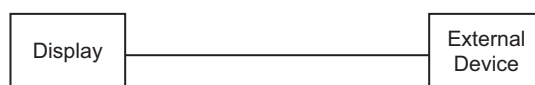
• 1:n Connection
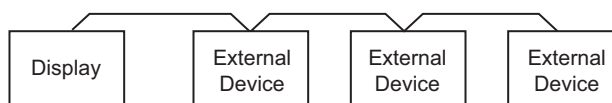
2 Selection of External Device

Select the External Device to be connected to the Display.

Setup Items	Setup Description
Maker	Select the maker of the External Device to be connected. Select "YOKOGAWA Electric Corporation".
Driver	Select a model (series) of the External Device to be connected and connection method. Select "Personal Computer Link SIO". Check the External Device which can be connected in "Personal Computer Link SIO" in system configuration.)"1 System Configuration" (page 3)
Use System Area	Check this option when you synchronize the system data area of Display and the device (memory) of External Device. When synchronized, you can use the ladder program of External Device to switch the display or display the window on the display. Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)" This can be also set with GP-Pro EX or in off-line mode of Display. Cf. GP-Pro EX Reference Manual " 6.13.6 Setting Guide of [System Setting Window]■[Main Unit Settings] Settings Guide◆System Area Setting" Cf. GP3000 Series User Manual "4.3.6 System Area Setting"
Port	Select the Display port to be connected to the External Device.

3   Example of Communication Setting

Examples of communication settings of the Display and the External Device, recommended by Pro-face, are shown.

3.1   Setting Example 1

■ Setting of GP-Pro EX

◆ Communication Settings

To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC

Maker YOKOGAWA Electric Corporation   Series Personal Computer Link SIO   Port COM1

Text Data Mode   1   Change

Communication Settings

SIO Type	⊙ RS232C	○ RS422/485(2wire)	○ RS422/485(4wire)
Speed	19200 ▼		
Data Length	○ 7	⊙ 8	
Parity	⊙ NONE	○ EVEN	○ ODD
Stop Bit	⊙ 1	○ 2	
Flow Control	○ NONE	⊙ ER(DTR/CTS)	○ XON/XOFF
Timeout	3 ÷ (sec)		
Retry	2 ÷		
Wait To Send	0 ÷ (ms)		

ExtentionMode
☐ Exist Sum Check
☑ Exist Terminator

RI / VCC   ⊙ RI   ○ VCC
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC.   Default

Device-Specific Settings
Allowable No. of Device/PLCs 16 Unit(s)

No.	Device Name	Settings
1	PLC1	Station No=1

◆ Device Setting

To display the setting screen, click ▦ ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

When you connect multiple External Device, click ▦ from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.

■ Setting of External Device

Execute [Configuration] from the [Project] menu in the ladder tool and set as below. Please refer to each maker's manual of the External Device for more detail on ladder tool.

Setup Items	Settings
Speed	19200
Data Length	8
Parity	None
Stop Bit	1
Exist Sum Check	None
Exist Terminator	Exists
Protect	None

3.2　　　Setting Example 2

■ Setting of GP-Pro EX

◆ Communication Settings

To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

◆ Device Setting

To display the setting screen, click ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

When you connect multiple External Device, click from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.

■ Setting of External Device

Set the computer link module as below. Please refer to each maker's manual of the External Device for more detail.

◆ Transmission Speed Setting Switch

Setup Items	Settings
Speed	19200

◆ Data Code Setting Switch

DIP Switch	Settings	Setup Description
SW1	ON	Data Length
SW2	OFF	Parity Bit
SW3	OFF	-
SW4	OFF	Stop Bit
SW5	OFF	Exist Sum Check
SW6	ON	Exist Terminator
SW7	OFF	Protect
SW8	OFF	Always OFF

◆ Station No. Setting Switch

Setup Items	Settings
Station No.	No.1 station

NOTE • Set the termination resistance switch of only the module which terminates the connection to 2-WIRE. Set other switches to OFF.

3.3   Setting Example 3

■ Setting of GP-Pro EX

◆ Communication Settings

To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1

Summary   Change Device/PLC

Maker YOKOGAWA Electric Corporation   Series Personal Computer Link SIO   Port COM1

Text Data Mode   1   Change

Communication Settings

SIO Type   ○ RS232C   ○ RS422/485(2wire)   ● RS422/485(4wire)

Speed   19200

Data Length   ○ 7   ● 8

Parity   ● NONE   ○ EVEN   ○ ODD

Stop Bit   ● 1   ○ 2

Flow Control   ○ NONE   ● ER(DTR/CTS)   ○ XON/XOFF

Timeout   3   (sec)

Retry   2

Wait To Send   0   (ms)

ExtentionMode
  ☐ Exist Sum Check
  ☑ Exist Terminator

RI / VCC   ● RI   ○ VCC
In the case of RS232C, you can select the 9th pin to RI (Input)
or VCC (5V Power Supply). If you use the Digital's RS232C
Isolation Unit, please select it to VCC.   Default

Device-Specific Settings
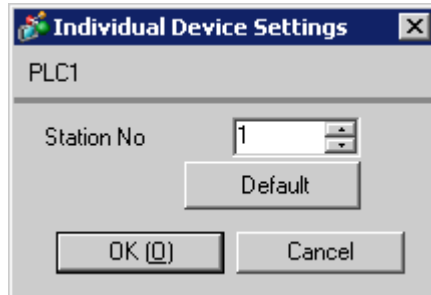 Allowable No. of Device/PLCs 16 Unit(s)
       No. Device Name   Settings
    1 PLC1   Station No=1

◆ Device Setting

To display the setting screen, click ▦ ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

When you connect multiple External Device, click ▦ from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.

■ Setting of External Device

Set the computer link module as below. Please refer to each maker's manual of the External Device for more detail.

◆ Transmission Speed Setting Switch

Setup Items	Settings
Speed	19200

◆ Data Code Setting Switch

DIP Switch	Settings	Setup Description
SW1	ON	Data Length
SW2	OFF	Parity Bit
SW3	OFF	-
SW4	OFF	Stop Bit
SW5	OFF	Exist Sum Check
SW6	ON	Exist Terminator
SW7	OFF	Protect
SW8	OFF	Always OFF

◆ Station No. Setting Switch

Setup Items	Settings
Station No.	No.1 station

NOTE • Set the termination resistance switch of only the module which terminates the connection to 4-WIRE. Set other switches to OFF.

3.4 Setting Example 4

■ Setting of GP-Pro EX

◆ Communication Settings

To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

| Device/PLC 1 |

Summary   Change Device/PLC

Maker |YOKOGAWA Electric Corporation| Series |Personal Computer Link SIO| Port |COM1|

Text Data Mode | 1 | Change

Communication Settings

SIO Type   ⊙ RS232C   ○ RS422/485(2wire)   ○ RS422/485(4wire)

Speed |19200 ▼|

Data Length   ○ 7   ⊙ 8

Parity   ⊙ NONE   ○ EVEN   ○ ODD

Stop Bit   ⊙ 1   ○ 2

Flow Control   ○ NONE   ⊙ ER(DTR/CTS)   ○ XON/XOFF

Timeout |3 ⬍| (sec)

Retry |2 ⬍|

Wait To Send |0 ⬍| (ms)

ExtentionMode

☐ Exist Sum Check

☑ Exist Terminator

RI / VCC   ⊙ RI   ○ VCC

In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. | Default |

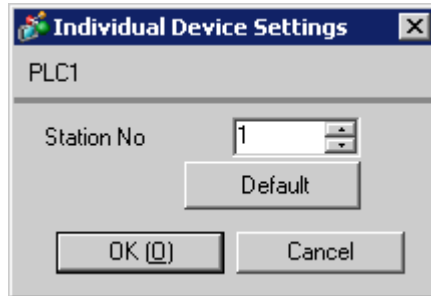Device-Specific Settings

Allowable No. of Device/PLCs 16 Unit(s) 📇

No. Device Name   Settings

👤 1 |PLC1| 📇 |Station No=1|

◆ Device Setting

To display the setting screen, click ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

When you connect multiple External Device, click from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.

■ Setting of External Device

Set the computer link module as below. Please refer to each maker's manual of the External Device for more detail.

◆ Transmission Speed Setting Switch

Setup Items	Settings
Speed	19200

◆ Data Code Setting Switch

DIP Switch	Settings	Setup Description
SW1	ON	Data Length
SW2	OFF	Parity Bit
SW3	OFF	-
SW4	OFF	Stop Bit
SW5	OFF	Exist Sum Check
SW6	ON	Exist Terminator
SW7	OFF	Protect
SW8	OFF	Always OFF

4   Setup Items

Set communication settings of the Display with GP-Pro EX or in off-line mode of the Display.

The setting of each parameter must be identical to that of External Device.

)"3 Example of Communication Setting" (page 5)

4.1   Communication Setting with GP-Pro EX

■ Communication Settings

To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

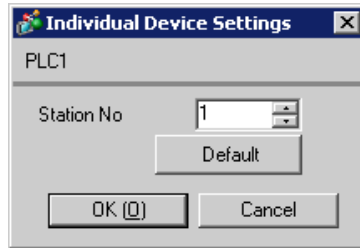| Setup Items	Setup Description
SIO Type	Select the SIO type to communicate with the External Device.
Speed	Select speed between the External Device and the Display.
Data Length	Select data length.
Parity	Select how to check parity.
Stop Bit	Select stop bit length.
Flow Control	Select the communication control method to prevent overflow of transmission and reception data.
Timeout	Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device.
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.

Setup Items	Setup Description
Wait To Send	Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.
Exist Sum Check (Extension Mode)	Set whether you perform the sum check.
Exist Terminator (Extension Mode)	Set whether you specify the data terminator.
RI/VCC	You can switch RI/VCC of the 9th pin when you select RS232C for SIO type.

■ Device Setting

To display the setting screen, click   ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

When [Allowable No. of Device/PLCs] is multiple, click   from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.

Setup Items	Setup Description
Station No.	Use an integer 0 to 32 to enter the station number of the External Device to communicate.

4.2 Communication Settings in Off-line Mode

NOTE • Please refer to GP3000 Series User Manual for more information on how to enter off-line mode or about operation.

Cf. GP3000 Series User Manual "Chapter 4 Settings"

■ Communication Settings

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings] in off-line mode. Touch the External Device you want to set from the displayed list.

Comm.	Device	Option		

Personal Computer Link SIO   [COM1]   Page 1/1

SIO Type	RS232C ▼
Speed	19200 ▼
Data Length	○ 7 ● 8
Parity	● NONE ○ EVEN ○ ODD
Stop Bit	● 1 ○ 2
Flow Control	ER(DTR/CTS) ▼
Timeout(s)	3 ▼ ▲
Retry	2 ▼ ▲
Wait To Send(ms)	0 ▼ ▲
Exist Check Sum	● OFF ○ ON
Exist Terminator	○ OFF ● ON

| | Exit | | Back | 2005/09/02 12:49:31 |

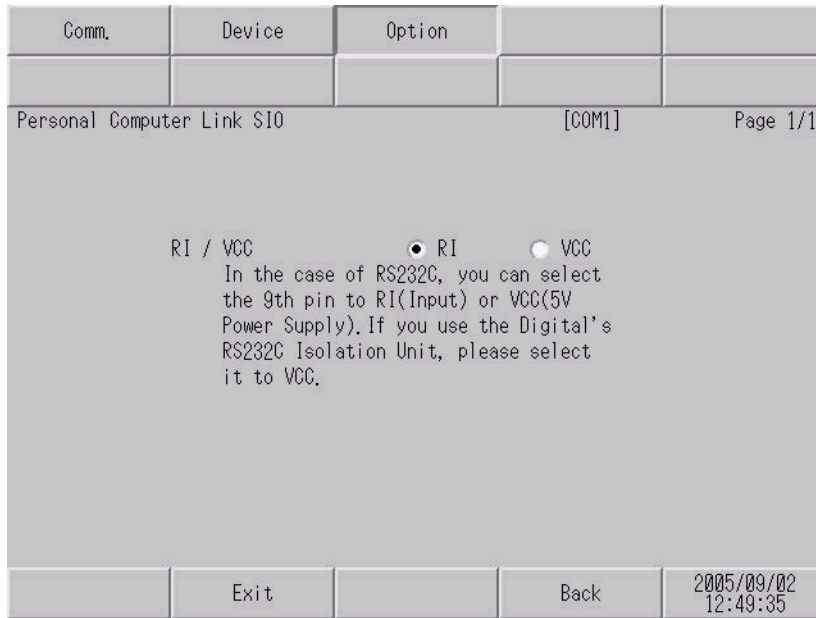| Setup Items	Setup Description
SIO Type	Select the SIO type to communicate with the External Device.
Speed	Select speed between the External Device and the Display.
Data Length	Select data length.
Parity	Select how to check parity.
Stop Bit	Select stop bit length.
Flow Control	Select the communication control method to prevent overflow of transmission and reception data.
Timeout	Use an integer from 1 to 127 to enter the time (sec) for which the Display waits for the response from the External Device.
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.
Wait To Send	Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.
Exist Check Sum	Set whether you perform the check sum.
Exist Terminator	Set whether you specify the data terminator.

■ Device Setting

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings]. Touch the External Device you want to set from the displayed list, and touch [Device].

Comm.	Device	Option		

Personal Computer Link SIO   [COM1]   Page 1/1

Device/PLC Name   [PLC1   ▼]

Station No.   [1 ▼ ▲]

	Exit		Back	2005/09/02 12:49:33

Setup Items	Setup Description
Device/PLC Name	Select the External Device for device setting. Device name is a title of External Device set with GP-Pro EX.(Initial value [PLC1])
Station No.	Use an integer 0 to 32 to enter the station number of the External Device to communicate.

◼ Option

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings]. Touch the External Device you want to set from the displayed list, and touch [Option].

Comm.	Device	Option		

Personal Computer Link SIO   [COM1]   Page 1/1

RI / VCC   ● RI   ○ VCC
In the case of RS232C, you can select
the 9th pin to RI(Input) or VCC(5V
Power Supply). If you use the Digital's
RS232C Isolation Unit, please select
it to VCC.

	Exit		Back	2005/09/02 12:49:35

Setup Items	Setup Description
RI/VCC	You can switch RI/VCC of the 9th pin when you select RS232C for SIO type.

5   Cable Diagram

The cable diagram shown below may be different from the cable diagram recommended by YOKOGAWA Electric Corporation. Please be assured there is no operational problem in applying the cable diagram shown in this manual.

- The FG pin of the External Device body must be D-class grounded. Please refer to the manual of the External Device for more details.
- SG and FG are connected inside the Display. When connecting SG to the External Device, design the system not to form short-circuit loop.

Display (Connection Port)	Cable	Notes
GP (COM1)	RS232C conversion cable by Pro-face, CA3-CBLCBT232-01 + Programming tool cable by YOKOGAWA Electric Corporation KM11-2N*A	The cable length must be 15m or less.

Cable Diagram1

CA3-CBLCBT232-01   KM11-2N*A
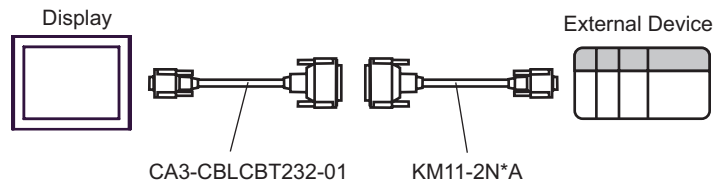
Cable Diagram 2

Display (Connection Port)		Cable	Notes
GP[*1] (COM1) AGP-3302B (COM2)	A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Connector terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	B	Your own cable	
GP[*1] (COM2)	C	Online adapter by Pro-face CA3-ADPONL-01 + Connector terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	—
	D	Online adapter by Pro-face CA3-ADPONL-01 + Your own cable	

*1   All GP models except AGP-3002B

NOTE
- Attach the termination resistance to the devices on both ends.
- Note that pole A and pole B are reversely named for the Display and the External Device.
- When the PA device has SG, connect it.
- Set the last resistance switch of the personal computer link module for the External Device which terminates the connection to 4-WIRE.
- We recommend CO-SPEU-SB(A)3P x 0.5SQ by Hitachi Cable, Ltd. for the connection cable.
- Total cable length is 1000m.
- Set the station No. for the personal computer link module to 2 to 32.
- You must set the different station No. of all PA devices connected to the Display. If there are more than 2 PA devices with the same station No., error occurs.
- Perform the identical communication settings for both the Display (m units) and the PA device (n units).

A) When using the COM port conversion adapter (CA3-ADPCOM-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
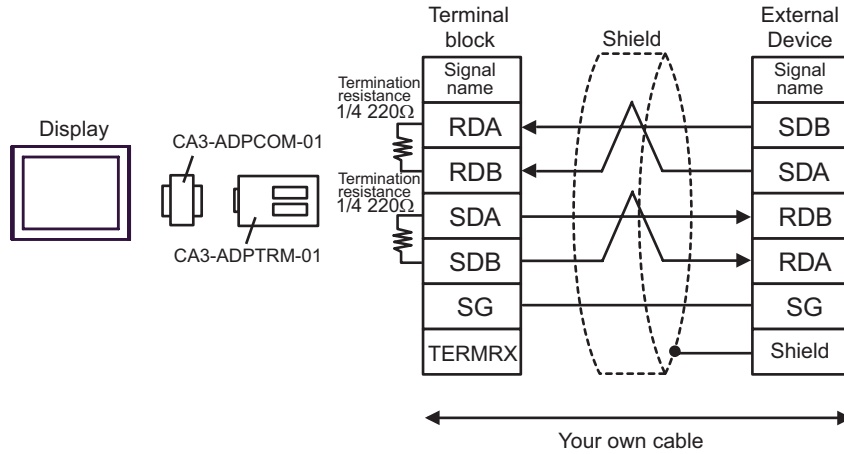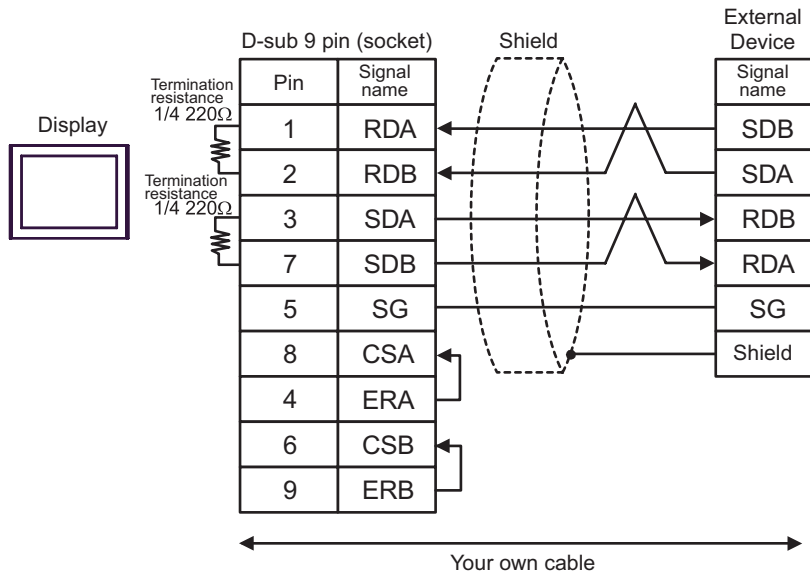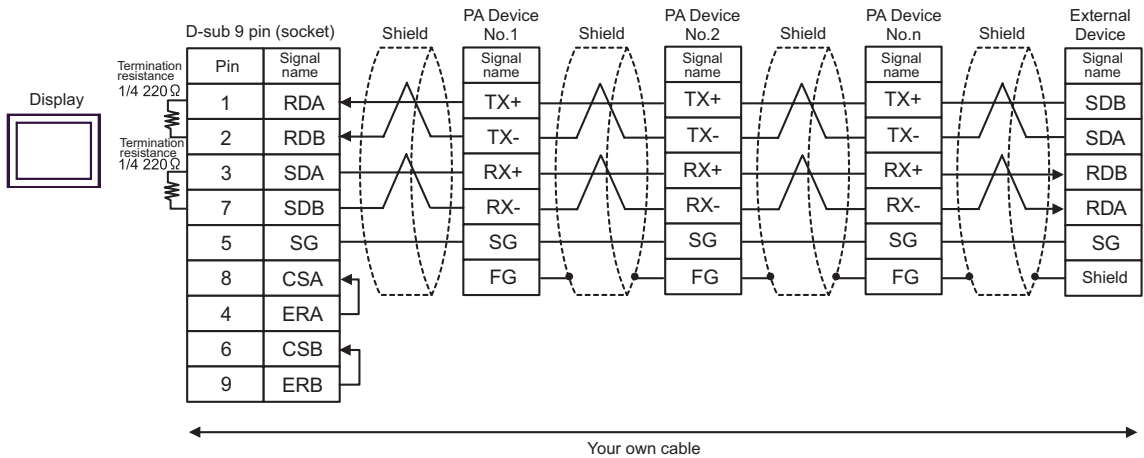
[1:1 Connection]
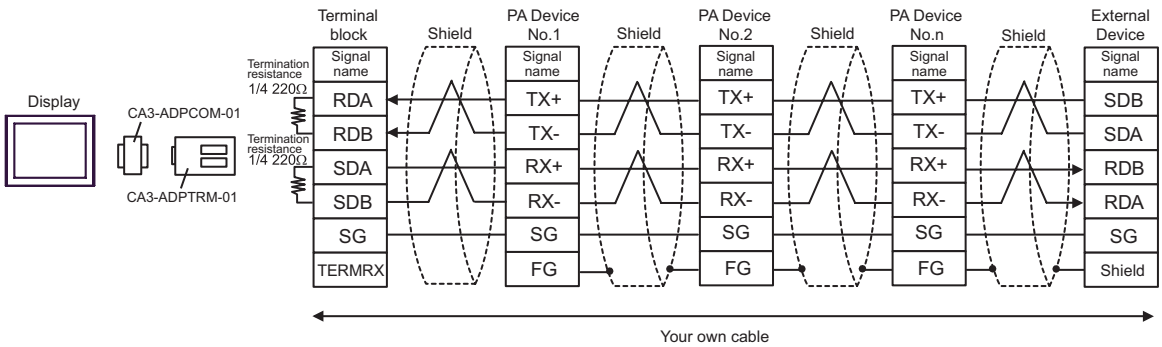
[1:n Connection]

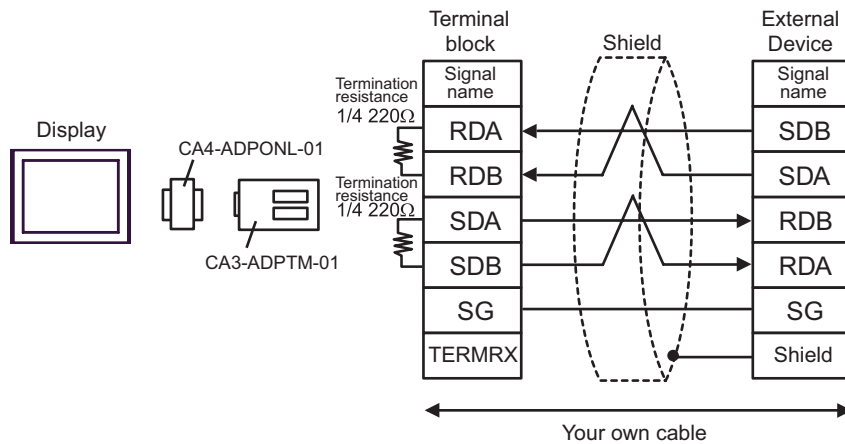| NOTE	• When the PA device has SG, connect it.
	• Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

B) When using your own cable
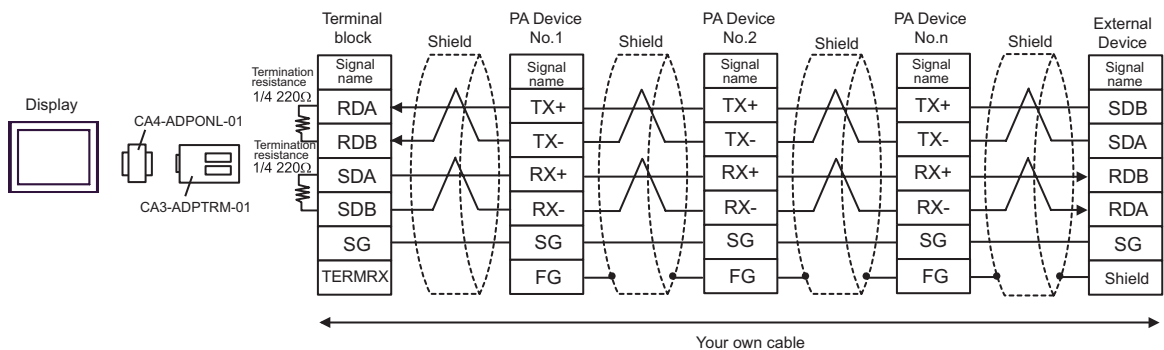
[1:1 Connection]

[1:n Connection]

NOTE	• When the PA device has SG, connect it.
	• Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

C) When using the connector terminal block conversion adapter (CA4-ADPONL-01) by Pro-face, the connector terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
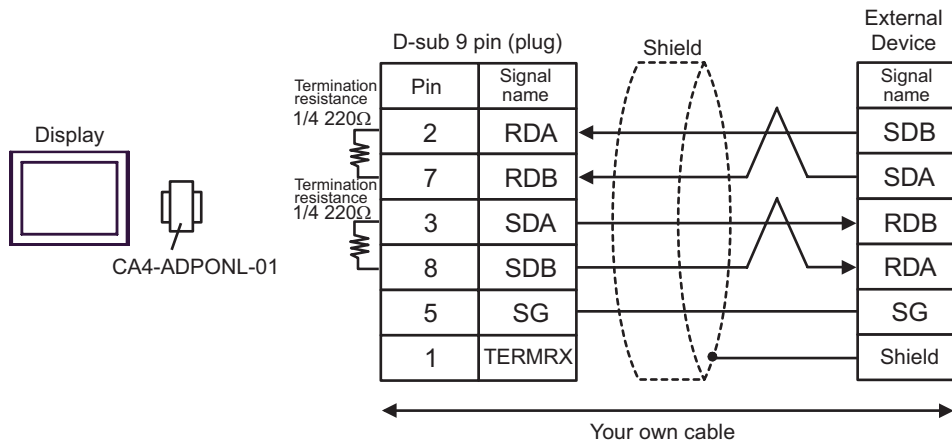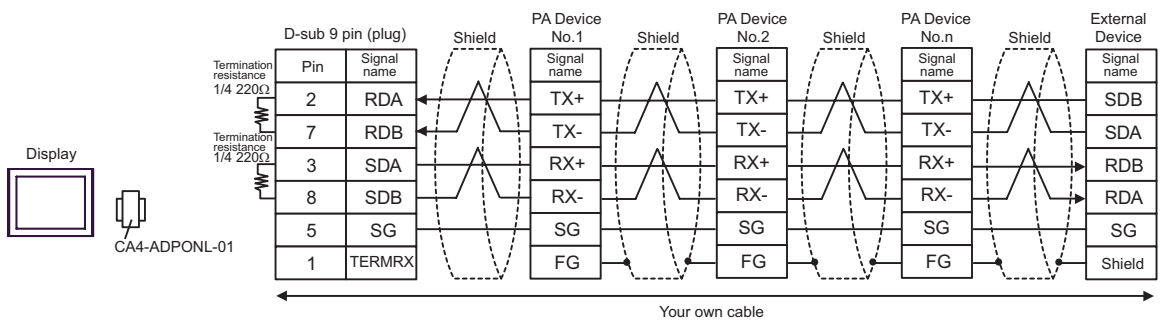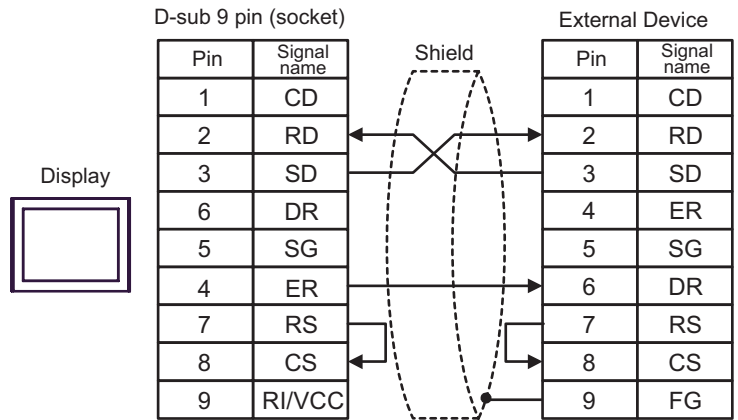
[1:1 Connection]

[1:n Connection]

NOTE	• When the PA device has SG, connect it.
	• Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

D) When using the connector terminal block conversion adapter (CA4-ADPONL-01) by Pro-face and your own cable

[1:1 Connection]

Pin	Signal name		Signal name
2	RDA	←	SDB
7	RDB	←	SDA
3	SDA	→	RDB
8	SDB	→	RDA
5	SG		SG
1	TERMRX		Shield

Display — CA4-ADPONL-01
Termination resistance 1/4 220Ω
Termination resistance 1/4 220Ω
D-sub 9 pin (plug) — Shield — External Device
Your own cable

[1:n Connection]

D-sub 9 pin (plug) — Shield — PA Device No.1 — Shield — PA Device No.2 — Shield — PA Device No.n — Shield — External Device

Pin	Signal name	PA Device No.1	PA Device No.2	PA Device No.n	External Device
2	RDA	TX+	TX+	TX+	SDB
7	RDB	TX-	TX-	TX-	SDA
3	SDA	RX+	RX+	RX+	RDB
8	SDB	RX-	RX-	RX-	RDA
5	SG	SG	SG	SG	SG
1	TERMRX	FG	FG	FG	Shield

Display — CA4-ADPONL-01
Termination resistance 1/4 220Ω
Termination resistance 1/4 220Ω
Your own cable

NOTE
• When the PA device has SG, connect it.
• Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

Cable Diagram 3

Display (Connection Port)	Cable	Notes
GP (COM1)	Your own cable	The cable length must be 15m or less.

D-sub 9 pin (socket)   External Device

Pin	Signal name		Pin	Signal name
1	CD		1	CD
2	RD		2	RD
3	SD	Shield	3	SD
6	DR		4	ER
5	SG		5	SG
4	ER		6	DR
7	RS		7	RS
8	CS		8	CS
9	RI/VCC		9	FG

Display

Cable Diagram 4

Display (Connection Port)		Cable	Notes
GP (COM1)*1 AGP-3302B (COM2)	A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Connector terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	―
	B	Your own cable	
GP (COM2)*1	C	Online adapter by Pro-face CA4-ADPONL-01 + Connector terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	D	Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	

*1   All GP models except AGP-3002B

NOTE
- Note that pole A and pole B are reversely named for the Display and the External Device.
- When the PA device has SG, connect it.
- Set the last resistance switch of the personal computer link module for the External Device which terminates the connection to 2-WIRE.
- We recommend CO-SPEU-SB(A)3P x 0.5SQ by Hitachi Cable, Ltd. for the connection cable.
- Total cable length is 1000m.

A) When using the COM port conversion adapter (CA3-ADPCOM-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
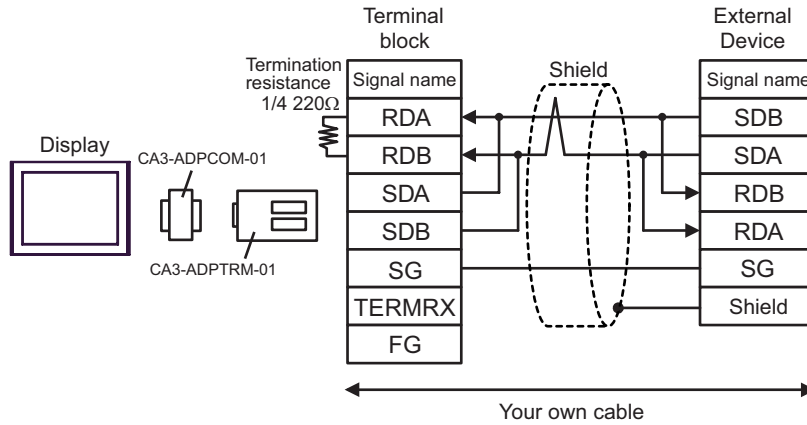
[1:1 Connection]

[1:n Connection]

B) When using your own cable
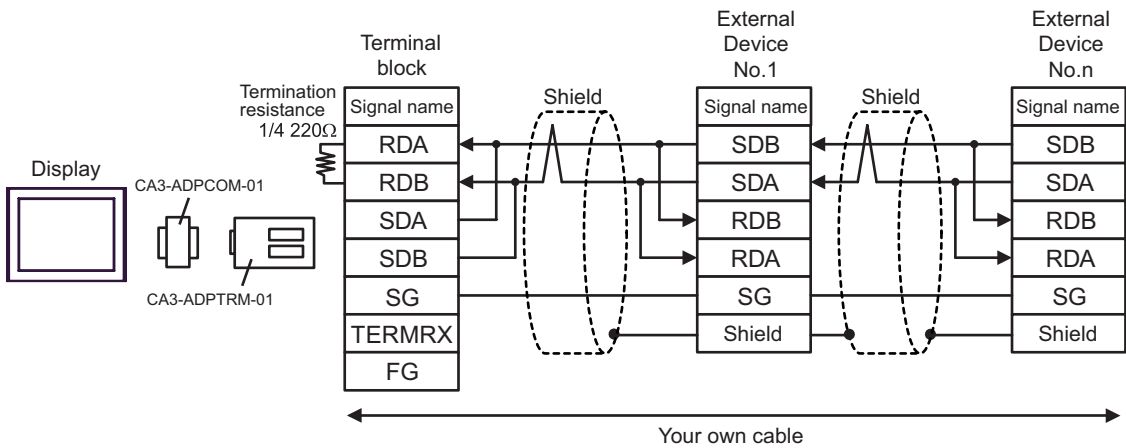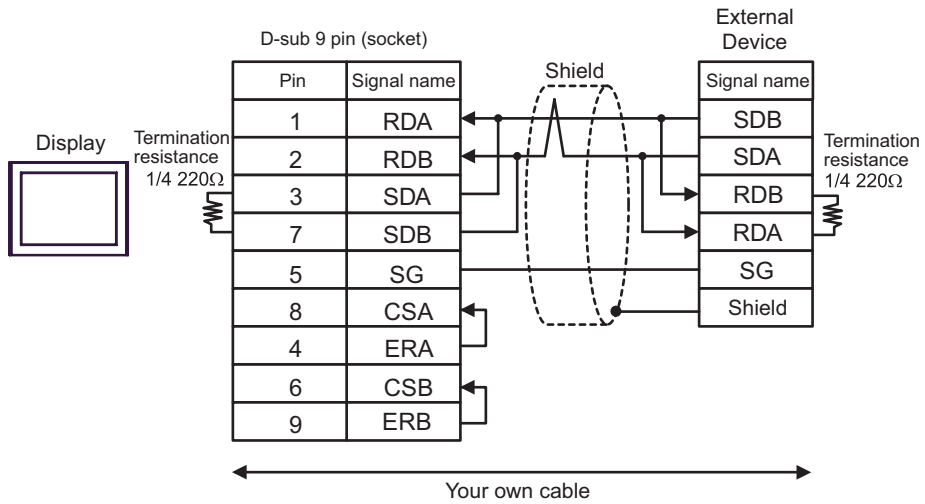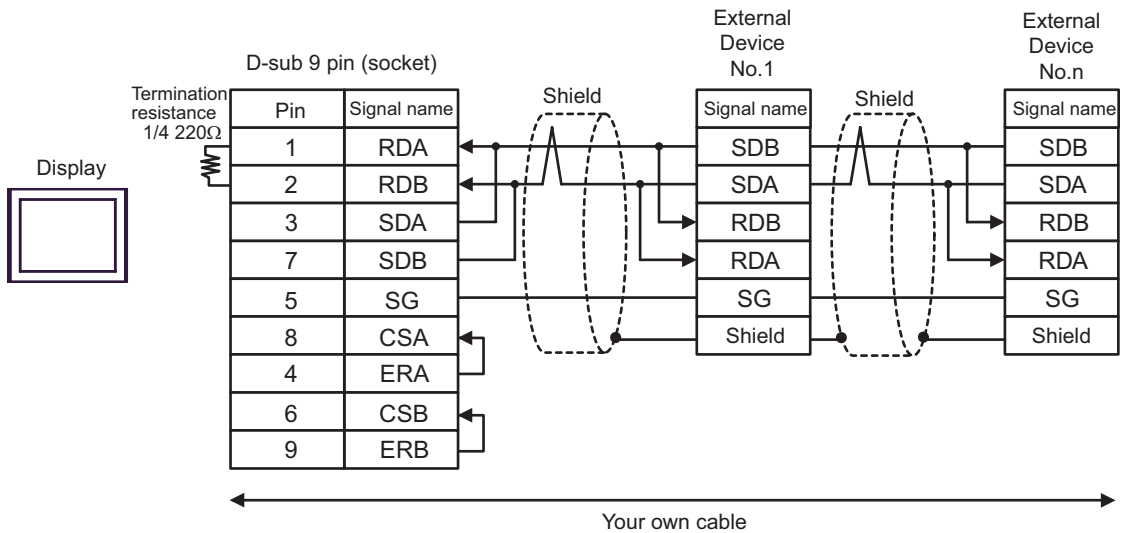
[1:1 Connection]
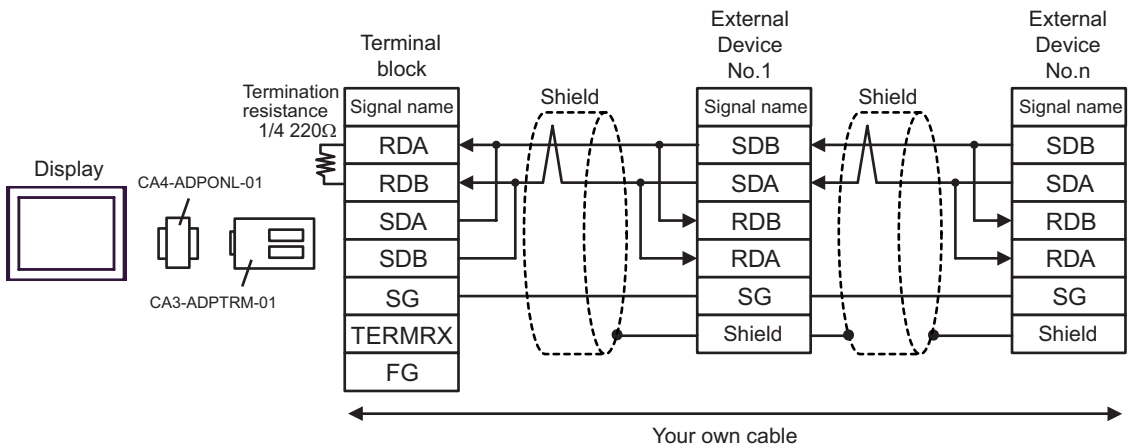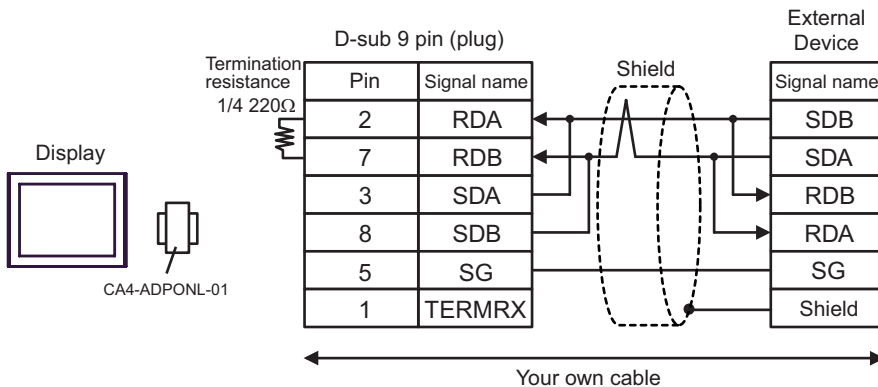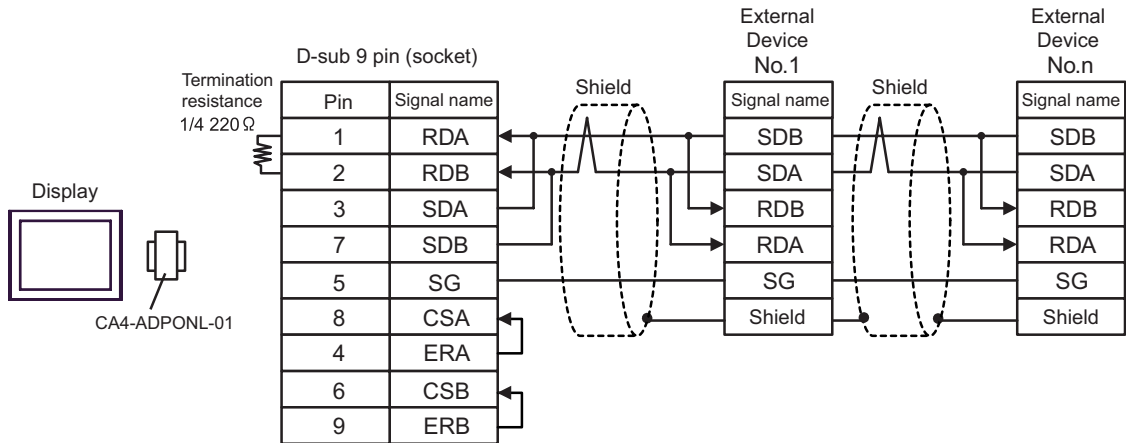

Your own cable

[1:n Connection]

Your own cable

C) When using the connector terminal block conversion adapter (CA4-ADPONL-01) by Pro-face, the connector

terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
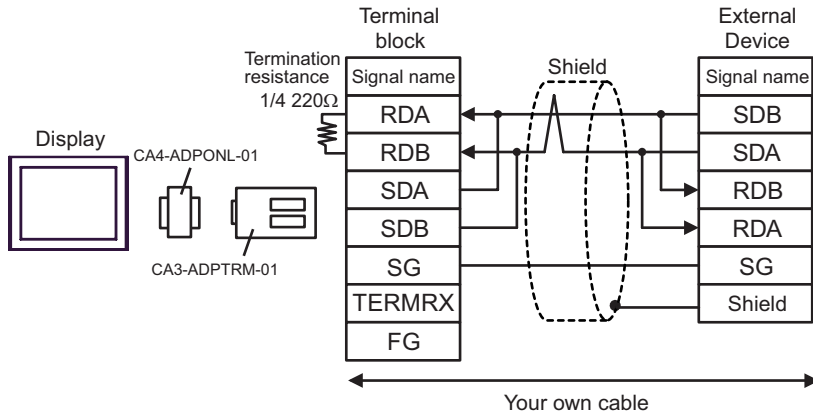
[1:1 Connection]

[1:n Connection]

D) When using the online adapter (CA4-ADPONL-01) by Pro-face and your own cable

[1:1 Connection]

[1:n Connection]

6   Supported Device

Range of supported device address is shown in the table below. Please note that the actually supported range of the devices varies depending on the External Device to be used. Please check the actual range in the manual of your External Device.

[diagram] This address can be specified as system data area.

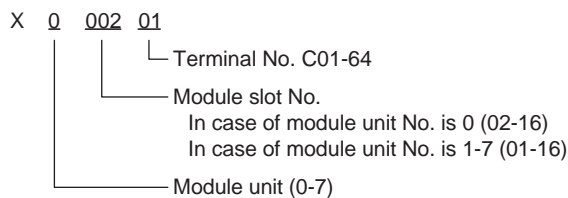| Device	Bit Address	Word Address	32bits	Notes
Input Relay	X00201 - X71664	X00201 - X71649		[÷16+1] [1]*[2]
Output Relay	Y00201 - Y71664	Y00201 - Y71649		[÷16+1] *[1]
Internal Relay	I00001 - I65535	I00001 - I65521		[÷16+1]
Common Relay	E0001 - E4096	E0001 - E4081		[÷16+1]
Special Relay	M0001 - M9984	M0001 - M9969		[÷16+1]
Link Relay	L00001 - L78192	L00001 - L78177		[÷16+1] *[4]
Timer (Contact)	TU0001 - TU3072	------		
Counter (Contact)	CU0001 - CU3072	------		
Timer (Current Value)	------	TP0001 - TP3072	[L / H]	
Timer (Setting Value)	------	TS0001 - TS3072		*[2]
Counter (Current Value)	------	CP0001 - CP3072		
Counter (Setting Value)	------	CS0001 - CS3072		*[2]
Data Register	------	D00001 - D65535		[Bit 15]
Common Register	------	B000001 - B262144		[Bit 15] *[3]
General Register	------	R0001 - R4096		[Bit 15]
Special Register	------	Z0001 - Z1024		[Bit 15]
Link Register	------	W00001 - W78192		[Bit 15] *[4]

*1   Address input area for input relay (X) and output relay (Y) is shown below.

When you specify the word address, specify the terminal number with the value of (a multiple of 16) + 1.

Example: X002001

```
X   0   002  01
            └─ Terminal No. C01-64
        ──── Module slot No.
              In case of module unit No. is 0 (02-16)
              In case of module unit No. is 1-7 (01-16)
    ──────── Module unit (0-7)
```
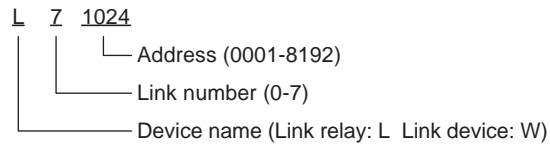
*2   Write disable

*3   When using the personal computer link module for connection, you can use up to B99999.

*4   In link relay (L) and link register (W), the upper 1st digit on address input area shows the link number, and lower 4th digit shows the address. Specify the word address for link relay (L) and link register (W) with the value of (a multiple of 16) + 1.

Example: When specifying L71024 of link relay

<div style="margin-left: 4em;">

L   7   <u>1024</u>
            └── Address (0001-8192)
        └──── Link number (0-7)
    └──────── Device name (Link relay: L Link device: W)

</div>

NOTE • Please refer to the GP-Pro EX Reference Manual for system data area.

Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"

• Please refer to the precautions on manual notation for icons in the table.

☞ "Manual Symbols and Terminology"

7 Device Code and Address Code

Use device code and address code when you select "Device & Address" for the address type in data displays.

Device	Device Name	Device Code (HEX)	Address Code
Input Relay	1X	0x0080[*1]	(Module unit No. x 0x40) + ((Module slot No. - 1) x 0x4) + ((Terminal No. - 1) divided by 16)[*5]
	2X	0x0180[*2]	
	3X	0x0280[*3]	
	4X	0x0380[*4]	
Output Relay	1Y	0x0081[*1]	(Module unit No. x 0x40) + ((Module slot No. - 1) x 0x4) + ((Terminal No. - 1) divided by 16)[*5]
	2Y	0x0181[*2]	
	3Y	0x0281[*3]	
	4Y	0x0381[*4]	
Internal Relay	1I	0x0082[*1]	Value of (word address - 1) divided by 16
	2I	0x0182[*2]	
	3I	0x0282[*3]	
	4I	0x0382[*4]	
Common Relay	1E	0x0084[*1]	Value of (word address - 1) divided by 16
	2E	0x0184[*2]	
	3E	0x0284[*3]	
	4E	0x0384[*4]	
Special Relay	1M	0x0083[*1]	Value of (word address - 1) divided by 16
	2M	0x0183[*2]	
	3M	0x0283[*3]	
	4M	0x0383[*4]	
Link Relay	1L	0x0088[*1]	(Link No. x 0x10000) + ((Word Address - 1) divided by 16) [*6]
	2L	0x0188[*2]	
	3L	0x0288[*3]	
	4L	0x0388[*4]	
Timer (Current Value)	1TP	0x0060[*1]	Word Address - 1
	2TP	0x0160[*2]	
	3TP	0x0260[*3]	
	4TP	0x0360[*4]	

Device	Device Name	Device Code (HEX)	Address Code
Timer (Setting Value)	1TS	0x0063[*1]	Word Address - 1
	2TS	0x0163[*2]	
	3TS	0x0263[*3]	
	4TS	0x0363[*4]	
Counter (Current Value)	1CP	0x0061[*1]	Word Address - 1
	2CP	0x0161[*2]	
	3CP	0x0261[*3]	
	4CP	0x0361[*4]	
Counter (Setting Value)	1CS	0x0064[*1]	Word Address - 1
	2CS	0x0164[*2]	
	3CS	0x0264[*3]	
	4CS	0x0364[*4]	
Data Register	1D	0x0000[*1]	Word Address - 1
	2D	0x0100[*2]	
	3D	0x0200[*3]	
	4D	0x0300[*4]	
Common Register	1B	0x0004[*1]	Word Address - 1
	2B	0x0104[*2]	
	3B	0x0204[*3]	
	4B	0x0304[*4]	
General Register	1R	0x0003[*1]	Word Address - 1
	2R	0x0103[*2]	
	3R	0x0203[*3]	
	4R	0x0303[*4]	
Special Register	1Z	0x0001[*1]	Word Address - 1
	2Z	0x0101[*2]	
	3Z	0x0201[*3]	
	4Z	0x0301[*4]	
Link Register	1W	0x0002[*1]	(Link No. x 0x10000) + ((Word Address - 1) divided by 16)[*6]
	2W	0x0102[*2]	
	3W	0x0202[*3]	
	4W	0x0302[*4]	

*1   When CPU number is 1

*2   When CPU number is 2

*3   When CPU number is 3

*4   When CPU number is 4

*5   Please refer to "6 Supported Device *1" for each name.

*6   Please refer to "6 Supported Device *4" for each name.

8 Error Messages

Error messages are displayed on the screen of Display as follows: "No. : Device Name: Error Message (Error Occurrence Area)". Each description is shown below.

Item	Description
No.	Error No.
Device Name	Name of External Device where error occurs. Device name is a title of External Device set with GP-Pro EX. (Initial value [PLC1])
Error Message	Displays messages related to the error which occurs.
Error Occurrence Area	Displays IP address or device address of External Device where error occurs, or error codes received from External Device. **NOTE** • Received error codes are displayed such as "Decimal [Hex]". • IP address is displayed such as "IP address (Decimal): MAC address (Hex)".

Display Examples of Error Messages

"RHAA035: PLC1: Error has been responded for device write command (Error Code: 2 [02])"

NOTE • Please refer to the manual of External Device for more detail of received error codes.