YOKOGAWA Electric Corporation

# 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<br>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<br>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<br>This section shows setting examples for communicating between the Display and the External Device. | ☞"3 Example of Communication Setting" (page 5) |
| 4 | Communication Settings<br>This section describes communication setup items on the Display.<br>Set communication settings of the Display with GP-Pro EX or in off-line mode. | ☞"4 Setup Items" (page 17) |
| 5 | Cable Diagram<br>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

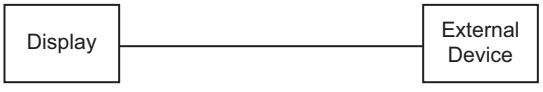
| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| FA-M3 | F3SP21-0N<br>F3SP25-2N<br>F3SP28-3N<br>F3SP35-5N<br>F3SP38-6N<br>F3SP53-4H<br>F3SP58-6H<br>F3SP28-3S<br>F3SP38-6S<br>F3SP53-4S<br>F3SP58-6S<br>F3SP59-7S | PROGRAMMER port on CPU | RS232C | Setting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

## 1.2 Personal Computer Link Module

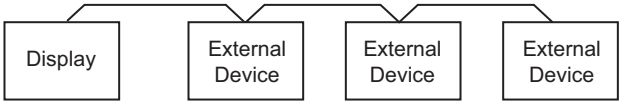
| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| FA-M3 | F3SP25-2N<br>F3SP28-3N<br>F3SP35-5N<br>F3SP38-6N<br>F3SP53-4H<br>F3SP58-6H<br>F3SP28-3S<br>F3SP38-6S<br>F3SP53-4S<br>F3SP58-6S<br>F3SP59-7S | F3LC11-1N, F3LC11-1F, RS232C port on F3LC12-1F | RS232C | 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

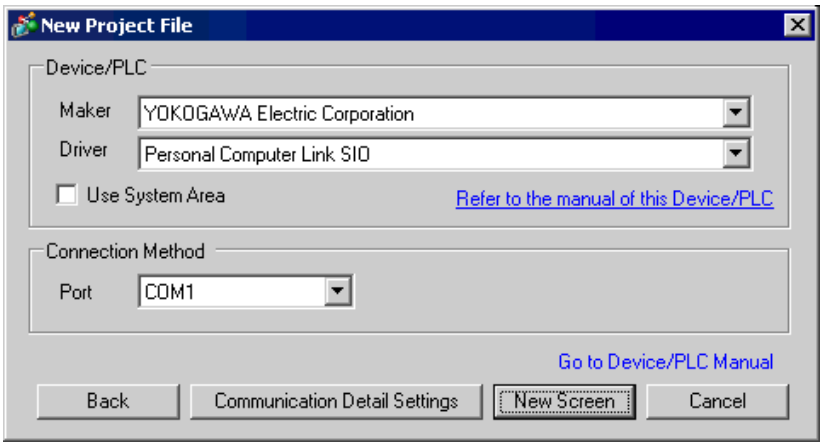



- 1:n Connection



# 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.<br>☞ "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.<br>Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"<br>This can be also set with GP-Pro EX or in off-line mode of Display.<br>Cf. GP-Pro EX Reference Manual " 6.13.6 Setting Guide of [System Setting Window]■[Main Unit Settings] Settings Guide◆System Area Setting"<br>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

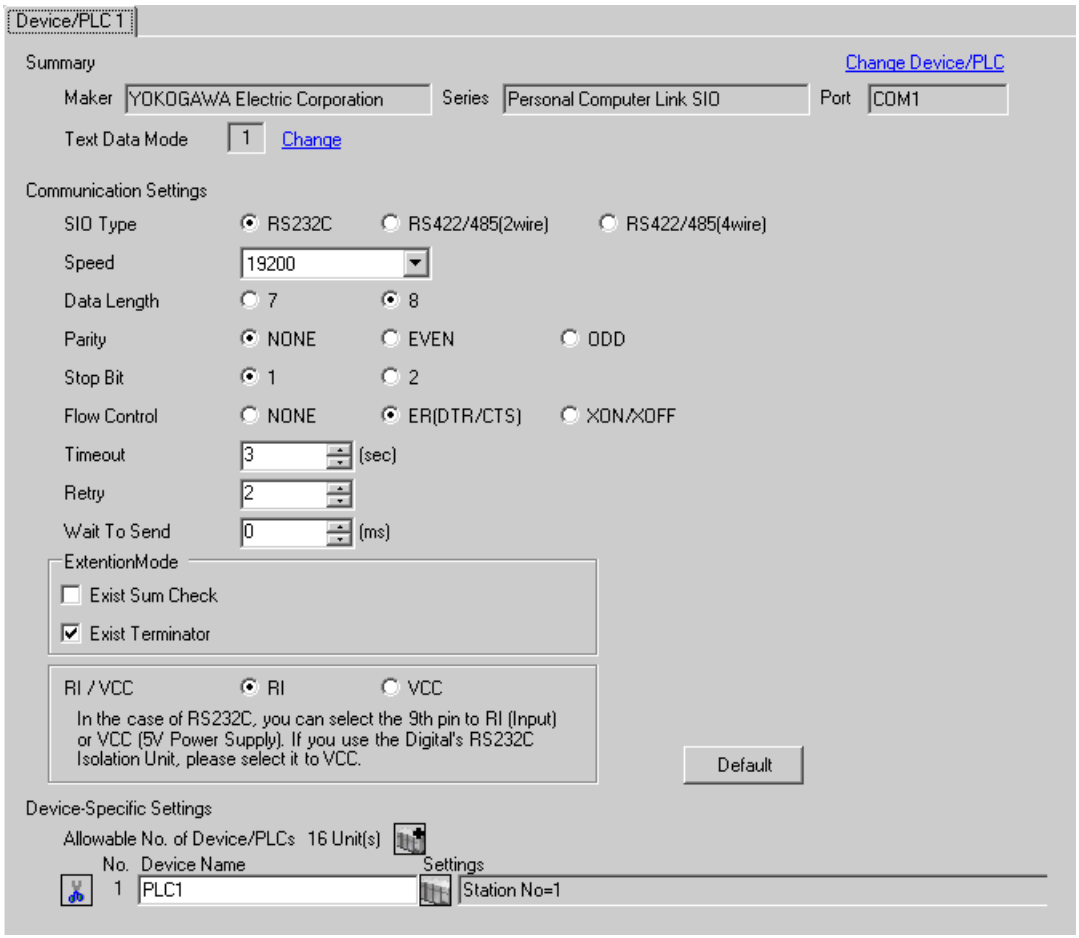
Examples of communication settings of the Display and the External Device, recommended by Pro-face, are shown.

## 3.1 Setting Example 1

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

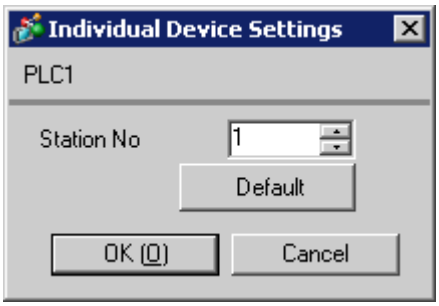
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



◆ Device 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.

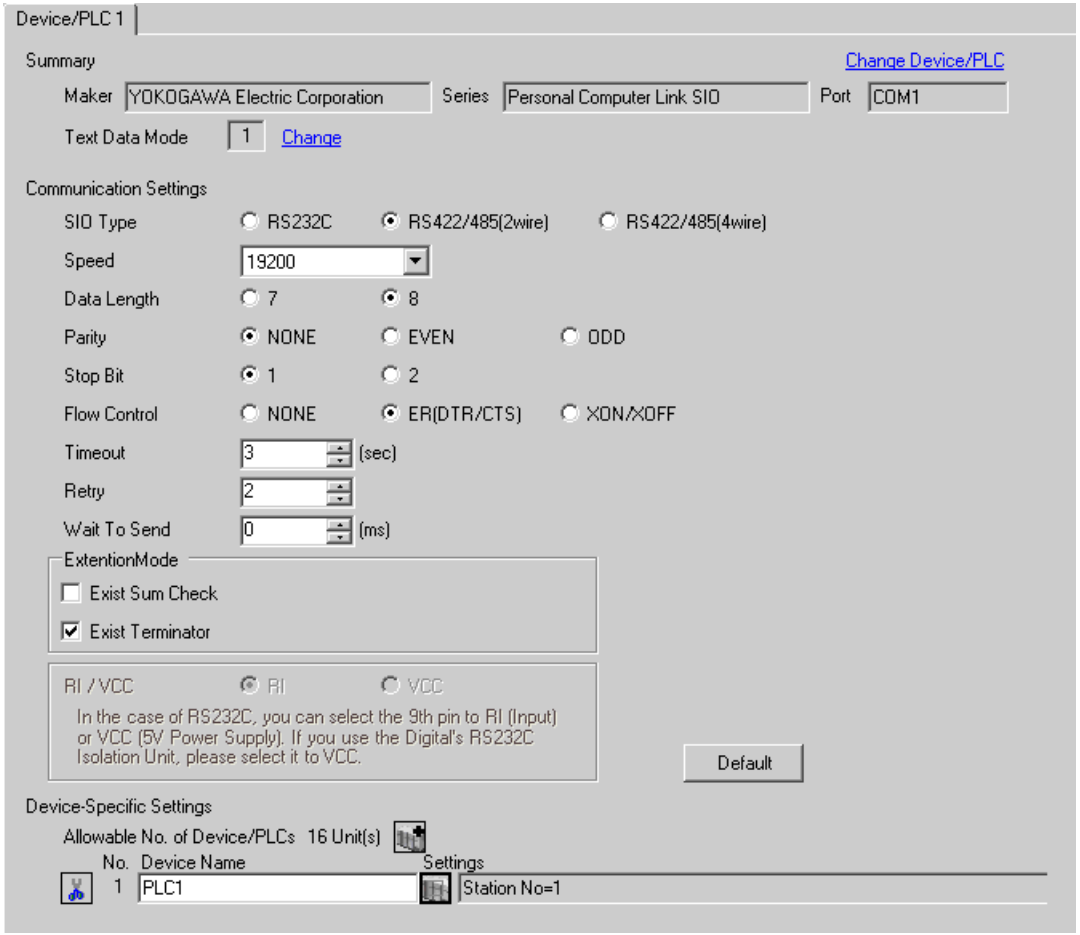
| Setup Items | Settings |
|---|---|
| Speed | 19200 |
| Data Length | 8 |
| Parity | None |
| Stop Bit | 1 |
| Exist Sum Check | None |
| Exist Terminator | Exists |
| Protect | None |

## 3.2 Setting Example 2

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

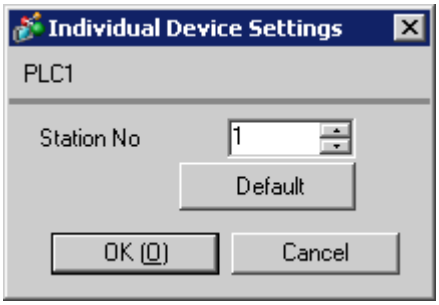
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



◆ 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**

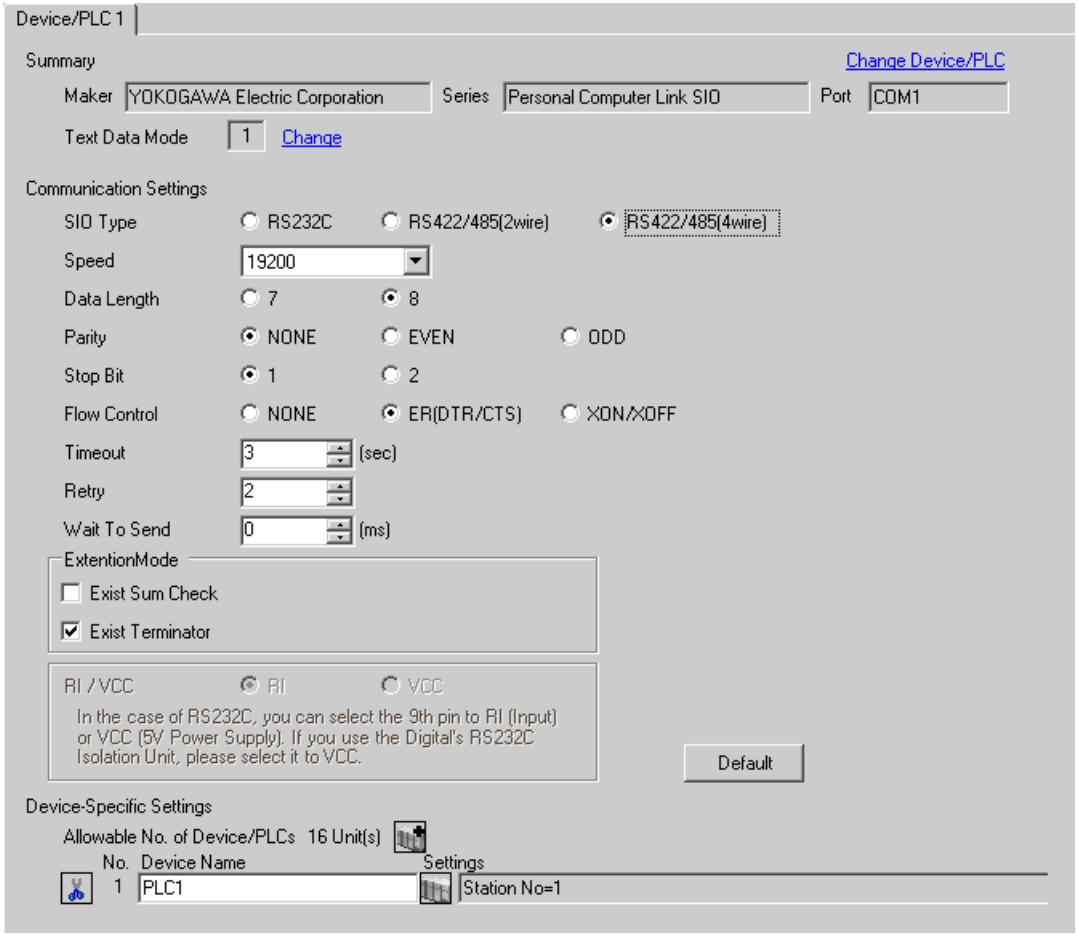
- Set the termination resistance switch of only the module which terminates the connection to 2-WIRE. Set other switches to OFF.

## 3.3 Setting Example 3

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

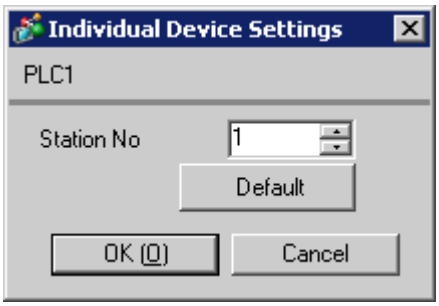
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



◆ Device 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**

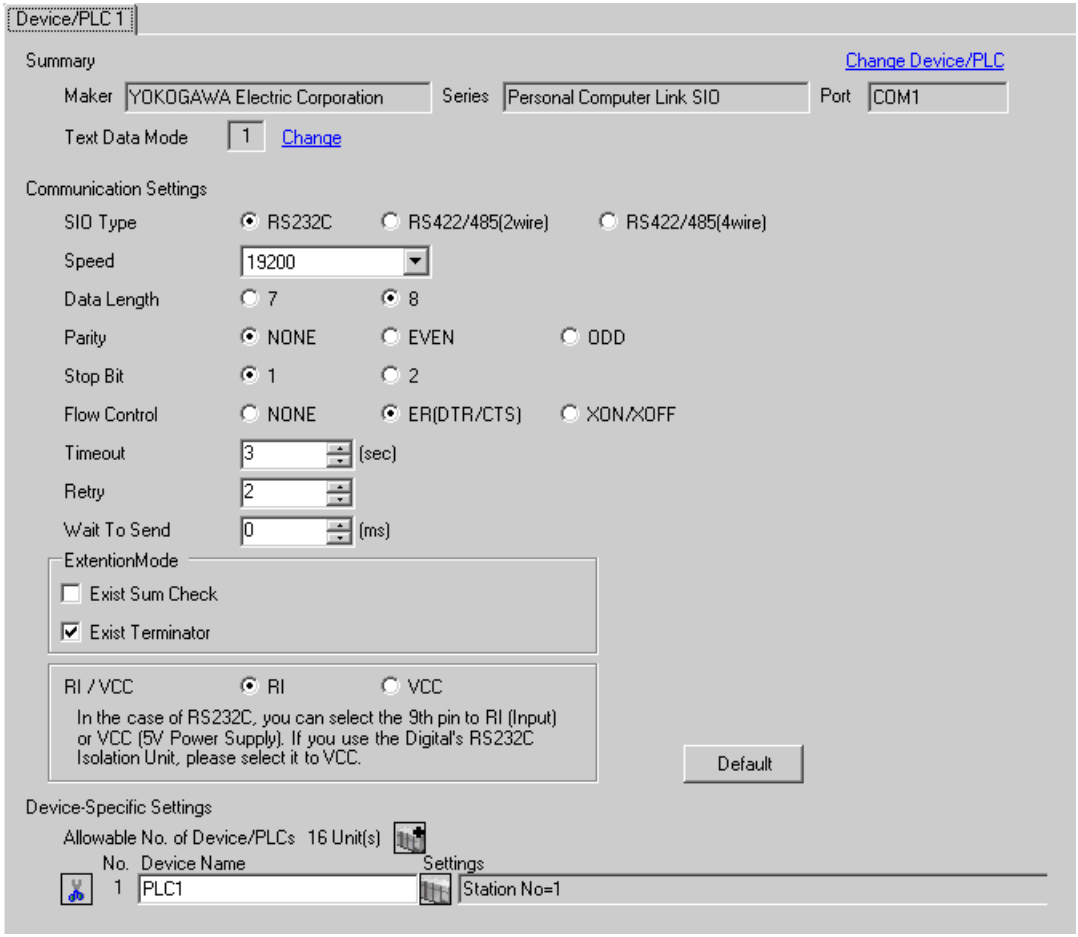
- Set the termination resistance switch of only the module which terminates the connection to 4-WIRE. Set other switches to OFF.

## 3.4 Setting Example 4

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

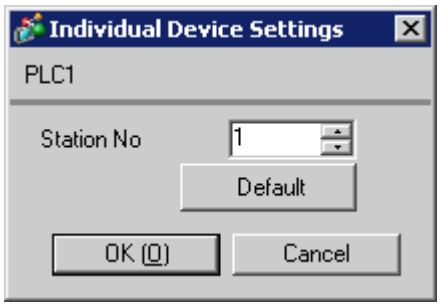
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



◆ Device 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.

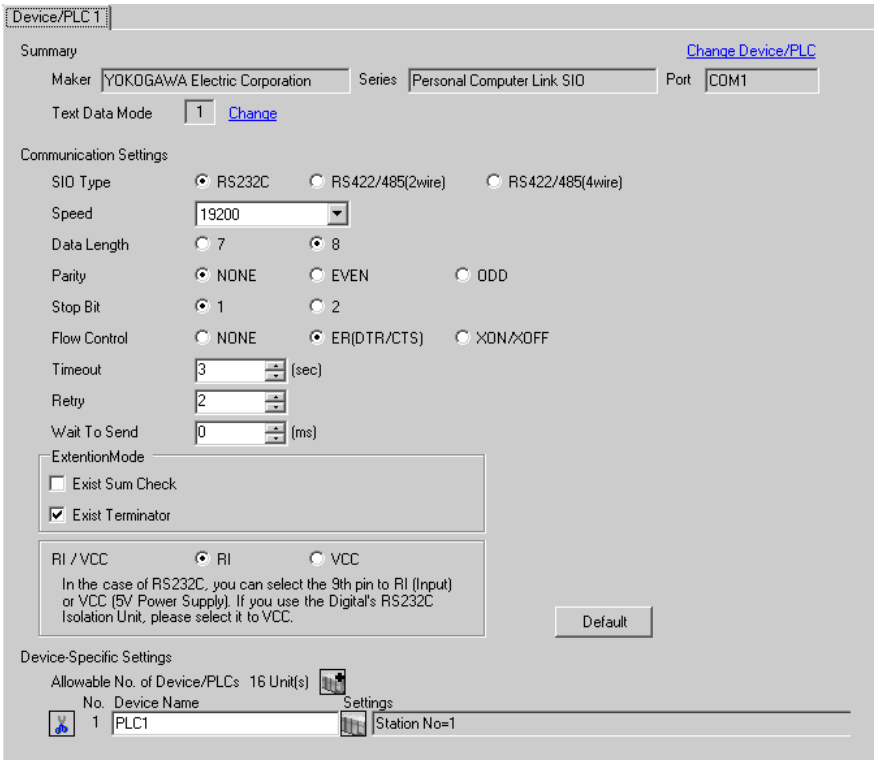
The setting of each parameter must be identical to that of External Device.

☞"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. |

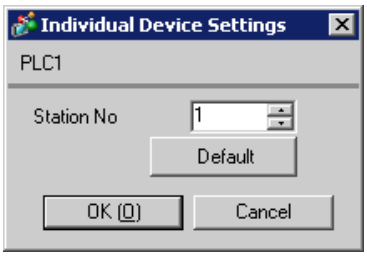
continued to next page

| 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

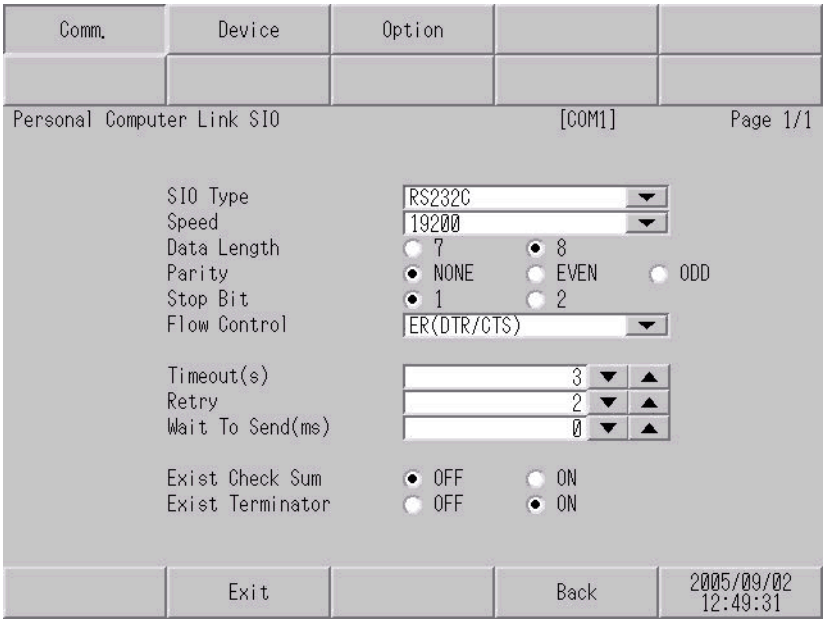
**NOTE**

- 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

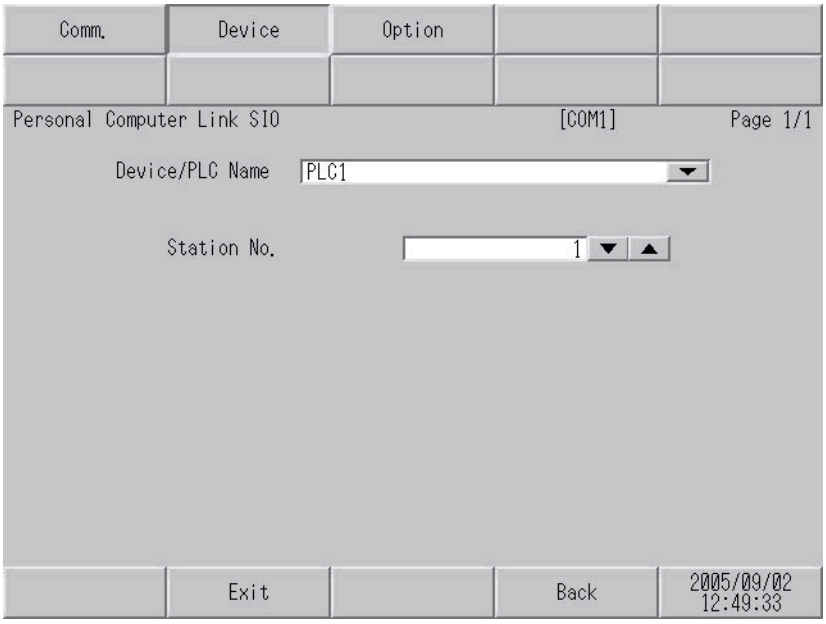
To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings] in off-line mode. Touch the External Device you want to set from the displayed list.




| 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

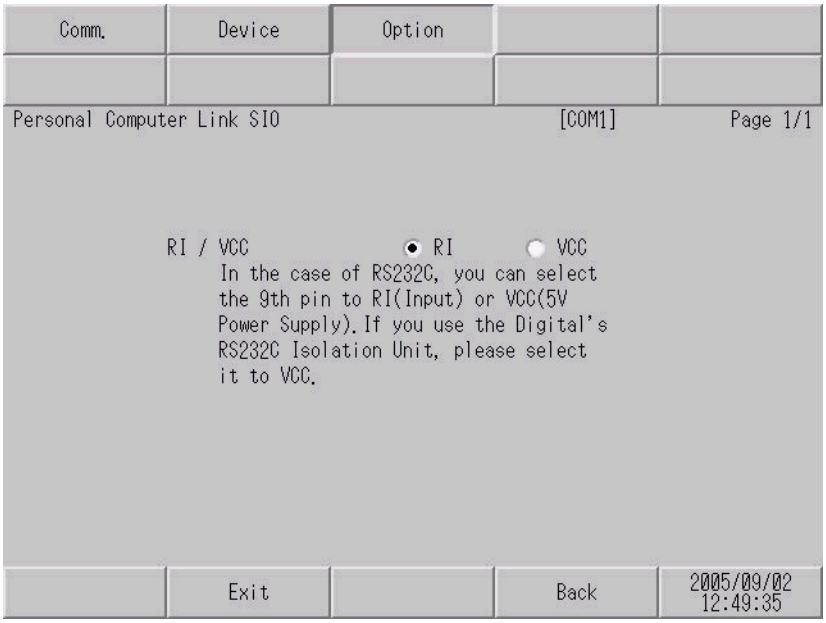
To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings]. Touch the External Device you want to set from the displayed list, and touch [Device].




| 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].




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

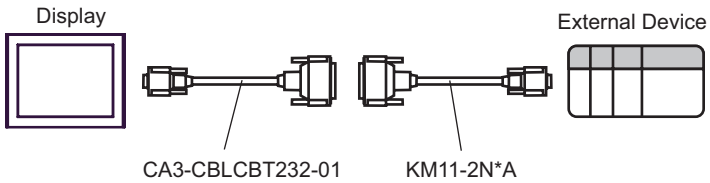
# 5 Cable Diagram

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<br>by Pro-face,<br>CA3-CBLCBT232-01<br>+<br>Programming tool cable<br>by YOKOGAWA Electric Corporation<br>KM11-2N*A | The cable length must be 15m or less. |

Cable Diagram1



Cable Diagram 2

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

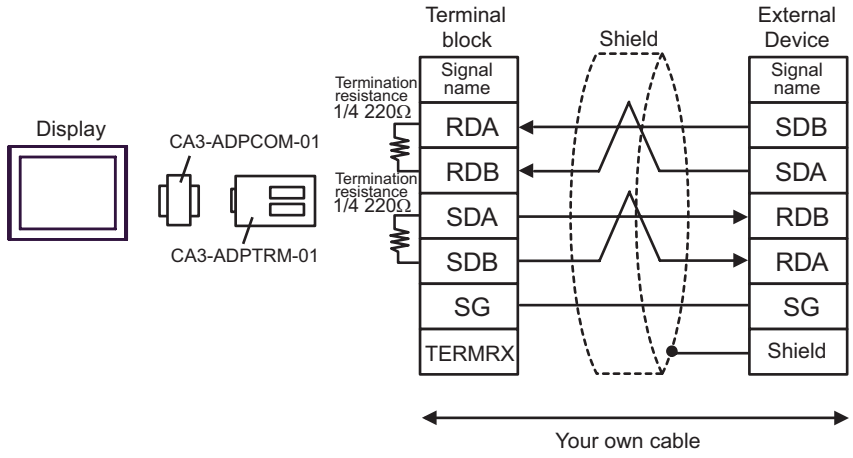
*1 All GP models except AGP-3002B

**NOTE**

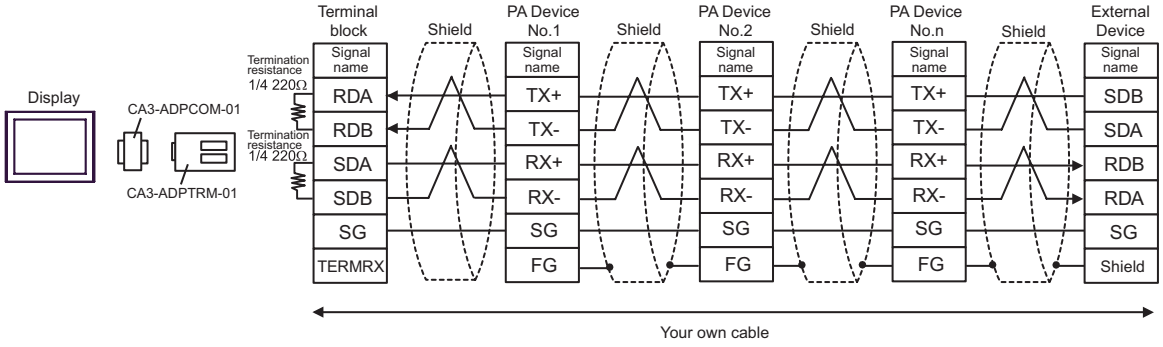
- Attach the termination resistance to the devices on both ends.
- Note that pole A and pole B are reversely named for the Display and the External Device.
- When the PA device has SG, connect it.
- Set the last resistance switch of the personal computer link module for the External Device which terminates 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]

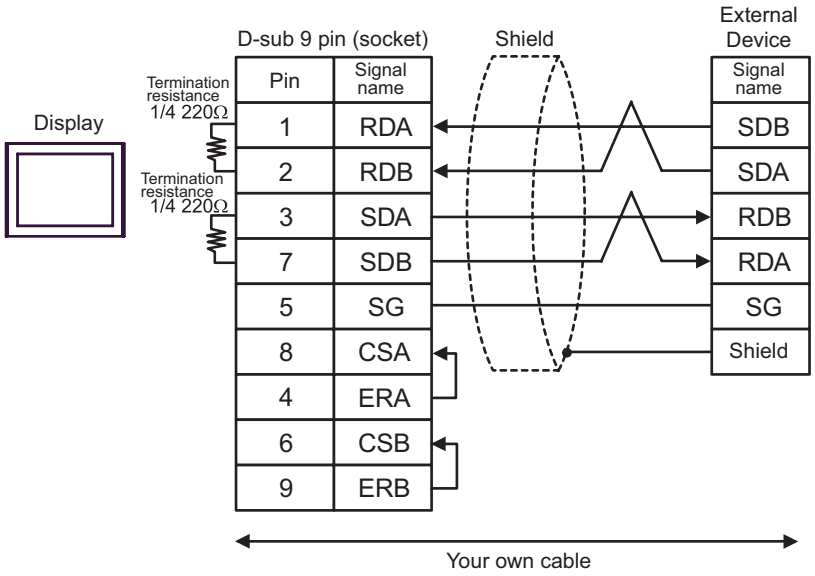



**NOTE**

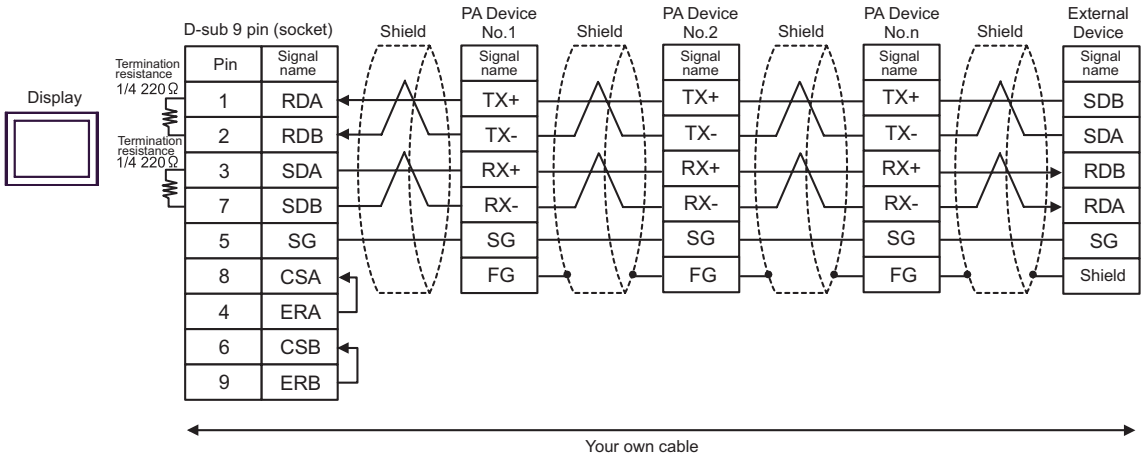
- When the PA device has SG, connect it.
- Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

B) When using your own cable

[1:1 Connection]




[1:n Connection]

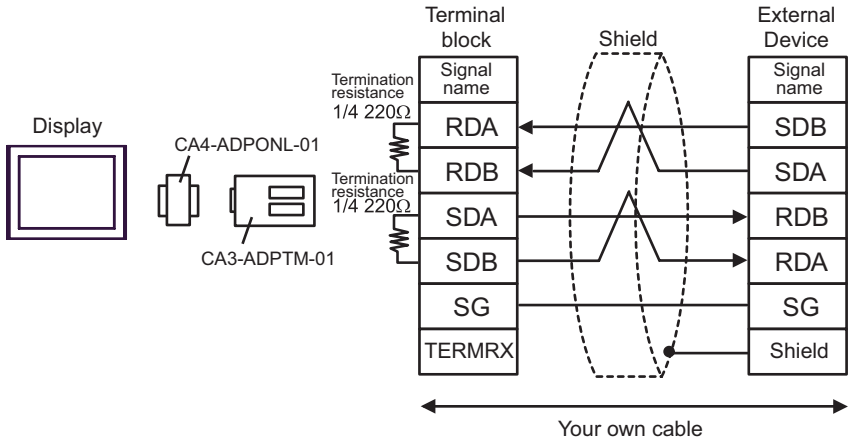



**NOTE**

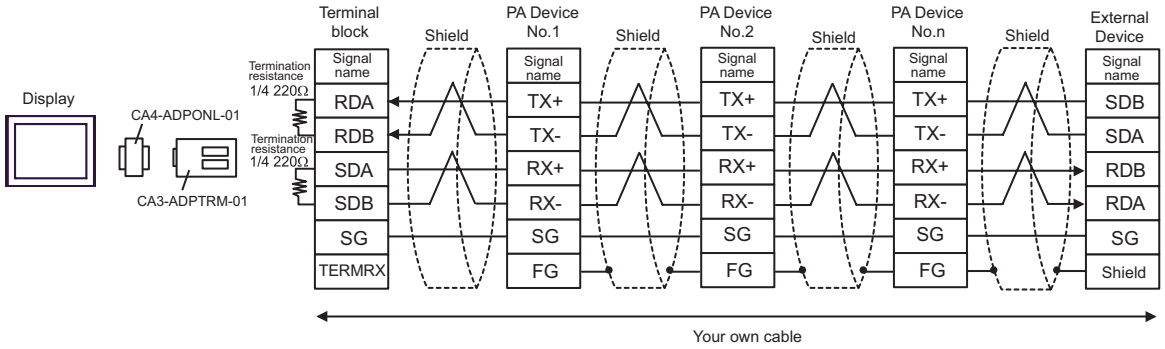
- When the PA device has SG, connect it.
- Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

C) When using the online 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]

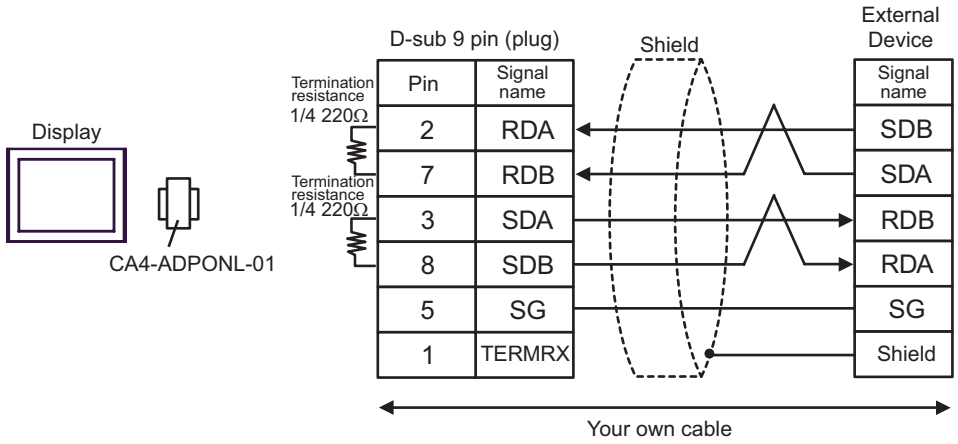



**NOTE**

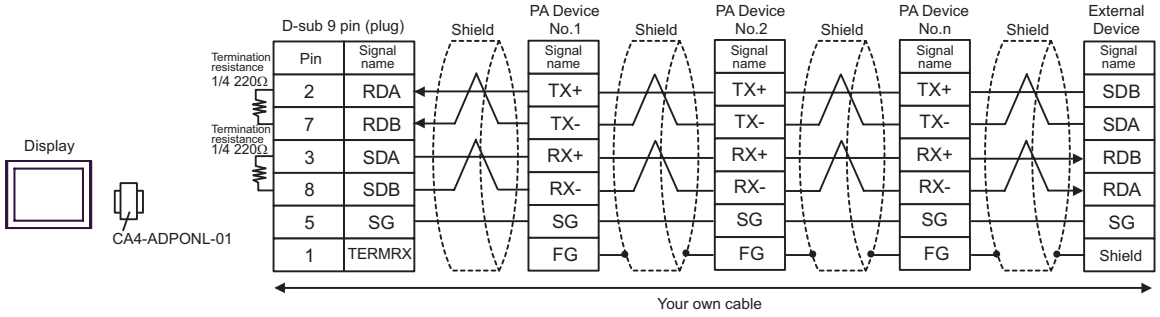
- When the PA device has SG, connect it.
- Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

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

[1:1 Connection]




[1:n Connection]

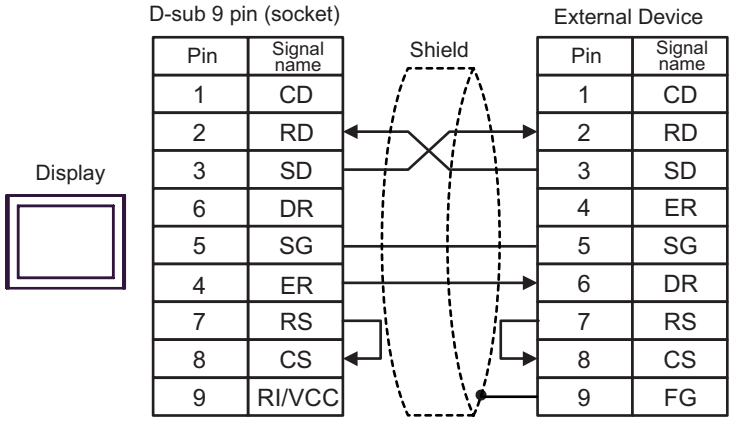



**NOTE**

- 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.

Cable Diagram 3

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



Cable Diagram 4

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

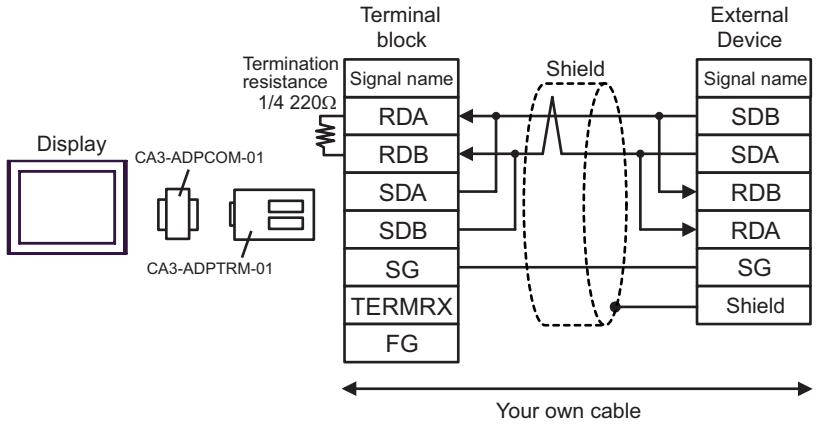
*1 All GP models except AGP-3002B

**NOTE**

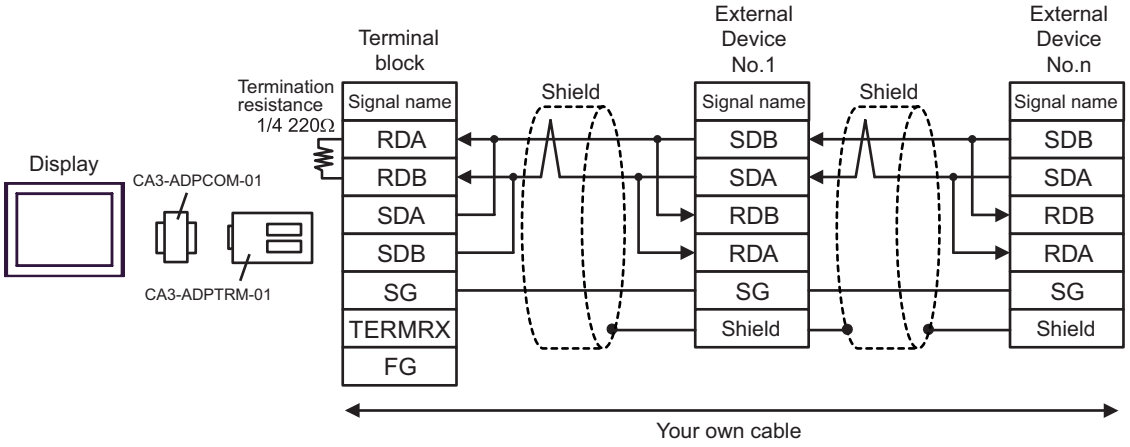
- Note that pole A and pole B are reversely named for the Display and the External Device.
- When the PA device has SG, connect it.
- Set the last resistance switch of the personal computer link module for the External Device which terminates the connection to 2-WIRE.
- We recommend CO-SPEU-SB(A)3P x 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]

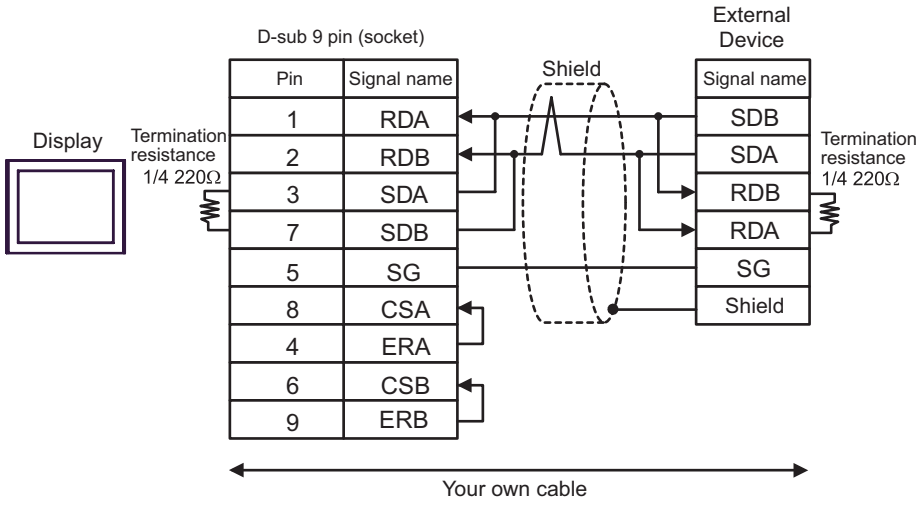



[1:n Connection]

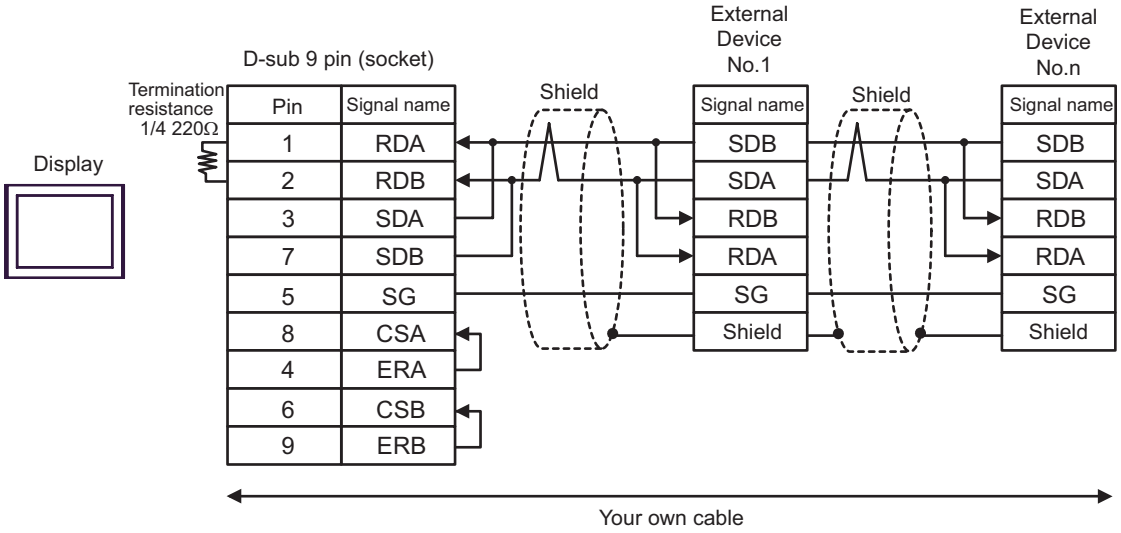


B) When using your own cable

[1:1 Connection]

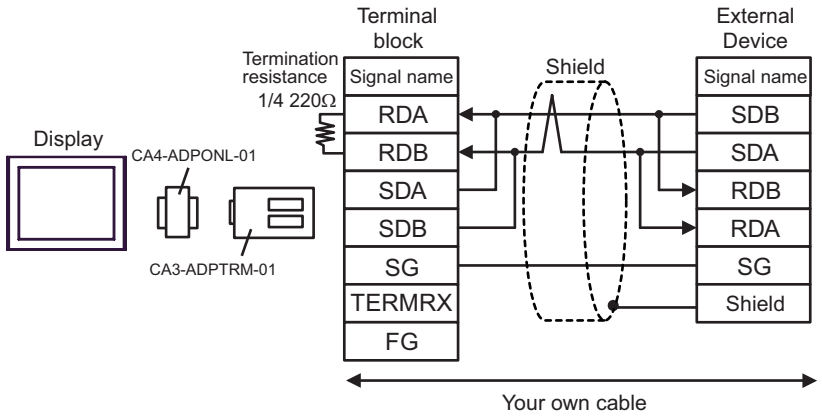



[1:n Connection]

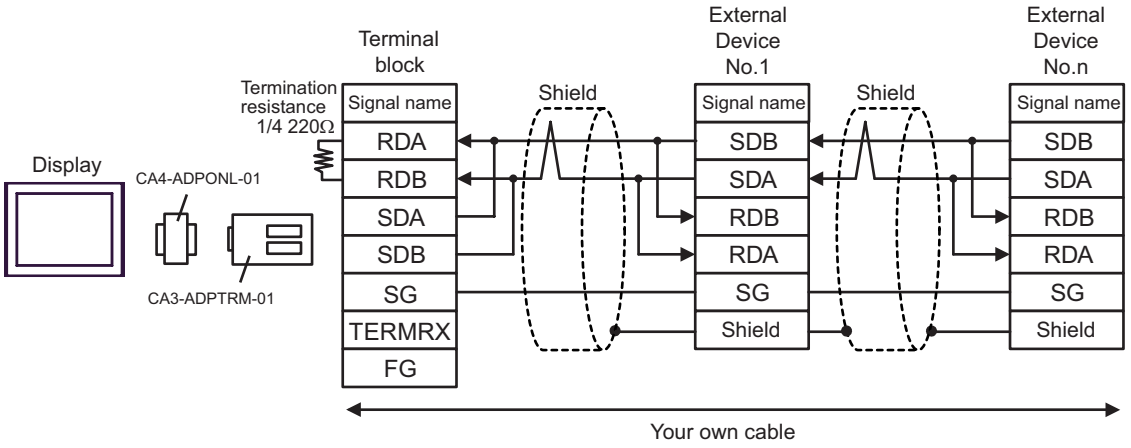


C) When using the online adapter (CA4-ADPONL-01) by Pro-face, the connector terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable

[1:1 Connection]

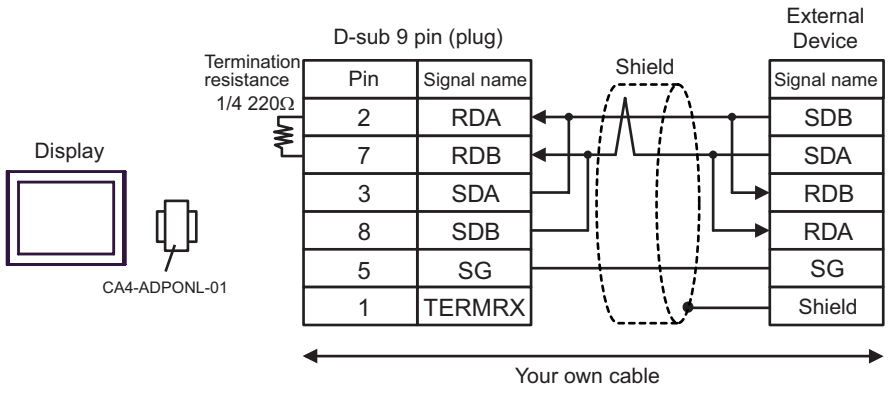



[1:n Connection]

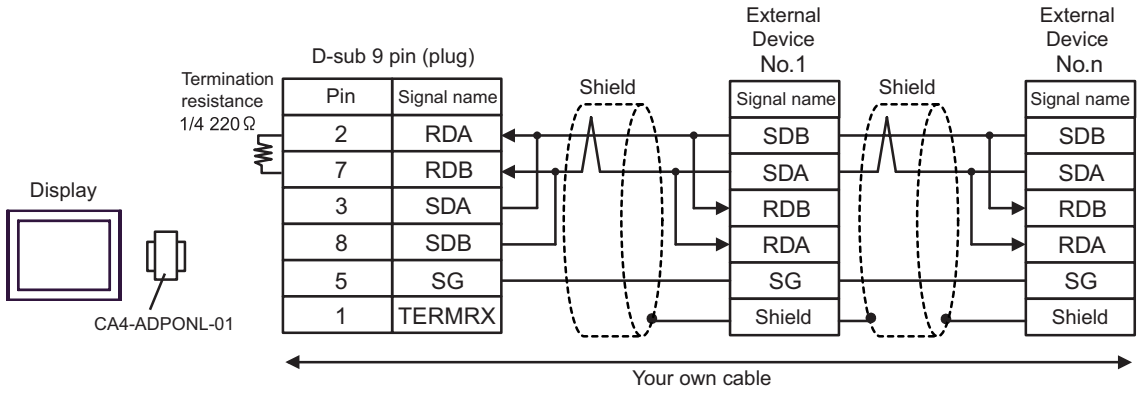



D) When using the online adapter (CA4-ADPONL-01) by Pro-face and your own cable

[1:1 Connection]



[1:n Connection]



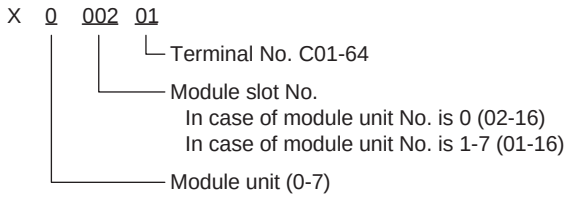
# 6 Supported Device

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.

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 |
| File 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

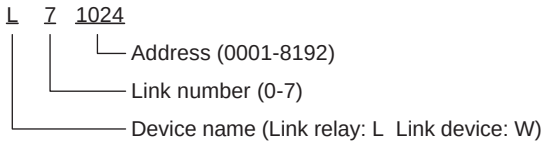



*2 Write disable

*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




**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.<br>**NOTE**<br>• Received error codes are displayed such as "Decimal [Hex]".<br>• 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.