



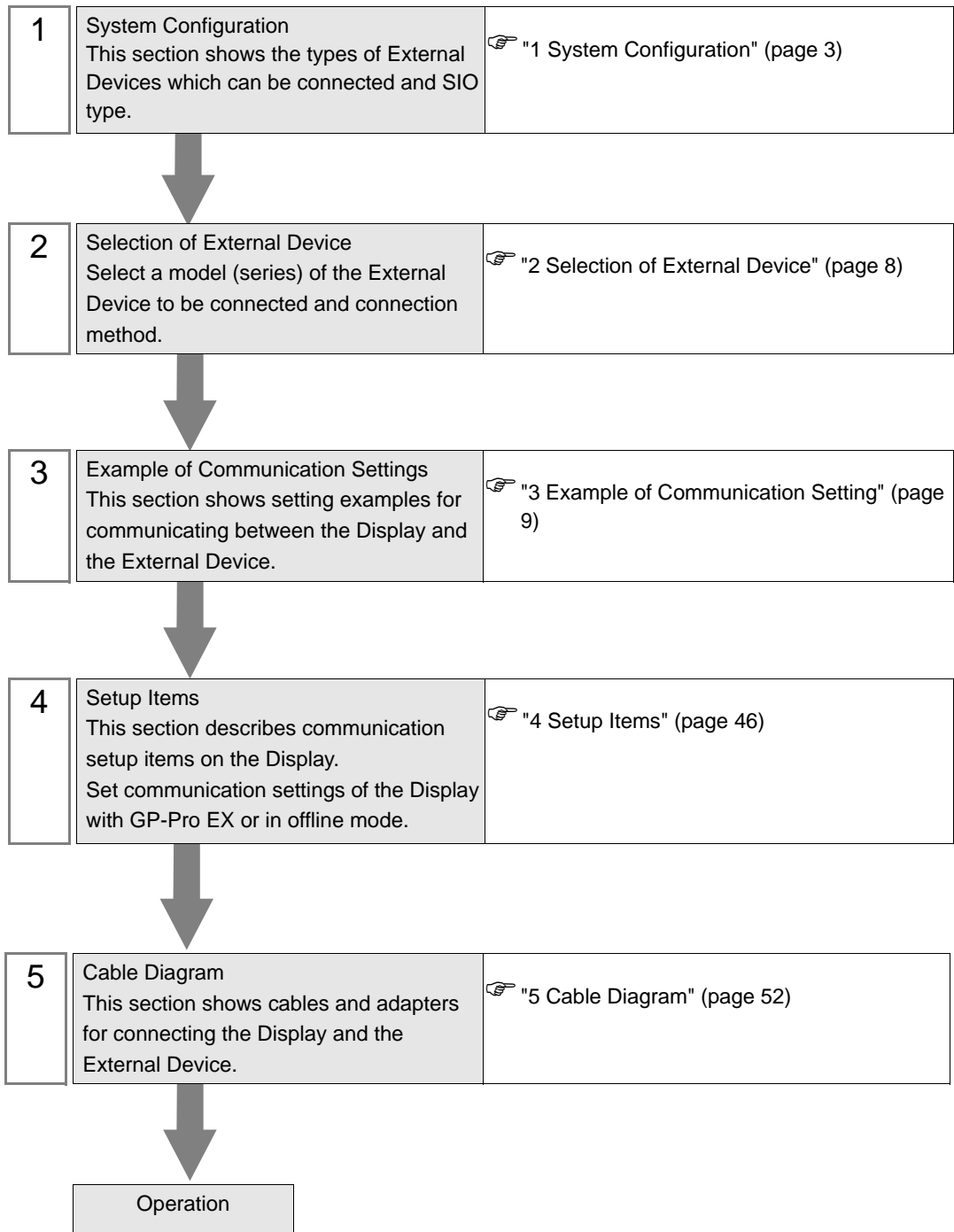
# JW Series Computer Link SIO Driver

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## Introduction

This manual describes how to connect the Display and the External Device.

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



# 1 System Configuration

The system configuration in the case when the External Device of Sharp Manufacturing Systems Corporation and the Display are connected is shown.

| Series | CPU  | Link I/F                           | SIO Type          | Setting Example             | Cable Diagram             |
|--------|--|------------------------------------|-------------------|-----------------------------|---------------------------|
| JW20H  | JW-21CU  | JW-21CM*1                          | RS422/485 (4wire) | Setting Example 1 (page 9)  | Cable Diagram 1 (page 52) |
|        |  |                                    | RS422/485 (2wire) | Setting Example 2 (page 12) | Cable Diagram 2 (page 58) |
|        | JW-22CU  | Communication port on the CPU unit | RS232C            | Setting Example 3 (page 14) | Cable Diagram 3 (page 67) |
|        |  |                                    | RS422/485 (4wire) | Setting Example 4 (page 16) | Cable Diagram 4 (page 68) |
|        |  | JW-21CM*1                          | RS422/485 (4wire) | Setting Example 1 (page 9)  | Cable Diagram 1 (page 52) |
|        |  |                                    | RS422/485 (2wire) | Setting Example 2 (page 12) | Cable Diagram 2 (page 58) |
| JW30H  | JW-31CUH1  | JW-21CM*1                          | RS422/485 (4wire) | Setting Example 1 (page 9)  | Cable Diagram 1 (page 52) |
|        |  |                                    | RS422/485 (2wire) | Setting Example 2 (page 12) | Cable Diagram 2 (page 58) |
|        | JW-32CUH1<br>JW-32CUM1<br>JW-32CUM2<br>JW-33CUH1<br>JW-33CUH2<br>JW-33CUH3 | PG/COMM1 on the CPU unit           | RS422/485 (4wire) | Setting Example 5 (page 18) | Cable Diagram 5 (page 74) |
|        |  | PG/COMM2 on the CPU unit           | RS232C            | Setting Example 6 (page 20) | Cable Diagram 6 (page 80) |
|        |  |                                    | RS422/485 (4wire) | Setting Example 7 (page 22) | Cable Diagram 5 (page 74) |
|        |  | JW-21CM*1                          | RS422/485 (4wire) | Setting Example 1 (page 9)  | Cable Diagram 1 (page 52) |
|        |  |                                    | RS422/485 (2wire) | Setting Example 2 (page 12) | Cable Diagram 2 (page 58) |

| Series                   | CPU  | Link I/F                              | SIO Type          | Setting Example              | Cable Diagram             |
|--------------------------|--|---------------------------------------|-------------------|------------------------------|---------------------------|
| JW50H<br>JW70H<br>JW100H | JW-50CUH   | JW-10CM                               | RS422/485 (4wire) | Setting Example 8 (page 24)  | Cable Diagram 1 (page 52) |
|                          |  |                                       | RS422/485 (2wire) | Setting Example 9 (page 26)  | Cable Diagram 2 (page 58) |
|                          | JW-70CUH<br>JW-100CUH  | Communication port on the CPU unit    | RS232C            | Setting Example 10 (page 28) | Cable Diagram 3 (page 67) |
|                          |  |                                       | RS422/485 (4wire) | Setting Example 11 (page 30) | Cable Diagram 7 (page 81) |
|                          |  | JW-10CM                               | RS422/485 (4wire) | Setting Example 8 (page 24)  | Cable Diagram 1 (page 52) |
|                          |  |                                       | RS422/485 (2wire) | Setting Example 9 (page 26)  | Cable Diagram 2 (page 58) |
| JW10                     | JW-1324K<br>JW-1424K<br>JW-1624K<br>JW-1342K<br>JW-1442K<br>JW-1642K | Communication port on the base module | RS422/485 (2wire) | Setting Example 12 (page 32) | Cable Diagram 8 (page 87) |

| Series | CPU  | Link I/F                 | SIO Type          | Setting Example              | Cable Diagram             |
|--------|--|--------------------------|-------------------|------------------------------|---------------------------|
| JW300  | JW-311CU<br>JW-312CU   | PG/COMM1 on the CPU unit | RS232C            | Setting Example 13 (page 34) | Cable Diagram 9 (page 96) |
|        |  |                          | RS422/485 (4wire) | Setting Example 14 (page 36) | Cable Diagram 5 (page 74) |
|        |  | JW-21CM*2                | RS422/485 (4wire) | Setting Example 17 (page 42) | Cable Diagram 1 (page 52) |
|        |  |                          | RS422/485 (2wire) | Setting Example 18 (page 44) | Cable Diagram 2 (page 58) |
|        | JW-321CU<br>JW-322CU<br>JW-331CU<br>JW-332CU<br>JW-341CU<br>JW-342CU<br>JW-352CU<br>JW-362CU | PG/COMM1 on the CPU unit | RS232C            | Setting Example 13 (page 34) | Cable Diagram 9 (page 96) |
|        |  |                          | RS422/485 (4wire) | Setting Example 14 (page 36) | Cable Diagram 5 (page 74) |
|        |  | PG/COMM2 on the CPU unit | RS232C            | Setting Example 15 (page 38) | Cable Diagram 6 (page 80) |
|        |  |                          | RS422/485 (4wire) | Setting Example 16 (page 40) | Cable Diagram 5 (page 74) |
|        |  | JW-21CM*2                | RS422/485 (4wire) | Setting Example 17 (page 42) | Cable Diagram 1 (page 52) |
|        |  |                          | RS422/485 (2wire) | Setting Example 18 (page 44) | Cable Diagram 2 (page 58) |

\*1 Note that some of them cannot be used or the range of use is restricted depending on the version of the link unit JW-21CM.

| Version sticker on the front of the unit | Restriction of use   |
|--|--|
| 30Hn                                     | Available to use without restriction   |
| 30H                                      | Unable to read or write the file register 10 to 2C<br>Unable to read or write the file register address 100000 to 176777 |
| Without sticker                          | Unable to use in the JW30H Series  |

\*2 Available with the Ethernet units compatible with JW300. "300" is labeled on the front of JW300-compatible units. For more information, contact the manufacturer of the External Device.

## ■ IPC COM Port

When connecting IPC with an External Device, the COM port used depends on the series and SIO type. Please refer to the IPC manual for details.

### Usable port

| Series  | Usable Port  |                      |                      |
|---|--|----------------------|----------------------|
|   | RS-232C  | RS-422/485(4 wire)   | RS-422/485(2 wire)   |
| PS-2000B                                      | COM1 <sup>*1</sup> , COM2,<br>COM3 <sup>*1</sup> , COM4                | -                    | -                    |
| PS-3450A, PS-3451A,<br>PS3000-BA, PS3001-BD   | COM1, COM2 <sup>*1*2</sup>   | COM2 <sup>*1*2</sup> | COM2 <sup>*1*2</sup> |
| PS-3650A (T41 model),<br>PS-3651A (T41 model) | COM1 <sup>*1</sup>   | -                    | -                    |
| PS-3650A (T42 model),<br>PS-3651A (T42 model) | COM1 <sup>*1*2</sup> , COM2  | COM1 <sup>*1*2</sup> | COM1 <sup>*1*2</sup> |
| PS-3700A (Pentium®4-M)<br>PS-3710A            | COM1 <sup>*1</sup> , COM2 <sup>*1</sup> ,<br>COM3 <sup>*2</sup> , COM4 | COM3 <sup>*2</sup>   | COM3 <sup>*2</sup>   |
| PS-3711A                                      | COM1 <sup>*1</sup> , COM2 <sup>*2</sup>                                | COM2 <sup>*2</sup>   | COM2 <sup>*2</sup>   |
| PS4000 <sup>*3</sup>                          | COM1, COM2   | -                    | -                    |
| PL3000  | COM1 <sup>*1*2</sup> , COM2 <sup>*1</sup> ,<br>COM3, COM4              | COM1 <sup>*1*2</sup> | COM1 <sup>*1*2</sup> |

\*1 The RI/5V can be switched. Use the IPC's switch to change if necessary.

\*2 Set up the SIO type with the DIP Switch. Please set up as follows according to SIO type to be used.

\*3 When making communication between an External Device and COM port on the Expansion slot, only RS-232C is supported. However, ER (DTR/CTS) control cannot be executed because of the specification of COM port.

For connection with External Device, use user-created cables and disable Pin Nos. 1, 4, 6 and 9. Please refer to the IPC manual for details of pin layout.

### DIP Switch setting: RS-232C

| DIP Switch | Setting           | Description   |
|------------|-------------------|---|
| 1          | OFF <sup>*1</sup> | Reserved (always OFF)                                   |
| 2          | OFF               | SIO type: RS-232C                                       |
| 3          | OFF               |   |
| 4          | OFF               | Output mode of SD (TXD) data: Always output             |
| 5          | OFF               | Terminal resistance (220Ω) insertion to SD (TXD): None  |
| 6          | OFF               | Terminal resistance (220Ω) insertion to RD (RXD): None  |
| 7          | OFF               | Short-circuit of SDA (TXA) and RDA (RXA): Not available |
| 8          | OFF               | Short-circuit of SDB (TXB) and RDB (RXB): Not available |
| 9          | OFF               | RS (RTS) Auto control mode: Disabled                    |
| 10         | OFF               |   |

\*1 When using PS-3450A, PS-3451A, PS3000-BA and PS3001-BD, turn ON the set value.

## DIP Switch setting: RS-422/485 (4 wire)

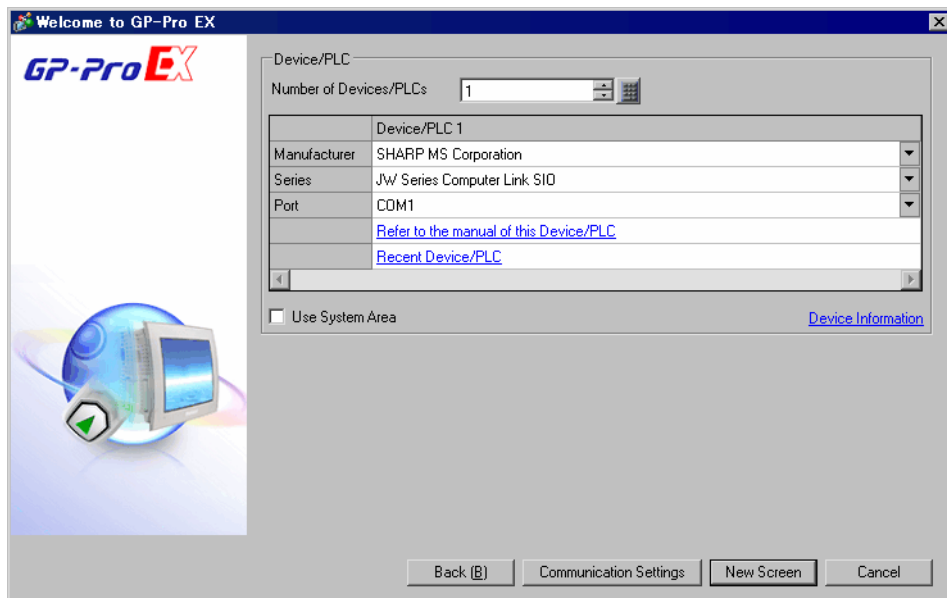
| DIP Switch | Setting | Description   |
|------------|---------|---|
| 1          | OFF     | Reserved (always OFF)                                   |
| 2          | ON      | SIO type: RS-422/485                                    |
| 3          | ON      |   |
| 4          | OFF     | Output mode of SD (TXD) data: Always output             |
| 5          | OFF     | Terminal resistance (220Ω) insertion to SD (TXD): None  |
| 6          | OFF     | Terminal resistance (220Ω) insertion to RD (RXD): None  |
| 7          | OFF     | Short-circuit of SDA (TXA) and RDA (RXA): Not available |
| 8          | OFF     | Short-circuit of SDB (TXB) and RDB (RXB): Not available |
| 9          | OFF     | RS (RTS) Auto control mode: Disabled                    |
| 10         | OFF     |   |

## DIP Switch setting: RS-422/485 (2 wire)

| DIP Switch | Setting | Description  |
|------------|---------|--|
| 1          | OFF     | Reserved (always OFF)                                  |
| 2          | ON      | SIO type: RS-422/485                                   |
| 3          | ON      |  |
| 4          | OFF     | Output mode of SD (TXD) data: Always output            |
| 5          | OFF     | Terminal resistance (220Ω) insertion to SD (TXD): None |
| 6          | OFF     | Terminal resistance (220Ω) insertion to RD (RXD): None |
| 7          | ON      | Short-circuit of SDA (TXA) and RDA (RXA): Available    |
| 8          | ON      | Short-circuit of SDB (TXB) and RDB (RXB): Available    |
| 9          | ON      | RS (RTS) Auto control mode: Enabled                    |
| 10         | ON      |  |

## 2 Selection of External Device

Select the External Device to be connected to the Display.



| Setup Items            | Setup Description   |
|------------------------|---|
| Number of Devices/PLCs | Enter an integer from 1 to 4 to define the number of Devices/PLCs to connect to the display.  |
| Manufacturer           | Select the manufacturer of the External Device to connect. Select "Sharp MS Corporation".   |
| Series                 | Select the External Device model (series) and the connection method. Select "JW Series Computer Link SIO".<br>In System configuration, make sure the External Device you are connecting is supported by "JW Series Computer Link SIO".<br>☞ "1 System Configuration" (page 3)   |
| Port                   | Select the Display port to be connected to the External Device.   |
| Use System Area        | Check this option to synchronize the system data area of the Display and the device (memory) of the External Device. When synchronized, you can use the External Device's ladder program to switch the display or display the window on the Display.<br>Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"<br>This feature can also be set in GP-Pro EX or in the Display's offline mode.<br>Cf. GP-Pro EX Reference Manual "System Settings [Display Unit] - [System Area] Settings Guide"<br>Cf. Maintenance/Troubleshooting Guide "Main Unit - System Area Settings" |



## 3 Example of Communication Setting

Examples of communication settings of the Display and the External Device, recommended by Digital Electronics Corp., are shown.

### 3.1 Setting Example 1

#### ■ Settings of GP-Pro EX


##### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

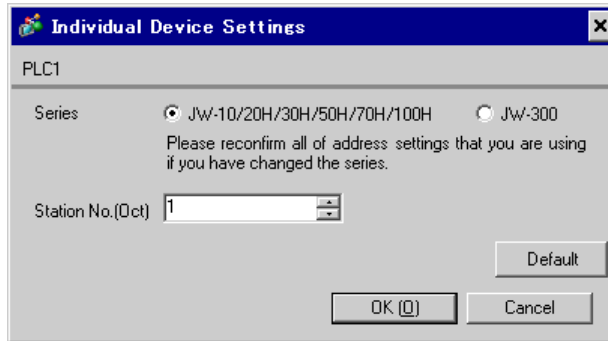
#### NOTE

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



■ Settings of External Device

Use the rotary switch on Link I/F for setting. Please refer to the manual of the External Device for more details. Restart the power of the External Device after setting the switch to enable the setting.

◆ Function Setting Switch

| Rotary Switch | Setting Value | Setup Description       |
|---------------|---------------|-------------------------|
| SW0           | 4             | SIO Type: Computer link |

◆ Station Setting Switch

| Rotary Switch | Setting Value | Setup Description                                  |
|---------------|---------------|--|
| SW2 (x10)     | 0             | Station No. setting: Set the upper station number. |
| SW1 (x1)      | 1             | Station No. setting: Set the lower station number. |

**NOTE**

- Set the station No. between 01 and 37 (o) with SW2 and SW1.

◆ Operation ModeSetting Switch

| DIP Switch | Setting Value | Setup Description                    |
|------------|---------------|--------------------------------------|
| SW3-1      | OFF           | Reserved                             |
| SW3-2      | ON            | Number of communication wire: 4 wire |
| SW3-3      | OFF           | Reserved                             |
| SW3-4      | ON            | Parity: Even                         |

◆ Transfer Speed Setting Switch

| Rotary Switch | Setting Value | Setup Description            |
|---------------|---------------|------------------------------|
| SW4           | 0             | Transmission speed: 19200bps |

◆ Termination Resistance Switch

| DIP Switch | Setting Value | Setup Description   |
|------------|---------------|---|
| SW7        | ON            | Insert the termination resistance: Set it to ON to insert the termination resistance. Set only the External Device which terminates the connection to ON. |

## ◆ Unit No. Switch

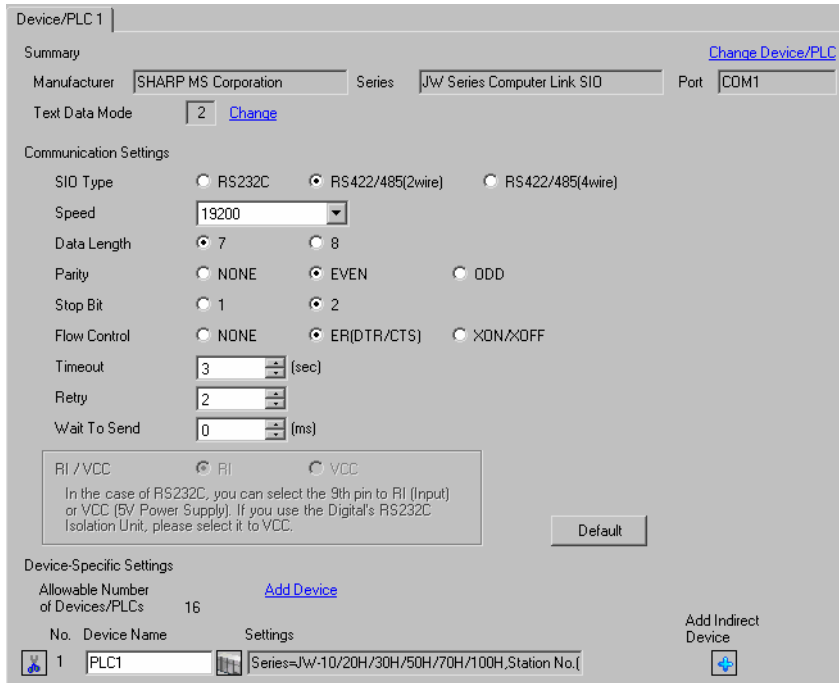
| Rotary Switch | Setting Value | Setup Description                                     |
|---------------|---------------|---|
| SW8           | 0             | Set the data memory address for sub station 01 to 04. |

### 3.2 Setting Example 2

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



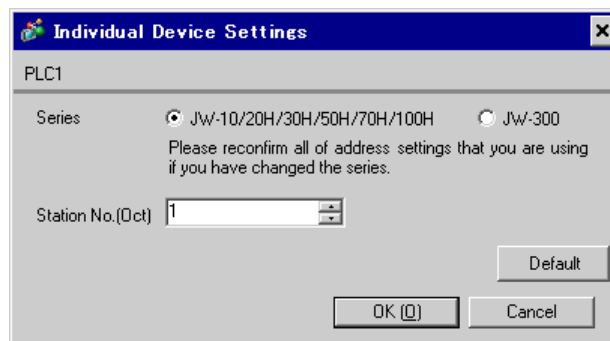
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Use the rotary switch on Link I/F for setting. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting the switch to enable the setting.

### ◆ Function Setting Switch

| Rotary Switch | Setting Value | Setup Description       |
|---------------|---------------|-------------------------|
| SW0           | 4             | SIO Type: Computer link |

### ◆ Station Setting Switch

| Rotary Switch | Setting Value | Setup Description                                  |
|---------------|---------------|--|
| SW2 (x10)     | 0             | Station No. setting: Set the upper station number. |
| SW1 (x1)      | 1             | Station No. setting: Set the lower station number. |

#### **NOTE**

- Set the station No. between 01 and 37 (o) with SW2 and SW1.

### ◆ Operation ModeSetting Switch

| DIP Switch | Setting Value | Setup Description                    |
|------------|---------------|--------------------------------------|
| SW3-1      | OFF           | Reserved                             |
| SW3-2      | OFF           | Number of communication wire: 2 wire |
| SW3-3      | OFF           | Reserved                             |
| SW3-4      | ON            | Parity: Even                         |

### ◆ Transfer Speed Setting Switch

| Rotary Switch | Setting Value | Setup Description         |
|---------------|---------------|---------------------------|
| SW4           | 0             | Transfer Speed: 19200 bps |

### ◆ Termination Resistance Switch

| DIP Switch | Setting Value | Setup Description   |
|------------|---------------|---|
| SW7        | ON            | Insert the termination resistance: Set it to ON to insert the termination resistance. Set only the External Device which terminates the connection to ON. |

### ◆ Unit No. Switch

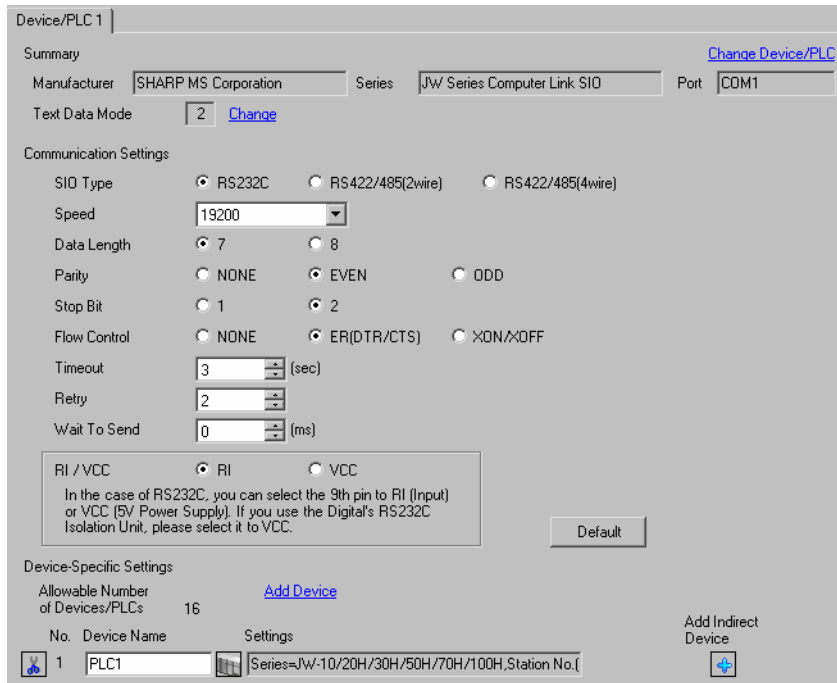
| Rotary Switch | Setting Value | Setup Description                                     |
|---------------|---------------|---|
| SW8           | 0             | Set the data memory address for sub station 01 to 04. |

### 3.3 Setting Example 3

#### ■ Settings of GP-Pro EX


##### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

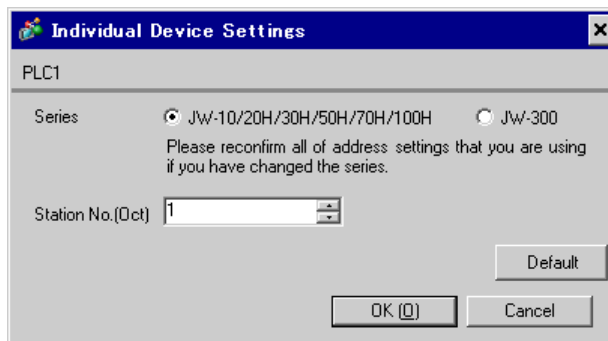


**NOTE** • Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #236         | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop bit: 2 bits          |
| D6                 | OFF           | Always OFF                |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #237

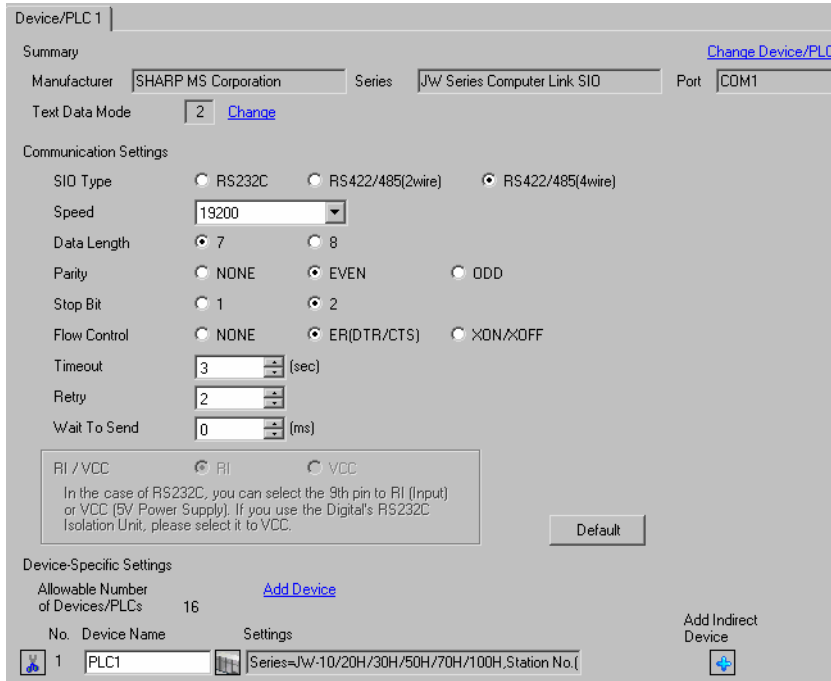
| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #237         | 1(o)          | Station No. setting. Enter in octal number. |

### 3.4 Setting Example 4

#### ■ Settings of GP-Pro EX


##### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

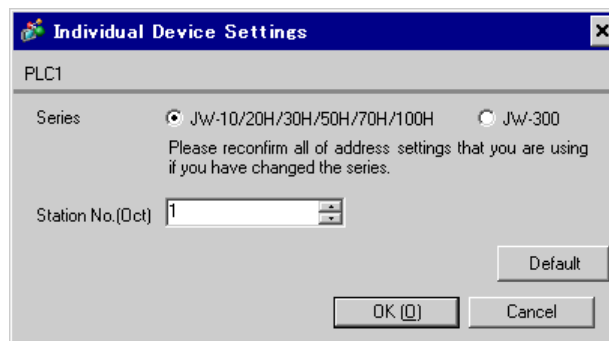


**NOTE** • Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.





## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #236         | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop bit: 2 bits          |
| D6                 | OFF           | Always OFF                |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #237

| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #237         | 1(o)          | Station No. setting. Enter in octal number. |

### ◆ Termination Resistance Switch

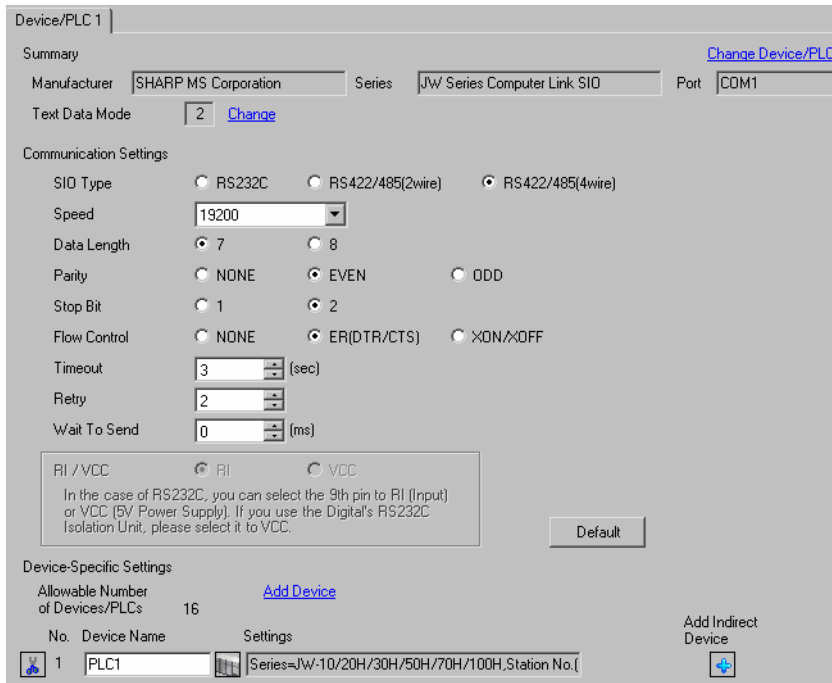
| DIP Switch | Setting Value | Setup Description  |
|------------|---------------|--|
| SW1        | ON            | Insert the termination resistance: Set it to ON to insert the termination resistance.<br>Set only the External Device which terminates the connection to ON. |

### 3.5 Setting Example 5

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



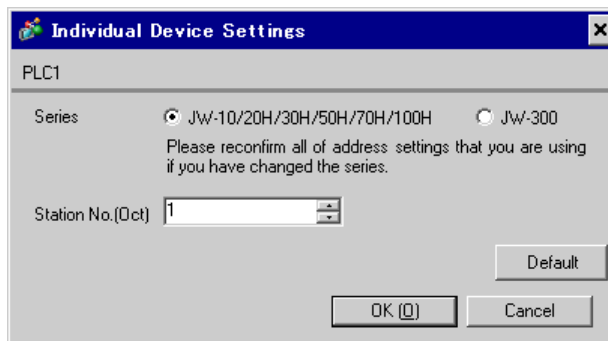
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings]  .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #234

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #234         | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Always OFF                |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #235

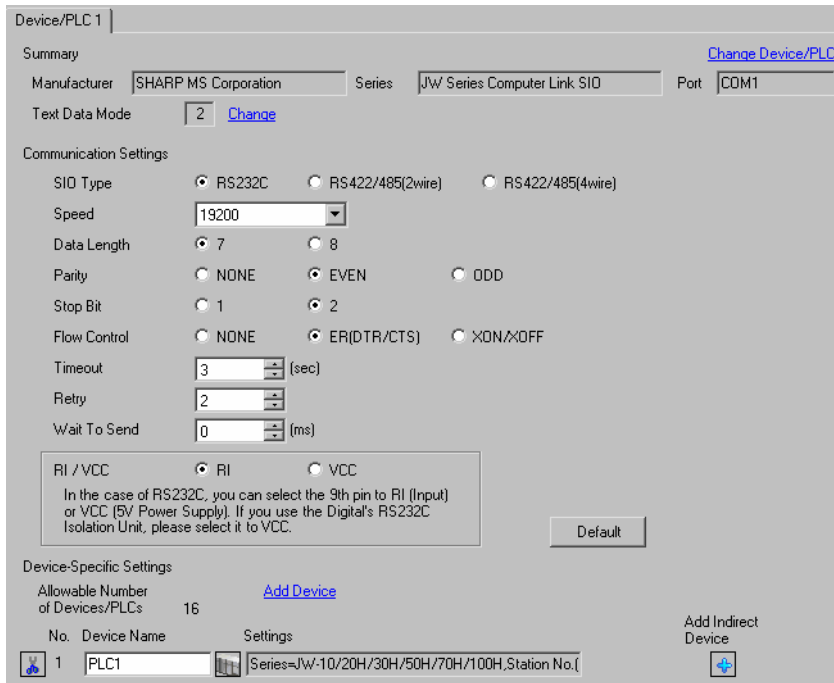
| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #235         | 1(o)          | Station No. setting. Enter in octal number. |

### 3.6 Setting Example 6

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



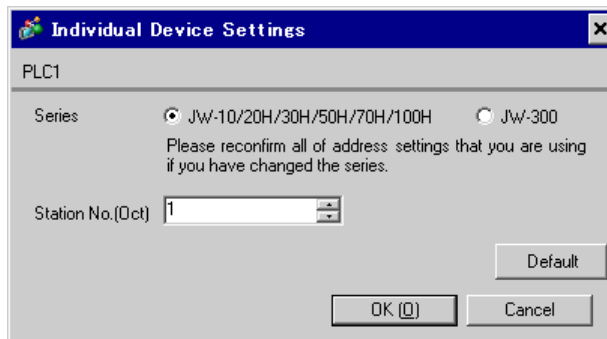
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #222

| Setting Area | Setting Value | Setup Description |
|--------------|---------------|-------------------|
| #222         | 0(H)          | RS232C connection |

### ◆ Setting for #236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #236         | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Always OFF                |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #237

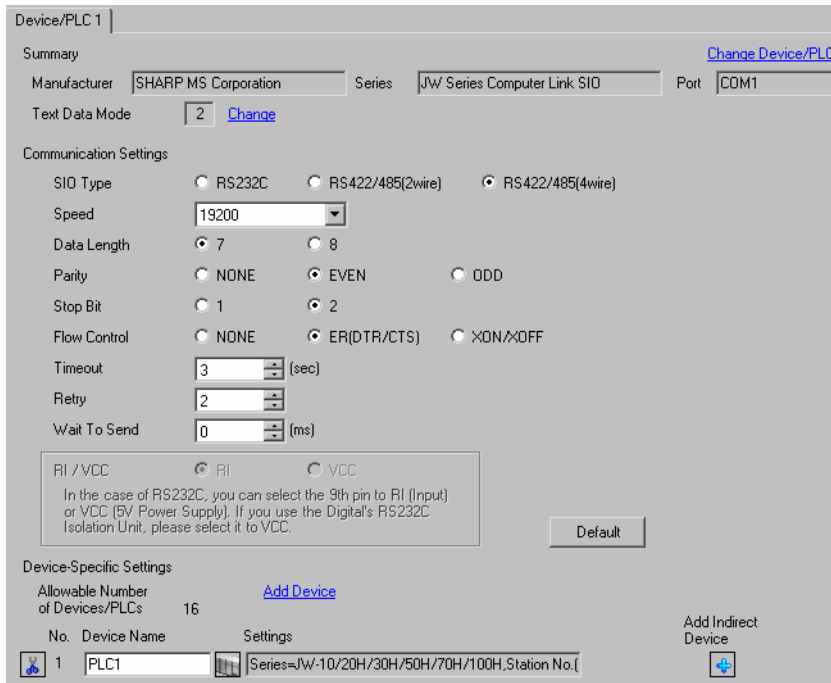
| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #237         | 1(o)          | Station No. setting. Enter in octal number. |

### 3.7 Setting Example 7

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings]  .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #222

1:1 Connection

| Setting Area | Setting Value | Setup Description  |
|--------------|---------------|--------------------|
| #222         | 00(H)         | RS-422A connection |

1:n Connection

| Setting Area | Setting Value | Setup Description  |
|--------------|---------------|--------------------|
| #222         | 04(H)         | RS-422A connection |

**IMPORTANT** • “1:n Connection” is enabled by using JW-32CUH1/33CUH1/33CUH2/33CUH3 (with software version 3.5 or later) or JW-32CUM1/32CUM2.

### ◆ Setting for #236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #236         | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Always OFF                |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #237

| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #237         | 1(o)          | Station No. setting. Enter in octal number. |

## 3.8 Setting Example 8

### ■ Settings of GP-Pro EX

#### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1

Summary [Change Device/PLC](#)

Manufacturer SHARP MS Corporation Series JW Series Computer Link SIO Port COM1

Text Data Mode 2 [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)

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 Number of Devices/PLCs 16 [Add Device](#)

| No. | Device Name | Settings                                       | Add Indirect Device |
|-----|-------------|--|---------------------|
| 1   | PLC1        | Series=Jw-10/20H/30H/50H/70H/100H,Station No.( | <a href="#">+</a>   |

#### NOTE

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

#### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

Individual Device Settings

PLC1

Series  Jw-10/20H/30H/50H/70H/100H  Jw-300

Please reconfirm all of address settings that you are using if you have changed the series.

Station No.(Oct) 1

Default

OK (O) Cancel



## ■ Settings of External Device

Use the rotary switch on Link I/F for setting. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting the switch to enable the setting.

### ◆ Function Setting Switch

| Rotary Switch | Setting Value | Setup Description       |
|---------------|---------------|-------------------------|
| SW0           | 4             | SIO Type: Computer link |

### ◆ Station Address Setting Switch

| Rotary Switch | Setting Value | Setup Description                                  |
|---------------|---------------|--|
| SW2           | 0             | Station No. setting: Set the upper station number. |
| SW1           | 1             | Station No. setting: Set the lower station number. |

#### NOTE

- Set the station No. between 01 and 37 (o) with SW2 and SW1.

### ◆ Operation ModeSetting Switch

| DIP Switch | Setting Value | Setup Description                    |
|------------|---------------|--------------------------------------|
| SW3-1      | OFF           | Reserved                             |
| SW3-2      | ON            | Number of communication wire: 4 wire |
| SW3-3      | OFF           | Reserved                             |
| SW3-4      | ON            | Parity: Even                         |

### ◆ Transfer SpeedSetting Switch

| Rotary Switch | Setting Value | Setup Description         |
|---------------|---------------|---------------------------|
| SW4           | 0             | Transfer Speed: 19200 bps |

### ◆ Termination Resistance Switch

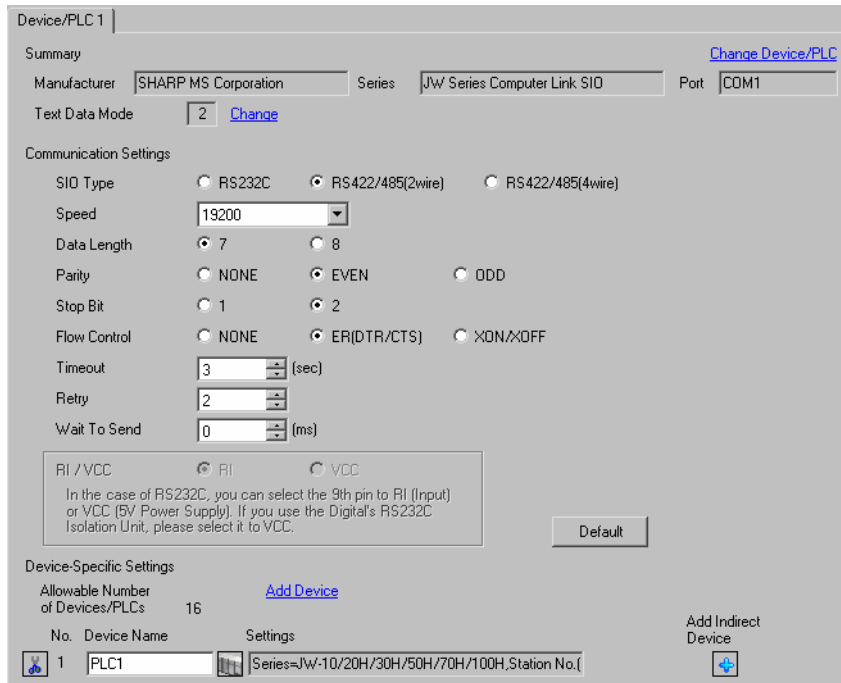
| DIP Switch | Setting Value | Setup Description   |
|------------|---------------|---|
| SW7        | ON            | Insert the termination resistance: Set it to ON to insert the termination resistance. Set only the External Device which terminates the connection to ON. |

### 3.9 Setting Example 9

#### ■ Settings of GP-Pro EX


##### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

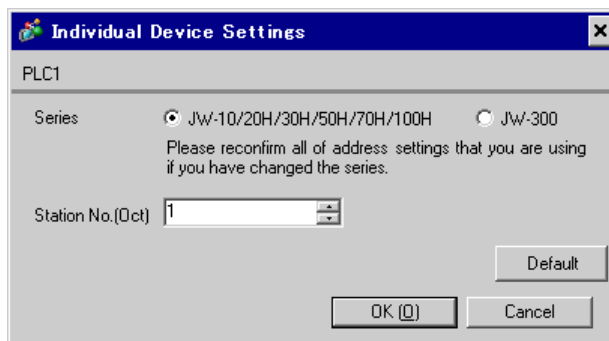


**NOTE** • Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Use the rotary switch on Link I/F for setting. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting the switch to enable the setting.

### ◆ Function Setting Switch

| Rotary Switch | Setting Value | Setup Description       |
|---------------|---------------|-------------------------|
| SW0           | 4             | SIO Type: Computer link |

### ◆ Station Address Setting Switch

| Rotary Switch | Setting Value | Setup Description                                  |
|---------------|---------------|--|
| SW2           | 0             | Station No. setting: Set the upper station number. |
| SW1           | 1             | Station No. setting: Set the lower station number. |

#### NOTE

- Set the station No. between 01 and 37 (o) with SW2 and SW1.

### ◆ Operation ModeSetting Switch

| DIP Switch | Setting Value | Setup Description                    |
|------------|---------------|--------------------------------------|
| SW3-1      | OFF           | Reserved                             |
| SW3-2      | OFF           | Number of communication wire: 2 wire |
| SW3-3      | OFF           | Reserved                             |
| SW3-4      | ON            | Parity: Even                         |

### ◆ Transfer SpeedSetting Switch

| Rotary Switch | Setting Value | Setup Description         |
|---------------|---------------|---------------------------|
| SW4           | 0             | Transfer Speed: 19200 bps |

### ◆ Termination Resistance Switch

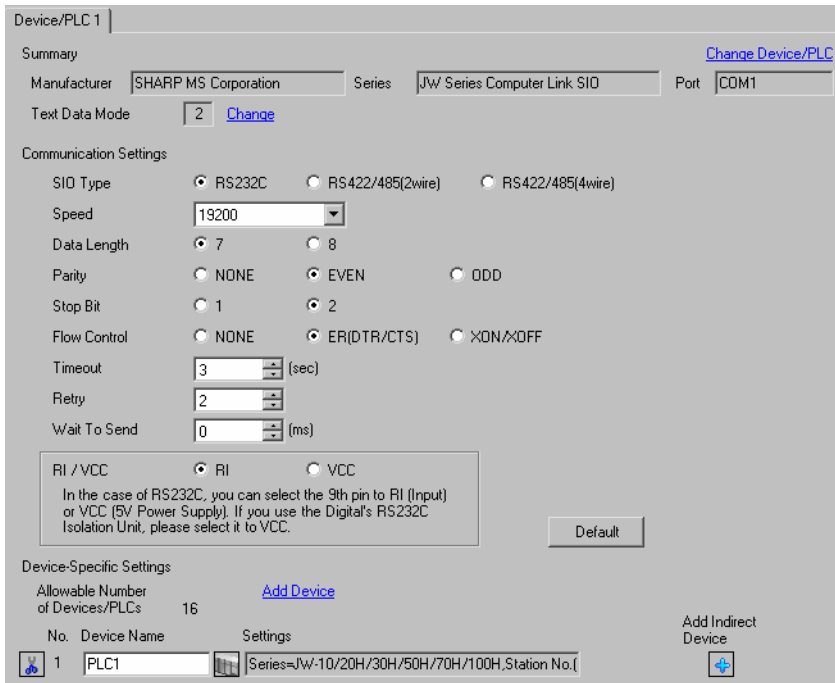
| DIP Switch | Setting Value | Setup Description   |
|------------|---------------|---|
| SW7        | ON            | Insert the termination resistance: Set it to ON to insert the termination resistance. Set only the External Device which terminates the connection to ON. |

### 3.10 Setting Example 10

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



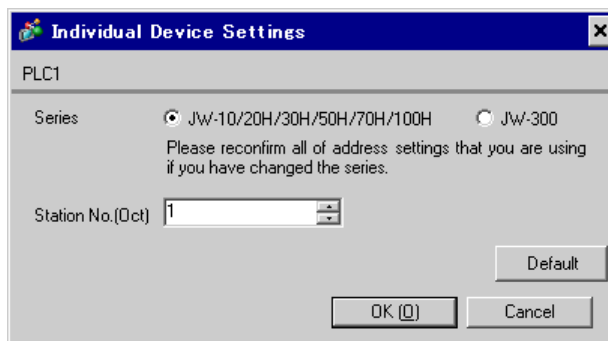
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #0236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #0236        | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Always OFF                |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #0237

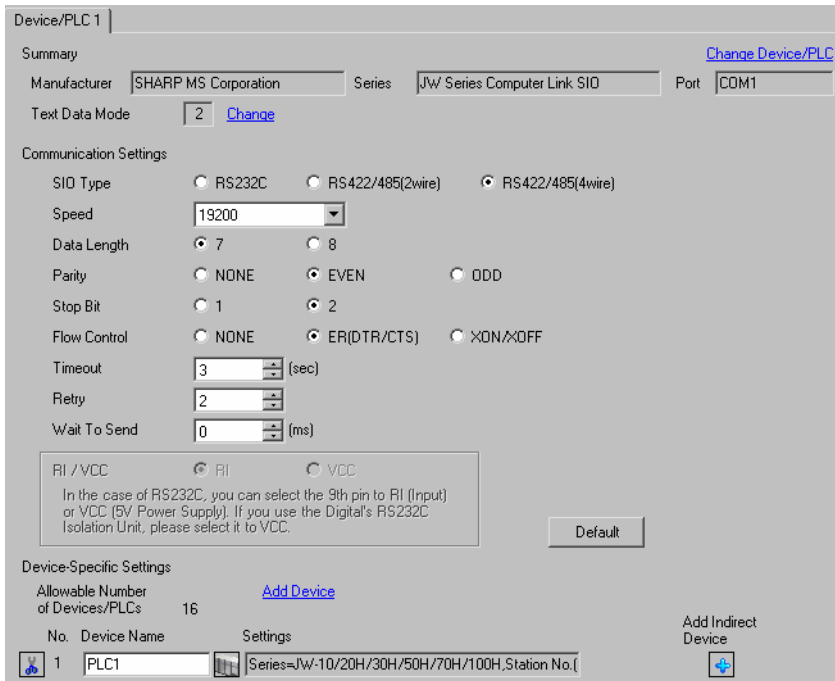
| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #0237        | 1(o)          | Station No. setting. Enter in octal number. |

### 3.11 Setting Example 11

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



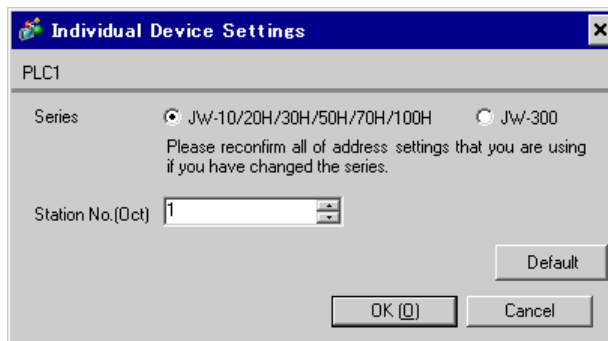
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #0236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #0236        | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Always OFF                |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #0237

| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #0237        | 1(o)          | Station No. setting. Enter in octal number. |

### ◆ Termination Resistance Switch

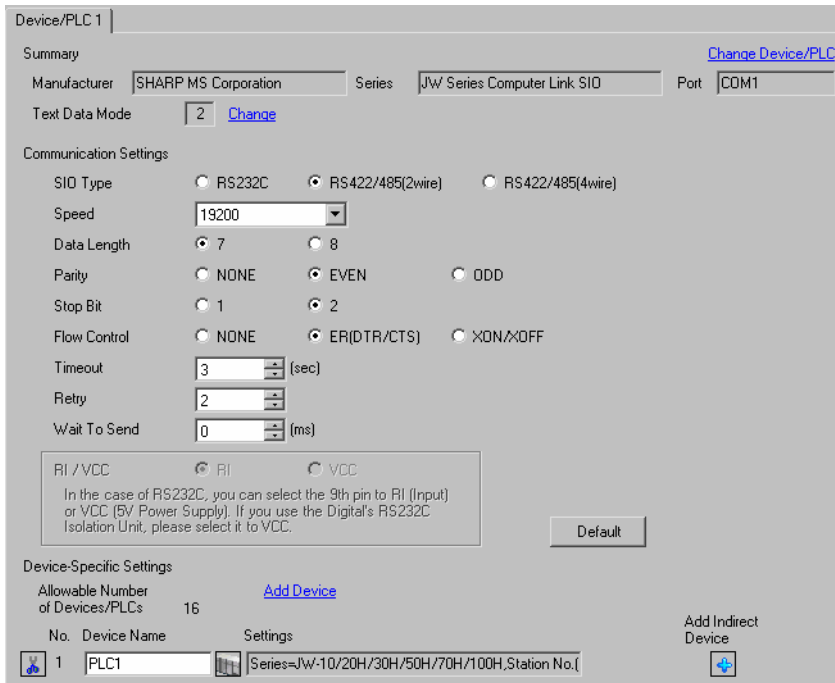
Insert the termination resistance at the end. Connecting the 6th and 13th pins in the port on the External Device allows the termination resistance to be inserted.

### 3.12 Setting Example 12

#### ■ Settings of GP-Pro EX


##### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

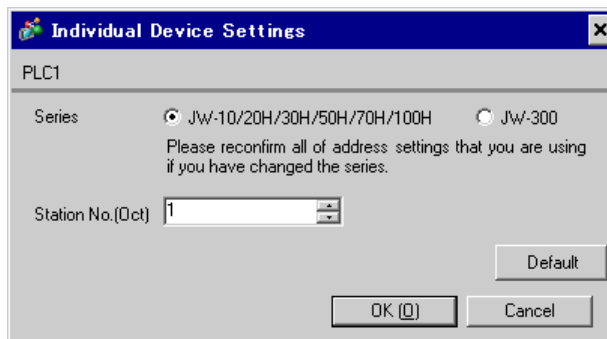


**NOTE** • Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.





## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #234

| Setting Area | Setting Value | Setup Description                         |
|--------------|---------------|---|
| #234         | 00(H)         | Communication mode setting: Computer link |

### ◆ Setting for #236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #236         | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Always OFF                |
| D7                 | OFF           | Data Length: 7 bits       |

### ◆ Setting for #237

| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #237         | 1(o)          | Station No. setting. Enter in octal number. |

### ◆ Termination Resistance Switch

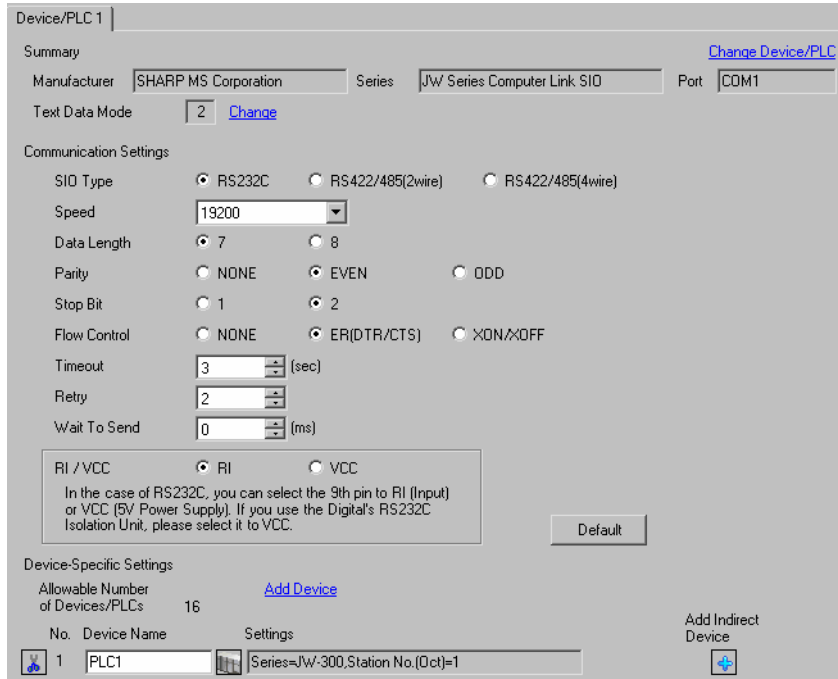
| DIP Switch | Setting Value | Setup Description  |
|------------|---------------|--|
| SW7        | ON            | Insert the termination resistance: Set it to ON to insert the termination resistance.<br>Set only the External Device which terminates the connection to ON. |

### 3.13 Setting Example 13

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



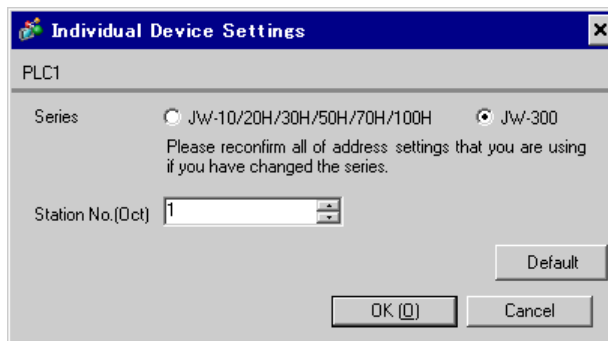
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #0234

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #0234        | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Data Length: 7 bits       |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #0235

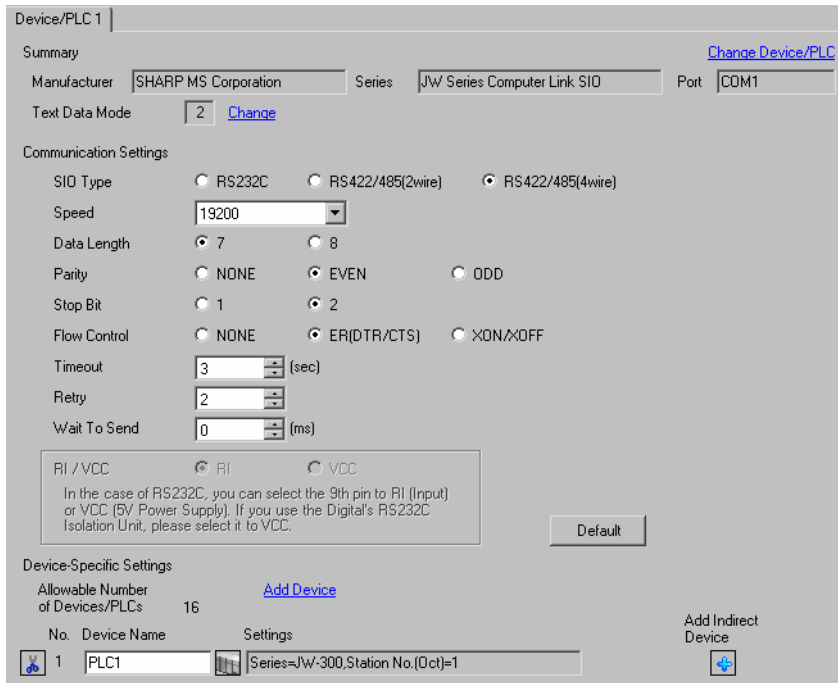
| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #0235        | 1(o)          | Station No. setting. Enter in octal number. |

### 3.14 Setting Example 14

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



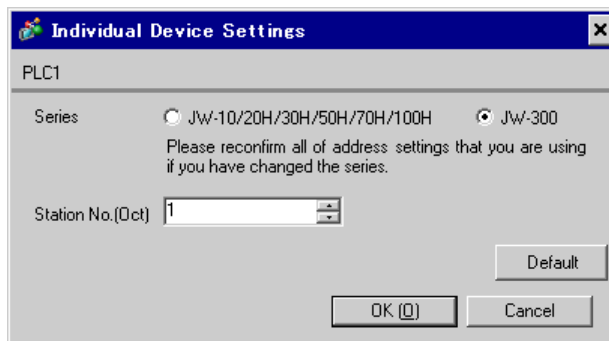
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings]  .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #0234

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #0234        | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Data Length: 7 bits       |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #0235

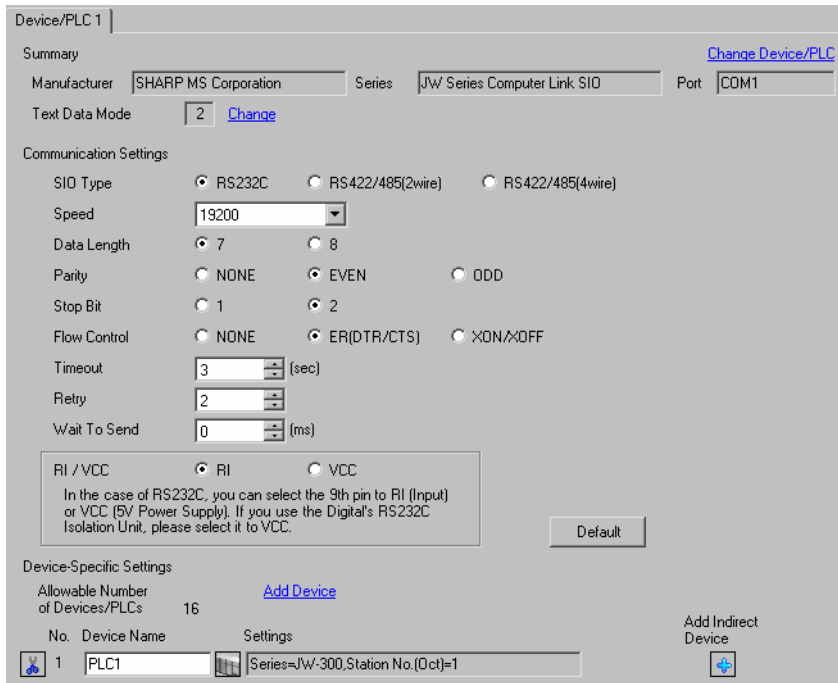
| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #0235        | 1(o)          | Station No. setting. Enter in octal number. |

### 3.15 Setting Example 15

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



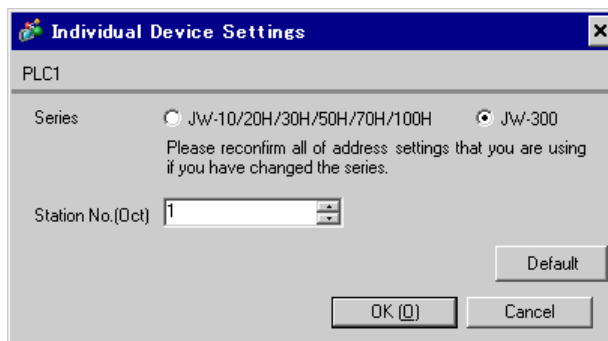
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #0236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #0236        | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Data Length: 7 bits       |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #0237

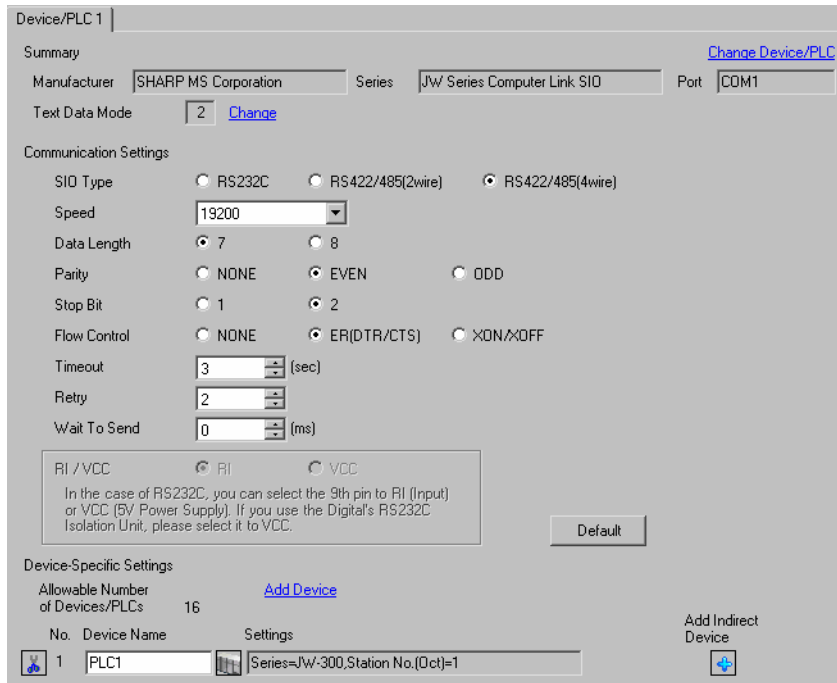
| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #0237        | 1(o)          | Station No. setting. Enter in octal number. |

### 3.16 Setting Example 16

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



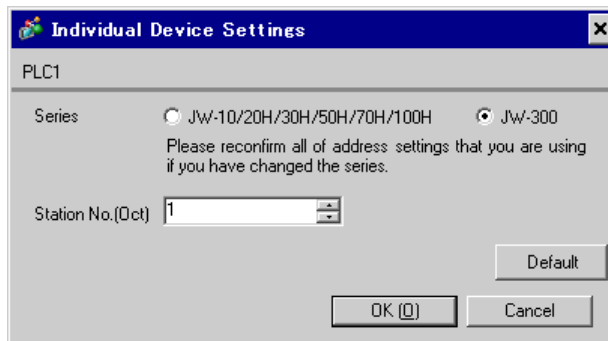
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings]  .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.





## ■ Settings of External Device

Set the bit of system memory in the External Device to ON or OFF. Please refer to the manual of the External Device for more details.

Restart the power of the External Device after setting to enable the setting.

### ◆ Setting for #0236

| Setting Area | Setting Value | Setup Description   |
|--------------|---------------|---|
| #0236        | 30(H)         | Communication setting. Enter in hex number.<br>Description for each bit is shown below. |

#### • Description for Bit

| Bit in System Area | Setting Value | Setup Description         |
|--------------------|---------------|---------------------------|
| D0                 | OFF           | Transfer Speed: 19200 bps |
| D1                 | OFF           |                           |
| D2                 | OFF           |                           |
| D3                 | OFF           | Parity: Even              |
| D4                 | ON            |                           |
| D5                 | ON            | Stop Bit: 2 bits          |
| D6                 | OFF           | Data Length: 7 bits       |
| D7                 | OFF           | Always OFF                |

### ◆ Setting for #0237

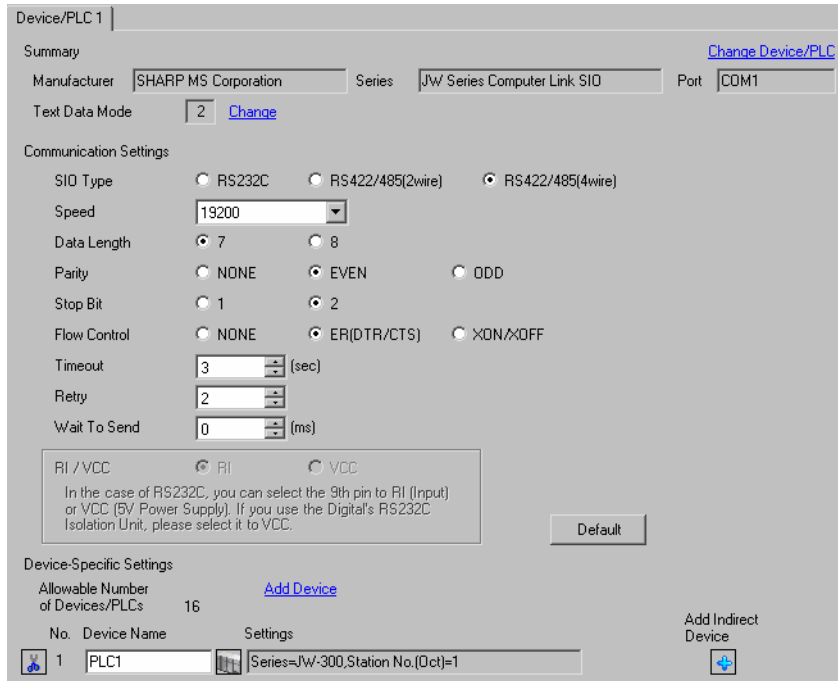
| Setting Area | Setting Value | Setup Description                           |
|--------------|---------------|---|
| #0237        | 1(o)          | Station No. setting. Enter in octal number. |

### 3.17 Setting Example 17

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings


To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



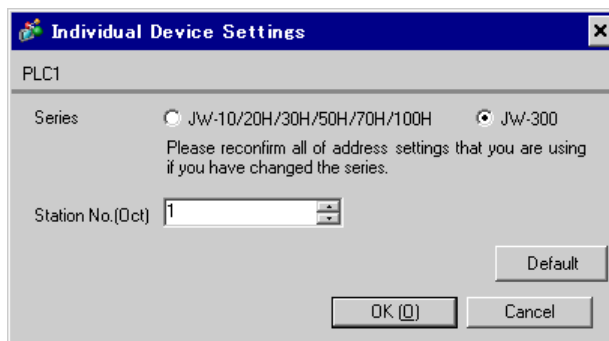
**NOTE**

- Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Use the rotary switch on Link I/F for setting. Please refer to the manual of the External Device for more details.  
Restart the power of the External Device after setting the switch to enable the setting.

### ◆ Function Setting Switch

| Rotary Switch | Setting Value | Setup Description       |
|---------------|---------------|-------------------------|
| SW0           | 4             | SIO Type: Computer link |

### ◆ Station Setting Switch

| Rotary Switch | Setting Value | Setup Description                                  |
|---------------|---------------|--|
| SW2 (x10)     | 0             | Station No. setting: Set the upper station number. |
| SW1 (x1)      | 1             | Station No. setting: Set the lower station number. |

#### **NOTE**

- Set the station No. between 01 and 37 (o) with SW2 and SW1.

### ◆ Operation ModeSetting Switch

| DIP Switch | Setting Value | Setup Description                    |
|------------|---------------|--------------------------------------|
| SW3-1      | OFF           | Reserved                             |
| SW3-2      | ON            | Number of communication wire: 4 wire |
| SW3-3      | OFF           | Reserved                             |
| SW3-4      | ON            | Parity: Even                         |

### ◆ Transfer Speed Setting Switch

| Rotary Switch | Setting Value | Setup Description            |
|---------------|---------------|------------------------------|
| SW4           | 0             | Transmission speed: 19200bps |

### ◆ Termination Resistance Switch

| DIP Switch | Setting Value | Setup Description  |
|------------|---------------|--|
| SW7        | ON            | Insert the termination resistance: Set it to ON to insert the termination resistance.<br>Set only the External Device which terminates the connection to ON. |

### ◆ Unit No. Switch

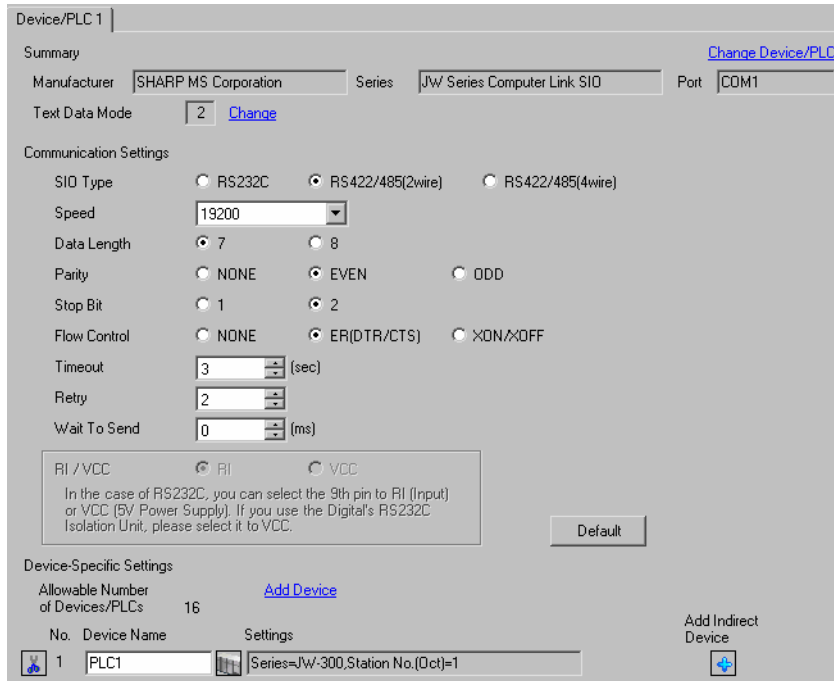
| Rotary Switch | Setting Value | Setup Description                                     |
|---------------|---------------|---|
| SW8           | 0             | Set the data memory address for sub station 01 to 04. |

### 3.18 Setting Example 18

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

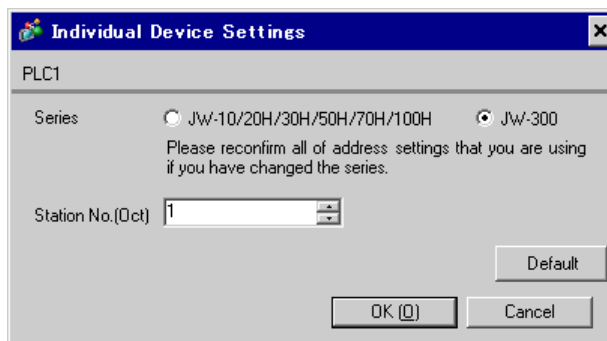


**NOTE** • Setting value for Wait To Send differs depending on the External Device. Please refer to the manual of the External Device for more details.

##### ◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings].

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



## ■ Settings of External Device

Use the rotary switch on Link I/F for setting. Please refer to the manual of the External Device for more details.  
Restart the power of the External Device after setting the switch to enable the setting.

### ◆ Function Setting Switch

| Rotary Switch | Setting Value | Setup Description       |
|---------------|---------------|-------------------------|
| SW0           | 4             | SIO Type: Computer link |

### ◆ Station Setting Switch

| Rotary Switch | Setting Value | Setup Description                                  |
|---------------|---------------|--|
| SW2 (x10)     | 0             | Station No. setting: Set the upper station number. |
| SW1 (x1)      | 1             | Station No. setting: Set the lower station number. |

#### **NOTE**

- Set the station No. between 01 and 37 (o) with SW2 and SW1.

### ◆ Operation ModeSetting Switch

| DIP Switch | Setting Value | Setup Description                    |
|------------|---------------|--------------------------------------|
| SW3-1      | OFF           | Reserved                             |
| SW3-2      | OFF           | Number of communication wire: 2 wire |
| SW3-3      | OFF           | Reserved                             |
| SW3-4      | ON            | Parity: Even                         |

### ◆ Transfer Speed Setting Switch

| Rotary Switch | Setting Value | Setup Description         |
|---------------|---------------|---------------------------|
| SW4           | 0             | Transfer Speed: 19200 bps |

### ◆ Termination Resistance Switch

| DIP Switch | Setting Value | Setup Description  |
|------------|---------------|--|
| SW7        | ON            | Insert the termination resistance: Set it to ON to insert the termination resistance.<br>Set only the External Device which terminates the connection to ON. |


### ◆ Unit No. Switch

| Rotary Switch | Setting Value | Setup Description                                     |
|---------------|---------------|---|
| SW8           | 0             | Set the data memory address for sub station 01 to 04. |

## 4 Setup Items

Set communication settings of the Display with GP-Pro Ex or in offline mode of the Display.

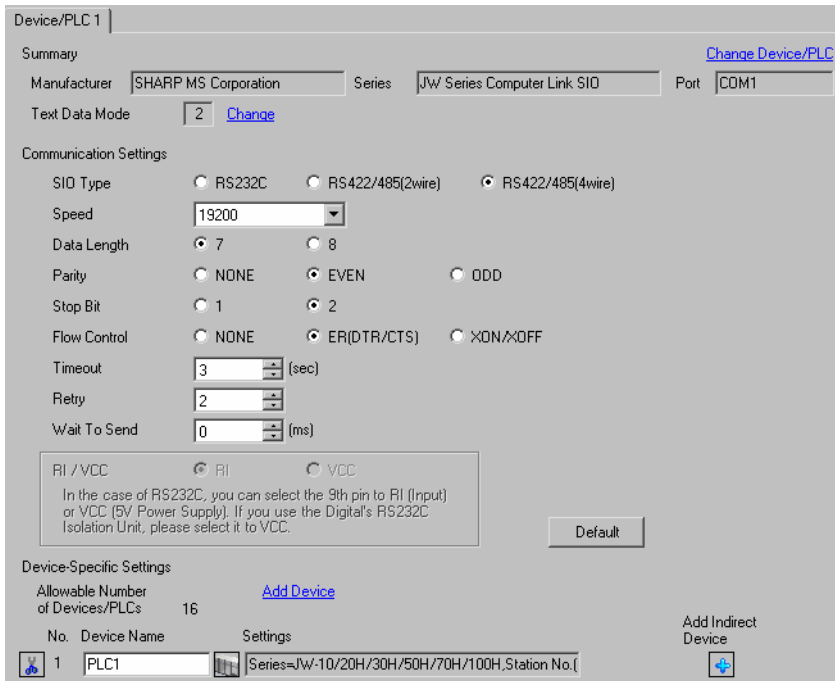
The setting of each parameter must be identical to that of External Device.

 "3 Example of Communication Setting" (page 9)

### 4.1 Setup Items in GP-Pro EX

#### ■ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].



| 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. |


Continues to the 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.   |
| RI/VCC       | Switches RI/VCC of the 9th pin.<br>It is necessary to change RI/5V by changeover switch of IPC when connect with IPC.<br>Please refer to the manual of the IPC for more detail. |

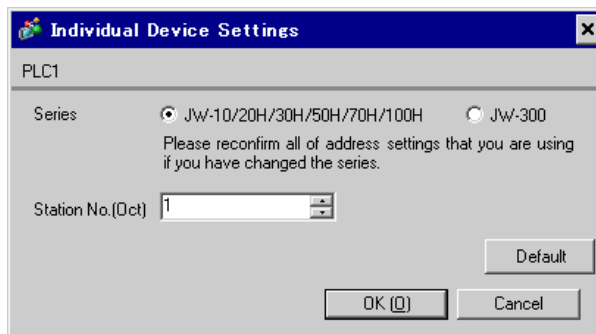
**NOTE**

- Refer to the GP-Pro EX Reference Manual for Indirect Device.
- Cf. GP-Pro EX Reference Manual "Changing the Device/PLC at Runtime (Indirect Device)"

■ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.



| Setup Items       | Setup Description   |
|-------------------|---|
| Series            | Select a series of the External Device  |
| Station No. (Oct) | Enter the unit No. of the External Device with "01 to 77" (octal).<br><b>NOTE</b><br>• When connecting the JW10 Series, enter with "0 to 77" (octal). |

## 4.2 Settings in Offline Mode

**NOTE**

- Refer to the Maintenance/Troubleshooting guide for information on how to enter offline mode or about the operation.

Cf. Maintenance/Troubleshooting Guide "Offline Mode"]

- The number of the setup items to be displayed for 1 page in the off-line mode depends on the Display in use. Please refer to the Reference manual for details.

### ■ Communication Settings

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

| Comm.                       | Device   | Option |          |                        |
|-----------------------------|--|--------|----------|------------------------|
| JW Series Computer Link SIO |  | [COM1] | Page 1/1 |                        |
| SIO Type                    | RS232C   |        |          |                        |
| Speed                       | 19200  |        |          |                        |
| Data Length                 | <input checked="" type="radio"/> 7 <input type="radio"/> 8                                 |        |          |                        |
| Parity                      | <input type="radio"/> NONE <input checked="" type="radio"/> EVEN <input type="radio"/> ODD |        |          |                        |
| Stop Bit                    | <input type="radio"/> 1 <input checked="" type="radio"/> 2                                 |        |          |                        |
| Flow Control                | ER(DTR/CTS)  |        |          |                        |
| Timeout(s)                  | 3  |        |          |                        |
| Retry                       | 2  |        |          |                        |
| Wait To Send(ms)            | 0  |        |          |                        |
| Exit                        |  | Back   |          | 2007/03/09<br>21:14:17 |

| Setup Items | Setup Description  |
|-------------|--|
| SIO Type    | Select the SIO type to communicate with the External Device.<br><b>IMPORTANT</b><br>To make the communication settings correctly, confirm the serial interface specifications of Display unit for [SIO Type].<br>We cannot guarantee the operation if a communication type that the serial interface does not support is specified.<br>For details concerning the serial interface specifications, refer to the manual for Display unit. |
| Speed       | Select speed between the External Device and the Display.  |
| Data Length | Select data length.  |

Continued to next page.



| Setup Items  | Setup Description  |
|--------------|--|
| 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. |
| 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.            |

■ Device Setting

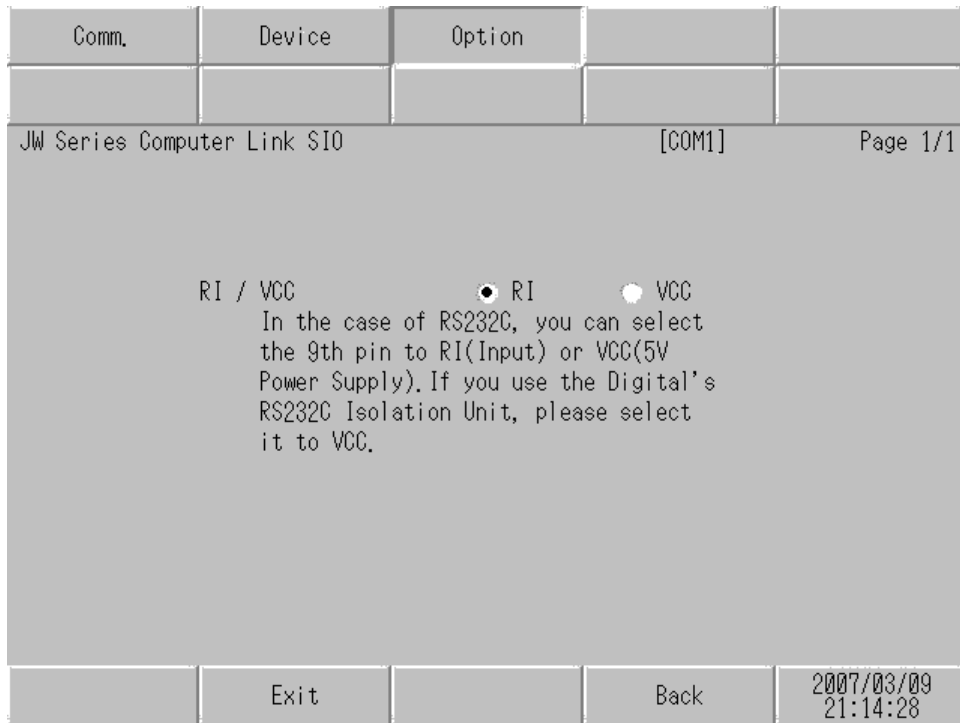
To display the setting screen, touch [Device/PLC Settings] from [Peripheral Equipment Settings]. Touch the External Device you want to set from the displayed list, and touch [Device Settings].

| Comm.                       | Device | Option                     |          |                        |
|-----------------------------|--------|----------------------------|----------|------------------------|
| JW Series Computer Link SIO |        | [COM1]                     | Page 1/1 |                        |
| Device/PLC Name             |        | [PLC1] ▼                   |          |                        |
| Series                      |        | JW-10/20H/30H/50H/70H/100H |          |                        |
| Station No. (Oct)           |        | [ 1 ] ▼ ▲                  |          |                        |
| Exit                        |        | Back                       |          | 2007/03/09<br>21:14:24 |

| Setup Items       | Setup Description   |
|-------------------|---|
| Device/PLC Name   | Select the External Device to set. Device name is a title of the External Device set with GP-Pro EX. (Initial value [PLC1])                           |
| Series            | Display a series of the External Device   |
| Station No. (Oct) | Enter the unit No. of the External Device with "01 to 77" (octal).<br><b>NOTE</b><br>• When connecting the JW10 Series, enter with "0 to 77" (octal). |

■ Option

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



| Setup Items | Setup Description   |
|-------------|---|
| RI/VCC      | Switches RI/VCC of the 9th pin.<br>It is necessary to change RI/5V by changeover switch of IPC when connect with IPC.<br>Please refer to the manual of the IPC for more detail. |

## 5 Cable Diagram

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

- The FG pin of the main body of the External Device 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.
- Connect the isolation unit, when communication is not stabilized under the influence of a noise etc..


Cable Diagram 1

| Display<br>(Connection Port)  | Cable |  | Remarks                        |
|---|-------|--|--------------------------------|
| GP3000* <sup>1</sup> (COM1)<br>AGP-3302B (COM2)<br>ST* <sup>2</sup> (COM2)<br>IPC* <sup>3</sup> | 1A    | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable | Cable length:<br>1000m or less |
|   | 1B    | Your own cable   |                                |
| GP3000* <sup>4</sup> (COM2)   | 1C    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable              |                                |
|   | 1D    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Your own cable   |                                |
| GP4000* <sup>5</sup> (COM2)<br>GP-4201T (COM1)  | 1E    | RS-422 Terminal Block Conversion Adapter by Pro-face<br>PFXZCBADTM1* <sup>6</sup><br>+<br>Your own cable   |                                |
|   | 1B    | Your own cable   |                                |

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A and AST-3302B

\*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.

 ■ IPC COM Port (page 6)

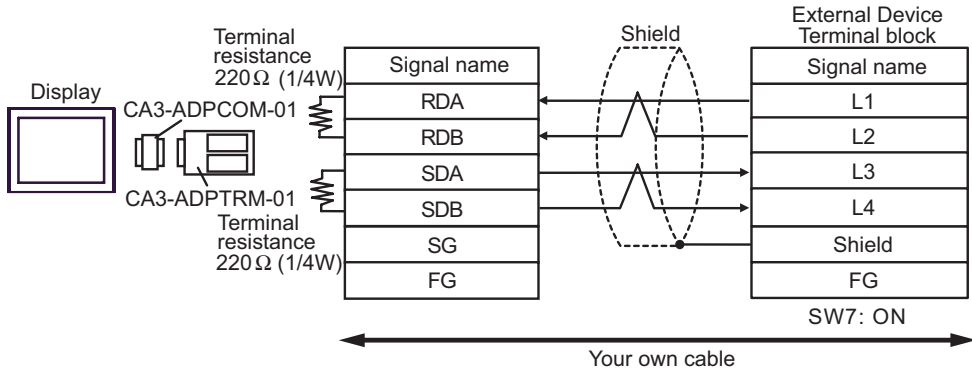
\*4 All GP models except GP-3200 series and AGP-3302B

\*5 All GP4000 models except GP-4100 Series, GP-4\*01TM, GP-4201T and GP-4\*03T

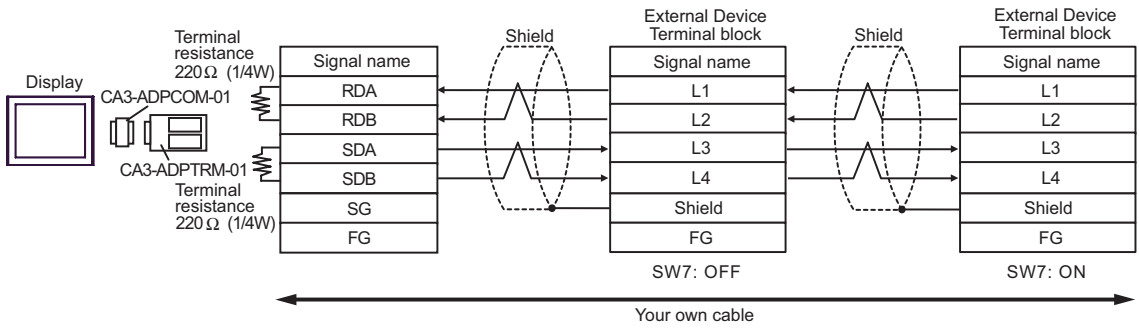
\*6 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 1A.

1A)

- 1:1 Connection



- 1:n Connection

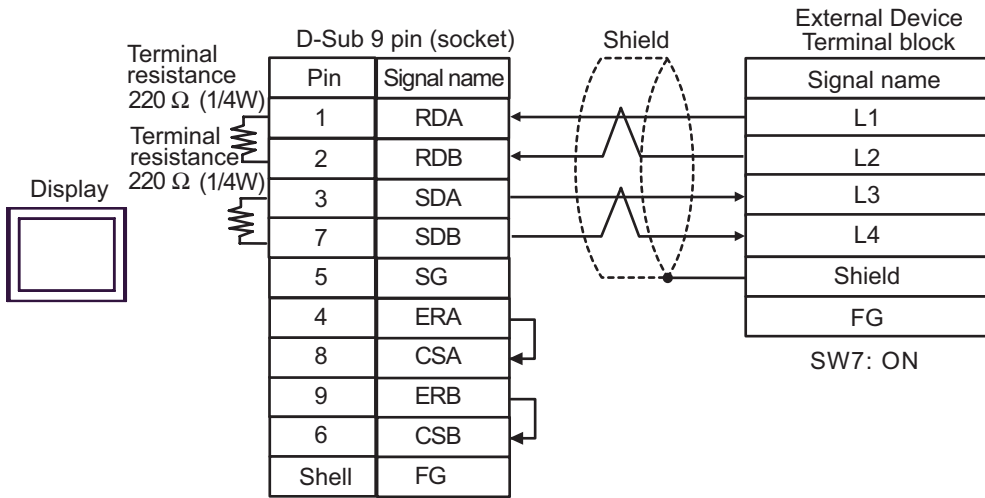


**NOTE**

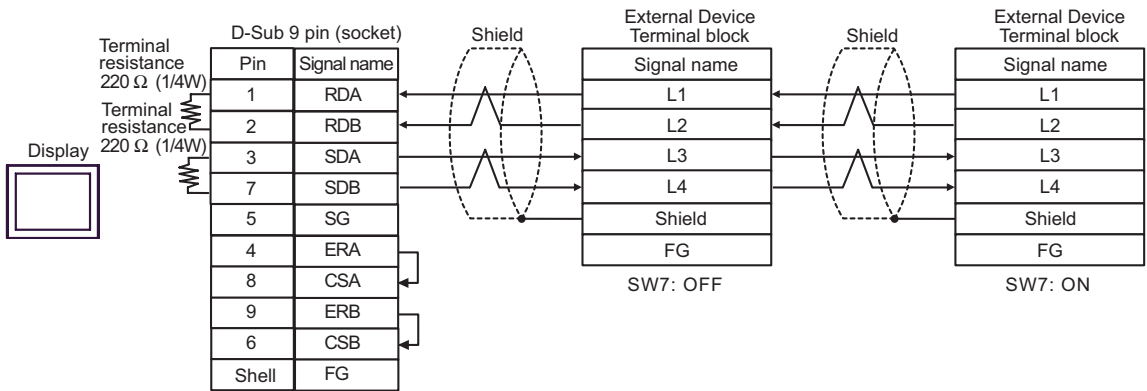
- When IPC is used as the Display, the terminal resistance of 220Ω can be inserted by the fact that the dip switch 5, 6 of IPC is turned to ON.

1B)

- 1:1 Connection



- 1:n Connection

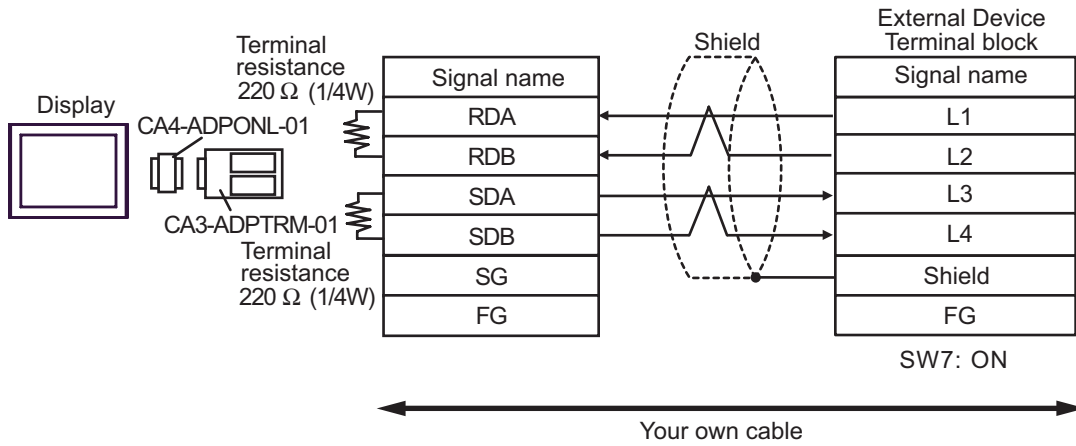


**NOTE**

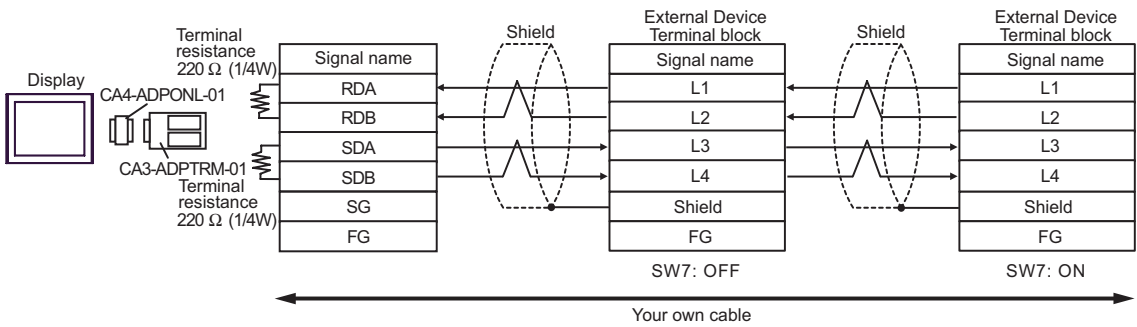
- When IPC is used as the Display, the terminal resistance of 220Ω can be inserted by the fact that the dip switch 5, 6 of IPC is turned to ON.

1C)

- 1:1 Connection

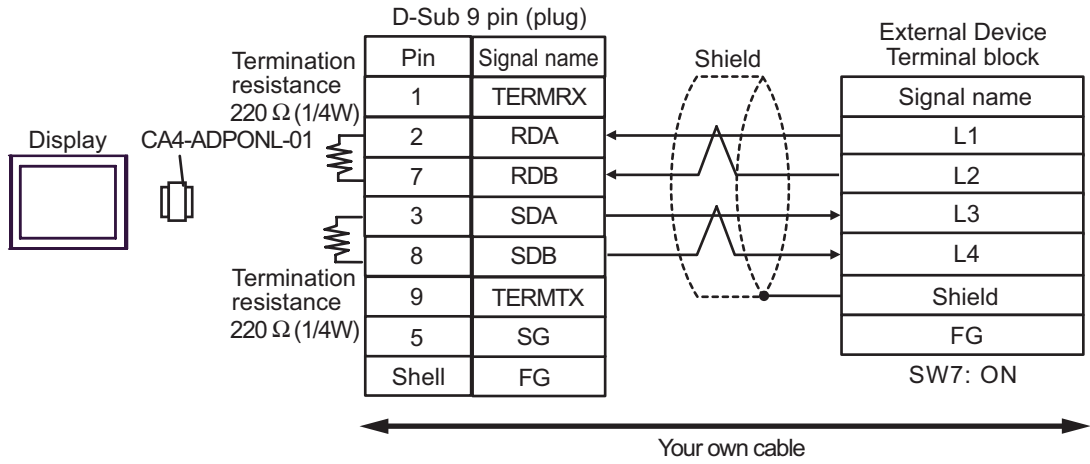


- 1:n Connection

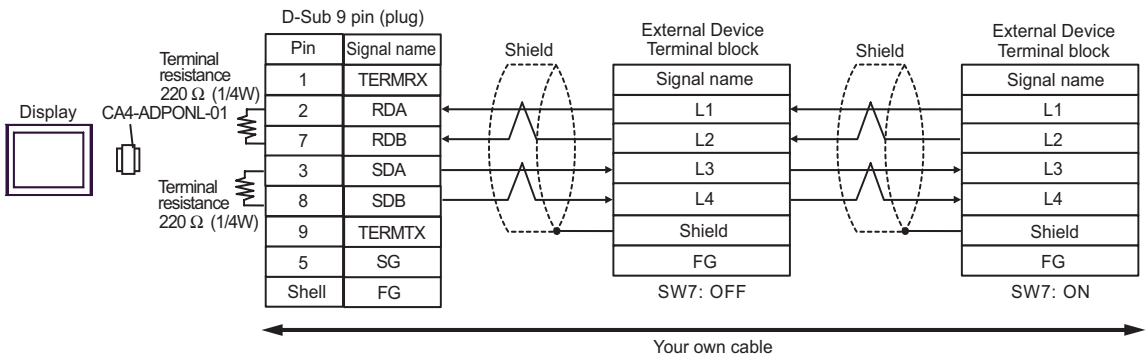


1D)

- 1:1 Connection



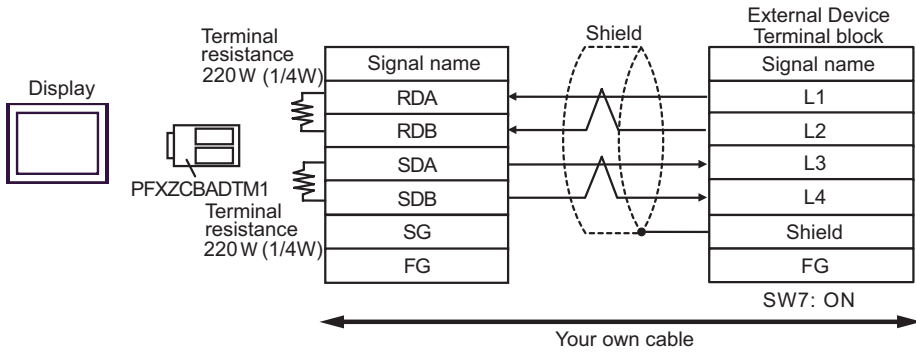
- 1:n Connection



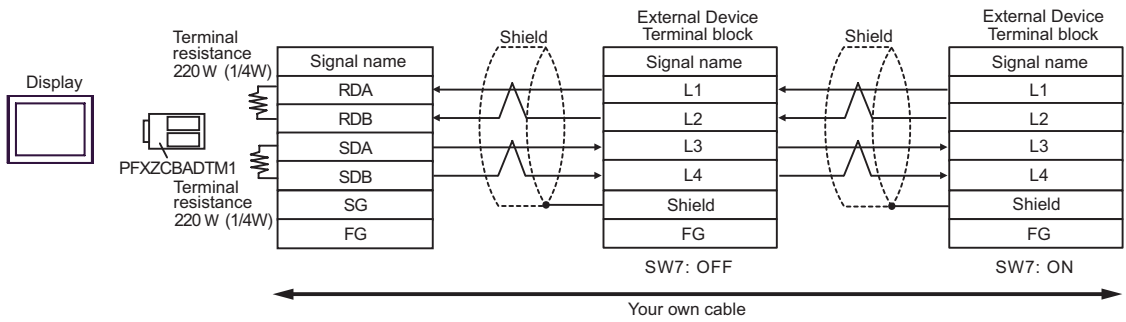


1E)

- 1:1 Connection



- 1:n Connection




Cable Diagram 2

| Display<br>(Connection Port)   | Cable |  | Remarks                        |
|--|-------|--|--------------------------------|
| GP3000* <sup>1</sup> (COM1)<br>AGP-3302B (COM2)<br>ST* <sup>2</sup> (COM2) | 2A    | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable | Cable length:<br>1000m or less |
|  | 2B    | Your own cable   |                                |
| GP3000* <sup>3</sup> (COM2)  | 2C    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable              |                                |
|  | 2D    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Your own cable   |                                |
| IPC* <sup>4</sup>  | 2E    | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable |                                |
|  | 2F    | Your own cable   |                                |
| GP-4*03T* <sup>5</sup> (COM2)<br>GP-4203T (COM1)                           | 2G    | Your own cable   |                                |
| GP4000* <sup>6</sup> (COM2)<br>GP-4201T (COM1)                             | 2H    | RS-422 Terminal Block Conversion Adapter by Pro-face<br>PFZCBADTM1* <sup>7</sup><br>+<br>Your own cable  |                                |
|  | 2B    | Your own cable   |                                |

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A and AST-3302B

\*3 All GP models except GP-3200 series and AGP-3302B

\*4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used.  
 ■ IPC COM Port (page 6)

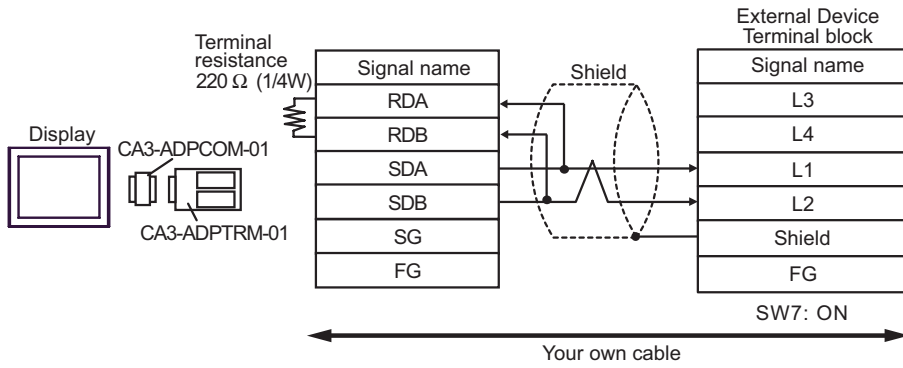
\*5 Except GP-4203T

\*6 All GP4000 models except GP-4100 Series, GP-4\*01TM, GP-4201T and GP-4\*03T

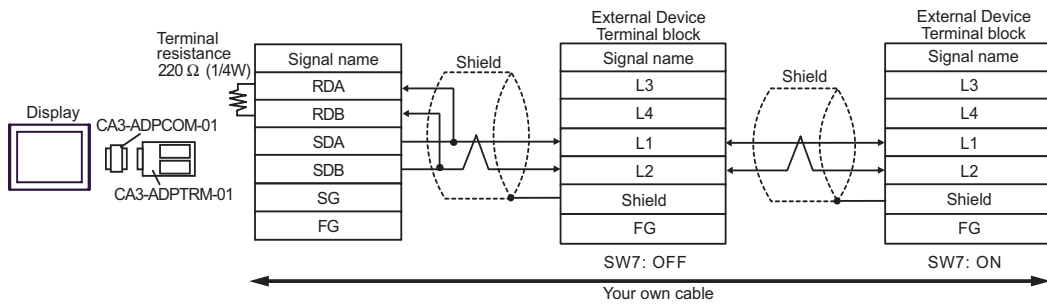
\*7 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 2A.

2A)

- 1:1 Connection

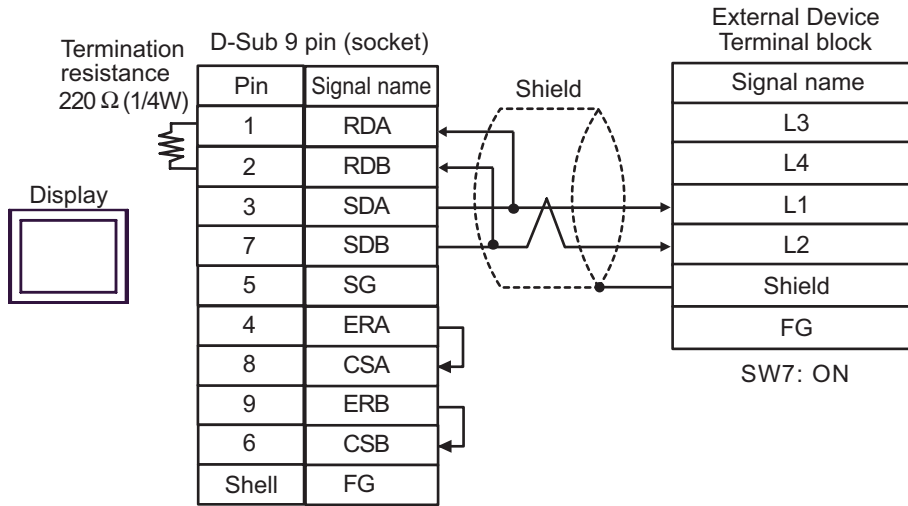


- 1:n Connection

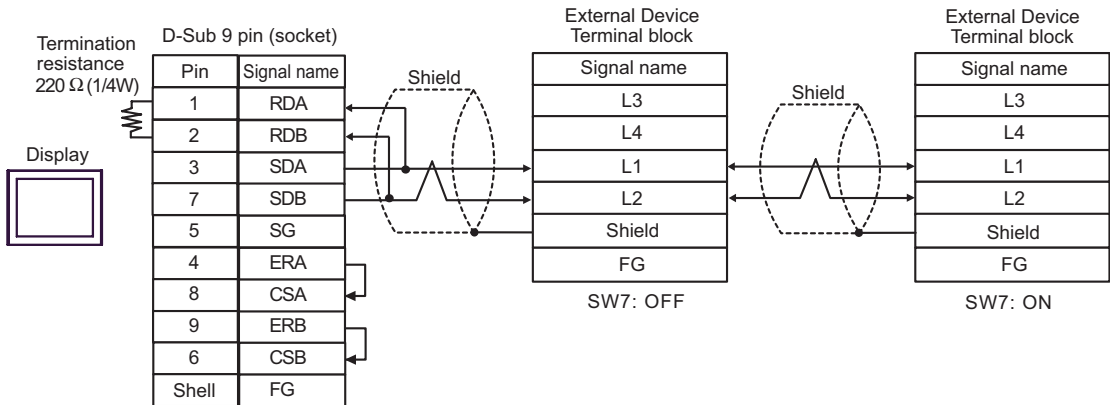


2B)

- 1:1 Connection

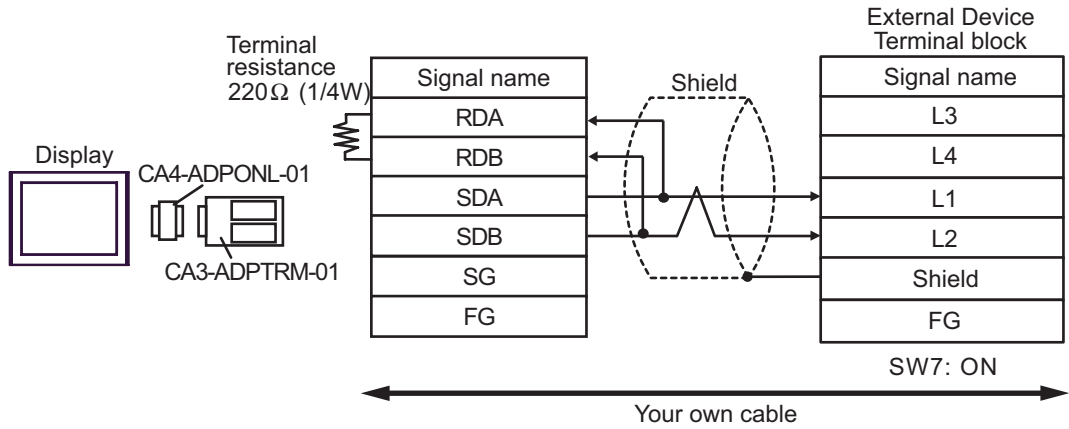


- 1:n Connection

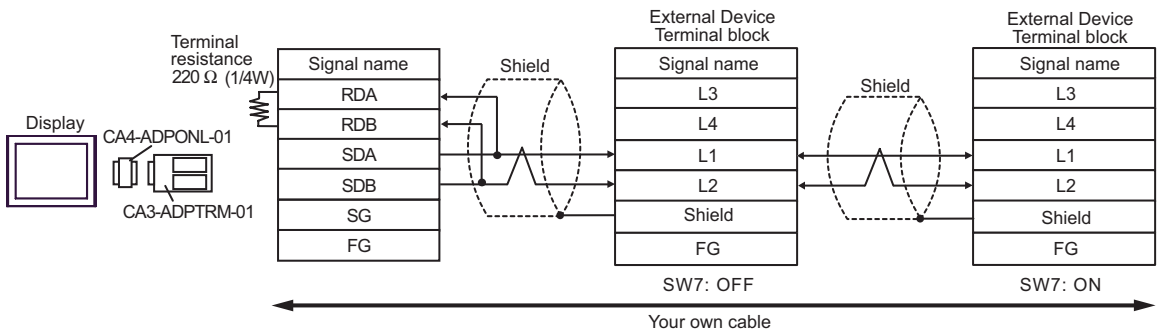


2C)

- 1:1 Connection

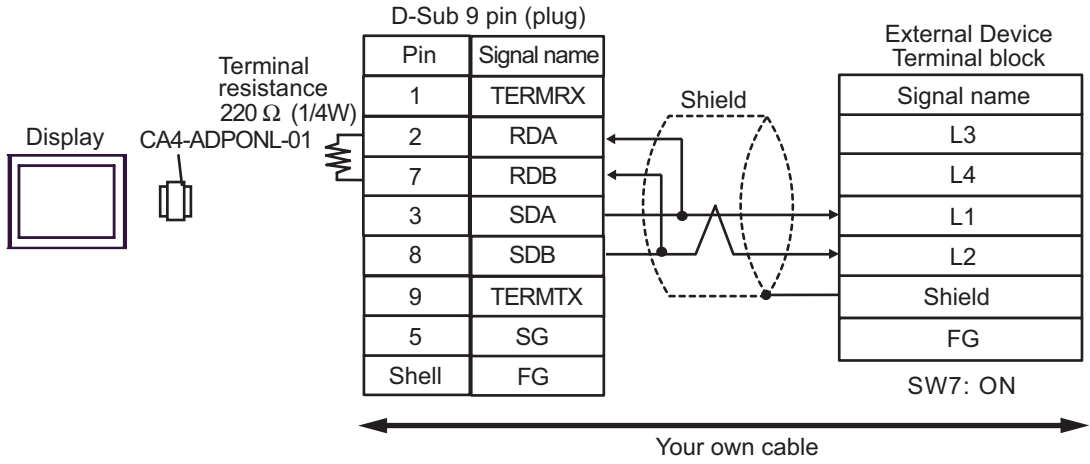


- 1:n Connection

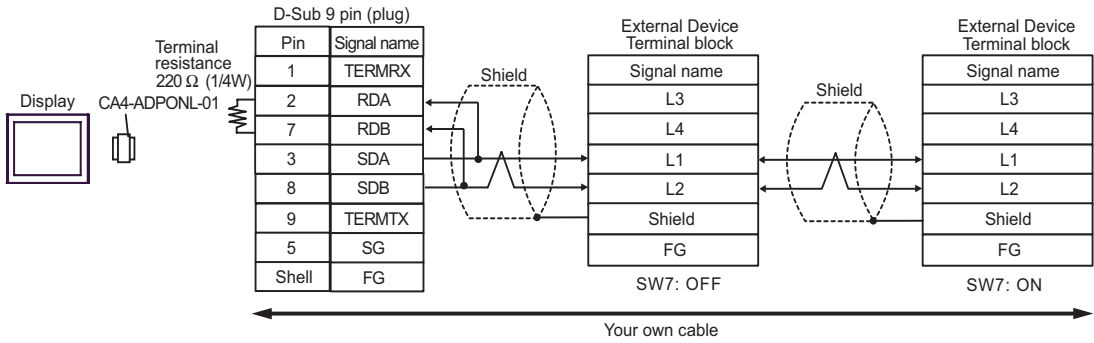


2D)

- 1:1 Connection

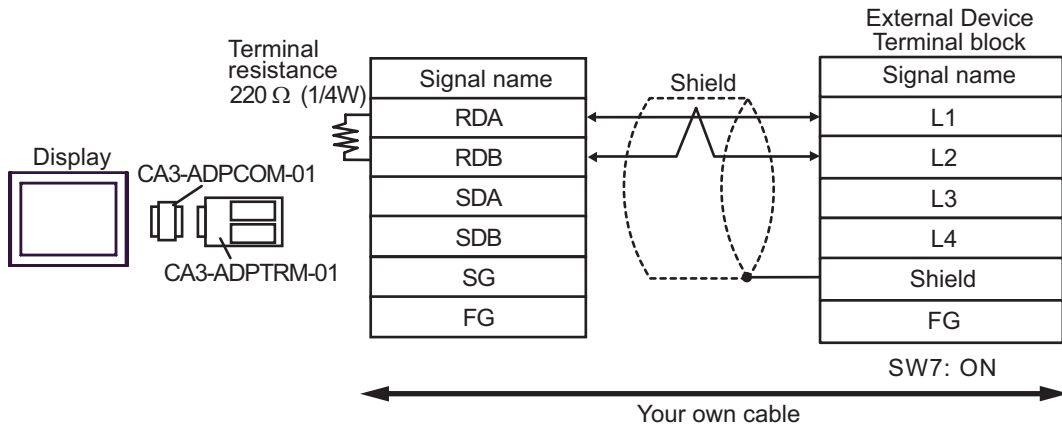


- 1:n Connection

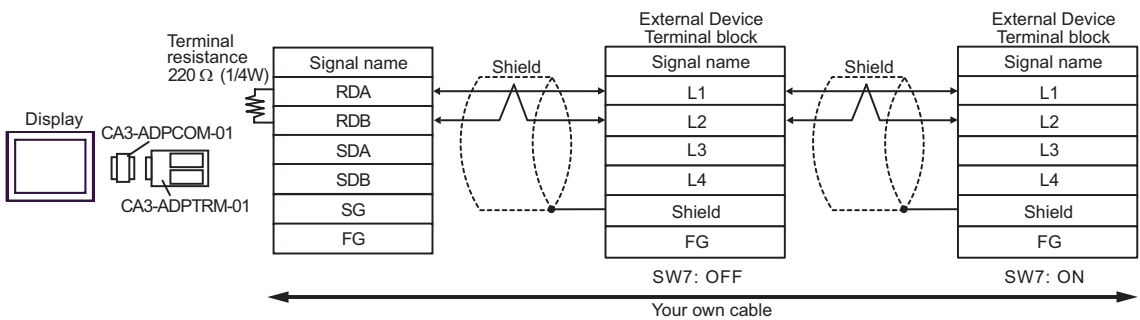


2E)

- 1:1 Connection



- 1:n Connection

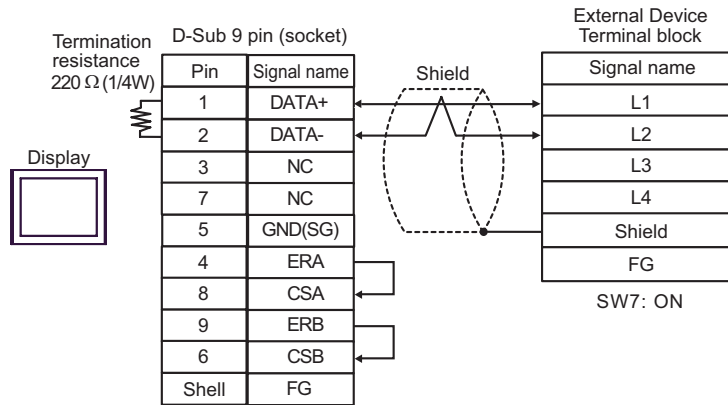


**NOTE**

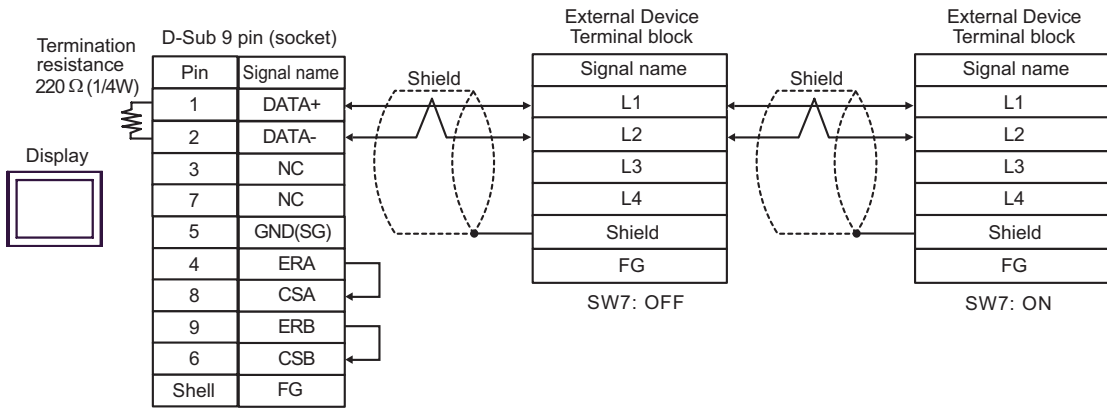
- When IPC is used as the Display, the terminal resistance of 220Ω can be inserted by the fact that the dip switch 6 of IPC is turned to ON.

2F)

- 1:1 Connection



- 1:n Connection



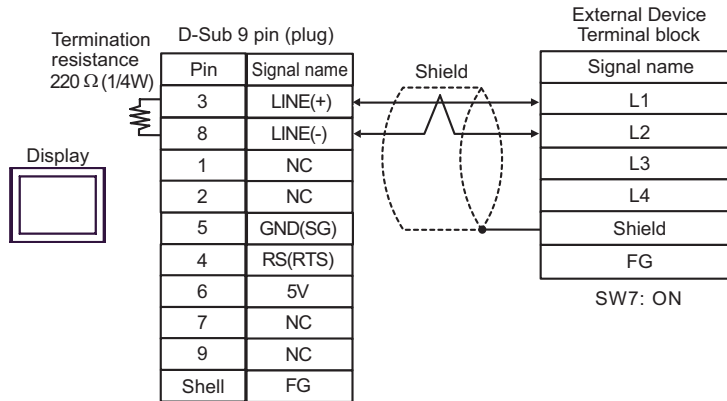
**NOTE**

- When IPC is used as the Display, the terminal resistance of 220Ω can be inserted by the fact that the dip switch 6 of IPC is turned to ON.

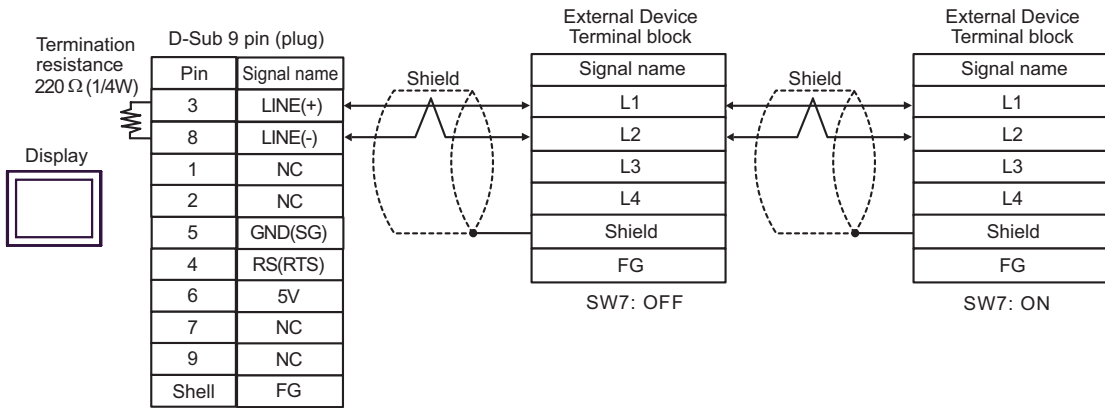


2G)

- 1:1 Connection



- 1:n Connection

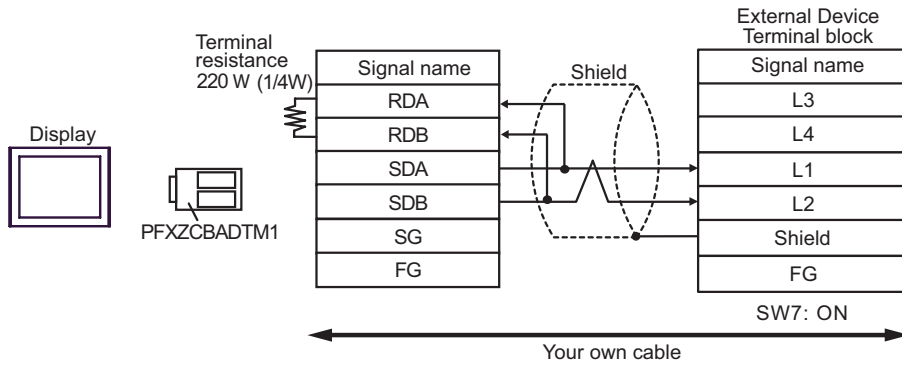


**IMPORTANT**

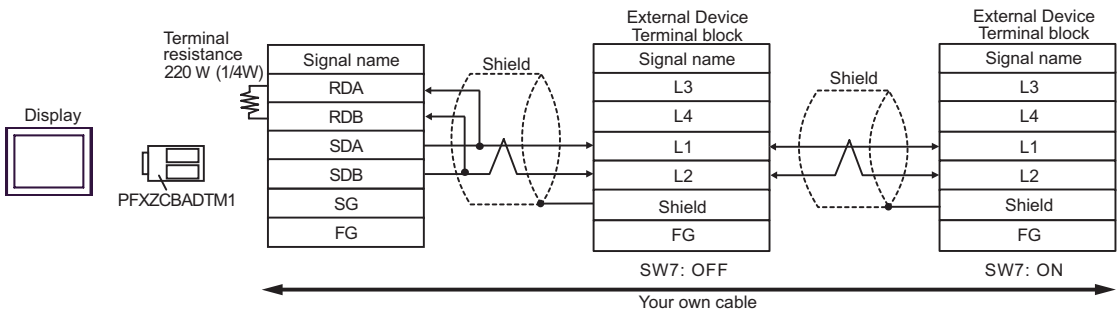
- The 5V output (Pin #6) on the Display is the power for the Siemens AG's PROFIBUS connector. Do not use it for other devices.

2H)

- 1:1 Connection



- 1:n Connection



Cable Diagram 3

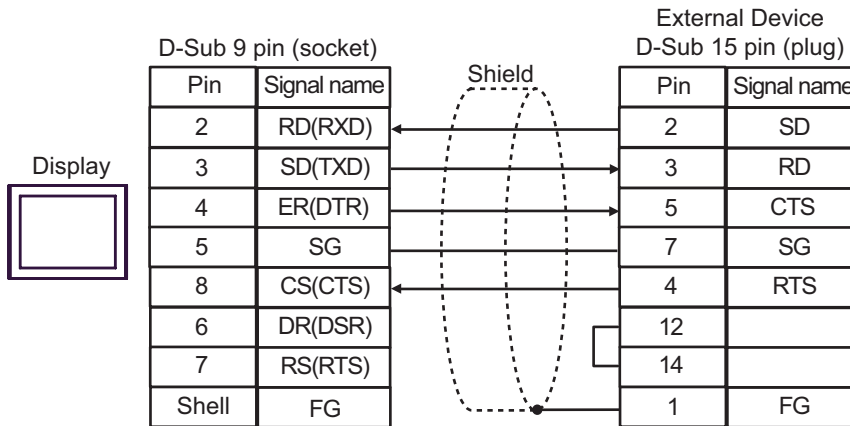
| Display<br>(Connection Port)  | Cable |                | Remarks                      |
|---|-------|----------------|------------------------------|
| GP3000 (COM1)<br>GP4000* <sup>1</sup> (COM1)<br>ST (COM1)<br>IPC* <sup>2</sup><br>PC/AT | 3A    | Your own cable | Cable length:<br>15m or less |

\*1 All GP4000 models except GP-4100 Series, GP4\*0ITM and GP-4203T

\*2 Only the COM port which can communicate by RS-232C can be used.

☞ ■ IPC COM Port (page 6)

3A)



Cable Diagram 4

| Display<br>(Connection Port)  | Cable |  | Remarks                  |
|---|-------|--|--------------------------|
| GP3000* <sup>1</sup> (COM1)<br>AGP-3302B (COM2)<br>ST* <sup>2</sup> (COM2)<br>IPC* <sup>3</sup> | 4A    | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable | Cable length:<br>or less |
|   | 4B    | Your own cable   |                          |
| GP3000* <sup>4</sup> (COM2)   | 4C    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable              |                          |
|   | 4D    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Your own cable   |                          |
| GP4000* <sup>5</sup> (COM2)<br>GP-4201T (COM1)  | 4E    | RS-422 Terminal Block Conversion Adapter by Pro-face<br>PFXZCBADTM1* <sup>6</sup><br>+<br>Your own cable   |                          |
|   | 4B    | Your own cable   |                          |

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A and AST-3302B

\*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.  
 ■ IPC COM Port (page 6)

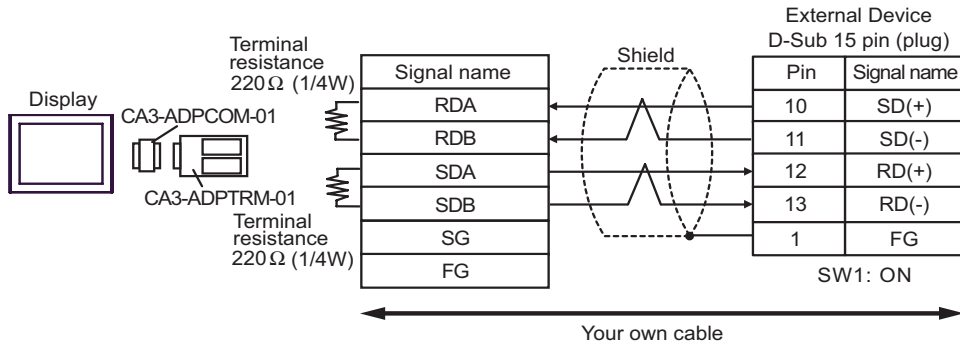
\*4 All GP models except GP-3200 series and AGP-3302B

\*5 All GP4000 models except GP-4100 Series, GP-4\*01TM, GP-4201T and GP-4\*03T

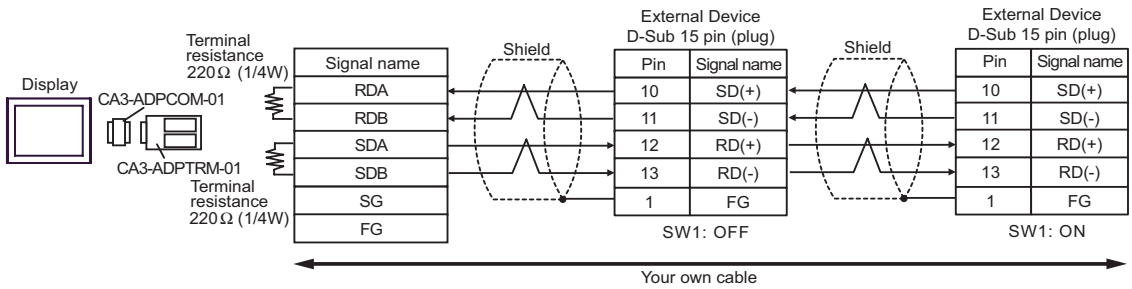
\*6 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 4A.

4A)

- 1:1 Connection



- 1:n Connection

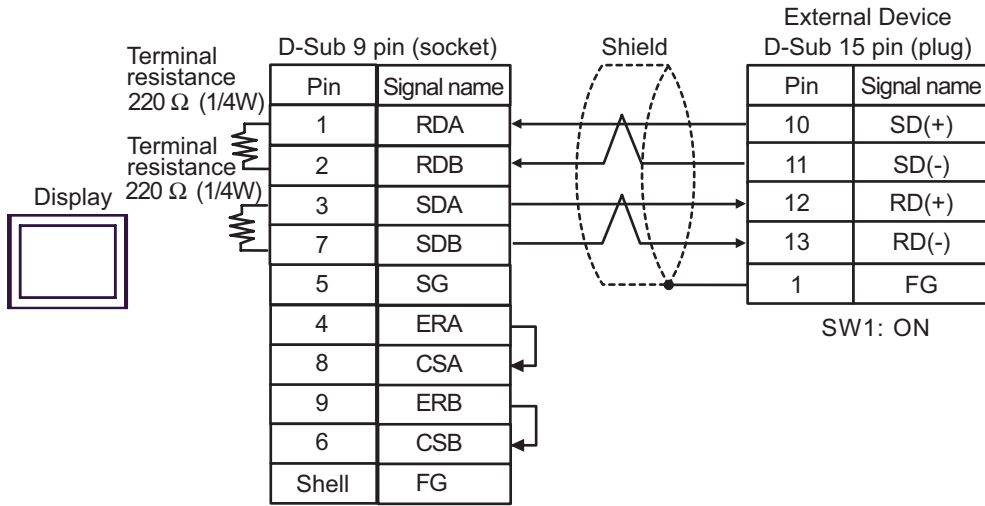


**NOTE**

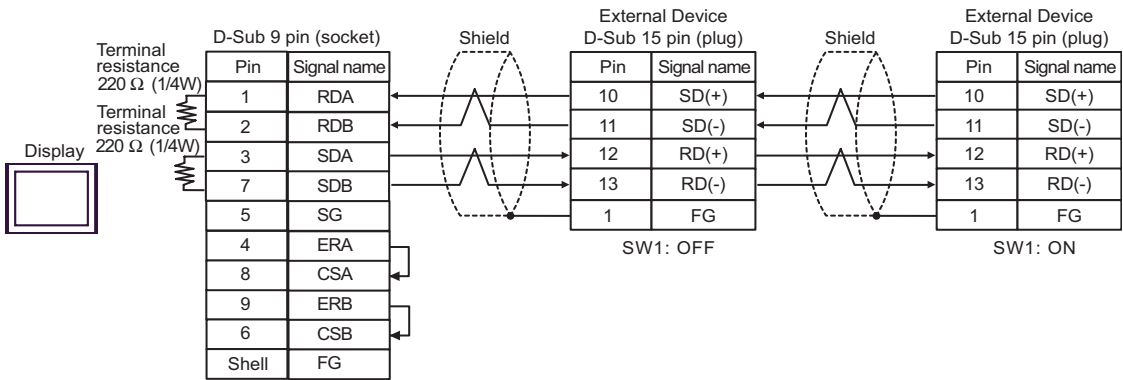
- When IPC is used as the Display, the terminal resistance of 220Ω can be inserted by the fact that the dip switch 5, 6 of IPC is turned to ON.

4B)

- 1:1 Connection



- 1:n Connection

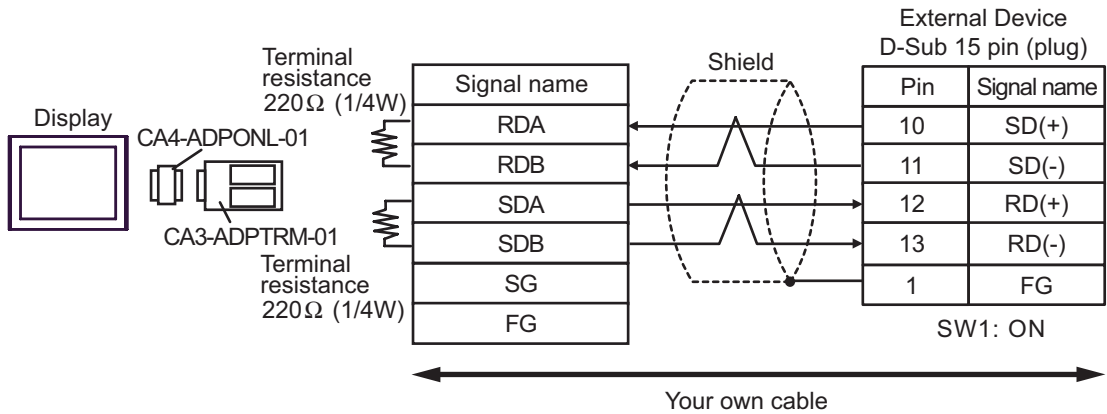


**NOTE**

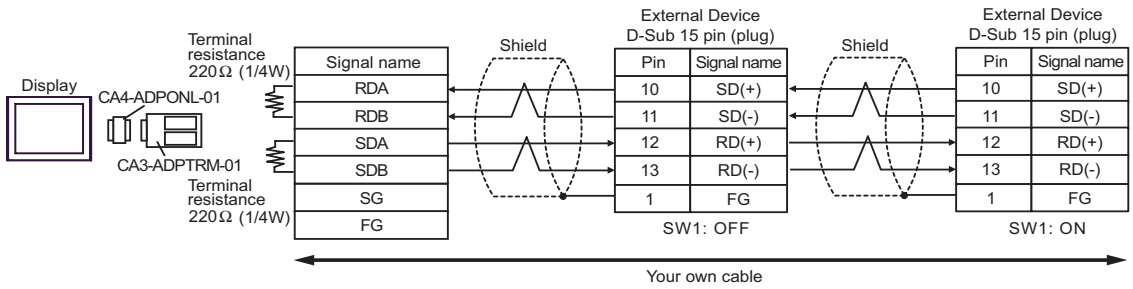
- When IPC is used as the Display, the terminal resistance of 220Ω can be inserted by the fact that the dip switch 5, 6 of IPC is turned to ON.

4C)

- 1:1 Connection

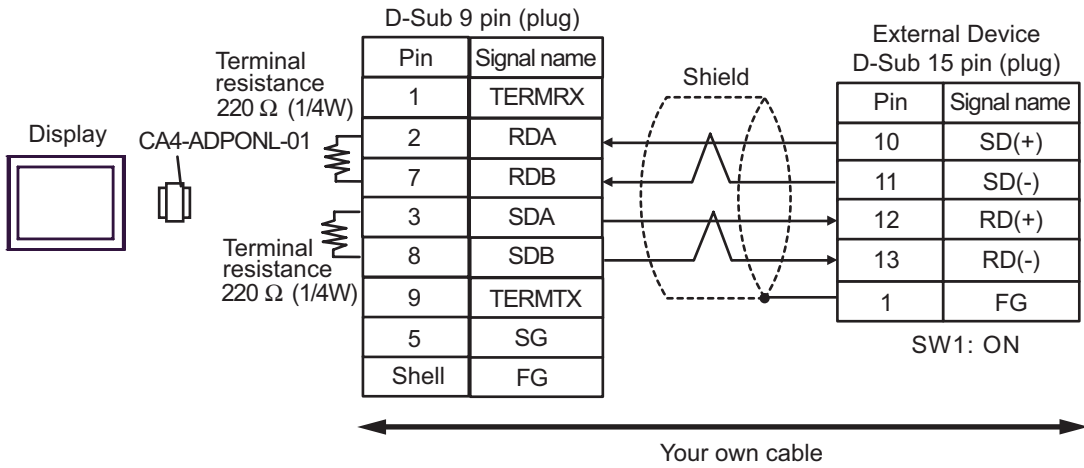


- 1:n connection

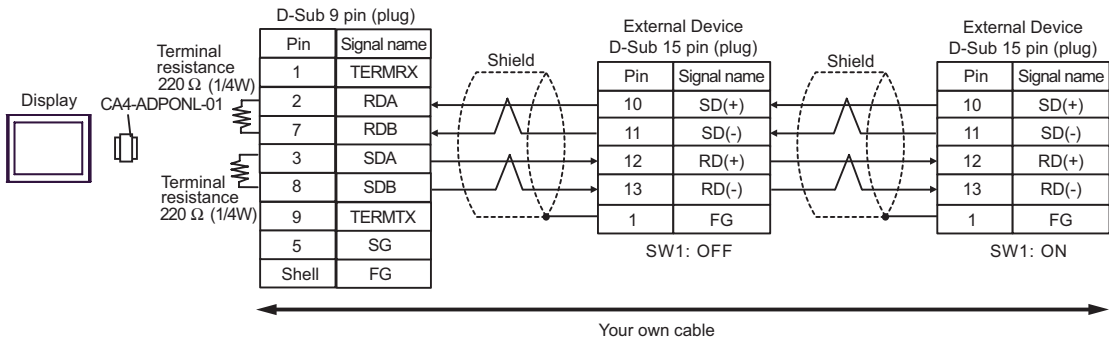


4D)

- 1:1 Connection



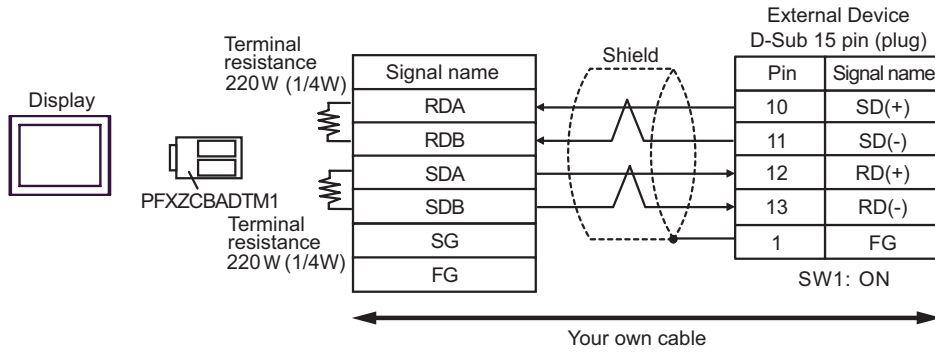
- 1:n Connection



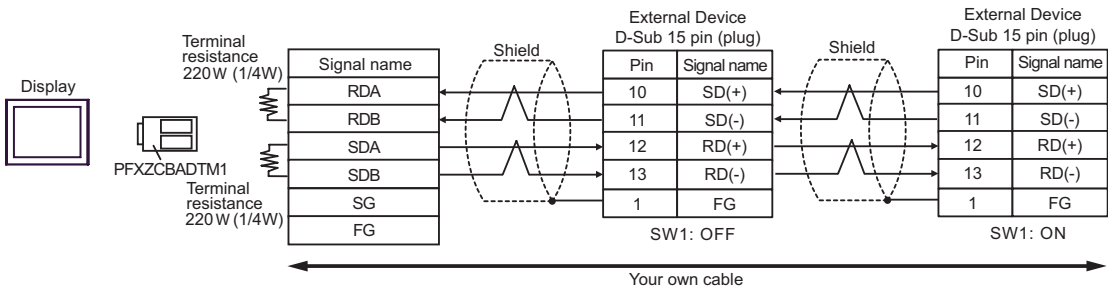


4E)

- 1:1 Connection



- 1:n Connection




Cable Diagram 5

| Display<br>(Connection Port)  | Cable |  | Remarks                        |
|---|-------|--|--------------------------------|
| GP3000* <sup>1</sup> (COM1)<br>AGP-3302B (COM2)<br>ST* <sup>2</sup> (COM2)<br>IPC* <sup>3</sup> | 5A    | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable | Cable length:<br>1000m or less |
|   | 5B    | Your own cable   |                                |
| GP3000* <sup>4</sup> (COM2)   | 5C    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable              |                                |
|   | 5D    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Your own cable   |                                |
| GP4000* <sup>5</sup> (COM2)<br>GP-4201T (COM1)  | 5E    | RS-422 Terminal Block Conversion Adapter by Pro-face<br>PFXZCBADTM1* <sup>6</sup><br>+<br>Your own cable   |                                |
|   | 5B    | Your own cable   |                                |

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A and AST-3302B

\*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.  
 ■ IPC COM Port (page 6)

\*4 All GP models except GP-3200 series and AGP-3302B

\*5 All GP4000 models except GP-4100 Series, GP-4\*01TM, GP-4201T and GP-4\*03T

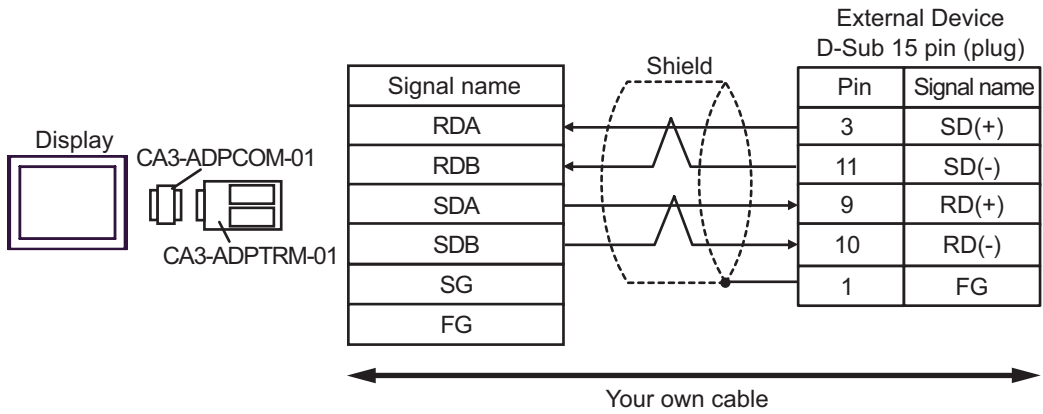
\*6 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 5A.

**NOTE**

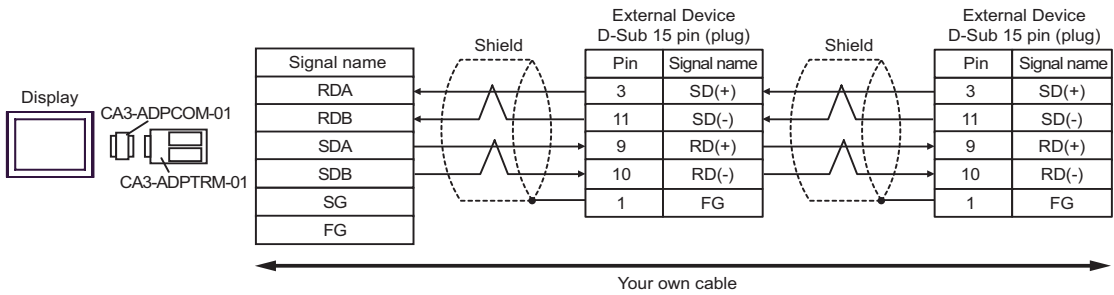
- Do not connect anything to Pins No. 2, 4, 8 and 12 on the External Device.
- Do not connect to Pins No. 14 and 15 on the External Device since voltage is +5V.

5A)

- 1:1 Connection

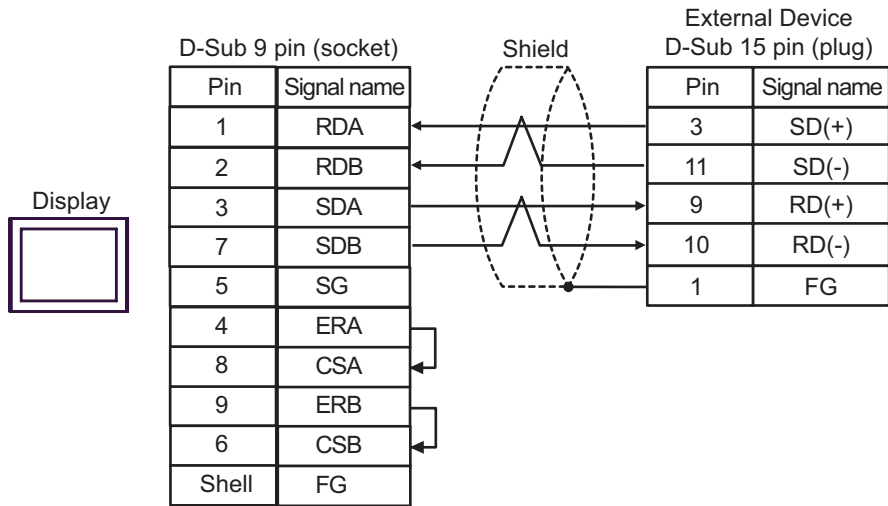


- 1:n Connection

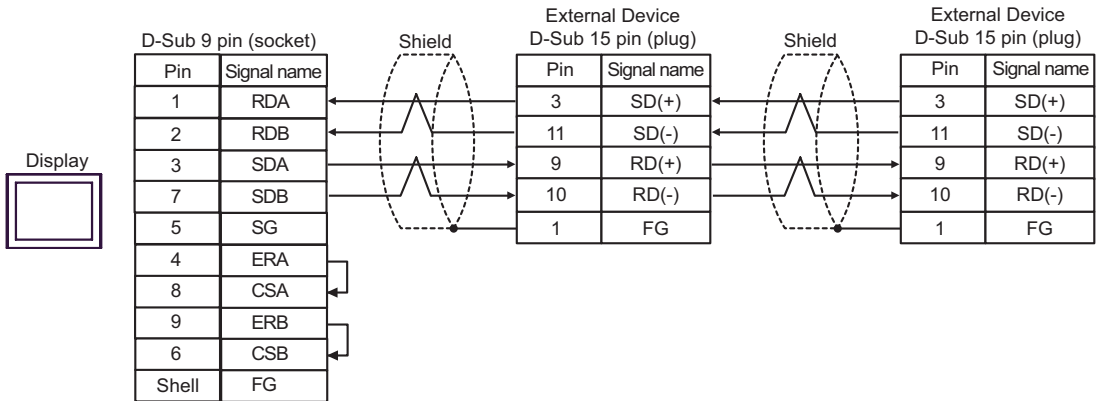


5B)

- 1:1 Connection

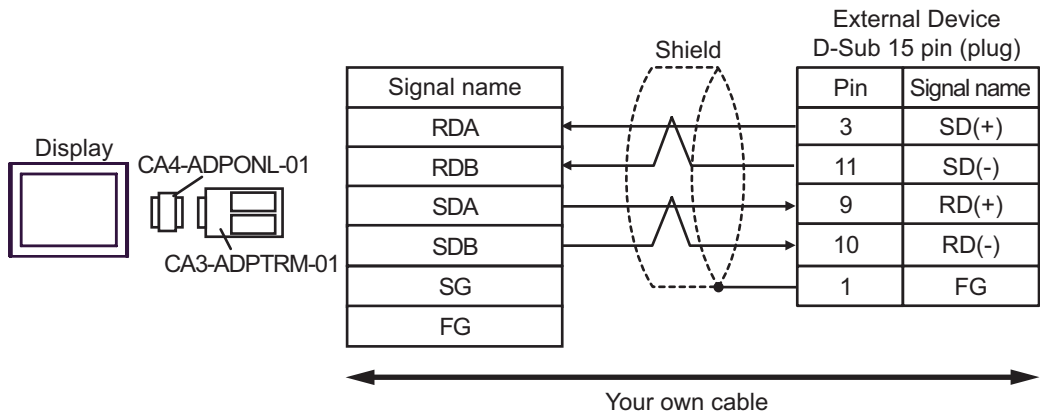


- 1:n Connection

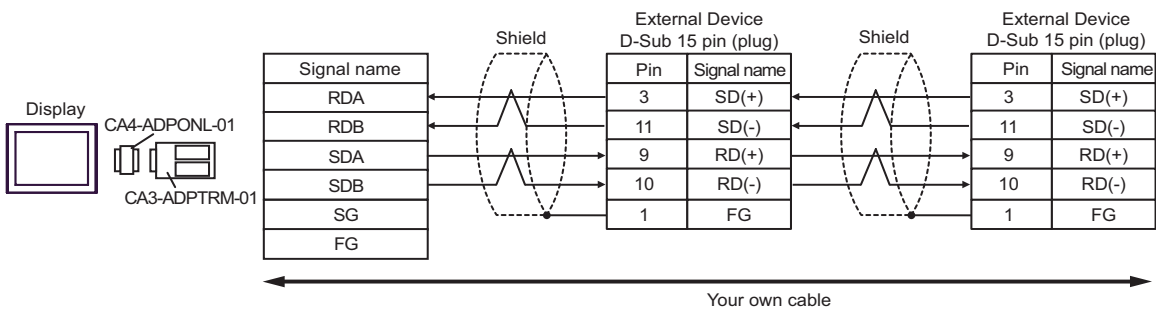


5C)

- 1:1 Connection

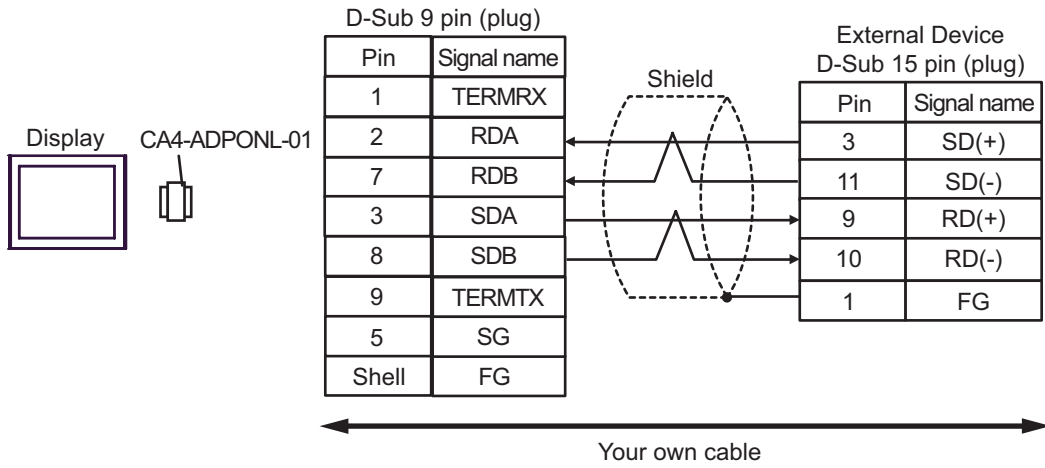


- 1:n Connection

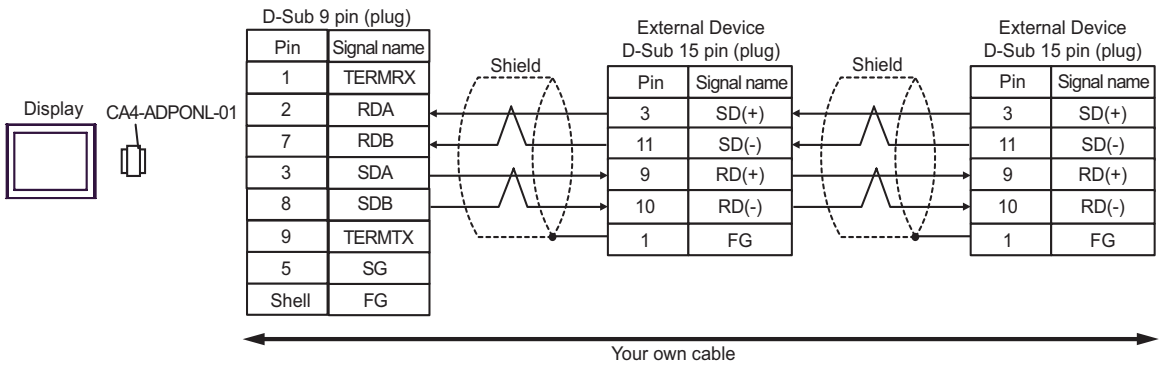


5D)

- 1:1 Connection

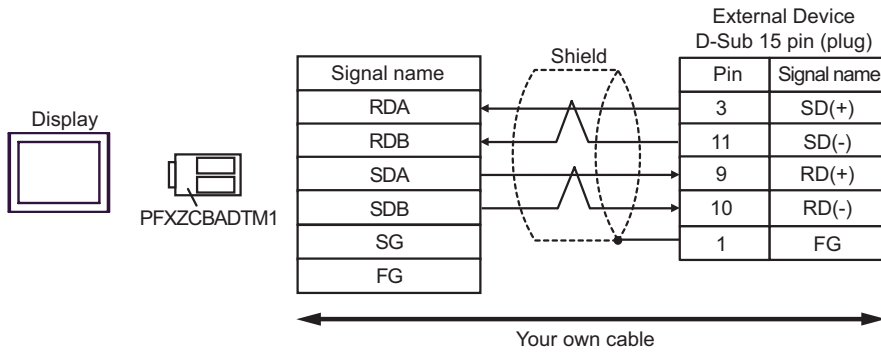


- 1:n Connection

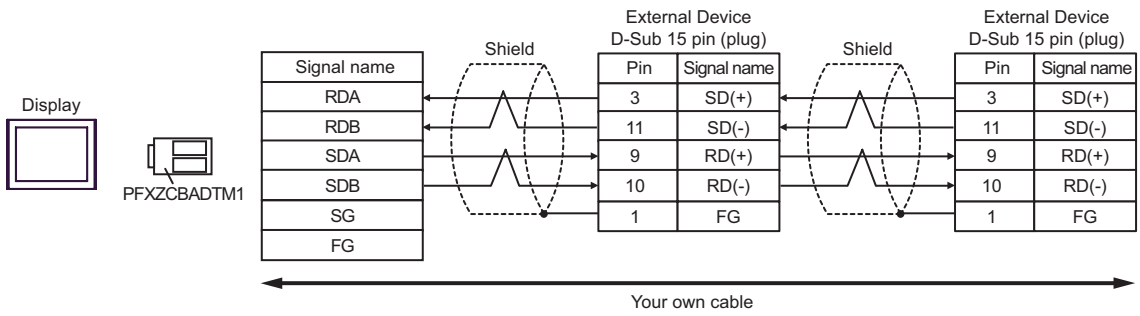


5E)

- 1:1 Connection



- 1:n Connection




Cable Diagram 6

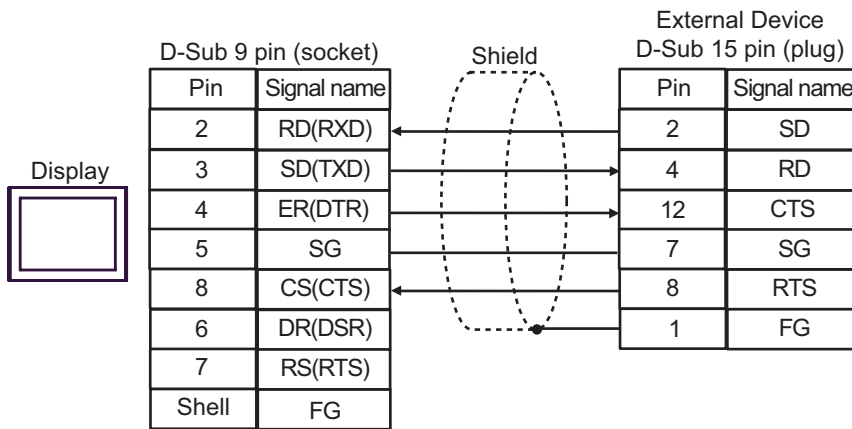
| Display<br>(Connection Port)  | Cable |                | Remarks                      |
|---|-------|----------------|------------------------------|
| GP3000 (COM1)<br>GP4000* <sup>1</sup> (COM1)<br>ST (COM1)<br>IPC* <sup>2</sup><br>PC/AT | 6A    | Your own cable | Cable length:<br>15m or less |

\*1 All GP4000 models except GP-4100 Series, GP4\*01TM and GP-4203T

\*2 Only the COM port which can communicate by RS-232C can be used.

 ■ IPC COM Port (page 6)

6A)






Cable Diagram 7

| Display<br>(Connection Port)  | Cable |  | Remarks                        |
|---|-------|--|--------------------------------|
| GP3000* <sup>1</sup> (COM1)<br>AGP-3302B (COM2)<br>ST* <sup>2</sup> (COM2)<br>IPC* <sup>3</sup> | 7A    | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable | Cable length:<br>1000m or less |
|   | 7B    | Your own cable   |                                |
| GP3000* <sup>4</sup> (COM2)   | 7C    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable              |                                |
|   | 7D    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Your own cable   |                                |
| GP4000* <sup>5</sup> (COM2)<br>GP-420IT (COM1)  | 7E    | RS-422 Terminal Block Conversion Adapter by Pro-face<br>PFXZCBADTM1* <sup>6</sup><br>+<br>Your own cable   |                                |
|   | 7B    | Your own cable   |                                |

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A and AST-3302B

\*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.  
 ■ IPC COM Port (page 6)

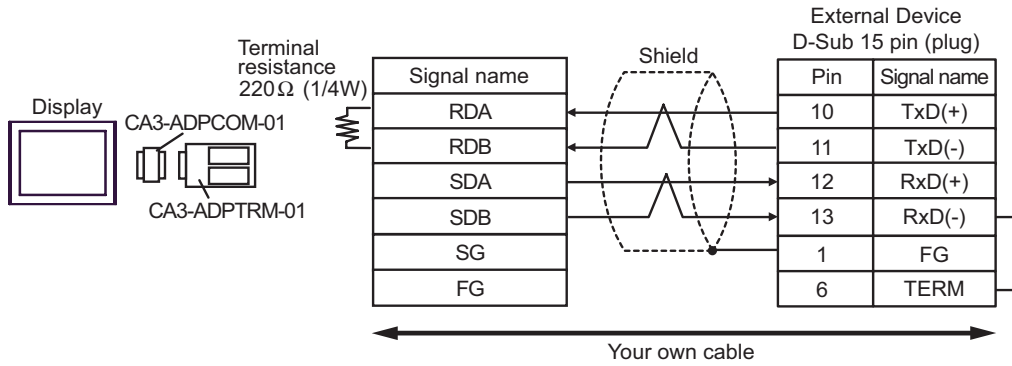
\*4 All GP models except GP-3200 series and AGP-3302B

\*5 All GP4000 models except GP-4100 Series, GP-4\*01TM, GP-420IT and GP-4\*03T

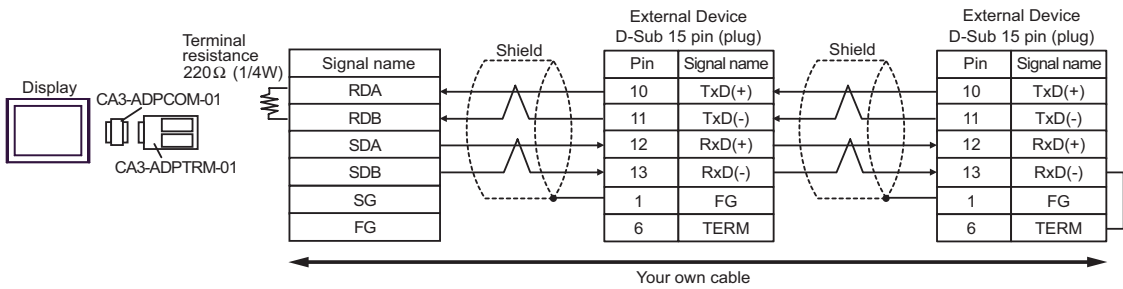
\*6 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 7A.

7A)

- 1:1 Connection



- 1:n Connection

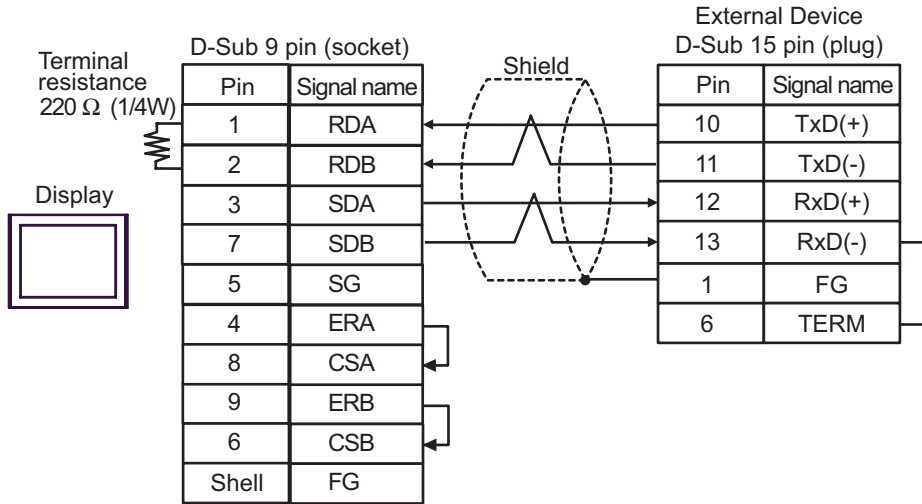


**NOTE**

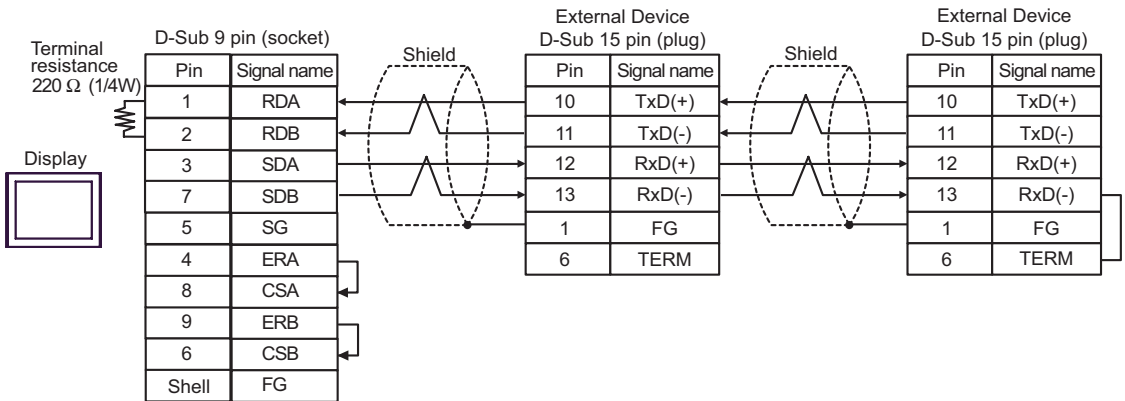
- When IPC is used as the Display, the terminal resistance of 220Ω can be inserted by the fact that the dip switch 6 of IPC is turned to ON.

7B)

- 1:1 Connection



- 1:n Connection

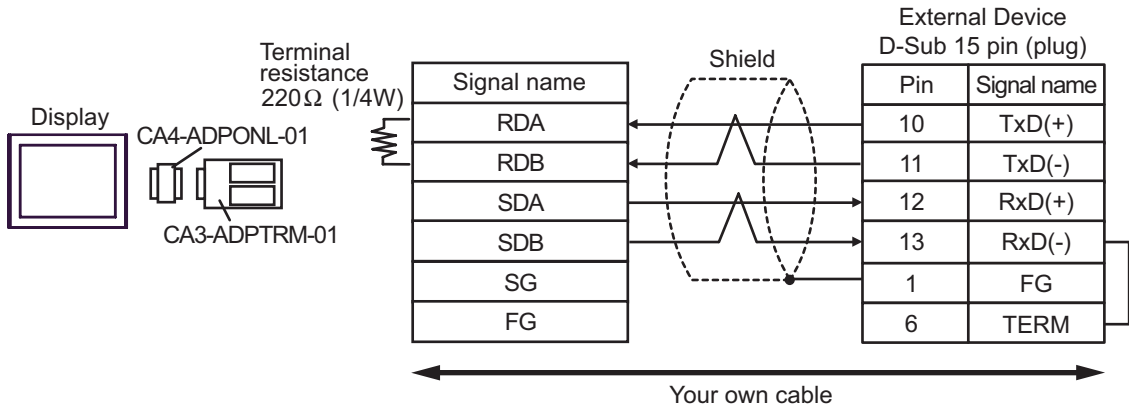


**NOTE**

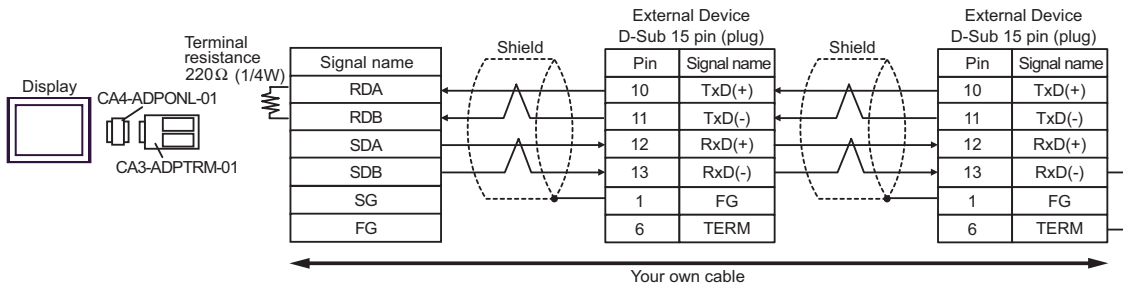
- When IPC is used as the Display, the terminal resistance of 220Ω can be inserted by the fact that the dip switch 6 of IPC is turned to ON.

7C)

- 1:1 Connection

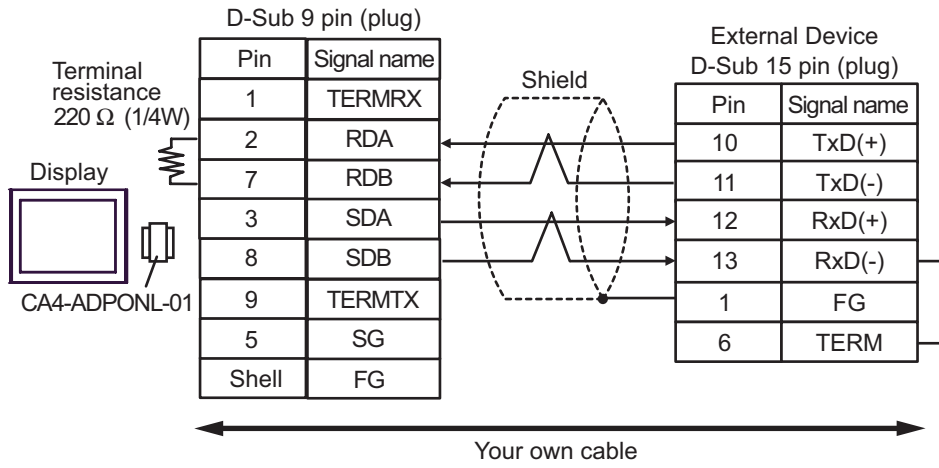


- 1:n Connection

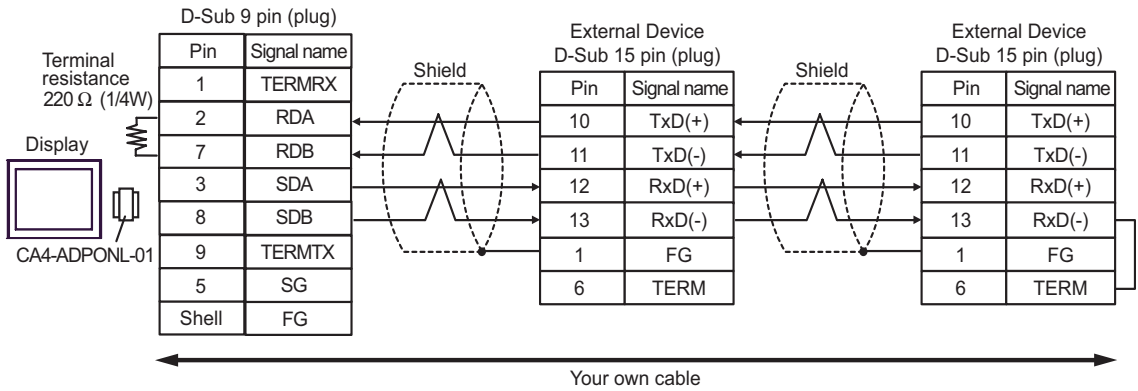


7D)

- 1:1 Connection

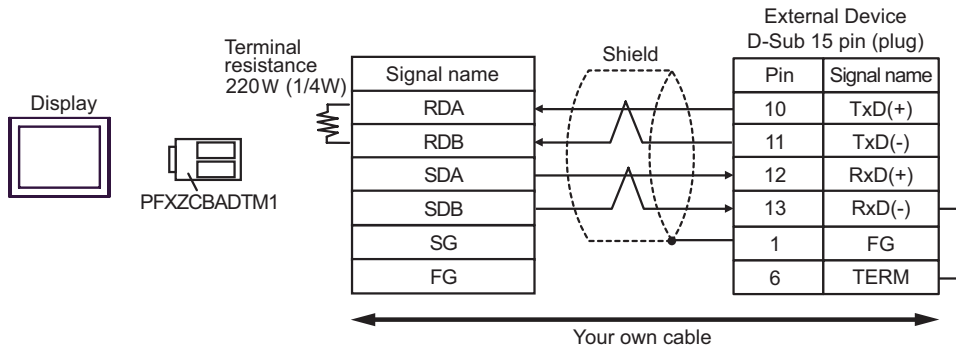


- 1:n Connection

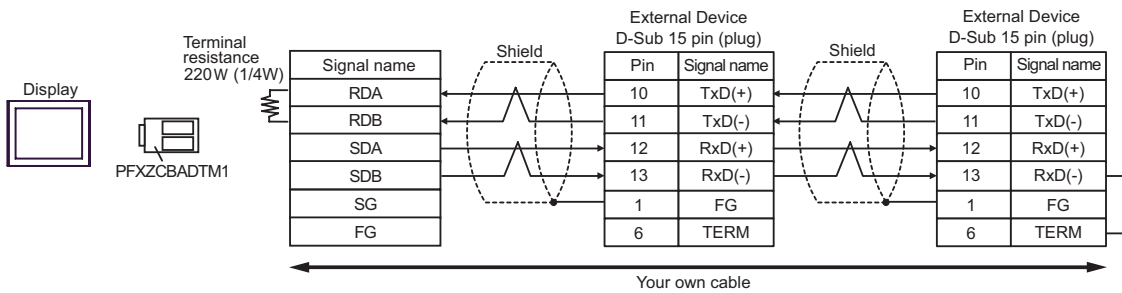


7E)

- 1:1 Connection



- 1:n Connection




Cable Diagram 8

| Display<br>(Connection Port)   | Cable |  | Remarks                        |
|--|-------|--|--------------------------------|
| GP3000* <sup>1</sup> (COM1)<br>AGP-3302B (COM2)<br>ST* <sup>2</sup> (COM2) | 8A    | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable | Cable length:<br>1000m or less |
|  | 8B    | Your own cable   |                                |
| GP3000* <sup>3</sup> (COM2)  | 8C    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable              |                                |
|  | 8D    | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Your own cable   |                                |
| IPC* <sup>4</sup>  | 8E    | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable |                                |
|  | 8F    | Your own cable   |                                |
| GP-4*03T* <sup>5</sup> (COM2)<br>GP-4203T (COM1)                           | 8G    | Your own cable   |                                |
| GP4000* <sup>6</sup> (COM2)<br>GP-4201T (COM1)                             | 8H    | RS-422 Terminal Block Conversion Adapter by Pro-face<br>PFZCBADTM1* <sup>7</sup><br>+<br>Your own cable  |                                |
|  | 8B    | Your own cable   |                                |

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A and AST-3302B

\*3 All GP models except GP-3200 series and AGP-3302B

\*4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used.  
 ■ IPC COM Port (page 6)

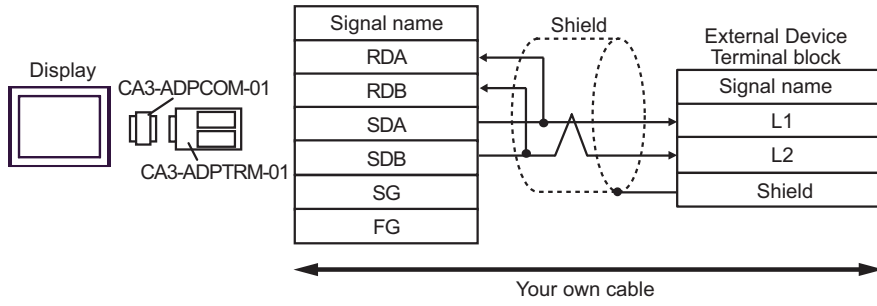
\*5 Except GP-4203T

\*6 All GP4000 models except GP-4100 Series, GP-4\*01TM, GP-4201T and GP-4\*03T

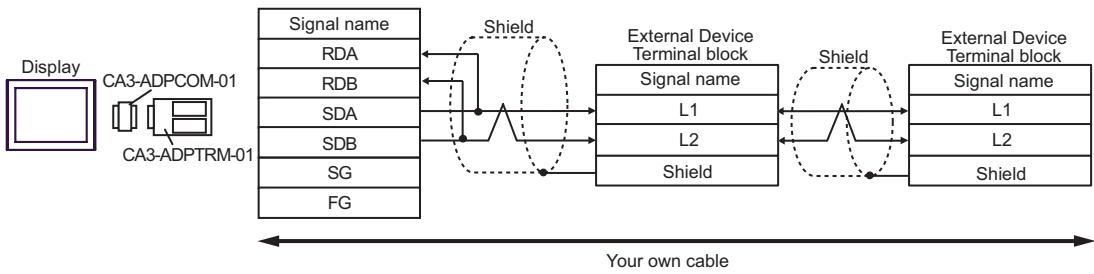
\*7 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 8A.

8A)

- 1:1 Connection



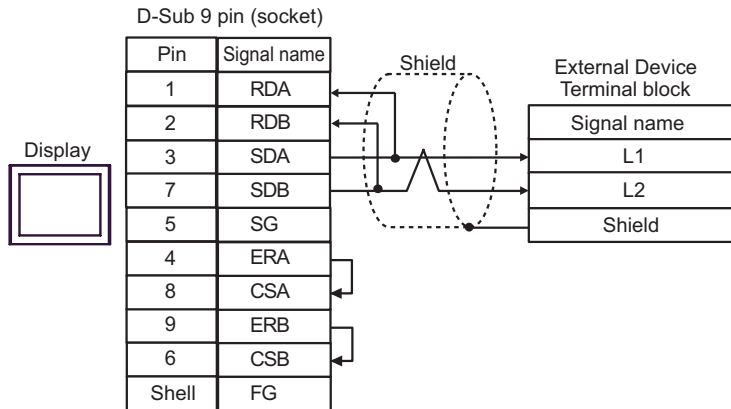
- 1:n Connection



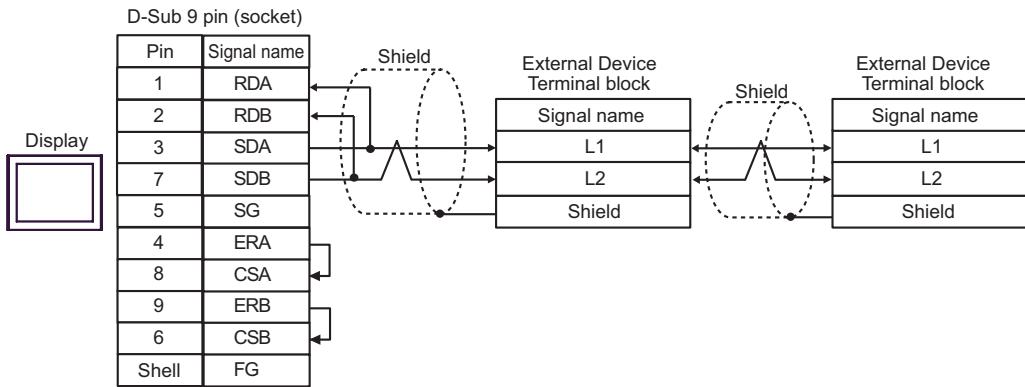


8B)

- 1:1 Connection

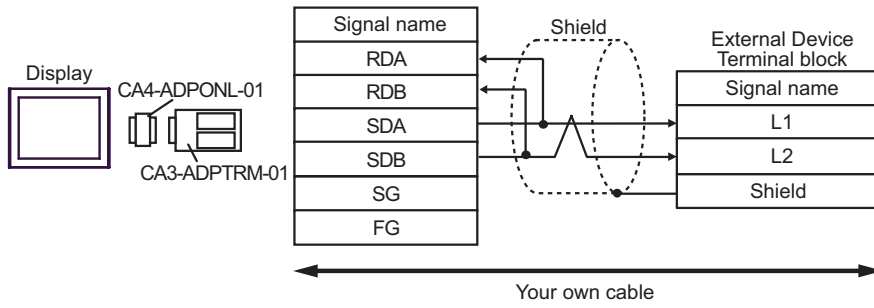


- 1:n Connection

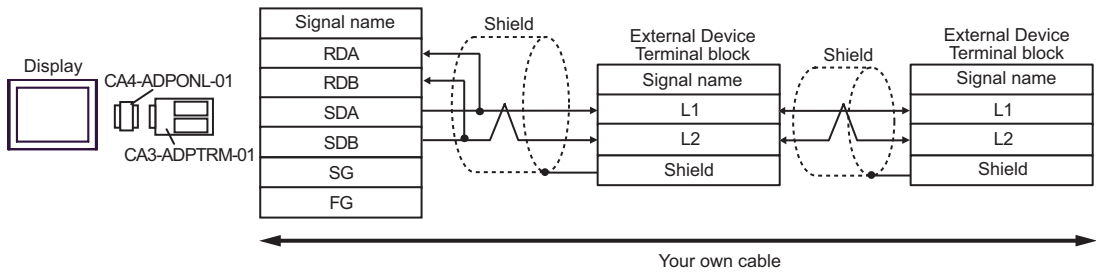


8C)

- 1:1 Connection

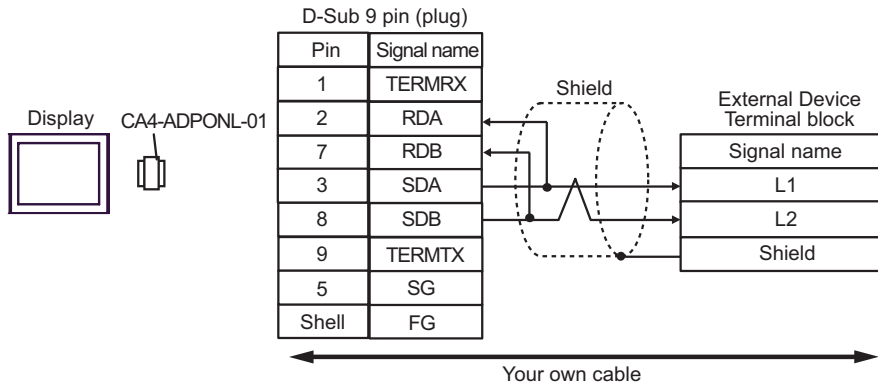


- 1:n Connection

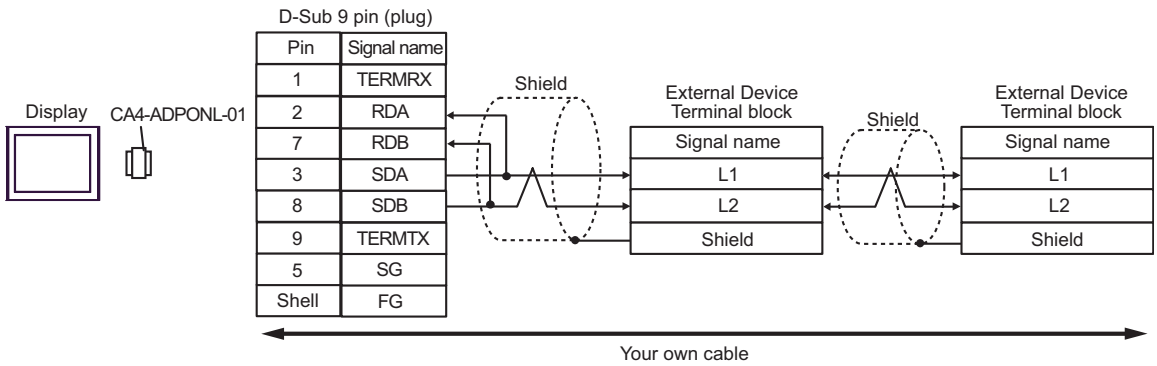


8D)

- 1:1 Connection

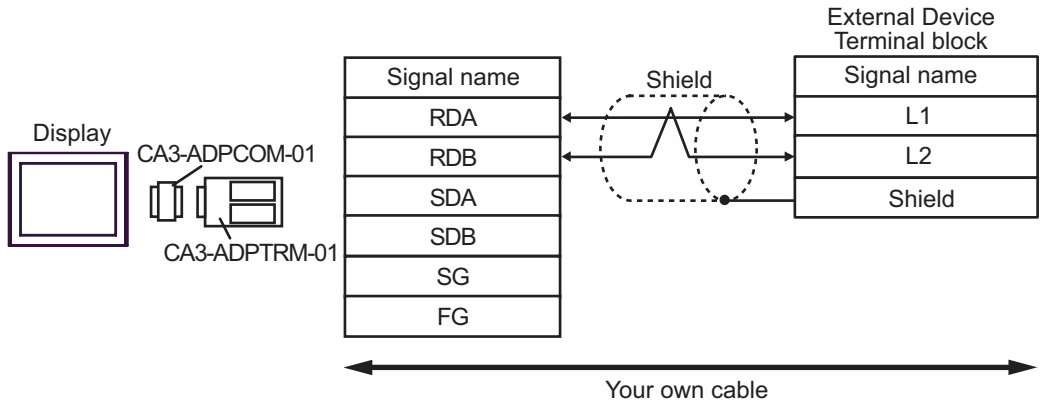


- 1:n Connection

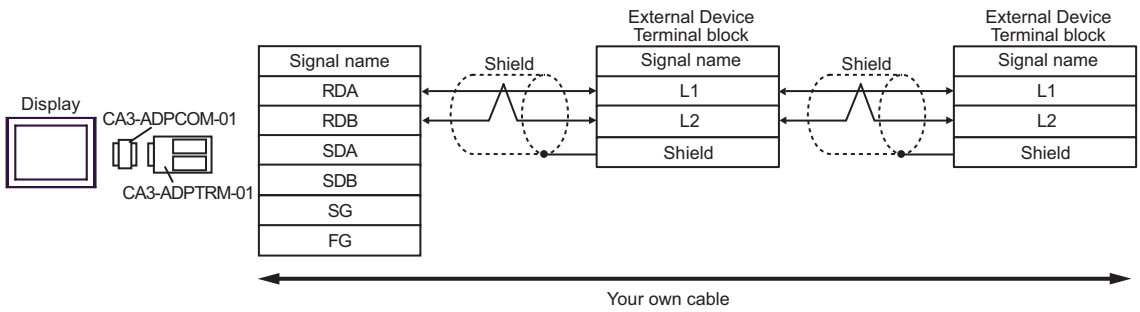


8E)

- 1:1 Connection

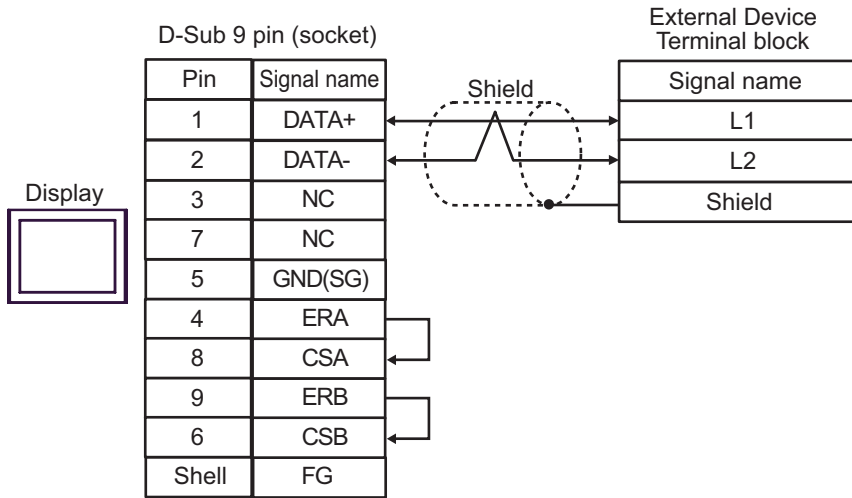


- 1:n Connection

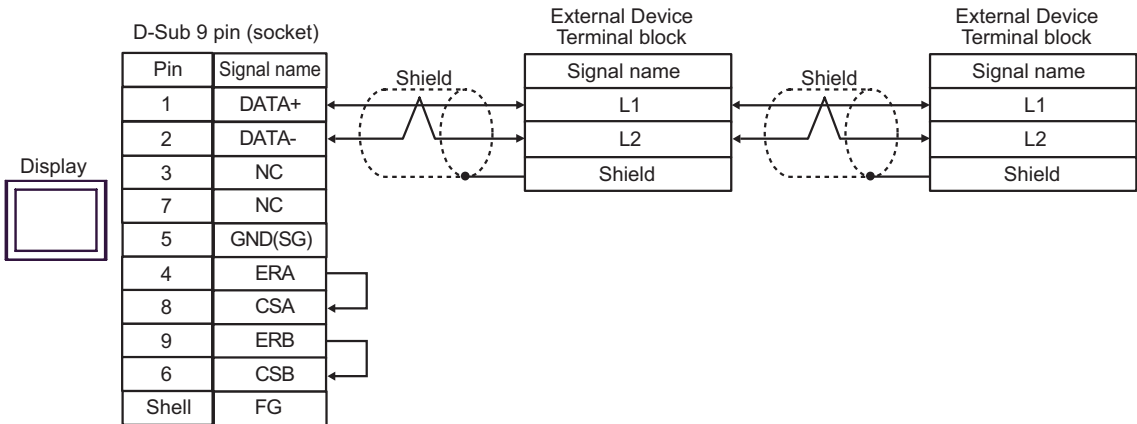


8F)

- 1:1 Connection

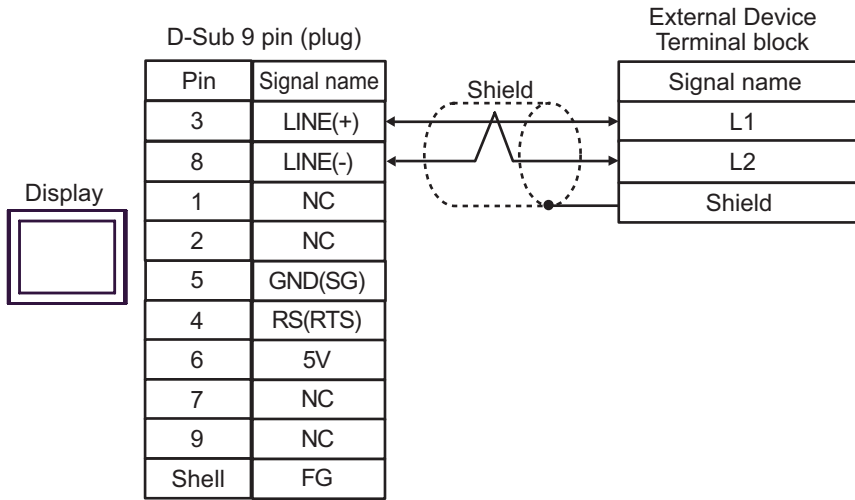


- 1:n Connection

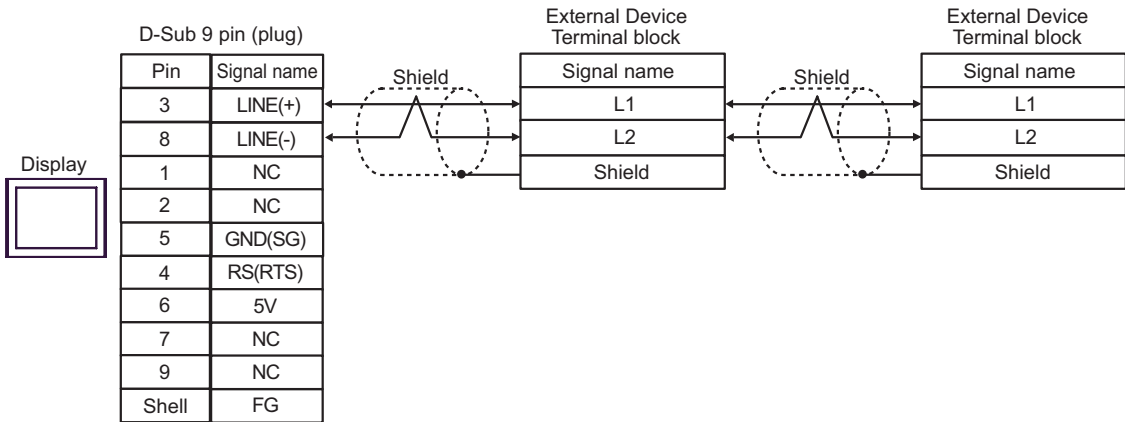


8G)

- 1:1 Connection



- 1:n Connection

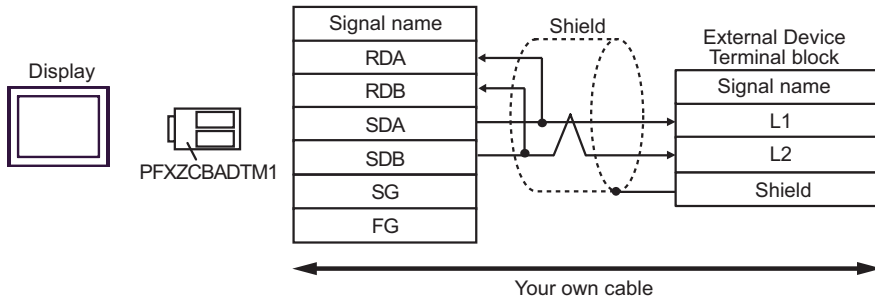


**IMPORTANT**

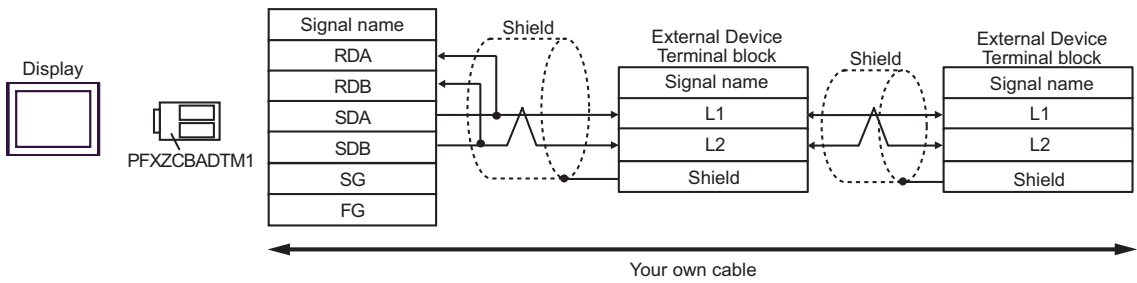
- The 5V output (Pin #6) on the Display is the power for the Siemens AG's PROFIBUS connector. Do not use it for other devices.

8H)

- 1:1 Connection



- 1:n Connection



Cable Diagram 9

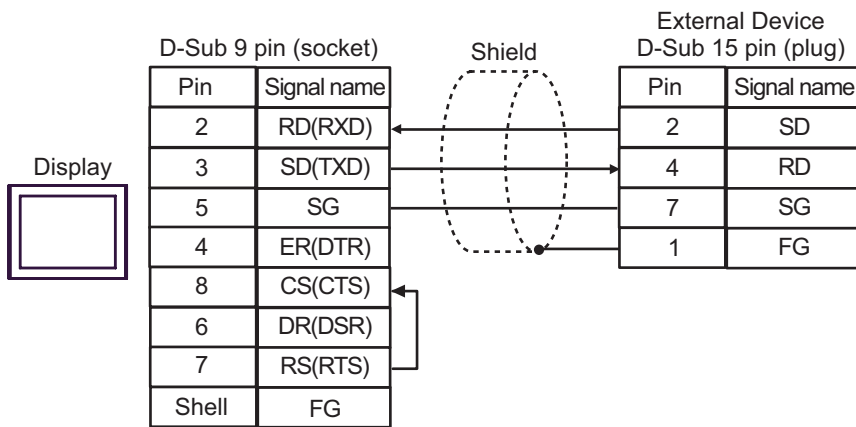
| Display<br>(Connection Port)  | Cable |                | Remarks                      |
|---|-------|----------------|------------------------------|
| GP3000 (COM1)<br>GP4000* <sup>1</sup> (COM1)<br>ST (COM1)<br>IPC* <sup>2</sup><br>PC/AT | 9A    | Your own cable | Cable length:<br>15m or less |

\*1 All GP4000 models except GP-4100 Series, GP4\*01TM and GP-4203T

\*2 Only the COM port which can communicate by RS-232C can be used.

☞ ■ IPC COM Port (page 6)

9A)





## 6 Supported Device

Range of supported device address is shown in the table below. Available type and range of device vary depending on CPU. Be sure to check them in each CPU manual before using.

### ■JW-10/20H/30H/50H/70H/100H Series

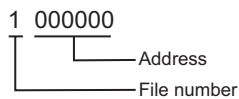
     This address can be specified as system data area.

| Device                                      | Bit Address   | Word Address                 | 32 bits | Remarks  |   |
|---|---------------|------------------------------|---------|--|---|
| Relay* <sup>1</sup>                         | 0000.0-1577.7 | A0000-A1576<br>(J0000-J1576) | L/H     | <div style="border: 1px solid black; padding: 2px; display: inline-block;">÷ 2</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 10px;">OCT 8</div> |   |
|   | 2000.0-7577.7 | A2000-A7576<br>(J2000-J7576) |         |  |   |
| Timer (Contact)                             | T0000-T1777   | -                            |         | <div style="border: 1px solid black; padding: 2px; display: inline-block;">OCT 8</div>   |   |
| Counter (Contact)                           | C0000-C1777   | -                            |         | <div style="border: 1px solid black; padding: 2px; display: inline-block;">OCT 8</div>   |   |
| Timer Counter (current value)* <sup>1</sup> | -             | B0000-B3776<br>(b0000-b3776) |         | <div style="border: 1px solid black; padding: 2px; display: inline-block;">÷ 2</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 10px;">OCT 8</div> |   |
|   |               | T0000-T3776                  |         | <div style="border: 1px solid black; padding: 2px; display: inline-block;">BIT 15</div>  |   |
| Register                                    | -             | 09000-09776                  |         | L/H  | <div style="border: 1px solid black; padding: 2px; display: inline-block;">÷ 2</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 10px;">OCT 8</div><br><div style="border: 1px solid black; padding: 2px; display: inline-block;">BIT 15</div> |
|   | -             | 19000-19776                  |         |  |   |
|   | -             | 29000-29776                  |         |  |   |
|   | -             | 39000-39776                  |         |  |   |
|   | -             | 49000-49776                  |         |  |   |
|   | -             | 59000-59776                  |         |  |   |
|   | -             | 69000-69776                  |         |  |   |
|   | -             | 79000-79776                  |         |  |   |
|   | -             | 89000-89776                  |         |  |   |
|   | -             | 99000-99776                  |         |  |   |
|   | -             | E0000-E0776                  |         |  |   |
|   | -             | E1000-E1776                  |         |  |   |
|   | -             | E2000-E2776                  |         |  |   |
|   | -             | E3000-E3776                  |         |  |   |
|   | -             | E4000-E4776                  |         |  |   |
|   | -             | E5000-E5776                  |         |  |   |
| -   | E6000-E6776   |                              |         |  |   |
| -   | E7000-E7776   |                              |         |  |   |

| Device          | Bit Address | Word Address        | 32 bits  | Remarks  |
|-----------------|-------------|---------------------|--|--|
| File Register*2 | -           | 1000000-1177776     | <div style="border: 1px solid black; padding: 2px; display: inline-block;">L/H</div> | <div style="border: 1px solid black; padding: 2px; display: inline-block;">+ 2</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 10px;">OCT 8</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-top: 10px;">Bit 15</div> |
|                 | -           | 2000000-2177776     |  |  |
|                 | .....       | .....               |  |  |
|                 | -           | 6000000-6177776     |  |  |
|                 | -           | 7000000-7177776     |  |  |
|                 | -           | F1000000-F10177776  |  |  |
|                 | -           | F11000000-F11177776 |  |  |
|                 | .....       | .....               |  |  |
|                 | -           | F1E000000-F1E177776 |  |  |
|                 | -           | F1F000000-F1F177776 |  |  |
|                 | -           | F20000000-F20177776 |  |  |
|                 | -           | F21000000-F21177776 |  |  |
|                 | .....       | .....               |  |  |
|                 | -           | F2B000000-F2B177776 |  |  |
|                 | -           | F2C000000-F2C177776 |  |  |

\*1 Values in parentheses are used for the word address of the relay and the timer counter (current value) (B) in the manual of the External Device. For entry, use AXXXX or BXXXX.

\*2 File Register consists of the file number and the address.



**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.  
☞ "Manual Symbols and Terminology"

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     This address can be specified as system data area.

| Device   | Bit Address     | Word Address                     | 32 bits  | Remarks  |
|--|-----------------|----------------------------------|--|--|
| Relay  | 00000.0-54377.7 | A00000-A54376<br>(J00000-J54376) | L/H  | <span style="border: 1px solid black; padding: 2px;">÷ 2</span>  |
| Timer (Contact)                                  | T00000-T17777   | -                                |  | <span style="border: 1px solid black; padding: 2px;">OCT 8</span>  |
| Counter (Contact)                                | C00000-C17777   | -                                |  | <span style="border: 1px solid black; padding: 2px;">OCT 8</span>  |
| Timer Counter (current value)*1                  | -               | B00000-B37776                    |  | <span style="border: 1px solid black; padding: 2px;">÷ 2</span> <span style="border: 1px solid black; padding: 2px;">Bit 15</span> |
|  |                 | TC00000-TC17777                  |  |  |
| Register(09, 19, 29, 39, 49, 59, 69, 79, 89, 99) | -               | 09000-09776                      |  | <span style="border: 1px solid black; padding: 2px;">÷ 2</span> <span style="border: 1px solid black; padding: 2px;">Bit 15</span> |
|  | -               | 19000-19776                      |  |  |
|  | .....           | .....                            |  |  |
|  | -               | 89000-89776                      |  |  |
|  | -               | 99000-99776                      |  |  |
| Register(E0, E1, E2, E3, E4, E5, E6, E7)         | -               | E0000-E0776                      |  | <span style="border: 1px solid black; padding: 2px;">÷ 2</span> <span style="border: 1px solid black; padding: 2px;">Bit 15</span> |
|  | -               | E1000-E1776                      |  |  |
|  | .....           | .....                            |  |  |
|  | -               | E6000-E6776                      |  |  |
|  | -               | E7000-E7776                      |  |  |
| Register(109-389)                                | -               | 109000-109776                    | <span style="border: 1px solid black; padding: 2px;">÷ 2</span> <span style="border: 1px solid black; padding: 2px;">Bit 15</span> |  |
|  | -               | 119000-119776                    |  |  |
|  | .....           | .....                            |  |  |
|  | -               | 379000-379776                    |  |  |
|  | -               | 389000-389776                    |  |  |
| Register Z                                       | -               | Z000-Z377                        | <span style="border: 1px solid black; padding: 2px;">Bit 15</span>   |  |
| File Register                                    | -               | 1-00000000 - 1-37777776          | <span style="border: 1px solid black; padding: 2px;">÷ 2</span> <span style="border: 1px solid black; padding: 2px;">Bit 15</span> |  |
| System Memory*1                                  | -               | SYS0000-SYS2776                  | <span style="border: 1px solid black; padding: 2px;">÷ 2</span> *2   |  |

\*1 The name of system memory is "#" in the External Device. To use "#" as an internal register in the Display, it can not use. Therefore, it changes "#" to "SYS".

\*2 Write disable

**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.
- Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- 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 Type & Address" for the address type in data displays.

### ■ JW-10/20H/30H/50H/70H/100H Series

| Device                  | Device Name | Device Code (HEX)                  | Address Code                       |
|-------------------------|-------------|------------------------------------|------------------------------------|
| Relay                   | A           | 0080                               | Value of word address divided by 2 |
| Counter (Current Value) | T           | 0060                               | Value of word address divided by 2 |
|                         | B           | 0061                               | Value of word address divided by 2 |
| Register                | 09          | 0000                               | Value of word address divided by 2 |
|                         | 19          | 0001                               | Value of word address divided by 2 |
|                         | 29          | 0002                               | Value of word address divided by 2 |
|                         | 39          | 0003                               | Value of word address divided by 2 |
|                         | 49          | 0004                               | Value of word address divided by 2 |
|                         | 59          | 0005                               | Value of word address divided by 2 |
|                         | 69          | 0006                               | Value of word address divided by 2 |
|                         | 79          | 0007                               | Value of word address divided by 2 |
|                         | 89          | 0008                               | Value of word address divided by 2 |
|                         | 99          | 0009                               | Value of word address divided by 2 |
|                         | E0          | 000A                               | Value of word address divided by 2 |
|                         | E1          | 000B                               | Value of word address divided by 2 |
|                         | E2          | 000C                               | Value of word address divided by 2 |
|                         | E3          | 000D                               | Value of word address divided by 2 |
|                         | E4          | 000E                               | Value of word address divided by 2 |
| E5                      | 000F        | Value of word address divided by 2 |                                    |
| E6                      | 0010        | Value of word address divided by 2 |                                    |
| E7                      | 0011        | Value of word address divided by 2 |                                    |

| Device        | Device Name | Device Code (HEX) | Address Code                       |
|---------------|-------------|-------------------|------------------------------------|
| File Register | 1           | 0012              | Value of word address divided by 2 |
|               | 2           | 0013              | Value of word address divided by 2 |
|               | .....       | .....             | .....                              |
|               | 6           | 0017              | Value of word address divided by 2 |
|               | 7           | 0018              | Value of word address divided by 2 |
|               | F10         | 0019              | Value of word address divided by 2 |
|               | F11         | 001A              | Value of word address divided by 2 |
|               | .....       | .....             | .....                              |
|               | F1E         | 0027              | Value of word address divided by 2 |
|               | F1F         | 0028              | Value of word address divided by 2 |
|               | F20         | 0029              | Value of word address divided by 2 |
|               | F21         | 002A              | Value of word address divided by 2 |
|               | .....       | .....             | .....                              |
|               | F2B         | 0034              | Value of word address divided by 2 |
|               | F2C         | 0035              | Value of word address divided by 2 |

## ■JW-300 Series

| Device  | Device Name | Device Code (HEX) | Address Code                       |
|---|-------------|-------------------|------------------------------------|
| Relay   | A           | 0080              | Value of word address divided by 2 |
| Timer/Counter (Current Value)                 | B           | 0061              | Value of word address divided by 2 |
|   | TC          | 0060              | Word Address                       |
| Register (09, 19, 29, 39, 59, 69, 79, 89, 99) | 09          | 0000              | Value of word address divided by 2 |
|   | 19          | 0001              | Value of word address divided by 2 |
|   | 29          | 0002              | Value of word address divided by 2 |
|   | 39          | 0003              | Value of word address divided by 2 |
|   | 49          | 0004              | Value of word address divided by 2 |
|   | 59          | 0005              | Value of word address divided by 2 |
|   | 69          | 0006              | Value of word address divided by 2 |
|   | 79          | 0007              | Value of word address divided by 2 |
|   | 89          | 0008              | Value of word address divided by 2 |
|   | 99          | 0009              | Value of word address divided by 2 |
| Register (E0, E1, E2, E3, E4, E5, E6, E7)     | E0          | 000A              | Value of word address divided by 2 |
|   | E1          | 000B              | Value of word address divided by 2 |
|   | E2          | 000C              | Value of word address divided by 2 |
|   | E3          | 000D              | Value of word address divided by 2 |
|   | E4          | 000E              | Value of word address divided by 2 |
|   | E5          | 000F              | Value of word address divided by 2 |
|   | E6          | 0010              | Value of word address divided by 2 |
|   | E7          | 0011              | Value of word address divided by 2 |

| Device                | Device Name | Device Code (HEX)                  | Address Code                       |
|-----------------------|-------------|------------------------------------|------------------------------------|
| Register (109 to 389) | 109         | 0040                               | Value of word address divided by 2 |
|                       | 119         | 0041                               | Value of word address divided by 2 |
|                       | 129         | 0042                               | Value of word address divided by 2 |
|                       | 139         | 0043                               | Value of word address divided by 2 |
|                       | 149         | 0044                               | Value of word address divided by 2 |
|                       | 159         | 0045                               | Value of word address divided by 2 |
|                       | 169         | 0046                               | Value of word address divided by 2 |
|                       | 179         | 0047                               | Value of word address divided by 2 |
|                       | 189         | 0048                               | Value of word address divided by 2 |
|                       | 199         | 0049                               | Value of word address divided by 2 |
|                       | 209         | 004A                               | Value of word address divided by 2 |
|                       | 219         | 004B                               | Value of word address divided by 2 |
|                       | 229         | 004C                               | Value of word address divided by 2 |
|                       | 239         | 004D                               | Value of word address divided by 2 |
|                       | 249         | 004E                               | Value of word address divided by 2 |
|                       | 259         | 004F                               | Value of word address divided by 2 |
|                       | 269         | 0050                               | Value of word address divided by 2 |
|                       | 279         | 0051                               | Value of word address divided by 2 |
|                       | 289         | 0052                               | Value of word address divided by 2 |
|                       | 299         | 0053                               | Value of word address divided by 2 |
|                       | 309         | 0054                               | Value of word address divided by 2 |
|                       | 319         | 0055                               | Value of word address divided by 2 |
|                       | 329         | 0056                               | Value of word address divided by 2 |
|                       | 339         | 0057                               | Value of word address divided by 2 |
| 349                   | 0058        | Value of word address divided by 2 |                                    |
| 359                   | 0059        | Value of word address divided by 2 |                                    |
| 369                   | 005A        | Value of word address divided by 2 |                                    |
| 379                   | 005B        | Value of word address divided by 2 |                                    |
| 389                   | 005C        | Value of word address divided by 2 |                                    |
| Resister Z            | Z           | 0037                               | Value of word address divided by 2 |
| File Register         | 1-          | 0012                               | Value of word address divided by 2 |
| System Memory         | SYS         | 0062                               | Value of word address divided by 2 |



## 8 Error Messages

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

| Item                  | Requirements  |
|-----------------------|---|
| No.                   | Error No.   |
| Device Name           | Name of the External Device where error occurs. Device name is a title of the External Device set with GP-Pro EX.(Initial value[PLC1])  |
| Error Message         | Displays messages related to the error which occurs.  |
| Error Occurrence Area | <p>Displays IP address or device address of the External Device where error occurs, or error codes received from the External Device.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• IP address is displayed such as "IP address(Decimal): MAC address(Hex)".</li> <li>• Device address is displayed such as "Address: Device address".</li> <li>• Received error codes are displayed such as "Decimal[Hex]".</li> </ul> |

Display Examples of Error Messages

"RHAA035: PLC1: Error has been responded for device write command (Error Code: 1[01H])"

**NOTE**

- Refer to your External Device manual for details on received error codes.
- Refer to "Display-related errors" in "Maintenance/Troubleshooting Guide" for details on the error messages common to the driver.

### ■ Error Codes Specific to the External Device

Error codes specific to the External Device are shown below.

| Error Code | Description                                      |
|------------|--|
| 0x01       | Format error.                                    |
| 0x07       | Writing to PLC memory is not executed correctly. |
| 0x0A       | Parity error.                                    |
| 0x0B       | Framing error.                                   |
| 0x0C       | Overflow error.                                  |
| 0x0D       | Sum check error.                                 |
| 0x0F       | Other CPU is accessing memory.                   |
| 0x1B       | System memory error.                             |

