OMRON Corporation

OMR_CSIO_29
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# C/CV Series HOST Link Driver

## Introduction

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

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

| | | |
|---|---|---|
| 1 | System Configuration<br>This section shows the types of External Devices which can be connected and SIO type. | ☞ "1 System Configuration" (page 3) |
| 2 | Selection of External Device<br>This section describes how to select a driver corresponding to the External Device to be connected. | ☞ "2 Selection of External Device" (page 15) |
| 3 | Example of Communication Settings<br>This section shows setting examples for communicating between the Display and the External Device. | ☞ "3 Example of Communication Setting" (page 16) |
| 4 | Communication Settings<br>Perform the communication settings between the Display and the External Device.<br>Set communication settings of the Display with GP-Pro EX or in offline mode. | ☞ "4 Setup Items" (page 71) |
| 5 | Cable Diagram<br>This section shows cables and adapters for connecting the Display and the External Device. | ☞ "5 Cable Diagram" (page 76) |

Operation

# 1 System Configuration

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

| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| SYSMAC C | C200H | C200H-LK201*1<br>C120-LK201-V1*2 | RS232C | Setting Example 1 (page 16) | Cable Diagram 1 (page 76) |
| | | C200H-LK202*1<br>C120-LK202-V1*2 | RS422/485 (4wire) | Setting Example 2 (page 20) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 2 (page 20) | Cable Diagram 14 (page 142) |
| | C200HS | C200H-LK201*1<br>C120-LK201-V1*2 | RS232C | Setting Example 1 (page 16) | Cable Diagram 1 (page 76) |
| | | C200H-LK202*1 | RS422/485 (4wire) | Setting Example 2 (page 20) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 2 (page 20) | Cable Diagram 14 (page 142) |
| | | Link I/F on the CPU unit*3 | RS232C | Setting Example 3 (page 23) | Cable Diagram 3 (page 86) |
| | | Peripheral port on the CPU unit | RS232C | Setting Example 4 (page 25) | Cable Diagram 4 (page 88) *4 |

| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| SYSMAC C | C500<br>C500F<br>C1000H<br>C2000<br>C2000H | C120-LK201-V1*2 | RS232C | Setting Example 1 (page 16) | Cable Diagram 1 (page 76) |
| | | C120-LK202-V1*2 | RS422/485 (4wire) | Setting Example 2 (page 20) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 2 (page 20) | Cable Diagram 14 (page 142) |
| | | C500-LK201-V1*2 | RS232C | Setting Example 5 (page 27) | Cable Diagram 1 (page 76) |
| | | | RS422/485 (4wire) | Setting Example 6 (page 30) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 6 (page 30) | Cable Diagram 14 (page 142) |
| | | C500-LK203*2 | RS232C | Setting Example 5 (page 27) | Cable Diagram 1 (page 76) |
| | | | RS422/485 (4wire) | Setting Example 6 (page 30) | Cable Diagram 5 (page 89) |
| | | | RS422/485 (4wire) Multilink | Setting Example 6 (page 30) | Cable Diagram 15 (page 150) |
| | C1000HF | C500-LK201-V1*2 | RS232C | Setting Example 5 (page 27) | Cable Diagram 1 (page 76) |
| | | | RS422/485 (4wire) | Setting Example 6 (page 30) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 6 (page 30) | Cable Diagram 14 (page 142) |
| | | C500-LK203*2 | RS232C | Setting Example 5 (page 27) | Cable Diagram 1 (page 76) |
| | | | RS422/485 (4wire) | Setting Example 6 (page 30) | Cable Diagram 5 (page 89) |
| | | | RS422/485 (4wire) Multilink | Setting Example 6 (page 30) | Cable Diagram 15 (page 150) |
| | C20H<br>C28H<br>C40H | Link I/F on the CPU unit*3 | RS232C | Setting Example 7 (page 33) | Cable Diagram 6 (page 97) |

| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| SYSMAC C | C20PF<br>C28PF<br>C40PF<br>C60PF | C20-LK201-V1*2 | RS232C | Setting Example 1 (page 16) | Cable Diagram 1 (page 76) |
| | | C20-LK202-V1*2 | RS422/485 (4wire) | Setting Example 2 (page 20) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 2 (page 20) | Cable Diagram 14 (page 142) |
| | C120<br>C120F | C120-LK201-V1*2 | RS232C | Setting Example 1 (page 16) | Cable Diagram 1 (page 76) |
| | | C120-LK202-V1*2 | RS422/485 (4wire) | Setting Example 2 (page 20) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 2 (page 20) | Cable Diagram 14 (page 142) |
| | CQM1-CPU11 | Peripheral port on the CPU unit | RS232C | Setting Example 8 (page 35) | Cable Diagram 4 (page 88)*4 |
| | CQM1-CPU21<br>CQM1-CPU41<br>CQM1-CPU42<br>CQM1-CPU43<br>CQM1-CPU44<br>CQM1-CPU41-V1<br>CQM1-CPU42-V1<br>CQM1-CPU43-V1<br>CQM1-CPU44-V1 | RS232C port on the CPU unit | RS232C | Setting Example 9 (page 37) | Cable Diagram 3 (page 86) |
| | | Peripheral port on the CPU unit | RS232C | Setting Example 8 (page 35) | Cable Diagram 4 (page 88)*4 |
| | CPM1<br>CPM1A<br>CPM1A-V1 | Peripheral port on the CPU unit | RS232C | Setting Example 8 (page 35) | Cable Diagram 4 (page 88)*4 |
| | | CPM1-CIF01 | RS232C | Setting Example 10 (page 39) | Cable Diagram 3 (page 86) |
| | | CPM1-CIF11 | RS422/485 (4wire) | Setting Example 11 (page 41) | Cable Diagram 7 (page 99) |
| | | | RS422/485 (4wire) Multilink | Setting Example 11 (page 41) | Cable Diagram 16 (page 158) |
| | SRM1-C02<br>CPM2A | RS232C port on the CPU unit | RS232C | Setting Example 9 (page 37) | Cable Diagram 3 (page 86) |
| | | CPM1-CIF01 | | Setting Example 10 (page 39) | |
| | | CPM1-CIF11 | RS422/485 (4wire) | Setting Example 11 (page 41) | Cable Diagram 7 (page 99) |
| | | | RS422/485 (4wire) Multilink | Setting Example 11 (page 41) | Cable Diagram 16 (page 158) |

| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| SYSMAC C | CPM2C | Communication port on the CPU unit | RS232C | Setting Example 8 (page 35) | Cable Diagram 9 (page 111)*4 |
| | | | | Setting Example 8 (page 35) | Cable Diagram 8 (page 108) |
| | | Peripheral port on CPM2C-CIF01 | RS232C | Setting Example 12 (page 43) | Cable Diagram 9 (page 111)*4 |
| | | RS232C port on CPM2C-CIF01 | RS232C | Setting Example 13 (page 45) | Cable Diagram 3 (page 86) |
| | | RS232C port on CPM2C- CIF11 | RS232C | Setting Example 14 (page 47) | Cable Diagram 3 (page 86) |
| | | Terminal block on CPM2C-CIF11 | RS422/485 (4wire) | Setting Example 15 (page 49) | Cable Diagram 10 (page 112) |
| | | | RS422/485 (4wire) Multilink | Setting Example 15 (page 49) | Cable Diagram 17 (page 166) |
| | CQM1H-CPU11 | Peripheral port on the CPU unit | RS232C | Setting Example 8 (page 35) | Cable Diagram 9 (page 111)*4 |
| | | | | Setting Example 8 (page 35) | Cable Diagram 8 (page 108) |
| | CQM1H-CPU21 | Peripheral port on the CPU unit | RS232C | Setting Example 8 (page 35) | Cable Diagram 9 (page 111)*4 |
| | | | | Setting Example 8 (page 35) | Cable Diagram 8 (page 108) |
| | | RS232C port on the CPU unit | RS232C | Setting Example 9 (page 37) | Cable Diagram 3 (page 86) |
| | CQM1H-CPU51 CQM1H-CPU61 | Peripheral port on the CPU unit | RS232C | Setting Example 8 (page 35) | Cable Diagram 9 (page 111)*4 |
| | | | | Setting Example 8 (page 35) | Cable Diagram 8 (page 108) |
| | | RS232C port on the CPU unit | RS232C | Setting Example 9 (page 37) | Cable Diagram 3 (page 86) |
| | | RS232C port on CQM1H-SCB41 | RS232C | Setting Example 16 (page 51) | Cable Diagram 3 (page 86) |
| | | RS422A/485 port on CQM1H-SCB41 | RS422/485 (4wire) | Setting Example 17 (page 53) | Cable Diagram 11 (page 122)*5 |
| | | | RS422/485 (4wire) Multilink | Setting Example 17 (page 53) | Cable Diagram 18 (page 177)*5 |

| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| SYSMAC α | C200HE-CPU42<br>C200HG-CPU63<br>C200HG-CPU43<br>C200HX-CPU64<br>C200HX-CPU44<br>C200HE-CPU42-Z<br>C200HG-CPU63-Z<br>C200HG-CPU43-Z<br>C200HX-CPU85-Z<br>C200HX-CPU65-Z<br>C200HX-CPU64-Z<br>C200HX-CPU44-Z | RS232C port on the CPU unit | RS232C | Setting Example 18 (page 55) | Cable Diagram 3 (page 86) |
| | | C200HW-COM02-V1 | RS232C | Setting Example 19 (page 57) | Cable Diagram 3 (page 86) |
| | | C200HW-COM03-V1 | RS422 (4wire) | Setting Example 20 (page 59) | Cable Diagram 11 (page 122) |
| | | | RS422/485 (4wire) Multilink | Setting Example 20 (page 59) | Cable Diagram 18 (page 177) |
| | | C200HW-COM04-V1 | RS232C | Setting Example 19 (page 57) | Cable Diagram 3 (page 86) |
| | | C200HW-COM05-V1 | RS232C | Setting Example 19 (page 57) | Cable Diagram 3 (page 86) |
| | | C200HW-COM06-V1 | RS232C | Setting Example 19 (page 57) | Cable Diagram 3 (page 86) |
| | | | RS422 (4wire) | Setting Example 20 (page 59) | Cable Diagram 11 (page 122) |
| | | | RS422/485 (4wire) Multilink | Setting Example 20 (page 59) | Cable Diagram 18 (page 177) |
| | | C200H-LK201-V1 | RS232C | Setting Example 1 (page 16) | Cable Diagram 1 (page 76) |
| | | C200H-LK202-V1 | RS422 (4wire) | Setting Example 2 (page 20) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 2 (page 20) | Cable Diagram 14 (page 142) |

| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| SYSMAC α | C200HX-CPU34<br>C200HX-CPU54<br>C200HX-CPU34-Z<br>C200HX-CPU54-Z<br>C200HE-CPU32<br>C200HE-CPU32-Z<br>C200HG-CPU33<br>C200HG-CPU33-Z<br>C200HG-CPU53<br>C200HG-CPU53-Z | C200HW-COM02-V1 | RS232C | Setting Example 19 (page 57) | Cable Diagram 3 (page 86) |
| | | C200HW-COM03-V1 | RS422 (4wire) | Setting Example 20 (page 59) | Cable Diagram 11 (page 122) |
| | | | RS422/485 (4wire) Multilink | Setting Example 20 (page 59) | Cable Diagram 18 (page 177) |
| | | C200HW-COM04-V1 | RS232C | Setting Example 19 (page 57) | Cable Diagram 3 (page 86) |
| | | C200HW-COM05-V1 | RS232C | Setting Example 19 (page 57) | Cable Diagram 3 (page 86) |
| | | C200HW-COM06-V1 | RS232C | Setting Example 19 (page 57) | Cable Diagram 3 (page 86) |
| | | | RS422 (4wire) | Setting Example 20 (page 59) | Cable Diagram 11 (page 122) |
| | | | RS422/485 (4wire) Multilink | Setting Example 20 (page 59) | Cable Diagram 18 (page 177) |
| | | C200H-LK201-V1 | RS232C | Setting Example 1 (page 16) | Cable Diagram 1 (page 76) |
| | | C200H-LK202-V1 | RS422 (4wire) | Setting Example 2 (page 20) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 2 (page 20) | Cable Diagram 14 (page 142) |
| | C200HE-CPU11<br>C200HE-CPU11-Z | C200H-LK201-V1 | RS232C | Setting Example 1 (page 16) | Cable Diagram 1 (page 76) |
| | | C200H-LK202-V1 | RS422 (4wire) | Setting Example 2 (page 20) | Cable Diagram 2 (page 78) |
| | | | RS422/485 (4wire) Multilink | Setting Example 2 (page 20) | Cable Diagram 14 (page 142) |

| Series | CPU | Link I/F | SIO Type | Setting Example | Cable Diagram |
|---|---|---|---|---|---|
| SYSMAC CV | CV500<br>CV1000<br>CV2000<br>CVM1<br>CVM1D | CV500-LK201 | RS232C (connecting port 1) | Setting Example 21 (page 61) | Cable Diagram 1 (page 76) |
| | | | RS232C (connecting port 2) | Setting Example 22 (page 63) | Cable Diagram 12 (page 132) |
| | | | RS422/485 (4wire) (connecting port 2) | Setting Example 23 (page 65) | Cable Diagram 13 (page 134) |
| | | | RS422/485 (4wire) Multilink | Setting Example 23 (page 65) | Cable Diagram 19 (page 188) |
| | | Link I/F on the CPU unit*6 | RS232C | Setting Example 24 (page 67) | Cable Diagram 12 (page 132) |
| | | | RS422/485 (4wire) | Setting Example 25 (page 69) | Cable Diagram 13 (page 134) |
| | | | RS422/485 (4wire) Multilink | Setting Example 25 (page 69) | Cable Diagram 19 (page 188) |

*1 Base mounting type.

*2 CPU mounting type.

*3 Connect to RS232C port.

*4 Commercial 9 pin-25 pin conversion adapter is required.

*5 Set the 2wire/4wire toggle switch to 4wire (Only 4wire type is available to use).

*6 Connect to the HOSTLINK port.

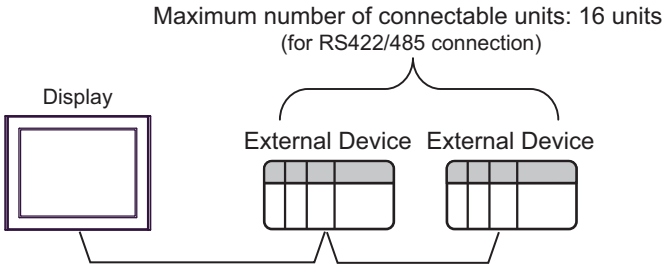
IMPORTANT

- For SYSMAC-α Series, please note as below.
- We cannot guarantee the operation when you access the nonexistent data memory area (DM6656 to DM6999).
- We cannot guarantee the operation when you access to DM7000 to DM9999 without the extension fixed DM setting.
- We cannot guarantee the operation when you specify the area within the range in the models in which the bank of the extension memory area does not exist.

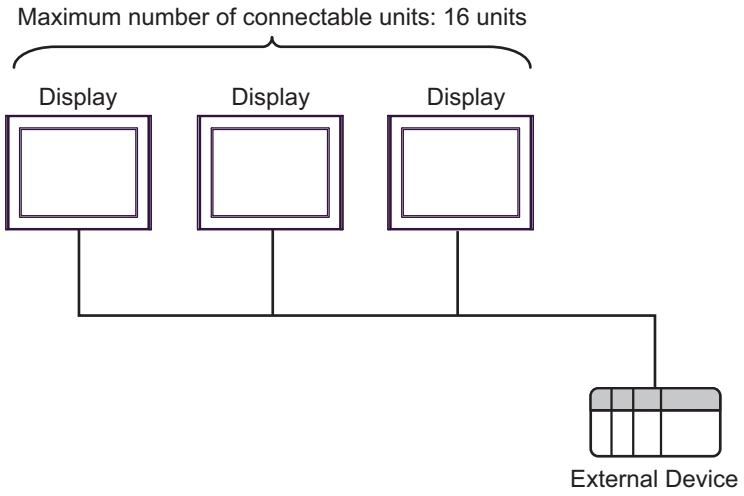
## ■ Connection Configuration

- 1:1 Connection


- 1:n Connection



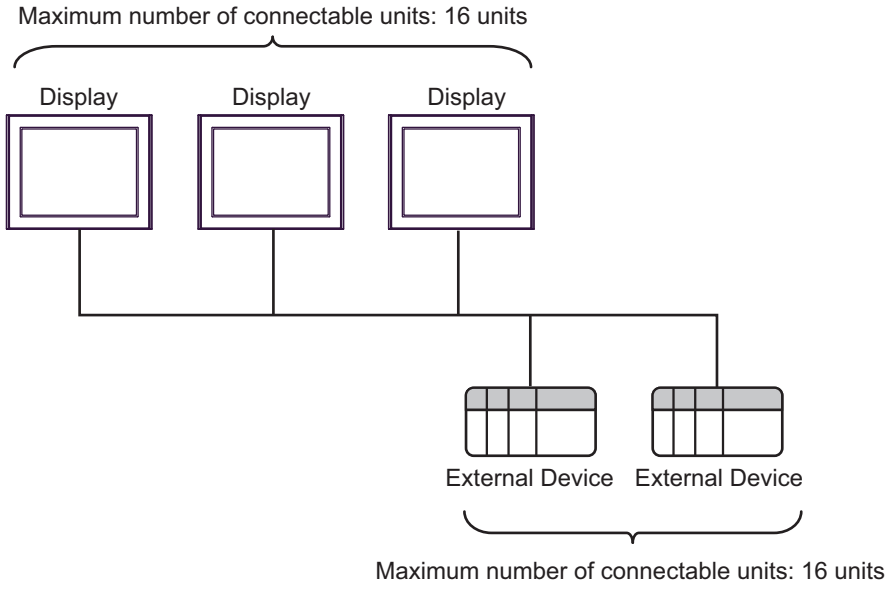

- n:1 Connection (Multilink connection)




**NOTE**

- The maximum number of connectable Displays is 16 units. However, keeping performance in consideration, the number of Displays that can be substantially used is up to 4.

- n:m Connection (Multilink connection)




NOTE

- The maximum number of connectable Displays is 16 units. However, keeping performance in consideration, the number of Displays that can be substantially used is up to 4.

## ■ 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*1 , COM2, COM3*1, COM4 | - | - |
| PS-3450A, PS-3451A, PS3000-BA, PS3001-BD | COM1, COM2*1*2 | COM2*1*2 | COM2*1*2 |
| PS-3650A (T41 model), PS-3651A (T41 model) | COM1*1 | - | - |
| PS-3650A (T42 model), PS-3651A (T42 model) | COM1*1*2, COM2 | COM1*1*2 | COM1*1*2 |
| PS-3700A (Pentium®4-M) PS-3710A | COM1*1, COM2*1, COM3*2 , COM4 | COM3*2 | COM3*2 |
| PS-3711A | COM1*1, COM2*2 | COM2*2 | COM2*2 |
| PS4000*3 | COM1, COM2 | - | - |
| PL3000 | COM1*1*2, COM2*1, COM3, COM4 | COM1*1*2 | COM1*1*2 |
| PE-4000B Atom N270 | COM1, COM2 | - | - |
| PE-4000B Atom N2600 | COM1, COM2 | COM3*4 , COM4*4, COM5*4, COM6*4 | COM3*4, COM4*4, COM5*4, COM6*4 |
| PS5000 (Slim Panel Type Core i3 Model) *5 *6 | COM1, COM2*4 | COM2*4 | COM2*4 |
| PS5000 (Slim Panel Type Atom Model) *5 *6 | COM1, COM2*7 | COM2*7 | COM2*7 |
| PS5000 (Enclosed Panel Type)*8 | COM1 | - | - |
| PS5000 (Modular Type PFXPU/PFXPP)*5 *6 PS5000 (Modular Type PFXPL2B5-6) | COM1*7 | COM1*7 | COM1*7 |
| PS5000 (Modular Type PFXPL2B1-4) | COM1, COM2*7 | COM2*7 | COM2*7 |
| PS6000 (Advanced Box) PS6000 (Standard Box) | COM1*9 | *10 | *10 |
| PS6000 (Basic Box) | COM1*9 | COM1*9 | COM1*9 |

*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.

*4 Set up the SIO type with the BIOS. Please refer to the IPC manual for details of BIOS.

*5 When setting up communication between an External Device and the RS-232C/422/485 interface module, use the IPC (RS-232C) or PS5000 (RS-422/485) cable diagrams. However, when using PFXZPBMPR42P2 in a RS-422/485 (4-wire) configuration with no flow control, connect 7.RTS+ and 8.CTS+, and connect 6.RTS- and 9.CTS-.
When using RS-422/485 communication with External Devices, you may need to reduce the transmission speed and increase the TX Wait time.

*6 To use RS-422/485 communication on the RS-232C/422/485 interface module, the DIP Switch setting is required. Please refer to "Knowledge Base" (FAQs) on the support site. (http://www.pro-face.com/trans/en/manual/1001.html)

| Settings | FAQ ID |
|---|---|
| PFXZPBMPR42P2, RS422/485 change method | FA263858 |
| PFXZPBMPR42P2 termination resistor setting | FA263974 |
| PFXZPBMPR44P2, RS422/485 change method | FA264087 |
| PFXZPBMPR44P2 termination resistor setting | FA264088 |

*7 Set up the SIO type with the DIP Switch. Please refer to the IPC manual for details of DIP Switch. The BOX Atom has not a switch to set the RS-232C, RS-422/485 mode. Use the BIOS for the setting.

*8 For the connection with the External Device, on the user-created cable read as if the connector on the Display-side is a M12 A-coding 8 pin socket. The pin assignment is the same as described in the cable diagram. For the M12 A-coding connector, use PFXZPSCNM122.

*9 In addition to COM1, you can also use the COM port on the optional interface.

*10 Install the optional interface in the expansion slot.

## DIP Switch settings (PL3000 / PS3000 Series)

### RS-232C

| DIP Switch | Setting | Description |
|---|---|---|
| 1 | OFF*1 | 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.

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*1 | RS (RTS) Auto control mode: Disabled |
| 10 | OFF*1 | |

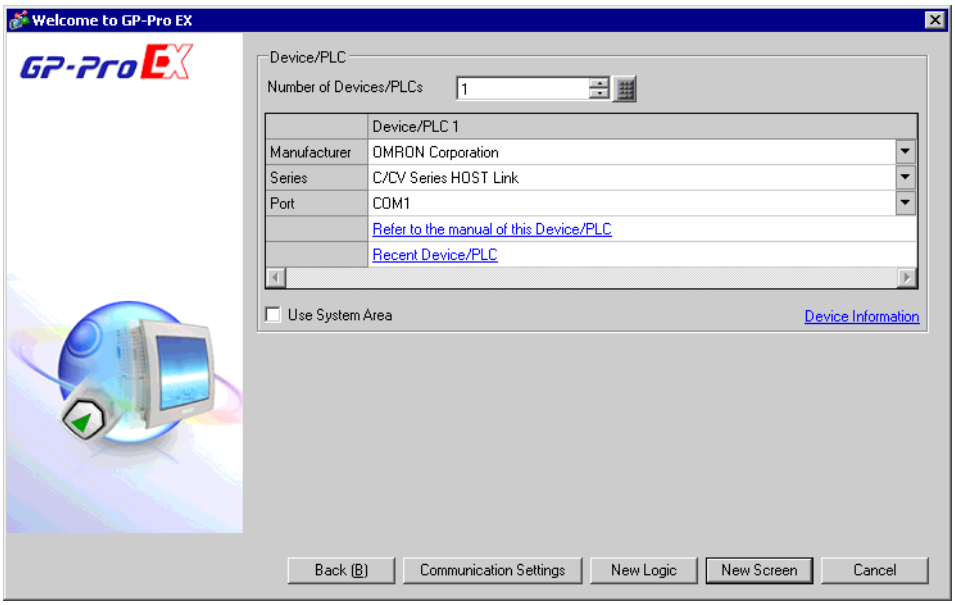
*1 When the connection configuration are the n:1 and n:m connections (both Multilink connections), turn ON the set value.

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 "OMRON Corporation". |
| Series | Select the External Device model (series) and the connection method. Select "C/CV Series HOST Link".<br>In System configuration, make sure the External Device you are connecting is supported by "C/CV Series HOST Link".<br>☞ "1 System Configuration" (page 3) |
| Port | Select the Display port to connect 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

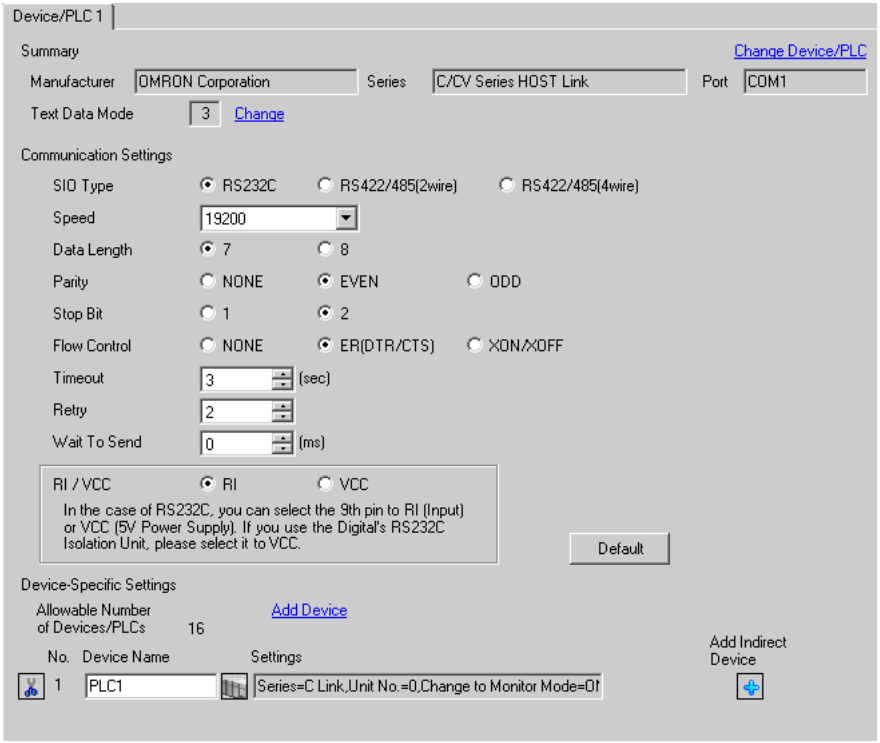
Examples of communication settings of the Display and the External Device, recommended by Pro-face, are shown.

## 3.1 Setting Example 1

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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



◆ 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.

## ■ Setting of External Device

Set the HOST link unit attached to the External Device as below.

Please refer to the manual of the External Device for more details.

◆ C200H-LK201

| Rotary Switch | Settings | Setup Description |
|---|---|---|
| SW1 | 0 | Unit No. x 10 |
| SW2 | 0 | Unit No. x 1 |
| SW3 | 6 | Transmission speed: 19.2Kbps |
| SW4 | 2 | 7-bit data length, 2 stop bits, Even |

| DIP Switch (rear panel) | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Unused |
| SW2 | OFF | Unused |
| SW3 | ON | 1:N step |
| SW4 | OFF | Without 5V supply |

Set the CTS control to 0V (always ON).

◆ C120-LK201-V1

| DIP Switch 1 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Unit No.: 0 |
| SW2 | OFF | |
| SW3 | OFF | |
| SW4 | OFF | |
| SW5 | OFF | |
| SW6 | OFF | Unused |
| SW7 | OFF | |
| SW8 | ON | Operation |

| DIP Switch 2 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Transmission speed: 19.2Kbps |
| SW2 | OFF | |
| SW3 | ON | |
| SW4 | OFF | |
| SW5 | OFF | Unused |
| SW6 | OFF | 1:N step |
| SW7 | ON | Level 1, 2, 3 Enabled |
| SW8 | ON | |

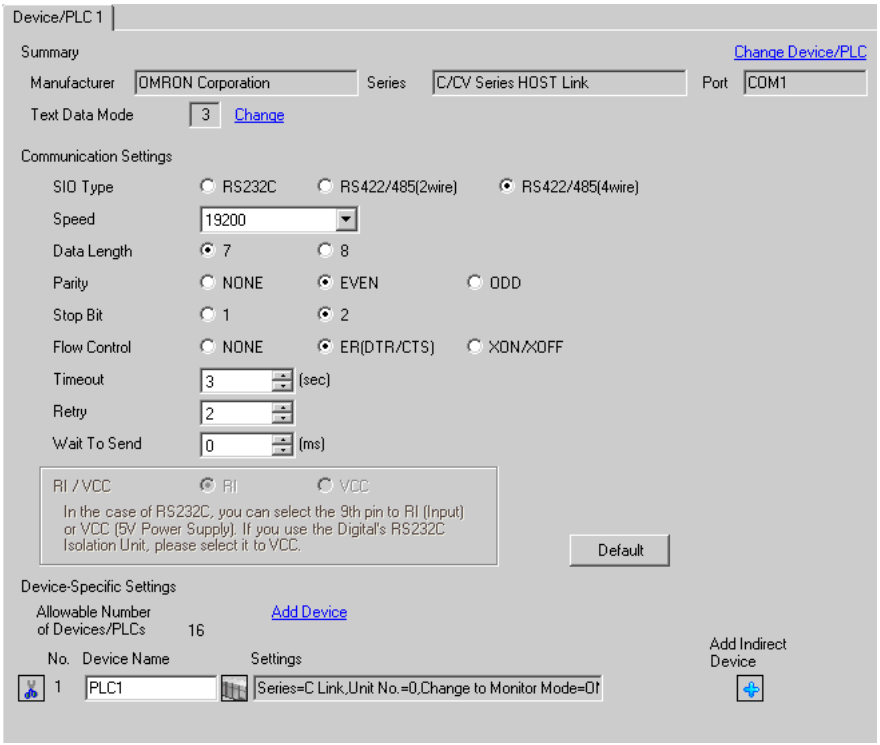
| DIP Switch 3 | Settings | Setup Description |
|---|---|---|
| SW1 | ON | CTS always ON |
| SW2 | OFF | |
| SW3 | ON | Internally synchronized |
| SW4 | OFF | |
| SW5 | ON | |
| SW6 | OFF | |
| SW7 | OFF | Unused |
| SW8 | OFF | |

## 3.2 Setting Example 2

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Set the HOST link unit attached to the External Device as below.

Please refer to the manual of the External Device for more details.

◆ C200H-LK202

| Rotary switch | Settings | Setup Description |
|---|---|---|
| SW1 | 0 | Unit No. x 10 |
| SW2 | 0 | Unit No. x 1 |
| SW3 | 6 | Transmission speed: 19.2Kbps |
| SW4 | 2 | 7-bit data length, 2 stop bits, Even |

Set the rear switch as below.

- 1:N step (OFF)
- When the External Device is located at the end of the communication connection due to system configuration, set the switch to "With termination resistance connection (ON)"; in other cases, set it to "Without termination resistance connection (OFF)"

◆ C120-LK202-V1

| DIP Switch 1 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Unit No.: 0 |
| SW2 | OFF | |
| SW3 | OFF | |
| SW4 | OFF | |
| SW5 | OFF | |
| SW6 | OFF | Unused |
| SW7 | OFF | |
| SW8 | ON | Operation |

| DIP Switch 2 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Transmission speed: 19.2Kbps |
| SW2 | OFF | |
| SW3 | ON | |
| SW4 | OFF | |
| SW5 | OFF | Unused |
| SW6 | OFF | 1:N step |
| SW7 | ON | Level 1, 2, 3 Enabled |
| SW8 | ON | |

- When the External Device is located at the end of the communication connection due to system configuration

| DIP Switch 3 | Settings | Setup Description |
|---|---|---|
| SW1 | ON | Attach termination resistance |
| SW2 | OFF | |
| SW3 | ON | |
| SW4 | OFF | |
| SW5 | ON | |
| SW6 | OFF | |
| SW7 | OFF | Unused |
| SW8 | OFF | |

- In Other Cases

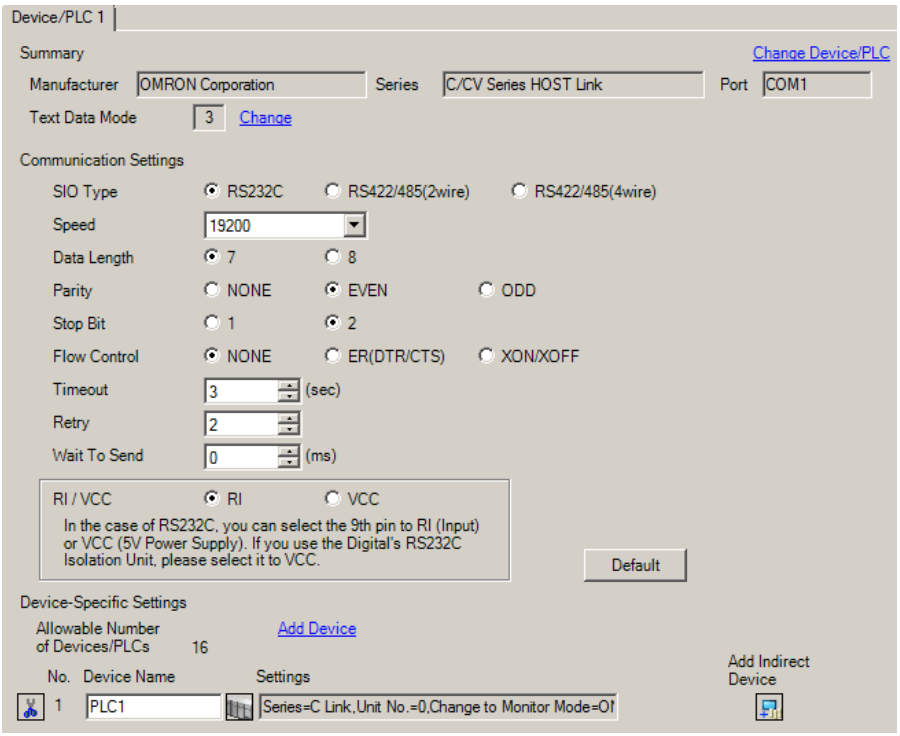
| DIP Switch 3 | Settings | Setup Description |
|---|---|---|
| SW1 | ON | Not attach termination resistance |
| SW2 | OFF | |
| SW3 | OFF | |
| SW4 | OFF | |
| SW5 | OFF | |
| SW6 | OFF | |
| SW7 | OFF | Unused |
| SW8 | OFF | |

## 3.3 Setting Example 3

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

### ◆ When setting with the ladder tool

Open [PC System Setting] in the ladder tool and set the HOST link port in [HOST Link Port]. Please refer to the manual of the External Device for more details on the ladder tool.

| Setup Items | Setting Value |
|---|---|
| Communication Settings | User setting |
| Speed | 19200 |
| Parameter | 7, 2, E |
| Mode | HOST link |
| Unit No. | 0 unit |
| Delay | 0 |
| CS Control | Enable |

### ◆ When setting the value in the data register

Use the ladder tool or etc. and set the value as below.

Set SW5 to OFF.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6645 | 0001(HEX) | Mode selection: HOST link |
| DM6646 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6648 | 0000(HEX) | HOST link, Unit No.: 0 |

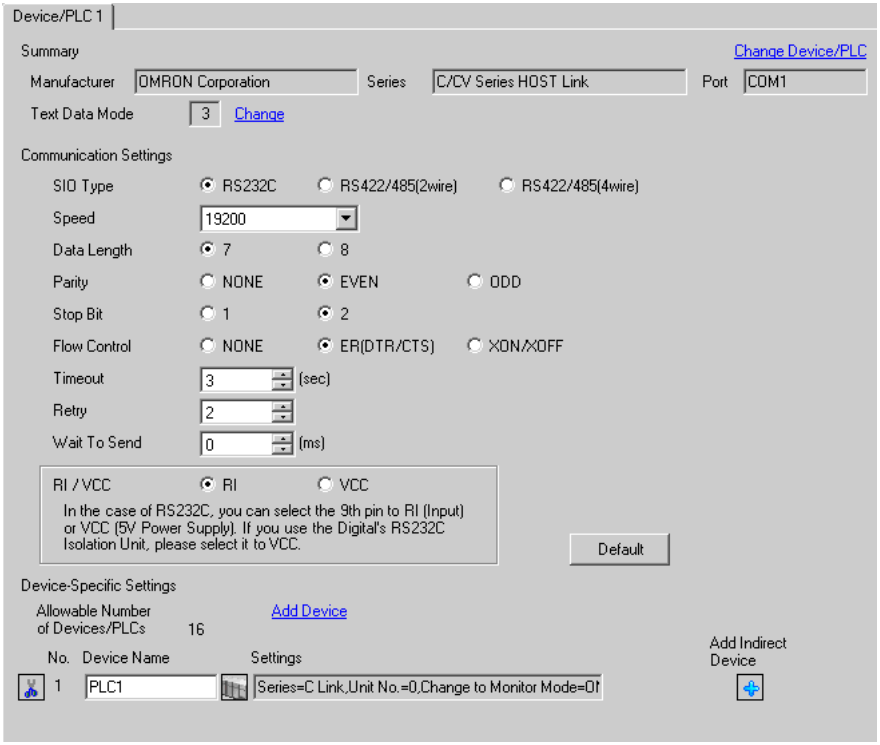
Write the data in each register and reset the External Device.

## 3.4 Setting Example 4

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

### ◆ When setting with the ladder tool

Open [PC System Setting] in the ladder tool and set the peripheral port in [Peripheral Port]. Please refer to the manual of the External Device for more details on the ladder tool.

| Setup Items | Setting Value |
|---|---|
| Communication Settings | User setting |
| Speed | 19200 |
| Parameter | 7, 2, E |
| Mode | HOST link |
| Unit No. | 0 unit |
| Delay | 0 |
| CS Control | Enable |

### ◆ When setting the value in the data register

Use the ladder tool or etc. and set the value as below.

Set SW5 to OFF.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6650 | 0001(HEX) | Mode selection: HOST link |
| DM6651 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6653 | 0000(HEX) | HOST link, Unit No.: 0 |

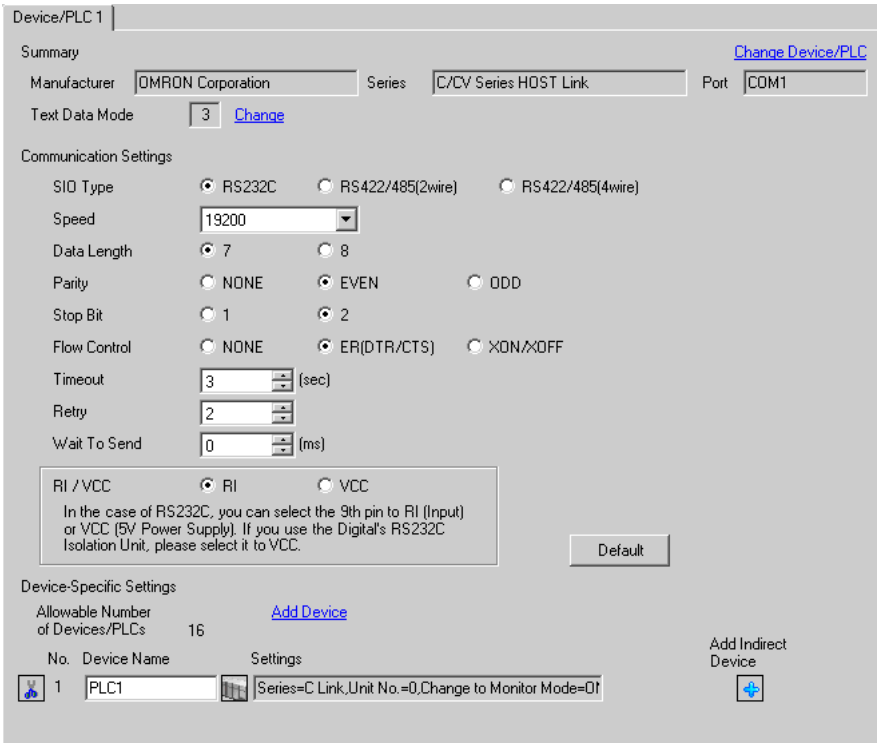
Write the data in each register and reset the External Device.

## 3.5 Setting Example 5

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Set the HOST link unit attached to the External Device as below.

Please refer to the manual of the External Device for more details on settings.

◆ C500-LK201-V1

| DIP Switch 1 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Unit No.: 0 |
| SW2 | OFF | |
| SW3 | OFF | |
| SW4 | OFF | |
| SW5 | OFF | |
| SW6 | OFF | Unused |
| SW7 | OFF | Unused |
| SW8 | ON | Operation |

| DIP Switch 2 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Transmission speed: 19.2Kbps |
| SW2 | OFF | |
| SW3 | ON | |
| SW4 | OFF | |
| SW5 | OFF | Unused |
| SW6 | OFF | 1:N step |
| SW7 | ON | Level 1, 2, 3 Enabled |
| SW8 | ON | |

Mode Control Switch (front of the unit): HOST link

I/O Port (rear of the unit): RS-232C

Synchronize (rear of the unit): Internal

Termination resistance (rear of the unit): None

CTS (rear of the unit): 0V

◆ C500-LK203

| DIP Switch 1 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Unit No.: 0 |
| SW2 | OFF | |
| SW3 | OFF | |
| SW4 | OFF | |
| SW5 | OFF | |
| SW6 | OFF | 7-bit data length, 2 stop bits, Even |
| SW7 | OFF | |
| SW8 | OFF | Normal |

| DIP Switch 2 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Transmission speed: 19.2Kbps |
| SW2 | OFF | |
| SW3 | ON | |
| SW4 | OFF | |
| SW5 | ON | System #0 |
| SW6 | OFF | 1:N step |
| SW7 | ON | Level 1, 2, 3 Enabled |
| SW8 | ON | |

Mode Control Switch (front of the unit): HOST link

5V supply (rear of the unit): OFF

I/O Port (rear of the unit): RS-232C

Synchronize (rear of the unit): Internal

Termination resistance (rear of the unit): None

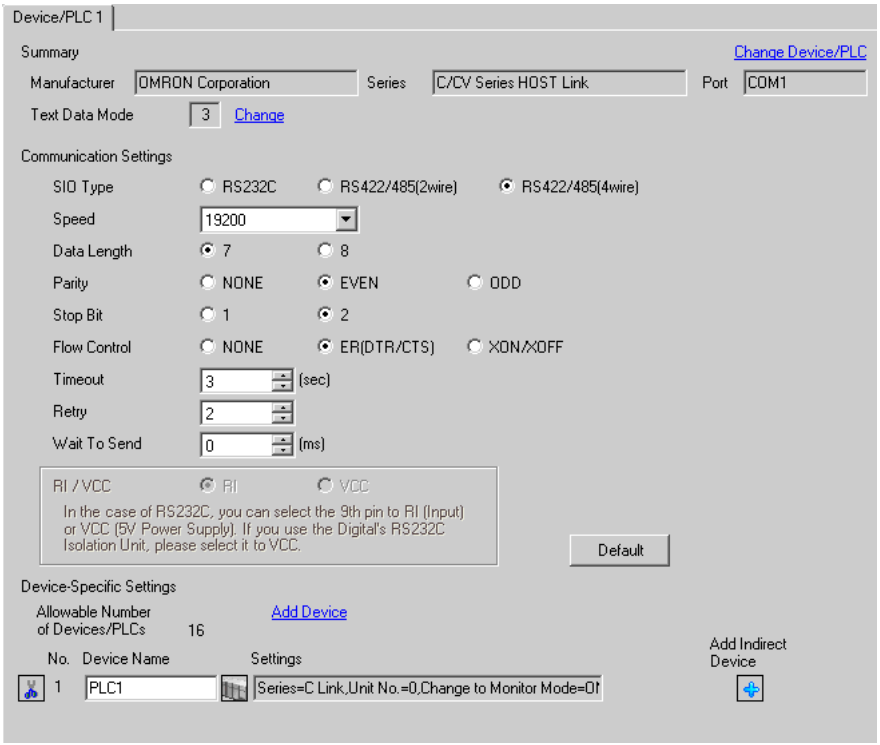
CTS (rear of the unit): 0V

## 3.6 Setting Example 6

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Set the HOST link unit attached to the External Device as below.

Please refer to the manual of the External Device for more details on settings.

◆ C500-LK201-V1

| DIP Switch 1 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Unit No.: 0 |
| SW2 | OFF | |
| SW3 | OFF | |
| SW4 | OFF | |
| SW5 | OFF | |
| SW6 | OFF | Unused |
| SW7 | OFF | Unused |
| SW8 | ON | Operation |

| DIP Switch 2 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Transmission speed: 19.2Kbps |
| SW2 | OFF | |
| SW3 | ON | |
| SW4 | OFF | |
| SW5 | OFF | Unused |
| SW6 | OFF | 1:N step |
| SW7 | ON | Level 1, 2, 3 Enabled |
| SW8 | ON | |

Mode Control Switch (front of the unit): HOST link

I/O Port (rear of the unit): RS-422

Synchronize (rear of the unit): Internal

Termination resistance (rear of the unit): When the External Device is located at the end of the communication connection due to system configuration, set it to [With]; in other cases, set it to [Without].

CTS (rear of the unit): 0V

◆ C500-LK203

| DIP Switch 1 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Unit No.: 0 |
| SW2 | OFF | |
| SW3 | OFF | |
| SW4 | OFF | |
| SW5 | OFF | |
| SW6 | OFF | 7-bit data length, 2 stop bits, Even |
| SW7 | OFF | |
| SW8 | OFF | Normal |

| DIP Switch 2 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | Transmission speed: 19.2Kbps |
| SW2 | OFF | |
| SW3 | ON | |
| SW4 | OFF | |
| SW5 | ON | System #0 |
| SW6 | OFF | 1:N step |
| SW7 | ON | Level 1, 2, 3 Enabled |
| SW8 | ON | |

Mode Control Switch (front of the unit): HOST link

5V supply (rear of the unit): OFF

I/O Port (rear of the unit): RS-422

Synchronize (rear of the unit): Internal

Termination resistance (rear of the unit): When the External Device is located at the end of the communication connection due to system configuration, set it to [With]; in other cases, set it to [Without].

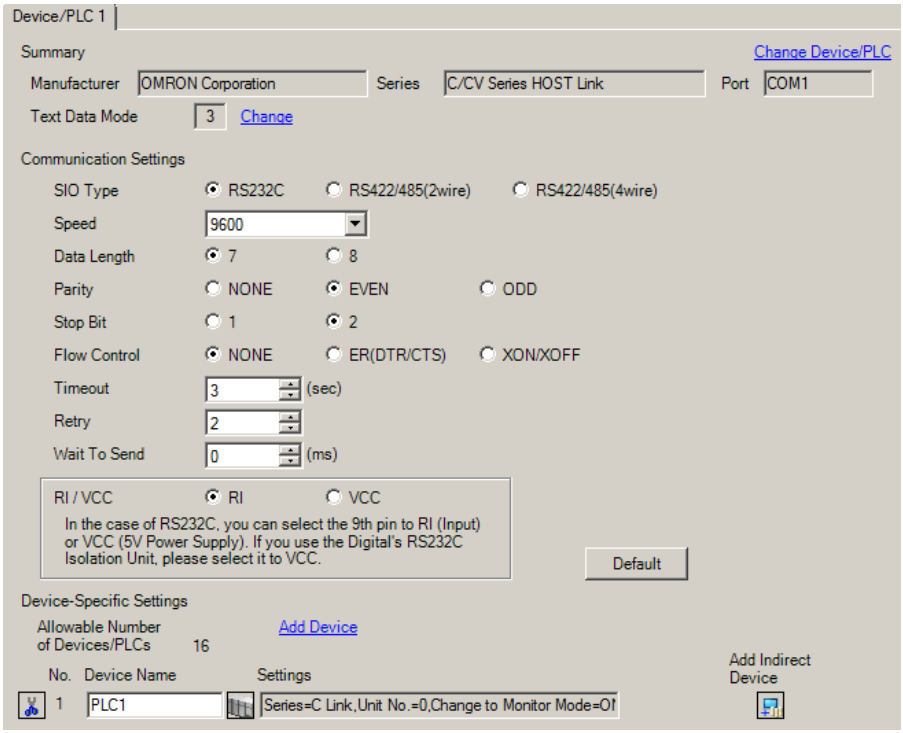
CTS (rear of the unit): 0V

## 3.7 Setting Example 7

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Perform the communication in the standard settings (default).

Please refer to the manual of the External Device for more details on settings.

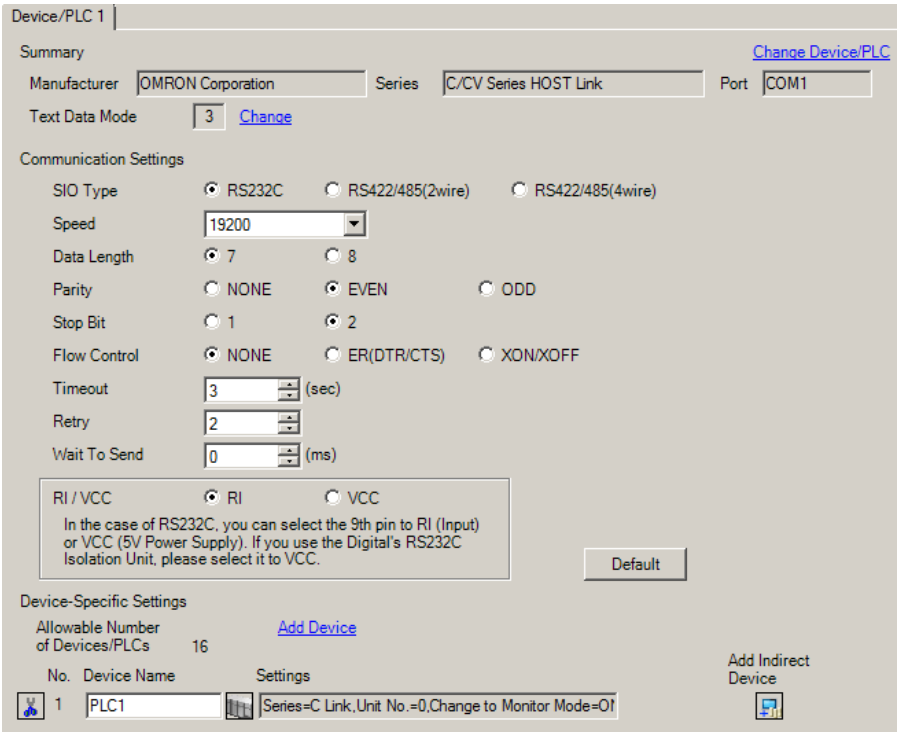
| Setup Items | Setting Value |
|---|---|
| Speed | 9600bps |
| Start Bit | 1 bit |
| Data Length | 7 bits |
| Stop Bit | 2 bits |
| Parity Bit | Even |
| Unit No. | No.0 unit |

## 3.8 Setting Example 8

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Use the ladder tool etc. and set the value as below.

When connecting to CPM1 or CPM1H, set SW5 to OFF.

When connecting to CPM2C, set SW1 for "Connecting port function switch setting" to OFF, SW2 to ON. Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6650 | 0001(HEX) | Mode selection: HOST link |
| DM6651 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6653 | 0000(HEX) | HOST link, Unit No.: 0 |

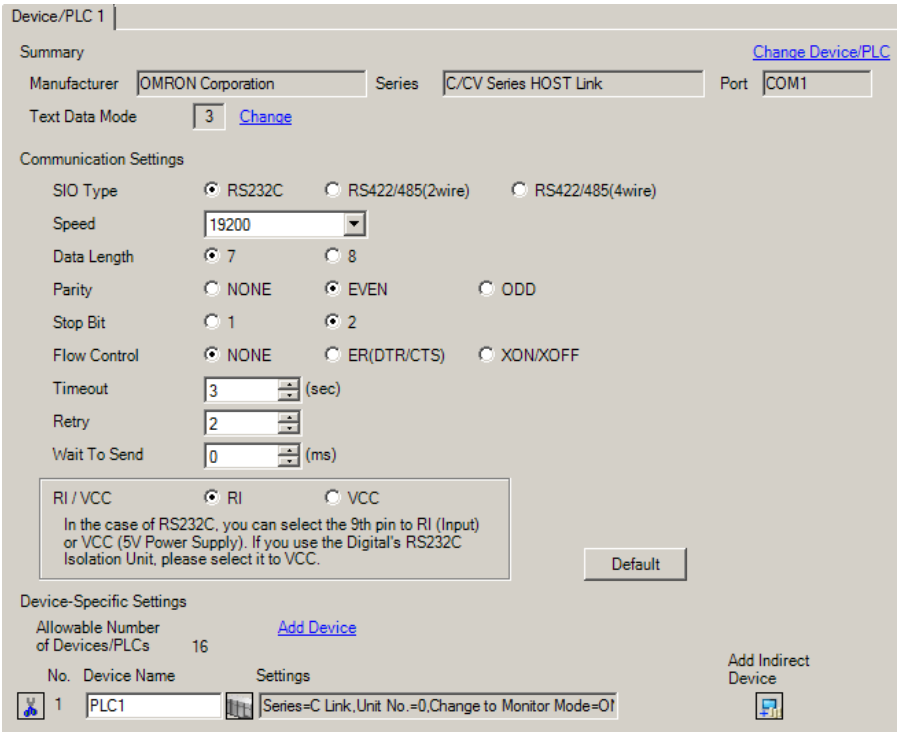
Write the data in each register and reset the External Device.

## 3.9 Setting Example 9

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Use the ladder tool etc. and set the value as below.

Set SW5 to OFF.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6645 | 0001(HEX) | Mode selection: HOST link |
| DM6646 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6648 | 0000(HEX) | HOST link, Unit No.: 0 |

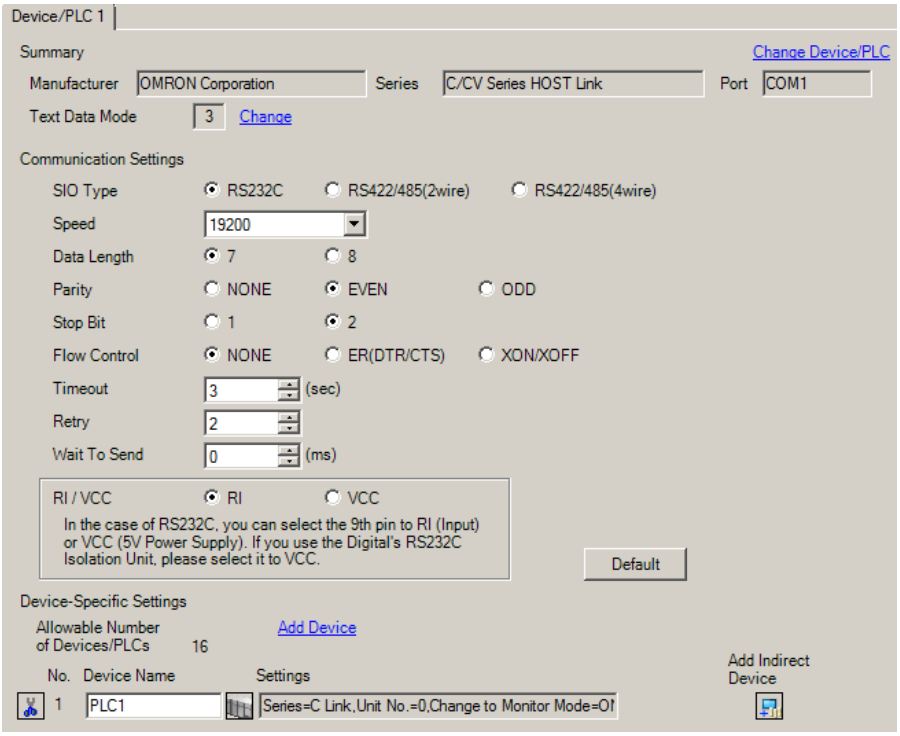
Write the data in each register and reset the External Device.

## 3.10 Setting Example 10

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Use the ladder tool etc. and set the value as below.

Always set the mode setting SW on the conversion adapter to [HOST].

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6650 | 0001(HEX) | Mode selection: HOST link |
| DM6651 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6653 | 0000(HEX) | HOST link, Unit No.: 0 |

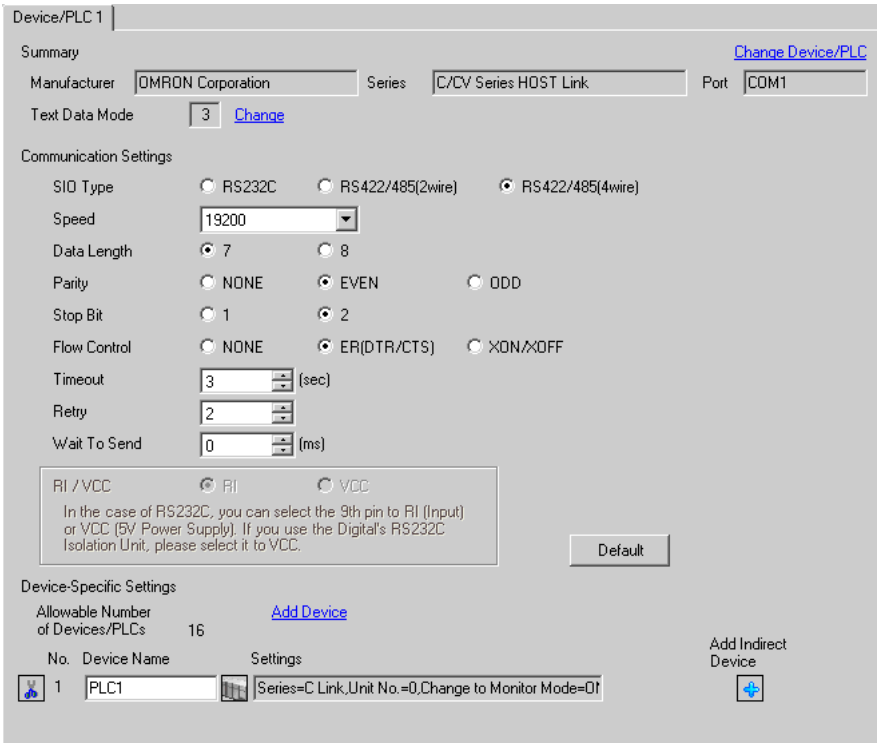
*Connect the conversion adapter to the peripheral port on the CPU.

## 3.11 Setting Example 11

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Use the ladder tool or etc. and set the value as below.

Always set the mode setting SW on the conversion adapter to [HOST].

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6650 | 0001(HEX) | Mode selection: HOST link |
| DM6651 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6653 | 0000(HEX) | HOST link, Unit No.: 0 |

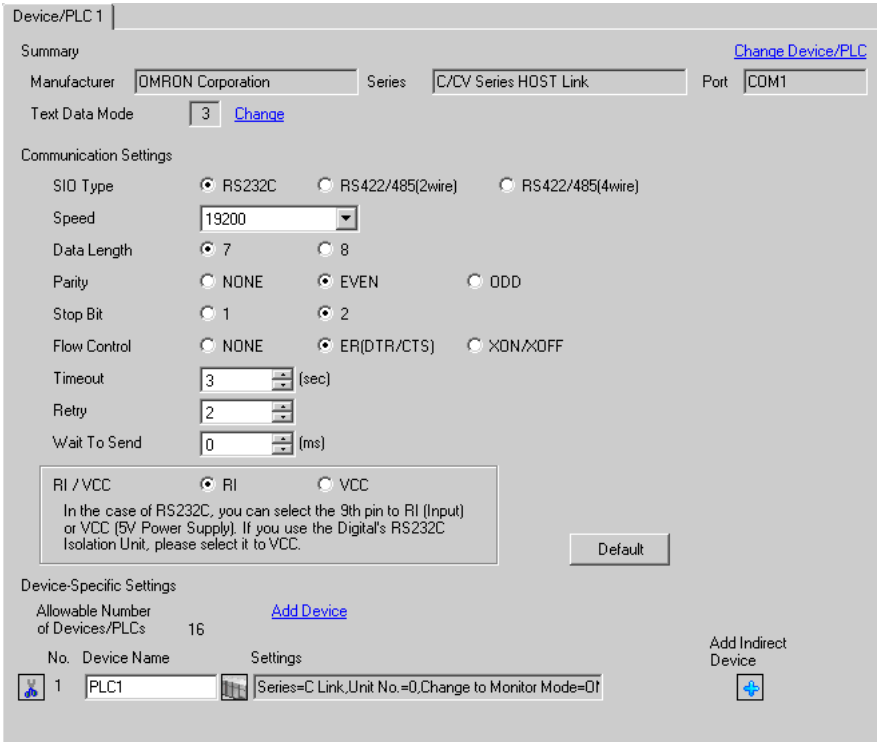
*Connect the conversion adapter to the peripheral port on the CPU.

## 3.12 Setting Example 12

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using the peripheral port on the CPM2C-CIF01

Use the ladder tool or etc. and set the value as below.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6650 | 0001(HEX) | Mode selection: HOST link |
| DM6651 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6653 | 0000(HEX) | HOST link, Unit No.: 0 |

Write the data in each register and reset the External Device.

Connecting Port Function Setting Switch on the CPU Unit

| DIP Switch | Settings |
|---|---|
| SW1 | OFF |
| SW2 | ON |

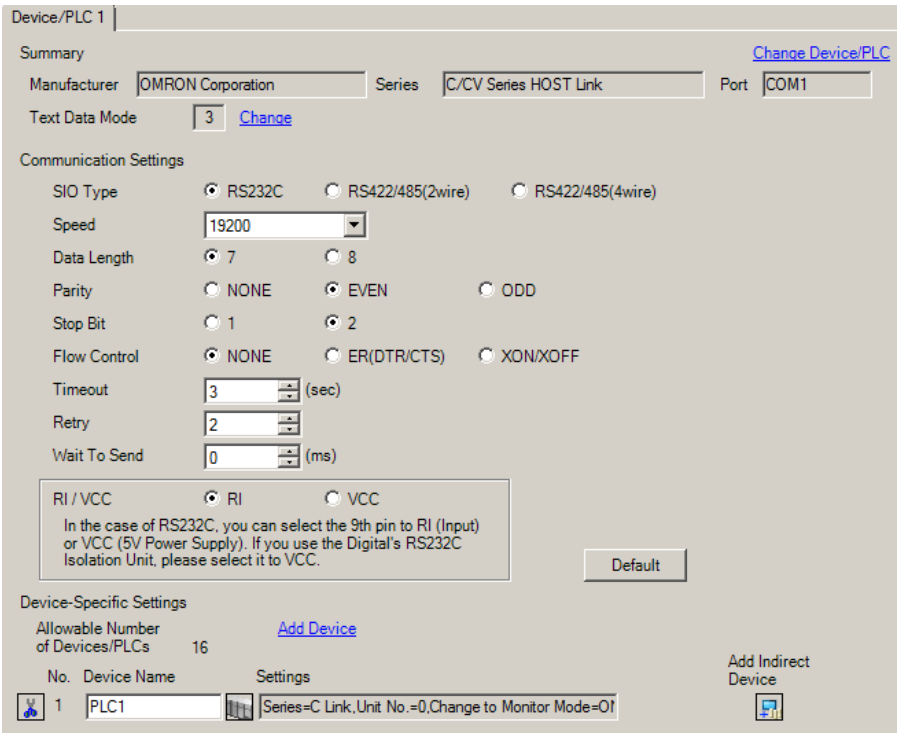
*Connect the conversion adapter to the communication port on the CPU.

## 3.13 Setting Example 13

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using the RS232C port on the CPM2C-CIF01

Use the ladder tool etc. and set the value as below.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6645 | 0001(HEX) | Mode selection: HOST link |
| DM6646 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6648 | 0000(HEX) | HOST link, Unit No.: 0 |

Write the data in each register and reset the External Device.

Connecting Port Function Setting Switch on the CPU Unit

| DIP Switch | Settings |
|---|---|
| SW1 | OFF |
| SW2 | ON |

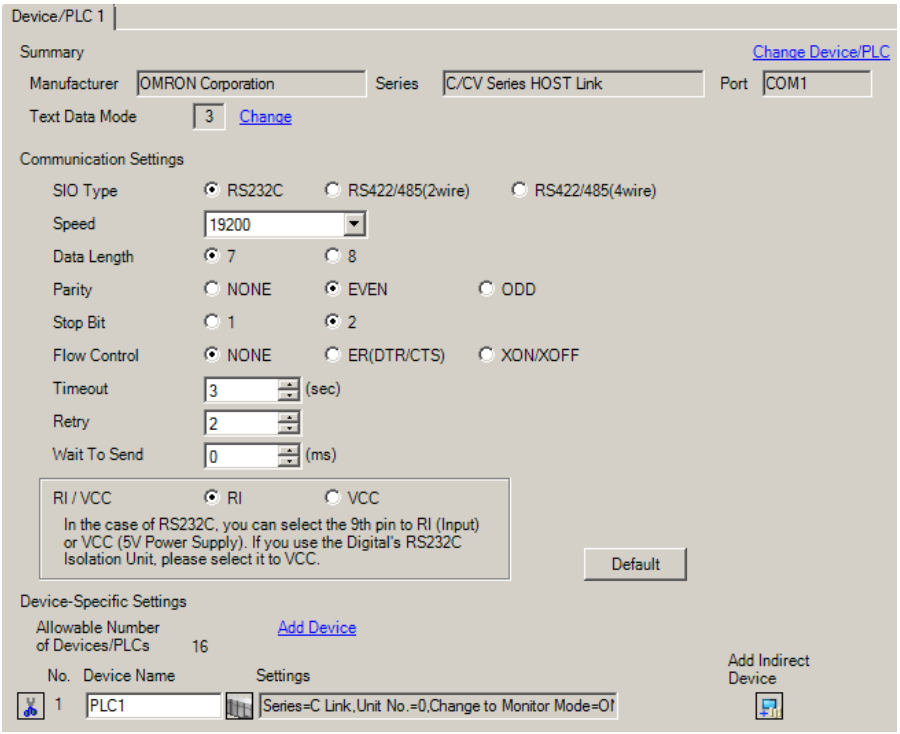
*Connect the conversion adapter to the communication port on the CPU.

## 3.14 Setting Example 14

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using the RS232C port on the CPM2C-CIF11

Use the ladder tool etc. and set the value as below.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6645 | 0001(HEX) | Mode selection: HOST link |
| DM6646 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6648 | 0000(HEX) | HOST link, Unit No.: 0 |

Write the data in each register and reset the External Device.

Connecting Port Function Setting Switch on the CPU Unit

| DIP Switch | Settings |
|---|---|
| SW1 | OFF |
| SW2 | ON |

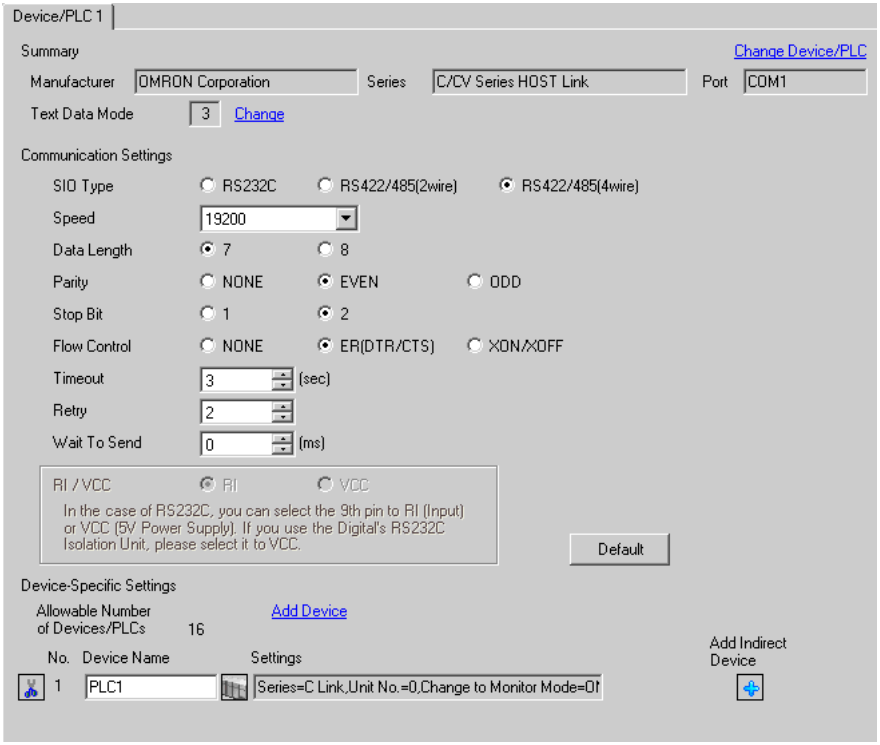
*Connect the conversion adapter to the communication port on the CPU.

## 3.15 Setting Example 15

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using the RS422 port on the CPM2C-CIF11

Use the ladder tool etc. and set the value as below.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6650 | 0001(HEX) | Mode selection: HOST link |
| DM6651 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6653 | 0000(HEX) | HOST link, Unit No.: 0 |

Write the data in each register and reset the External Device.

When the External Device is located at the end of the communication connection due to system configuration, set the switch to "With termination resistance connection (ON)"; in other cases, set it to "Without termination resistance connection (OFF)"

RS-485 Interface Toggle Switch

| DIP Switch 2 | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | 4 wire communication |
| SW2 | OFF | |
| SW3 | OFF | RS control function of the CPU unit |
| SW4 | ON | |

Connecting Port Function Setting Switch on the CPU Unit

| DIP Switch | Settings |
|---|---|
| SW1 | OFF |
| SW2 | ON |

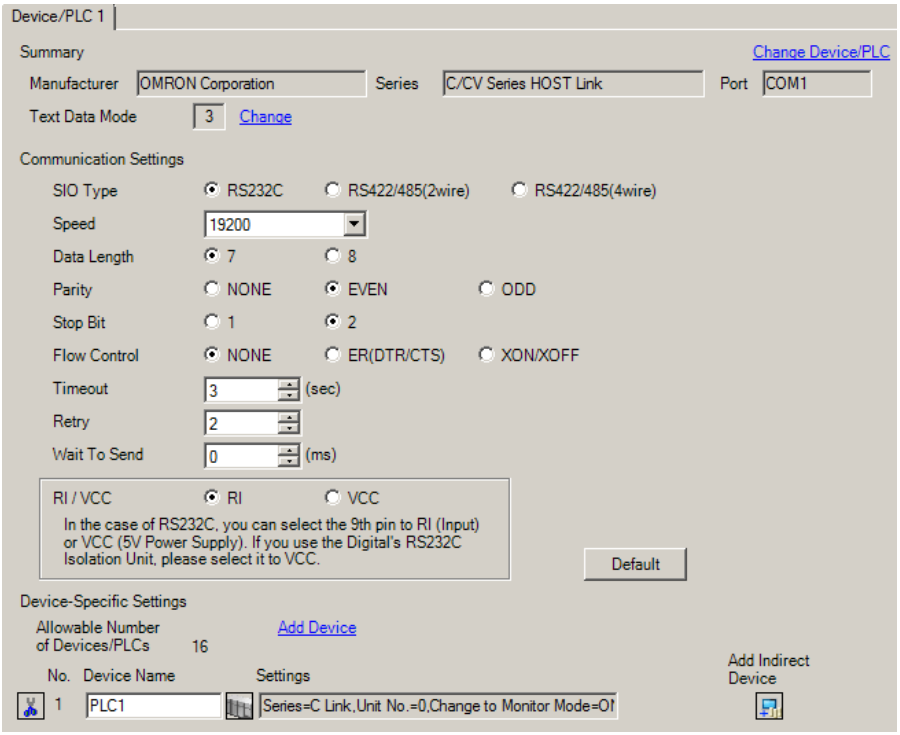
*Connect the conversion adapter to the communication port on the CPU.

## 3.16 Setting Example 16

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using RS232C on CQM1H - SCB41B

Use the ladder tool etc. and set the value as below.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6555 | 0001(HEX) | Mode selection: HOST link |
| DM6556 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6558 | 0000(HEX) | HOST link, Unit No.: 0 |

Write the data in each register and reset the External Device.

Switch setting on the front unit

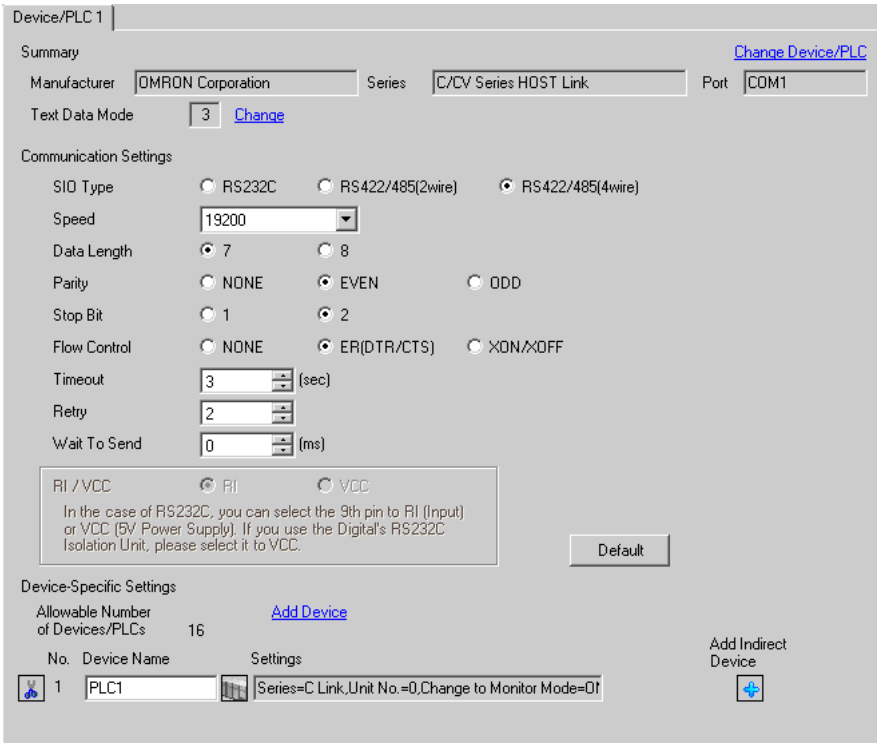
| Switch | Settings |
|---|---|
| TERM | OFF |
| FIRE | Option |

## 3.17 Setting Example 17

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using RS422/485 port on CQM1H-SCB41B

Use the ladder tool etc. and set the value as below.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6550 | 0001(HEX) | Mode selection: HOST link |
| DM6551 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6553 | 0000(HEX) | HOST link, Unit No.: 0 |

Write the data in each register and reset the External Device.

Switch setting on the front unit

| Switch | Settings |
|---|---|
| TERM | ON |
| FIRE | 4 |

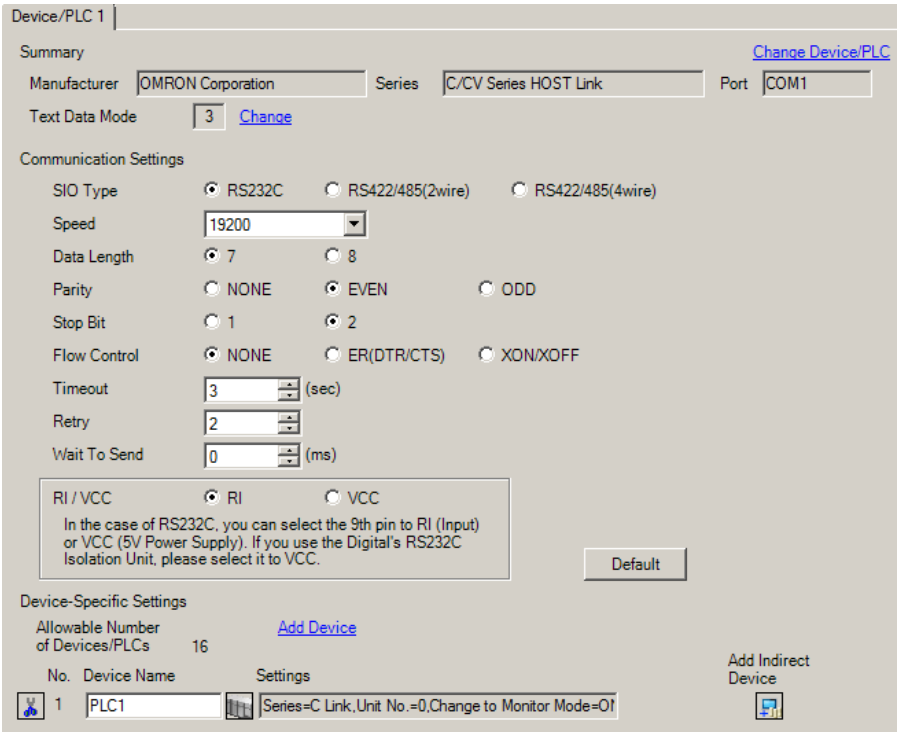
When the External Device is located at the end of the communication connection due to system configuration, set the switch to "With termination resistance connection (ON)"; in other cases, set it to "Without termination resistance connection (OFF)"

## 3.18 Setting Example 18

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Use the ladder tool etc. and set the value as below.

Set SW5 to OFF.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6645 | 0001(HEX) | Mode selection: HOST link |
| DM6646 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6648 | 0000(HEX) | HOST link, Unit No.: 0 |

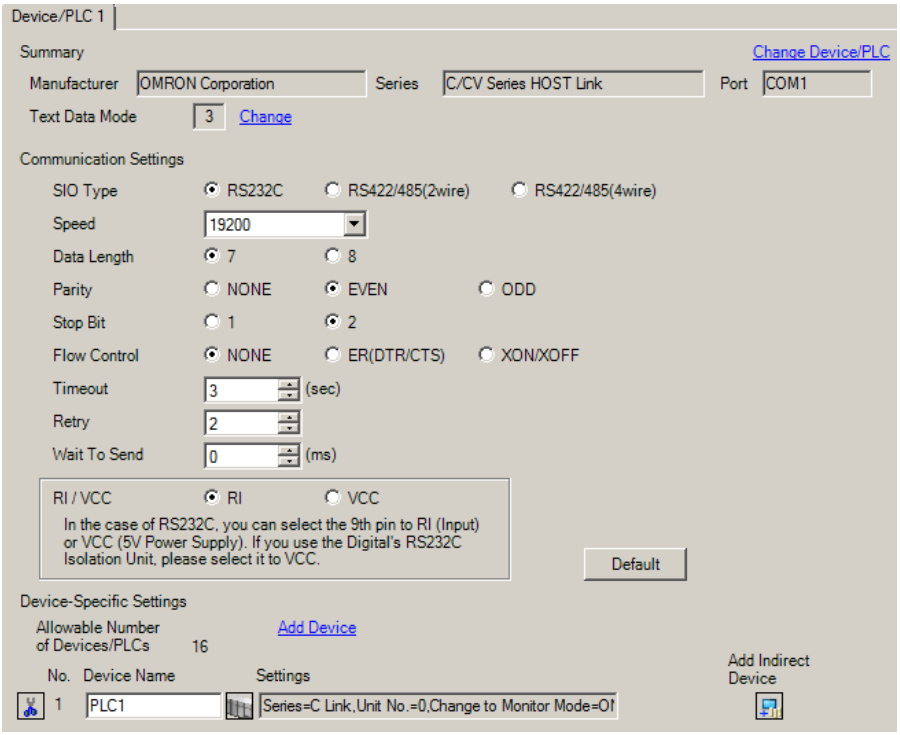
Write the data in each register and reset the External Device.

## 3.19 Setting Example 19

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Use the ladder tool etc. and set the value as below.

Set SW5 to OFF.

Please refer to the manual of the External Device for more details on settings.

◆ When using the port A

| Register | Settings | Setup Description |
|---|---|---|
| DM6555 | 0001(HEX) | Mode selection: HOST link |
| DM6556 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6558 | 0000(HEX) | HOST link, Unit No.: 0 |

Write the data in each register and reset the External Device.

◆ When using the port B

| Register | Settings | Setup Description |
|---|---|---|
| DM6550 | 0001(HEX) | Mode selection: HOST link |
| DM6551 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6553 | 0000(HEX) | HOST link, Unit No.: 0 |

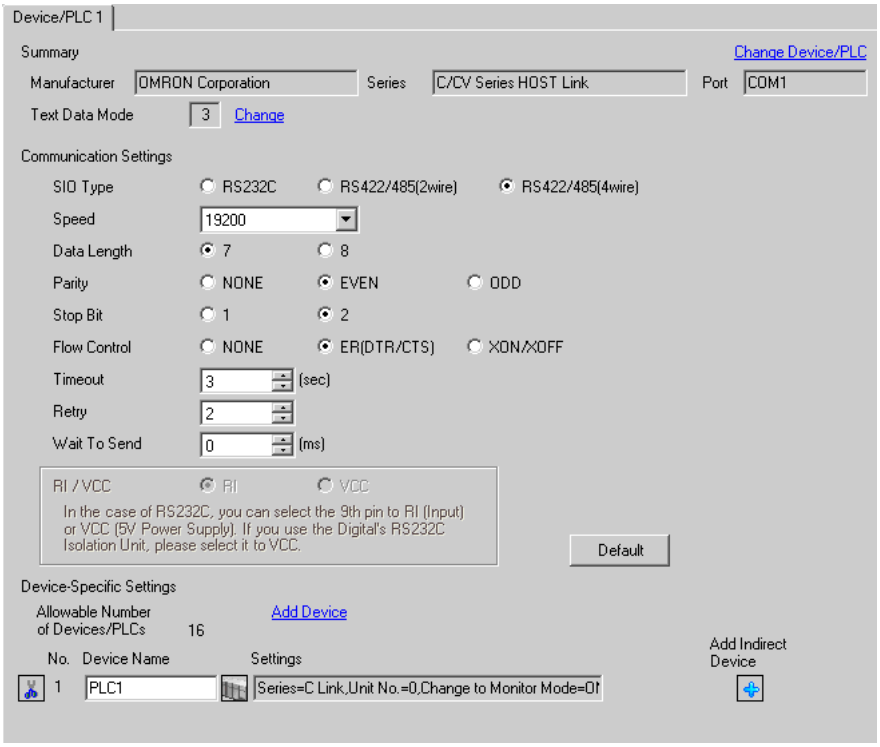
Write the data in each register and reset the External Device.

## 3.20 Setting Example 20

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

Use the ladder tool etc. and set the value as below.

Set SW5 to OFF.

Please refer to the manual of the External Device for more details on settings.

| Register | Settings | Setup Description |
|---|---|---|
| DM6555 | 0001(HEX) | Mode selection: HOST link |
| DM6556 | 0304(HEX) | 19200bps, 7-bit data length, 2 stop bits, Even parity |
| DM6558 | 0000(HEX) | HOST link, Unit No.: 0 |

Write the data in each register and reset the External Device.

Set the DIP switch on the communication board as below.

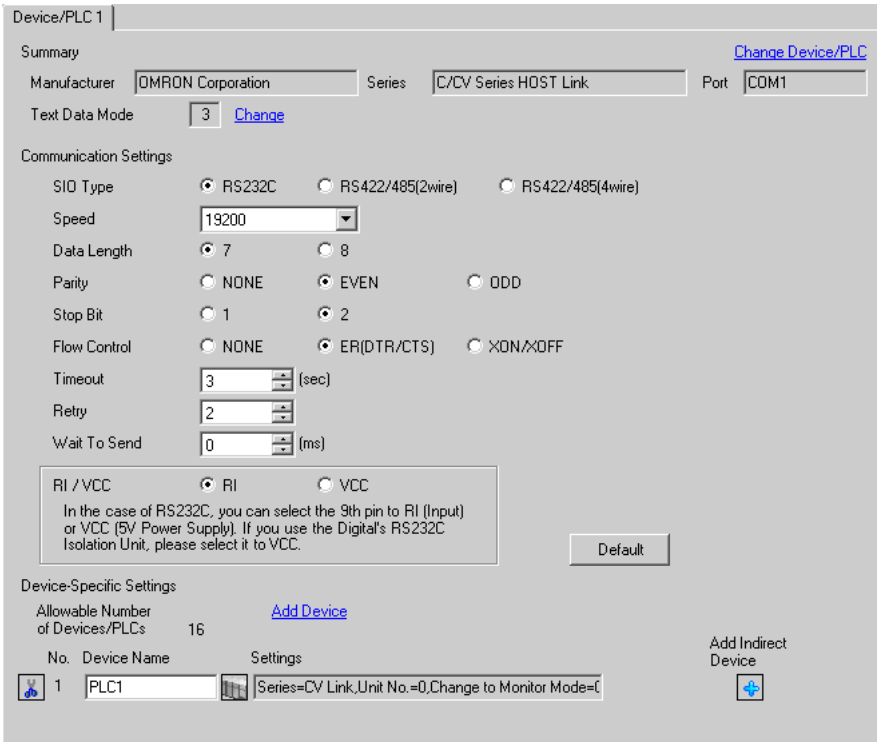
- SW1: ON
- SW2: When the External Device is located at the end of the communication connection due to system configuration, set the switch to "With termination resistance (ON)"; in other cases, set it to "Without termination resistance (OFF)".

## 3.21 Setting Example 21

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using the port 1 (RS232C)

| Rotary Switch*1 | Settings | Setup Description |
|---|---|---|
| SW3 | 0 | Unit No.: 0 |
| SW4 | 0 | |

*1 SW1 and SW2 settings have no relations with the communication of the Display.

| | Settings | Setup Description |
|---|---|---|
| 5V Output Setting SW | Lower | Not supply |

| | Settings | Setup Description |
|---|---|---|
| Termination resistance SW | Lower | Termination resistance: Without |

| DIP Switch | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | 9600bps, 7-bit data length, 2 stop bits, Even parity*1 |
| SW2 | ON | Port 1: Always CTS signal ON |
| SW3 | ON | Port 2: Always CTS signal ON |
| SW4 | OFF | Reserved: Always OFF |
| SW5 | OFF | Wrap communication test: Execute normal operation. |
| SW6 | OFF | Unused |

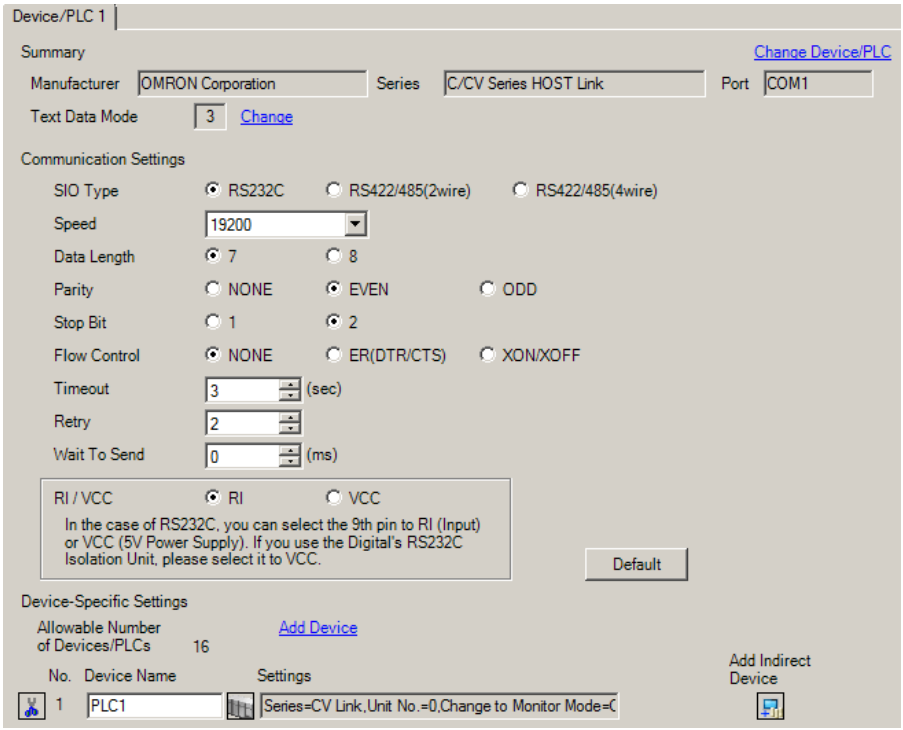
*1 Use the ladder software etc. to change the transmission speed to 19200bps.

## 3.22 Setting Example 22

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using the port 2 (RS232C)

| Rotary Switch*1 | Settings | Setup Description |
|---|---|---|
| SW3 | 0 | Unit No.: 0 |
| SW4 | 0 | |

*1 SW1 and SW2 settings have no relations with the communication of the Display.

| | Settings | Setup Description |
|---|---|---|
| 5V Output Setting SW | Lower | Not supply |

| | Settings | Setup Description |
|---|---|---|
| Channel toggle SW | Lower | RS232C |

| | Settings | Setup Description |
|---|---|---|
| Termination resistance SW | Lower | Termination resistance: Without |

| DIP Switch | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | 9600bps, 7-bit data length, 2 stop bits, Even parity*1 |
| SW2 | ON | Port 1: Always CTS signal ON |
| SW3 | ON | Port 2: Always CTS signal ON |
| SW4 | OFF | Reserved: Always OFF |
| SW5 | OFF | Wrap communication test: Execute normal operation. |
| SW6 | OFF | Unused |

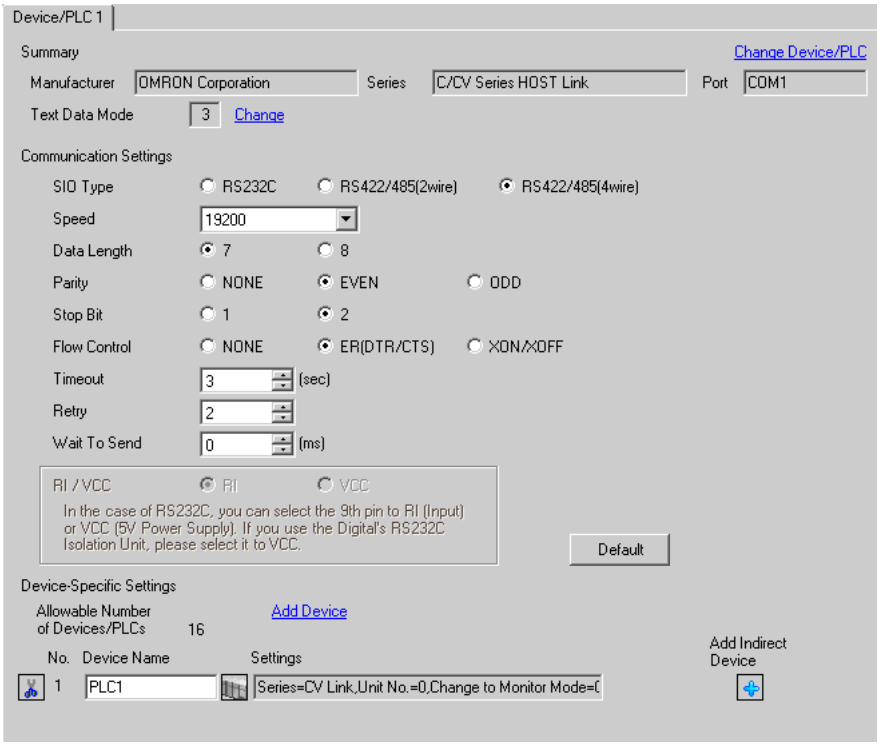
*1 Use the ladder software etc. to change the transmission speed to 19200bps.

## 3.23 Setting Example 23

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When using the port 2 (RS422)

| Rotary Switch*1 | Settings | Setup Description |
|---|---|---|
| SW3 | 0 | Unit No.: 0 |
| SW4 | 0 | |

*1 SW1 and SW2 settings have no relations with the communication of the Display.

| | Settings | Setup Description |
|---|---|---|
| 5V Output Setting SW | Lower | Not supply |

| | Settings | Setup Description |
|---|---|---|
| Channel toggle SW | Upper | RS422 |

| | Settings | Setup Description |
|---|---|---|
| Termination resistance SW | Upper | Termination resistance: With*1 |

*1 Set to ON the termination resistance selection switch of only the unit which is located at the end of the system.

| DIP Switch | Settings | Setup Description |
|---|---|---|
| SW1 | OFF | 9600bps, 7-bit data length, 2 stop bits, Even parity*1 |
| SW2 | ON | Port 1: Always CTS signal ON |
| SW3 | ON | Port 2: Always CTS signal ON |
| SW4 | OFF | Reserved: Always OFF |
| SW5 | OFF | Wrap communication test: Execute normal operation. |
| SW6 | OFF | Unused |

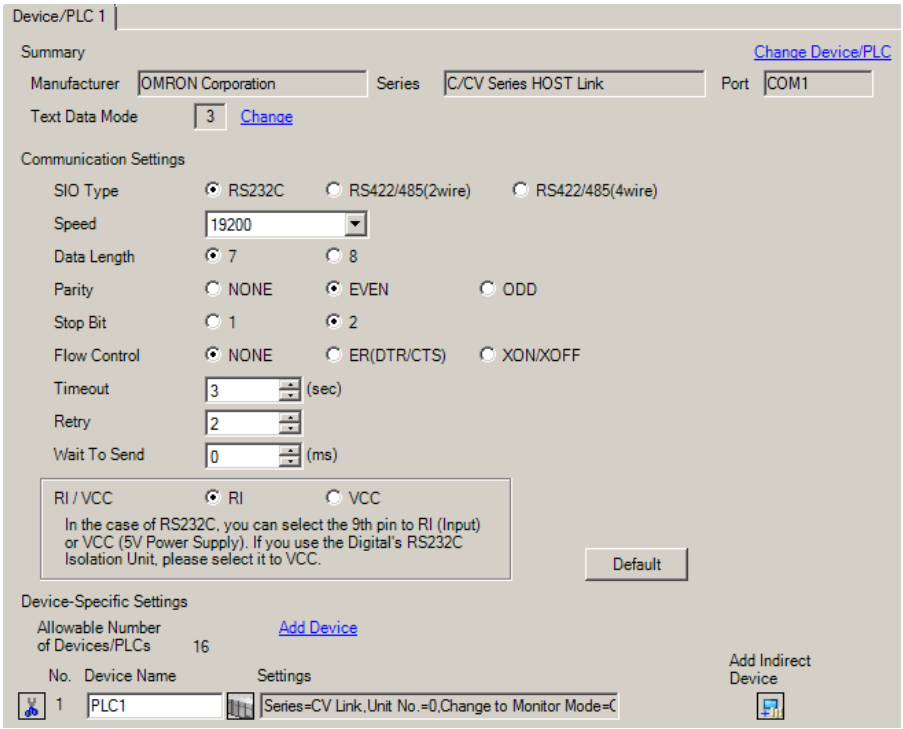
*1 Use the ladder software etc. to change the transmission speed to 19200bps.

## 3.24 Setting Example 24

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When connecting the RS232C port

| | Settings | Setup Description |
|---|---|---|
| Communication Setting Toggle SW | Upper | RS232C SIO Type |

| DIP Switch*1 | Settings | Setup Description |
|---|---|---|
| SW4 | OFF | 19200bps, 7-bit data length, 2 stop bits, Even parity, Unit No.: 0 |
| SW6 | OFF | Termination resistance: Without |

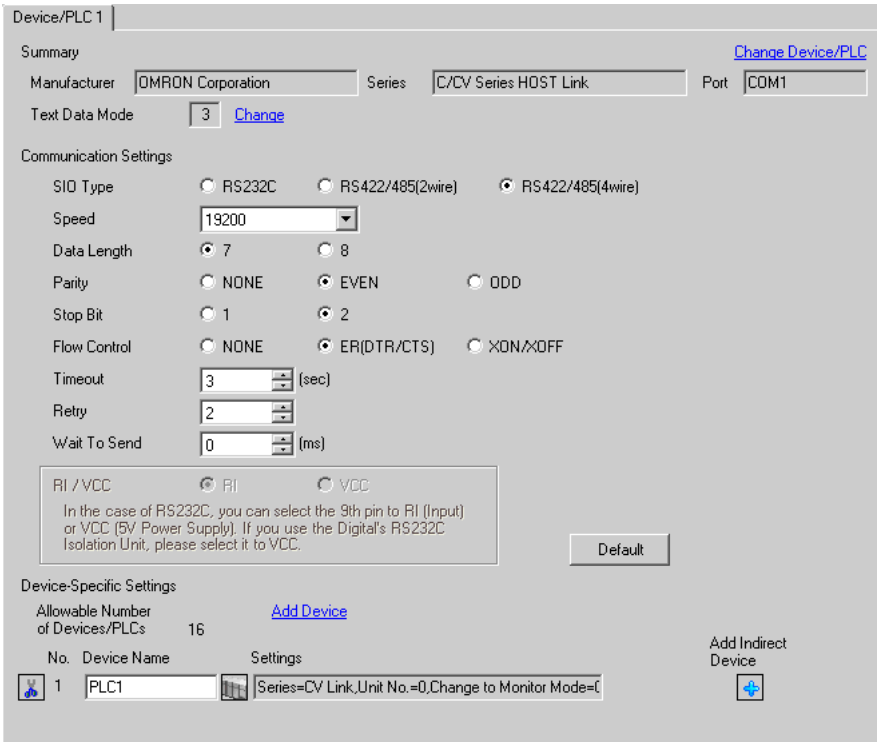
*1 Other DIP SW settings have no relations with the communication with GP.

## 3.25 Setting Example 25

### ■ Setting of GP-Pro EX

#### ◆ Communication Settings

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




#### ◆ 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.

## ■ Setting of External Device

When connecting the RS422 port

| | Settings | Setup Description |
|---|---|---|
| Communication Setting Toggle SW | Lower | RS422 SIO Type |

| DIP Switch*1 | Settings | Setup Description |
|---|---|---|
| SW4 | OFF | 19200bps, 7-bit data length, 2 stop bits, Even parity, Unit No.: 0 |
| SW6 | ON | Termination resistance: With*2 |

*1 Other DIP SW settings have no relations with the communication with GP.

*2 Set to ON the termination resistance selection switch of only the unit which is located at the end of the system.

# 4 Setup Items

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

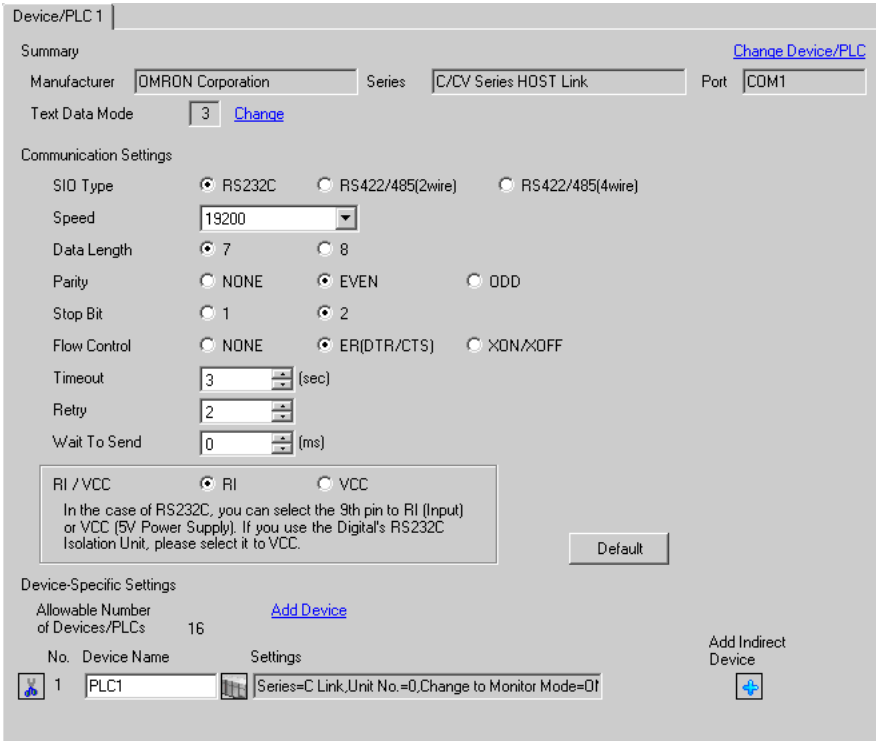
The setting of each parameter must be identical to that of External Device.

☞"3 Example of Communication Setting" (page 16)

## 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. |

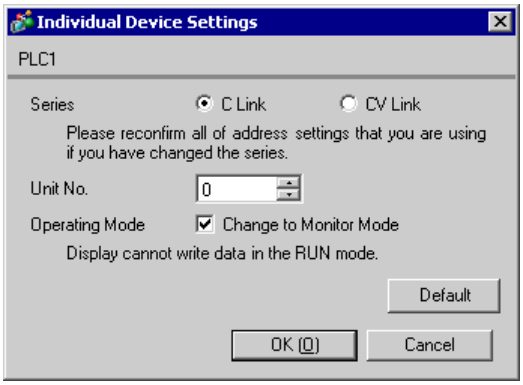
continued to next page

| Setup Items | Setup Description |
|---|---|
| Wait To Send | Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands. |
| RI/VCC | You can switch RI/VCC of the 9th pin when you select RS232C for SIO type.<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. |

## ■ 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 the model of the External Device to be connected. |
| Unit No. | Set the unit No. of the External Device. |
| Operating Mode | Set the change to the monitor mode whether enable or disable. |

**IMPORTANT**

- The External Device does not receive write from the Display in operation mode. When the "Operating Mode" is enabled, the External Device will be changed to the monitor mode at startup, which allows you to write to the External Device.

## 4.2 Setup Items in Offline Mode

**NOTE**

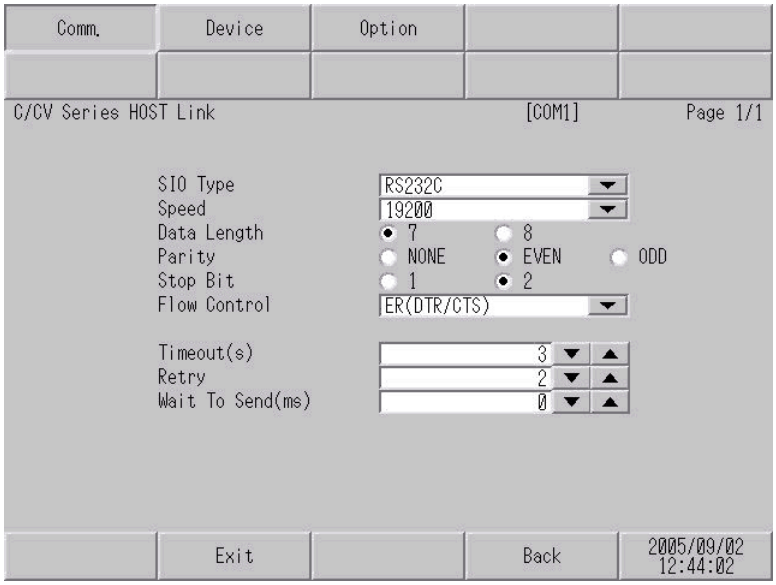
- Refer to the Maintenance/Troubleshooting guide for information on how to enter offline mode or about the operation.

  Cf. Maintenance/Troubleshooting Guide "Offline Mode"

- The number of the setup items to be displayed for 1 page in the offline 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 Settings] in the offline mode. Touch the External Device you want to set from the displayed list, and touch [Communication Settings].

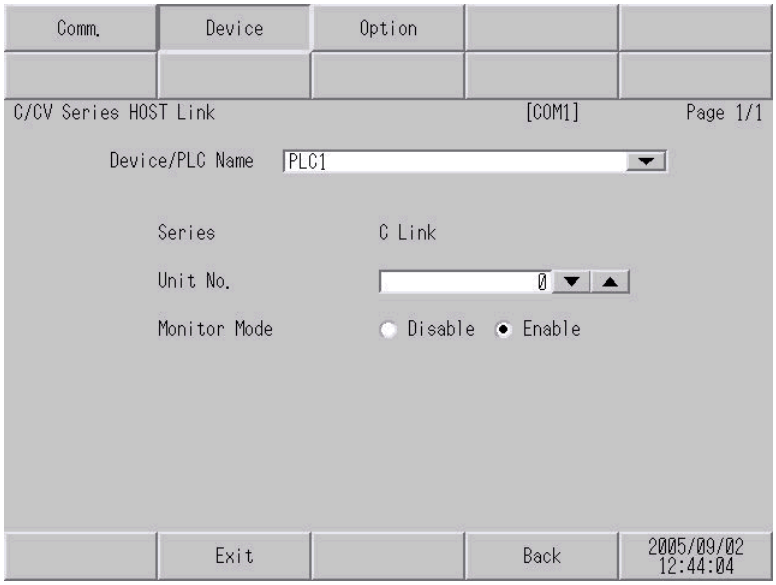



| Setup Items | Setup Description |
|---|---|
| SIO Type | Select the SIO type to communicate with the External Device.<br>**IMPORTANT**<br>To make the communication settings correctly, confirm the serial interface specifications of Display unit for [SIO Type].<br>We cannot guarantee the operation if 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. |
| Parity | Select how to check parity. |
| Stop Bit | Select stop bit length. |
| Flow Control | Select the communication control method to prevent overflow of transmission and reception data. |
| Timeout | Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device. |
| Retry | In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command. |

| Setup Items | Setup Description |
|---|---|
| Wait To Send | Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands. |

## ■ Device Setting

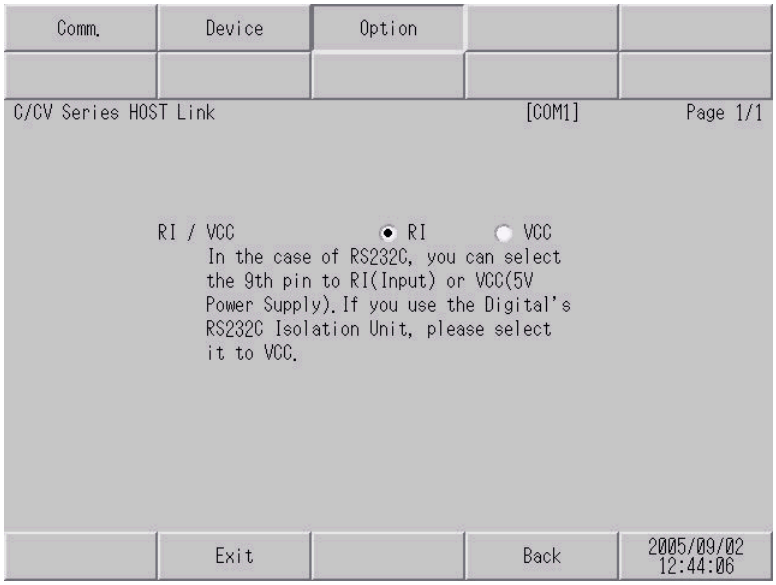
To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings]. Touch the External Device you want to set from the displayed list, and touch [Device Settings].




| Setup Items | Setup Description |
|---|---|
| Device/PLC Name | Select the External Device to set. Device/PLC name is a title of the External Device set with GP-Pro EX. (Initial value [PLC1]) |
| Series | Select the model of the External Device to be connected. |
| Unit No. | Set the unit No. of the External Device. |
| Monitor Mode | Set the change to the monitor mode whether enable or disable. |

## ■ Option

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




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

- GP-4100 series, GP-4*01TM, GP-Rear Module, LT-4*01TM and LT-Rear Module do not have the [Option] setting in the offline mode.

# 5 Cable Diagram

The cable diagram shown below may be different from the cable diagram recommended by OMRON 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

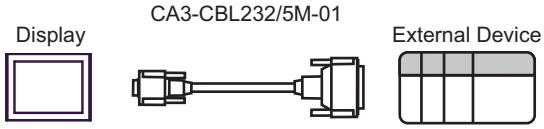
| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000 (COM1)<br>GP4000*1 (COM1)<br>SP5000*2 (COM1/2)<br>SP-5B00 (COM1)<br>ST3000 (COM1)<br>ST6000 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000 (COM1)<br>LT3000 (COM1)<br>IPC*3<br>PC/AT | 1A | RS232C cable by Pro-face<br>CA3-CBL232/5M-01 | |
| | 1B | User-created cable | Cable length: 15m or less |
| GP-4105 (COM1)<br>GP-4115T (COM1)<br>GP-4115T3 (COM1) | 1C | User-created cable | Cable length: 15m or less |

*1 All GP4000 models except GP-4100 Series and GP-4203T

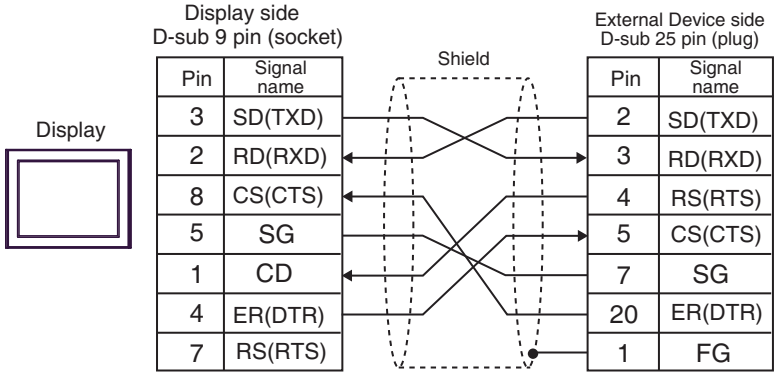
*2 Except SP-5B00

*3 Only the COM port which can communicate by RS-232C can be used.
☞"■ IPC COM Port" (page 12)

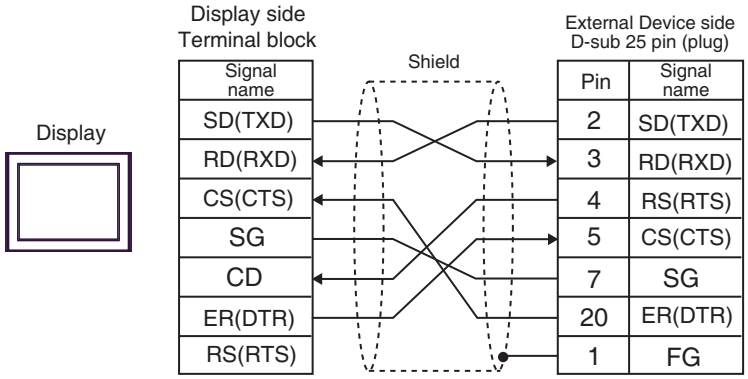
1A)


CA3-CBL232/5M-01
Display
External Device

1B)


Display side
D-sub 9 pin (socket)
Pin
Signal name
3 SD(TXD)
2 RD(RXD)
8 CS(CTS)
5 SG
1 CD
4 ER(DTR)
7 RS(RTS)
Shield
External Device side
D-sub 25 pin (plug)
Pin
Signal name
2 SD(TXD)
3 RD(RXD)
4 RS(RTS)
5 CS(CTS)
7 SG
20 ER(DTR)
1 FG
Display

1C)


Display side
Terminal block
Signal name
SD(TXD)
RD(RXD)
CS(CTS)
SG
CD
ER(DTR)
RS(RTS)
Shield
External Device side
D-sub 25 pin (plug)
Pin
Signal name
2 SD(TXD)
3 RD(RXD)
4 RS(RTS)
5 CS(CTS)
7 SG
20 ER(DTR)
1 FG
Display

Cable Diagram 2

| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 2A | COM port conversion adapter<br>by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter<br>by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 2B | User-created cable | |
| GP3000[*4] (COM2) | 2C | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter<br>by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 2D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 2E | User-created cable | The cable length must be 500m or less. |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 2F | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 2B | User-created cable | |
| PE-4000B[*10]<br>PS5000[*10]<br>PS6000 (Optional Interface)[*10] | 2G | User-created cable | The cable length must be 500m or less. |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

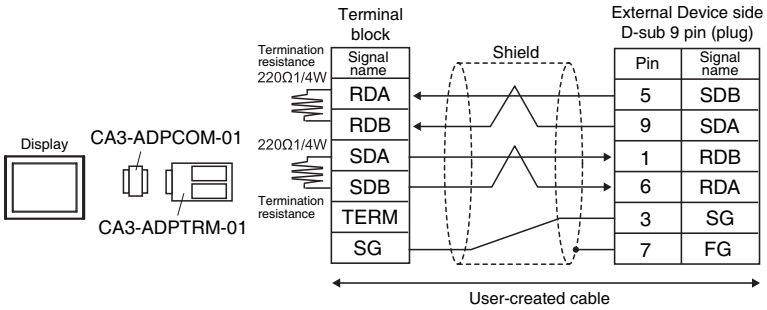
*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

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

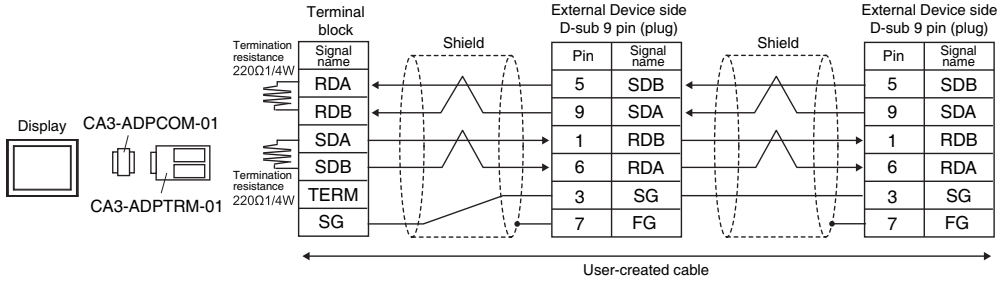
*10 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
"■ IPC COM Port" (page 12)

2A)

- 1:1 Connection




- 1:n Connection

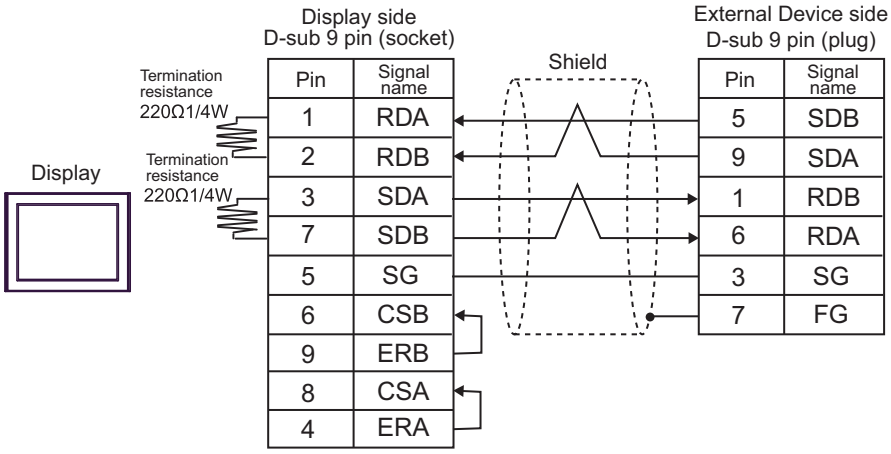



**NOTE**

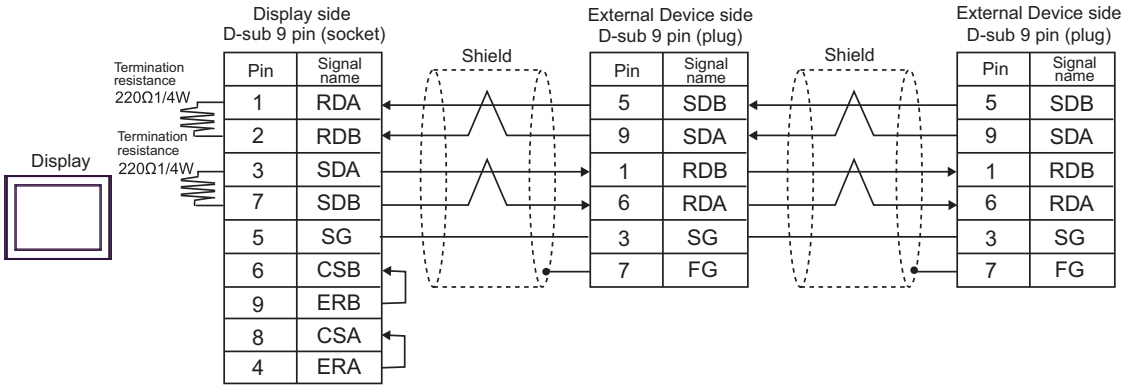
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

2B)

- 1:1 Connection




- 1:n Connection

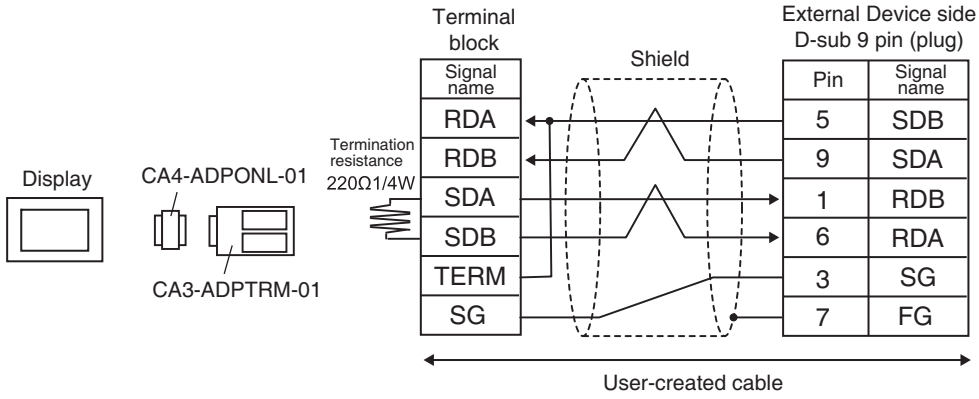



**NOTE**

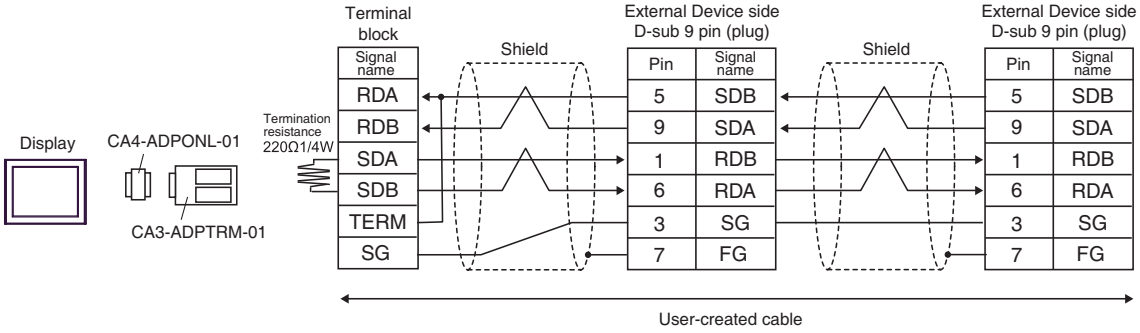
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

2C)

- 1:1 Connection

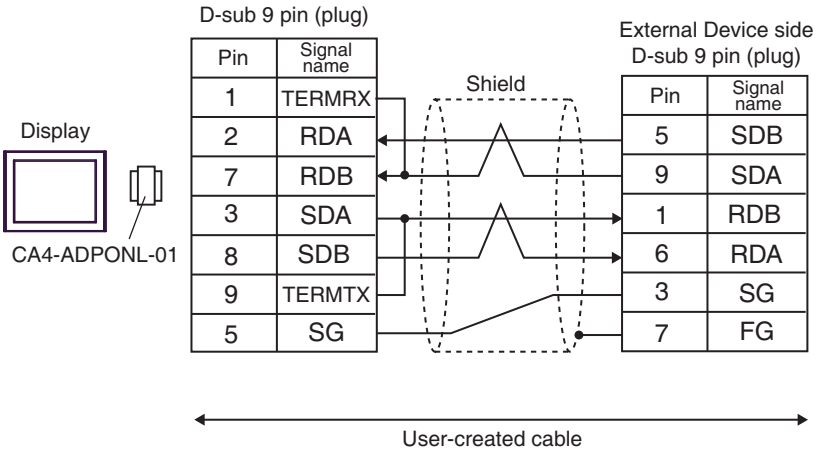



- 1:n Connection

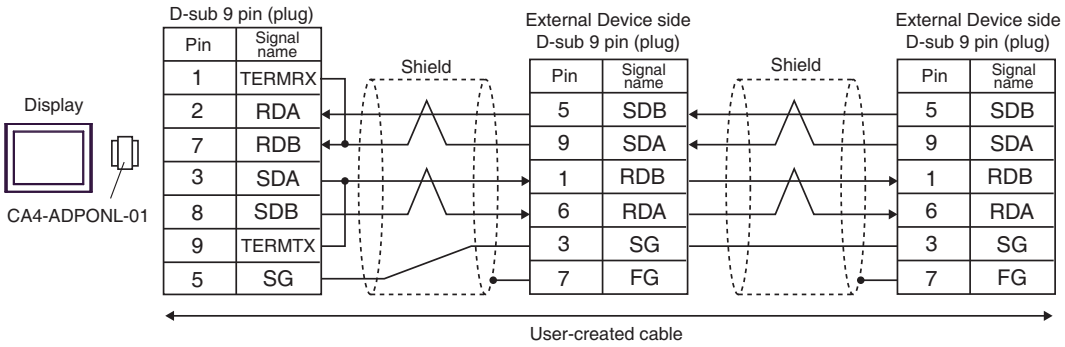


2D)

- 1:1 Connection

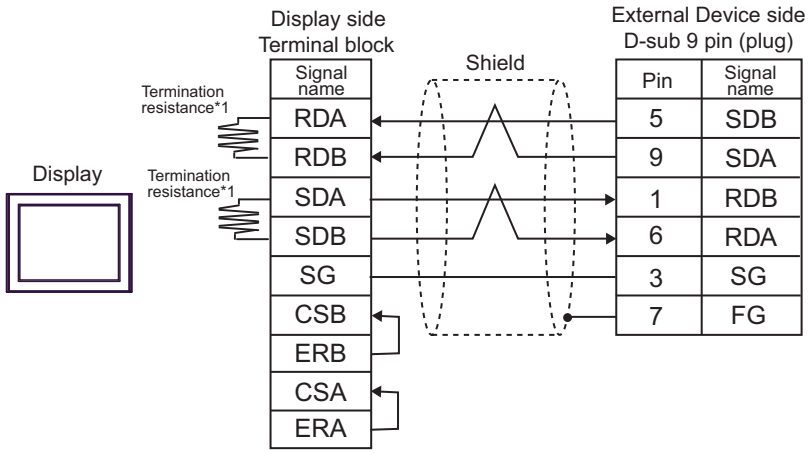



- 1:n Connection

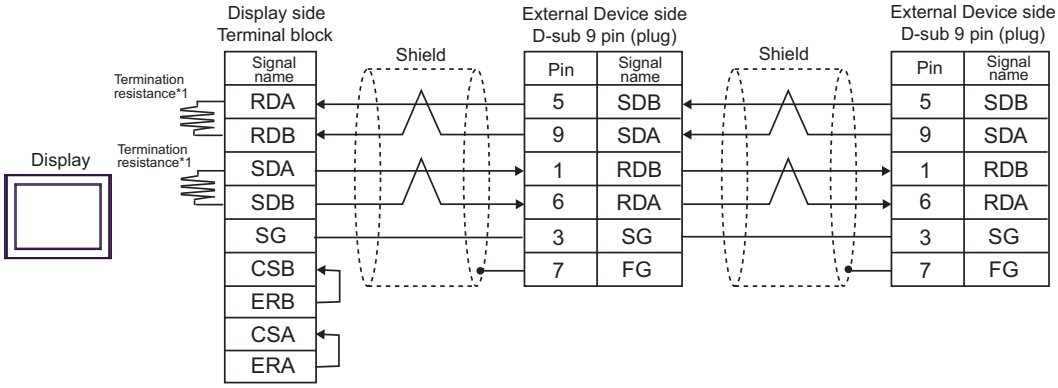


2E)

- 1:1 Connection




- 1:n Connection

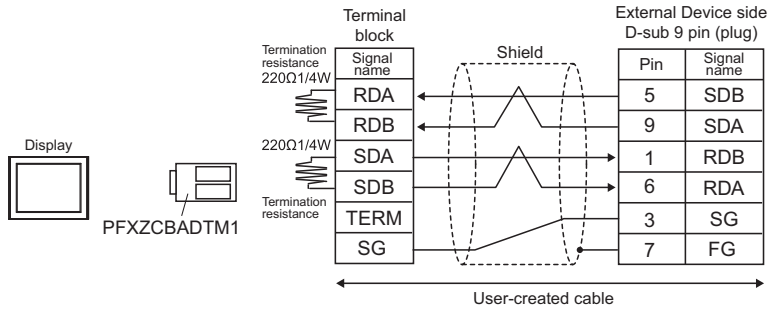



*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

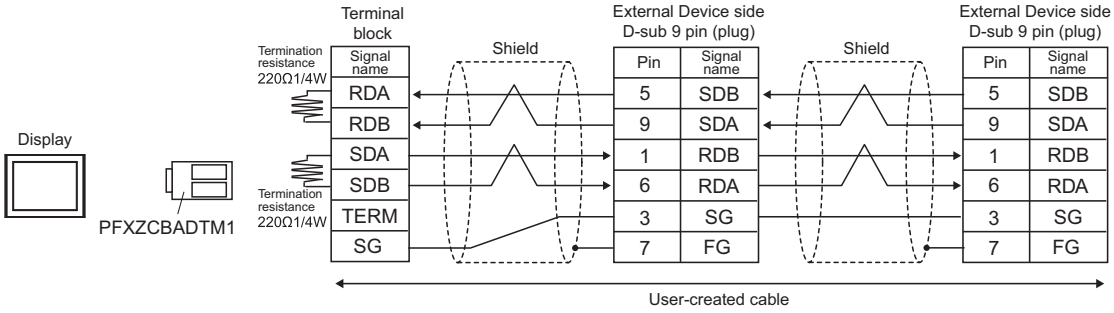
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

2F)

- 1:1 Connection

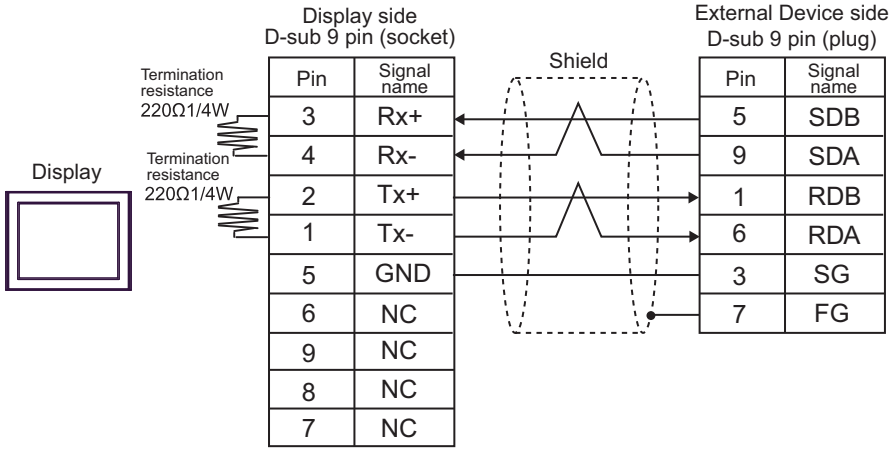



- 1:n Connection

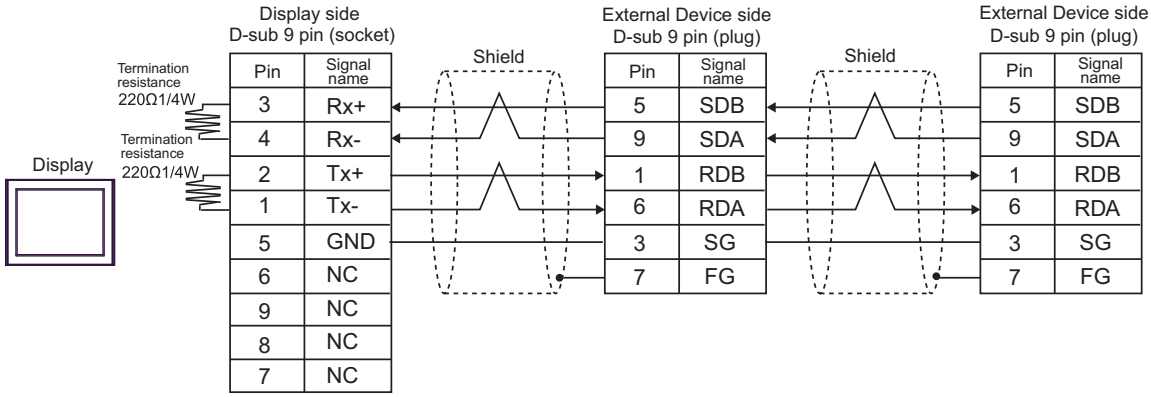


2G)

- 1:1 Connection




- 1:n Connection



Cable Diagram 3

| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000 (COM1)<br>GP4000*1 (COM1)<br>SP5000*2 (COM1/2)<br>SP-5B00 (COM1)<br>ST3000 (COM1)<br>ST6000 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000 (COM1)<br>LT3000 (COM1)<br>IPC*3<br>PC/AT | 3A | OMRON SYSMAC link cable by Pro-face<br>CA3-CBLSYS-01 | |
| | 3B | User-created cable | The cable length must be 15m or less. |
| GP-4105 (COM1)<br>GP-4115T (COM1)<br>GP-4115T3 (COM1) | 3C | User-created cable | The cable length must be 15m or less. |
| LT-4*01TM (COM1)<br>LT-Rear Module (COM1) | 3D | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21 | The cable length must be 5m or less. |

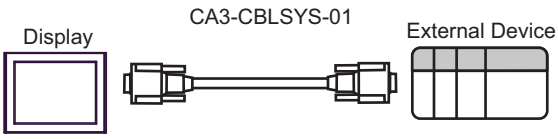
*1 All GP4000 models except GP-4100 Series and GP-4203T

*2 Except SP-5B00

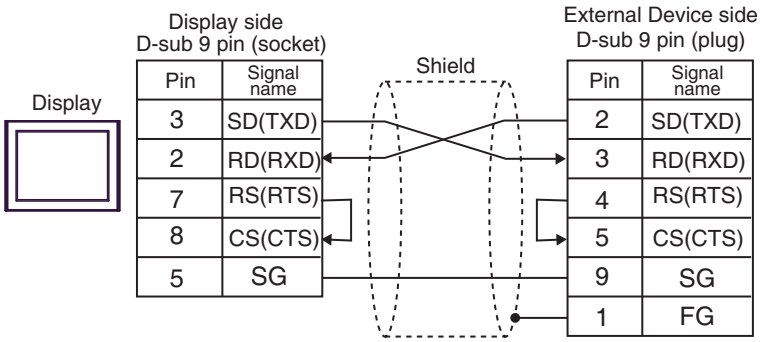
*3 Only the COM port which can communicate by RS-232C can be used.

"■ IPC COM Port" (page 12)

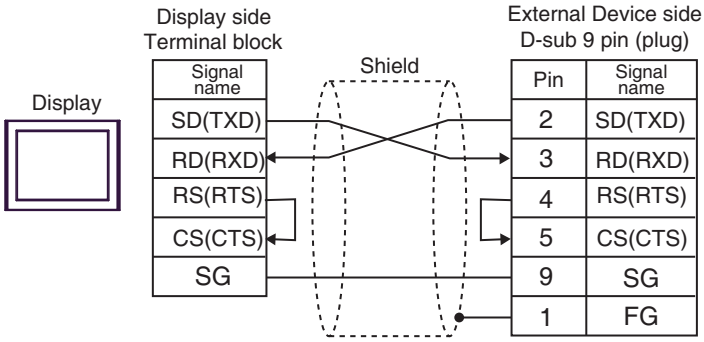
3A)



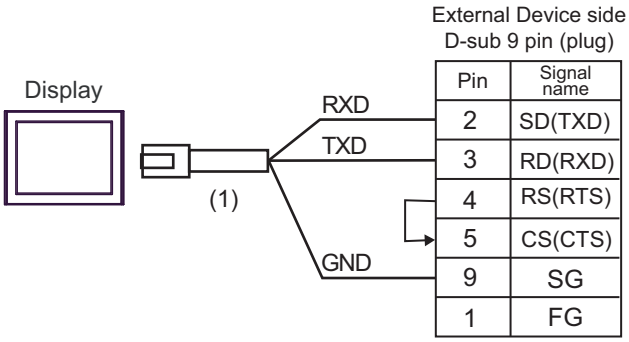

3B)



3C)




3D)




| Number | Name | Notes |
|---|---|---|
| (1) | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21 | |

Cable Diagram 4

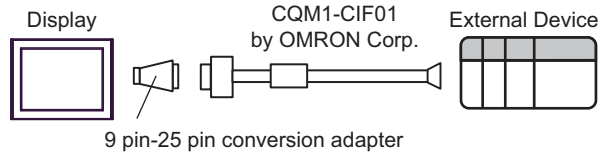
| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000 (COM1)<br>GP4000*1 (COM1)<br>SP5000*2 (COM1/2)<br>SP-5B00 (COM1)<br>ST3000 (COM1)<br>ST6000 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000 (COM1)<br>LT3000 (COM1)<br>IPC*3<br>PC/AT | 4A | Isolation cable by OMRON Corporation<br>CQM1-CIF01 | Commercial 9 pin-25 pin conversion adapter is required. |
| GP-4105 (COM1)<br>GP-4115T (COM1)<br>GP-4115T3 (COM1) | 4B | User-created cable<br>+<br>Isolation cable by OMRON Corporation<br>CQM1-CIF01 | |

*1 All GP4000 models except GP-4100 Series and GP-4203T

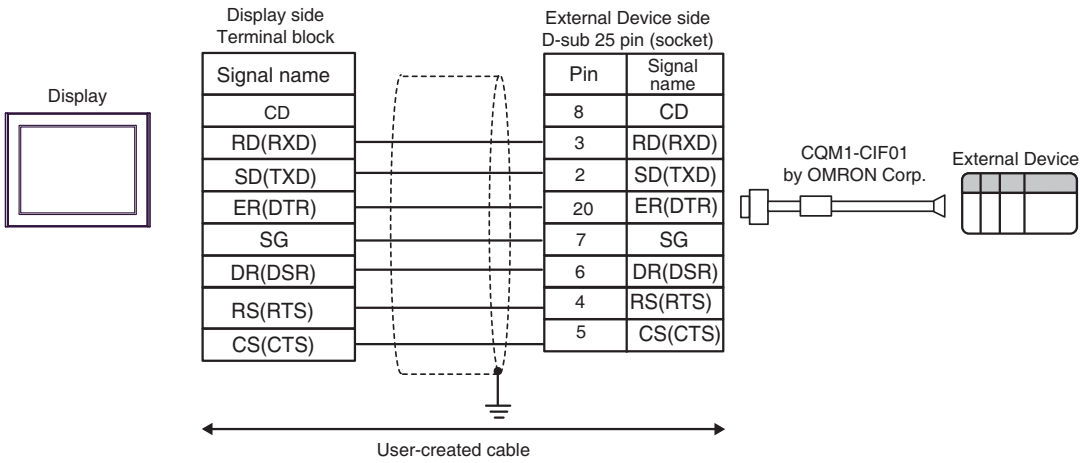
*2 Except SP-5B00

*3 Only the COM port which can communicate by RS-232C can be used.
☞"■ IPC COM Port" (page 12)

4A)




4B)



Cable Diagram 5

| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 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>User-created cable | The cable length must be 500m or less. |
| | 5B | User-created cable | |
| GP3000[*4] (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>User-created cable | The cable length must be 500m or less. |
| | 5D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 5E | User-created cable | The cable length must be 500m or less. |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 5F | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 5B | User-created cable | |
| PE-4000B[*10]<br>PS5000[*10]<br>PS6000 (Optional Interface)[*10] | 5G | User-created cable | The cable length must be 500m or less. |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

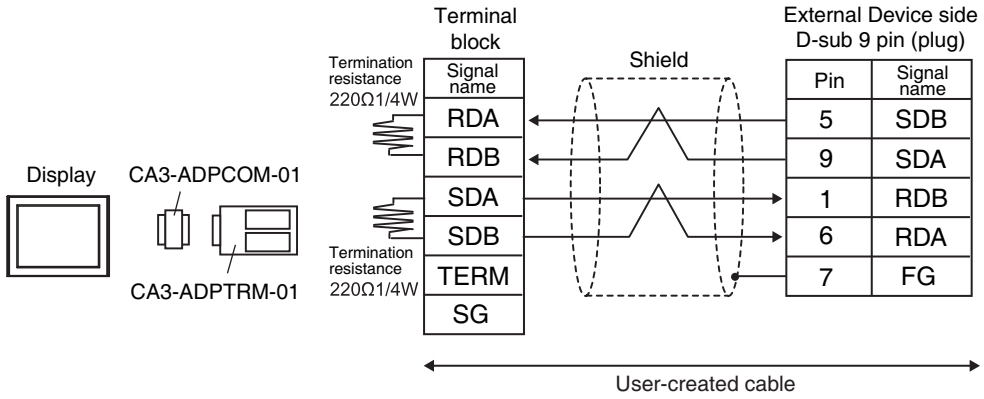
*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

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

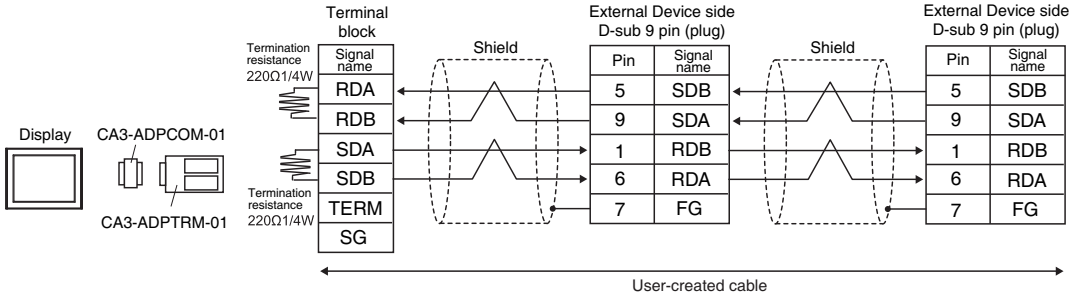
*10 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

5A)

- 1:1 Connection




- 1:n Connection

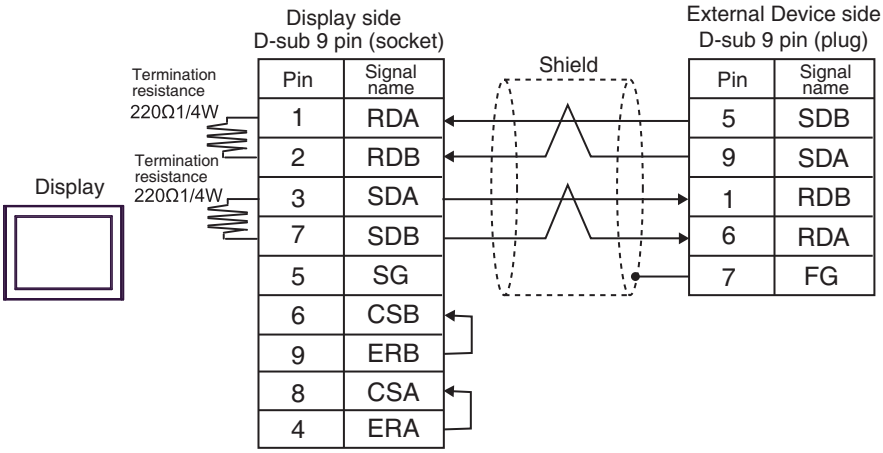



**NOTE**

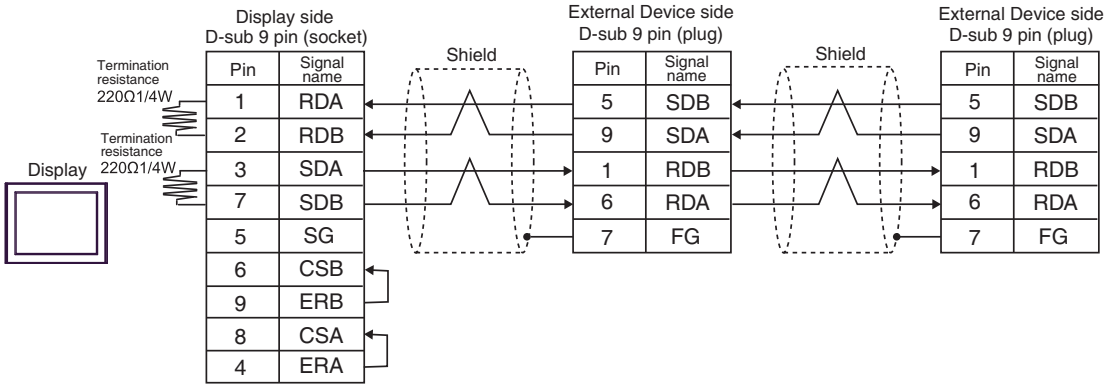
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

5B)

- 1:1 Connection




- 1:n Connection

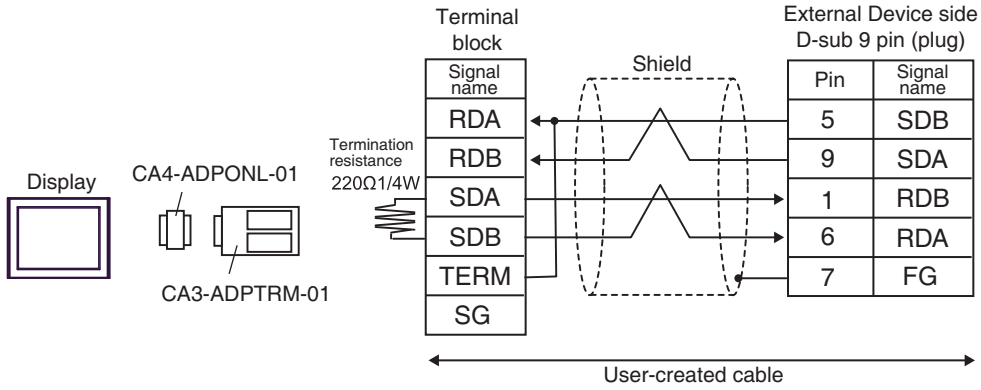



**NOTE**

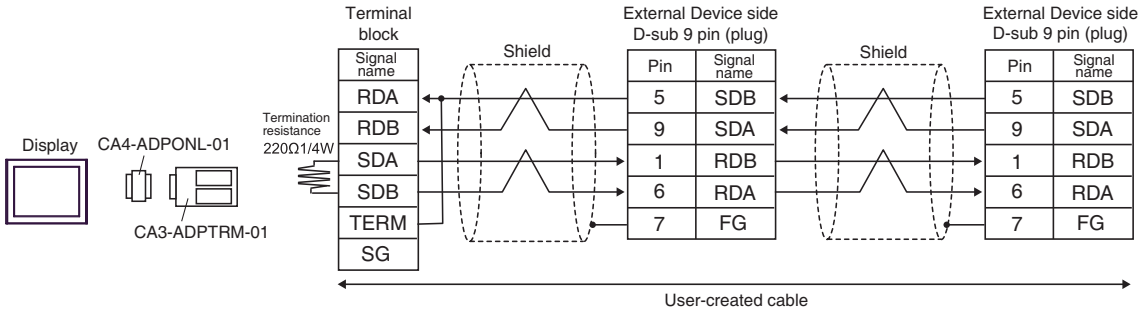
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

5C)

- 1:1 Connection

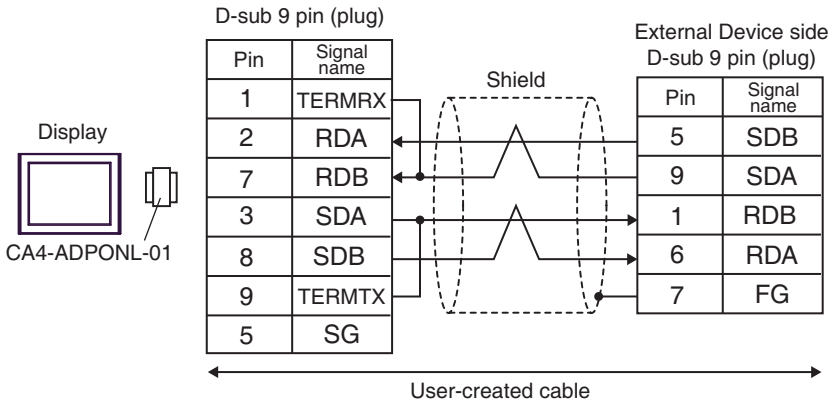



- 1:n Connection

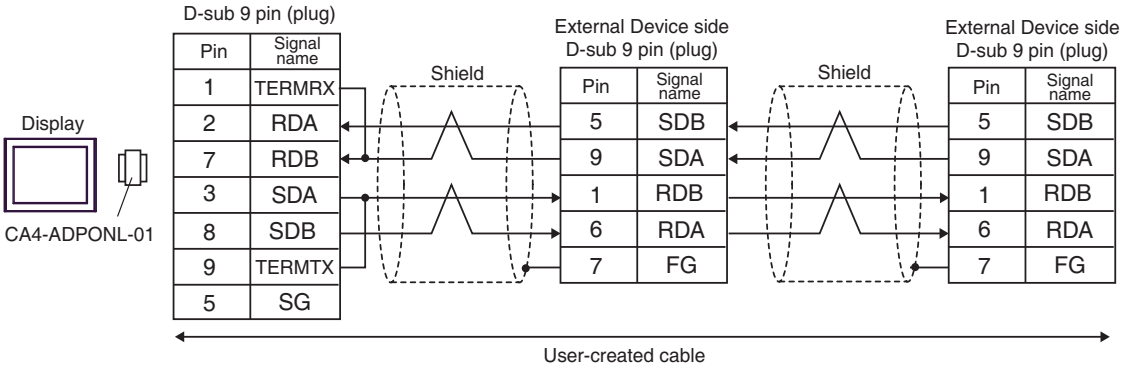


5D)

- 1:1 Connection

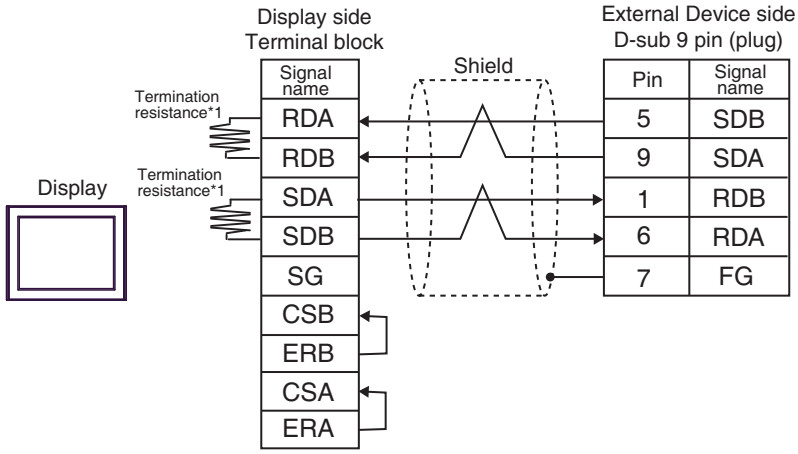



- 1:n Connection

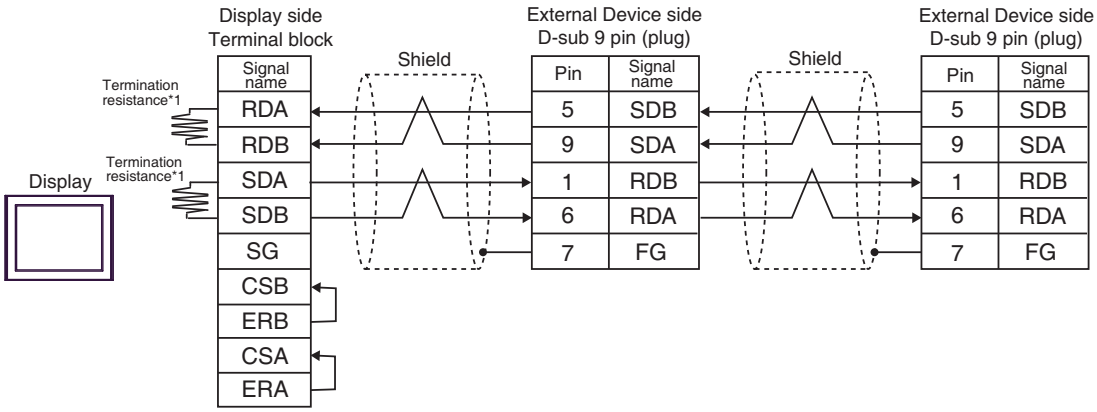


5E)

- 1:1 Connection




- 1:n Connection

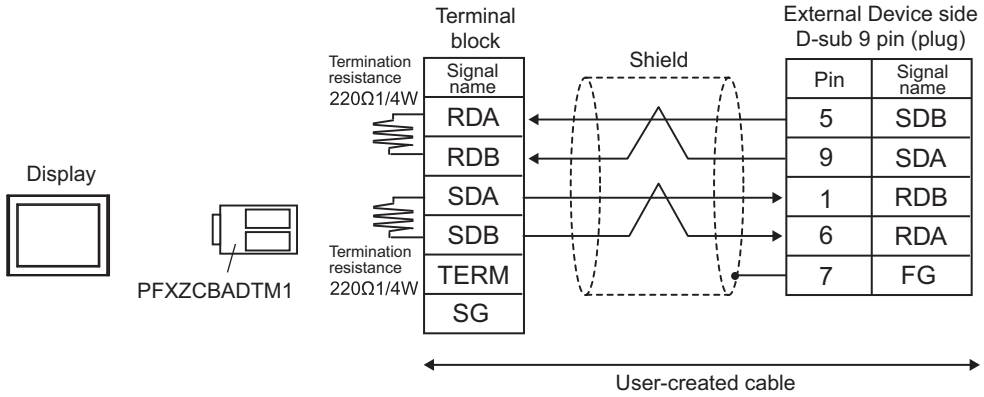



*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

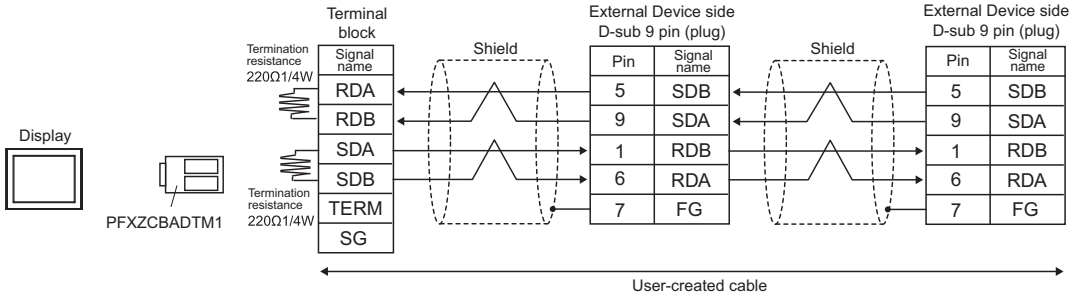
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

5F)

- 1:1 Connection

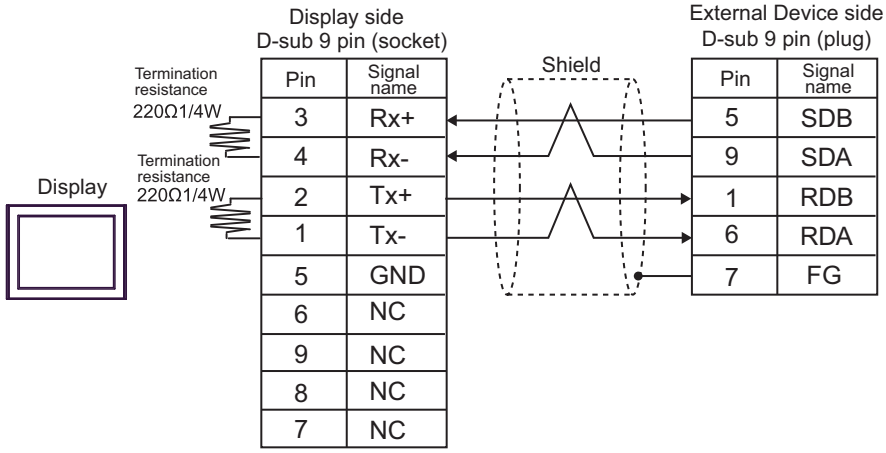



- 1:n Connection

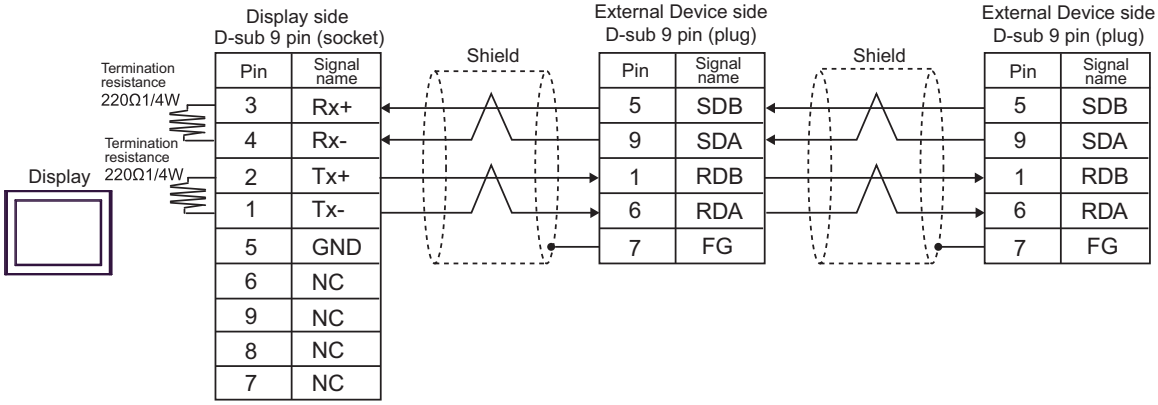


5G)

- 1:1 Connection




- 1:n Connection



Cable Diagram 6

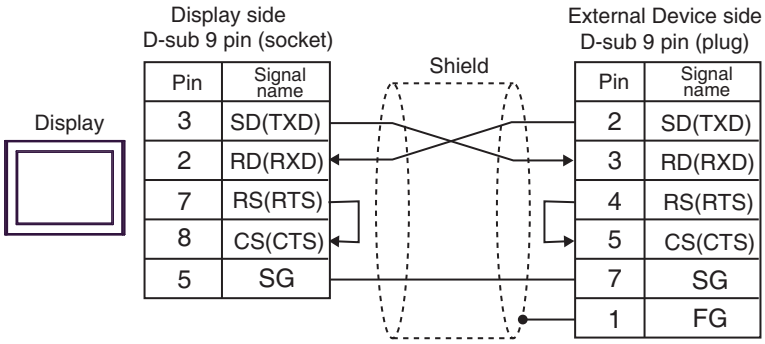
| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000 (COM1)<br>GP4000*1 (COM1)<br>SP5000*2 (COM1/2)<br>SP-5B00 (COM1)<br>ST3000 (COM1)<br>ST6000 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000 (COM1)<br>LT3000 (COM1)<br>IPC*3<br>PC/AT | 6A | User-created cable | The cable length must be 15m or less. |
| GP-4105 (COM1)<br>GP-4115T (COM1)<br>GP-4115T3 (COM1) | 6B | User-created cable | The cable length must be 15m or less. |
| LT-4*01TM (COM1)<br>LT-Rear Module (COM1) | 6C | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21 | The cable length must be 5m or less. |

*1 All GP4000 models except GP-4100 Series and GP-4203T

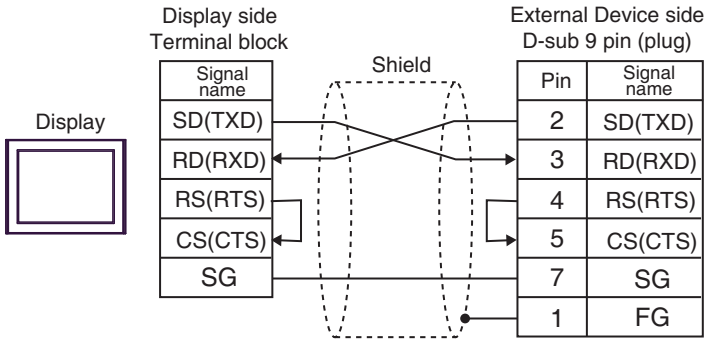
*2 Except SP-5B00

*3 Only the COM port which can communicate by RS-232C can be used.
☞"■ IPC COM Port" (page 12)

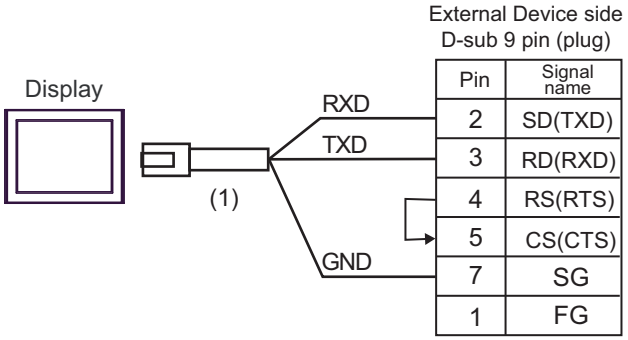
6A)



6B)




6C)




| Number | Name | Notes |
|---|---|---|
| (1) | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21 | |

Cable Diagram 7

| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 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>User-created cable | The cable length must be 500m or less. |
| | 7B | RS422 cable by Pro-face<br>CA3-CBL422/5M-01 | |
| | 7C | User-created cable | |
| GP3000[*4] (COM2) | 7D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 7E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 7F | User-created cable | The cable length must be 500m or less. |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 7G | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 7B | RS422 cable by Pro-face<br>CA3-CBL422/5M-01 | |
| | 7C | User-created cable | |
| PE-4000B[*10]<br>PS5000[*10]<br>PS6000 (Optional Interface)[*10] | 7H | User-created cable | The cable length must be 500m or less. |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

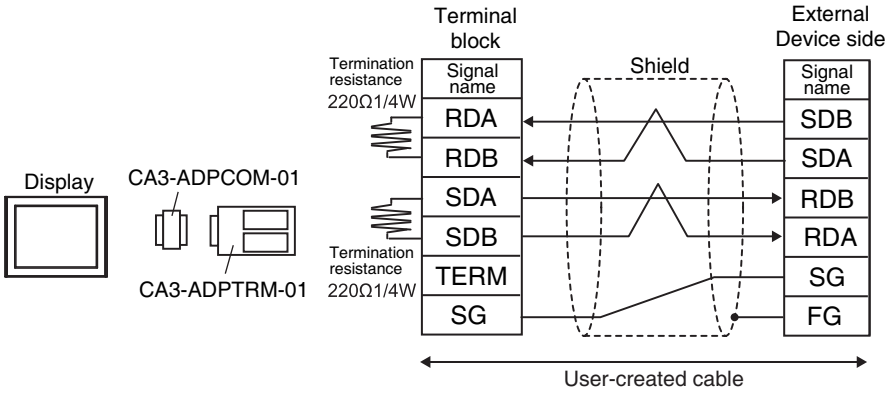
*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

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

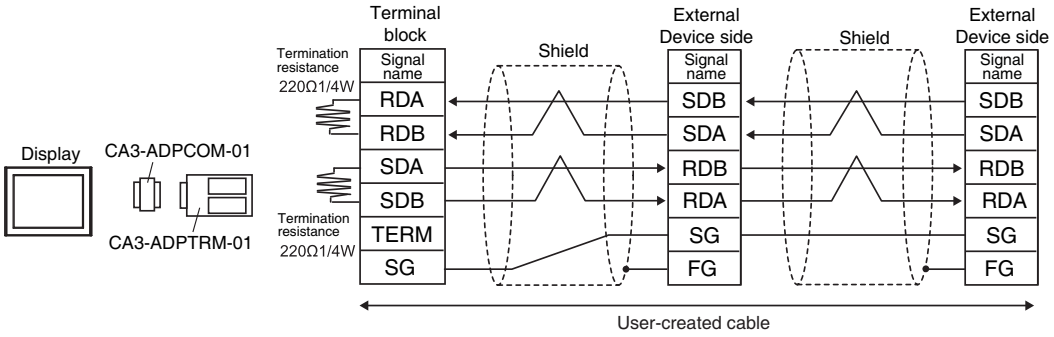
*10 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

7A)

- 1:1 Connection




- 1:n Connection

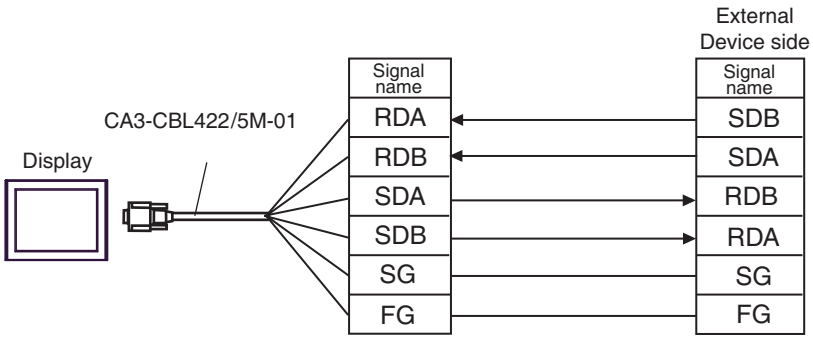



**NOTE**

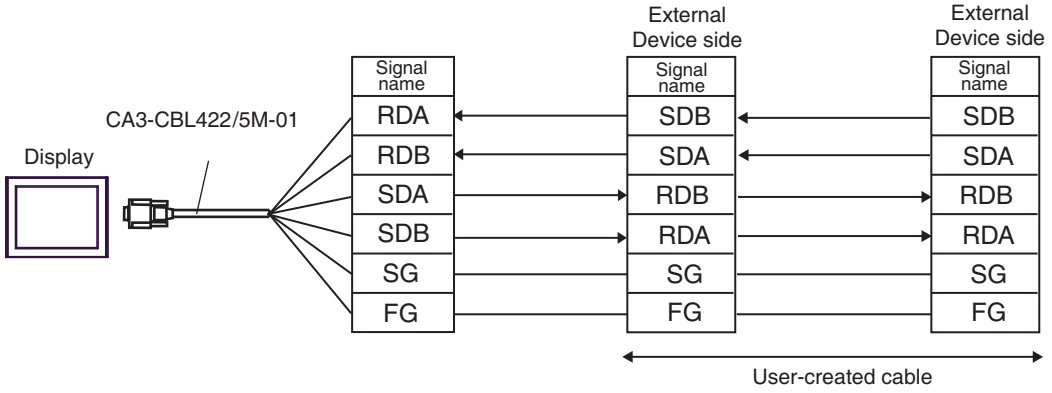
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

7B)

- 1:1 Connection

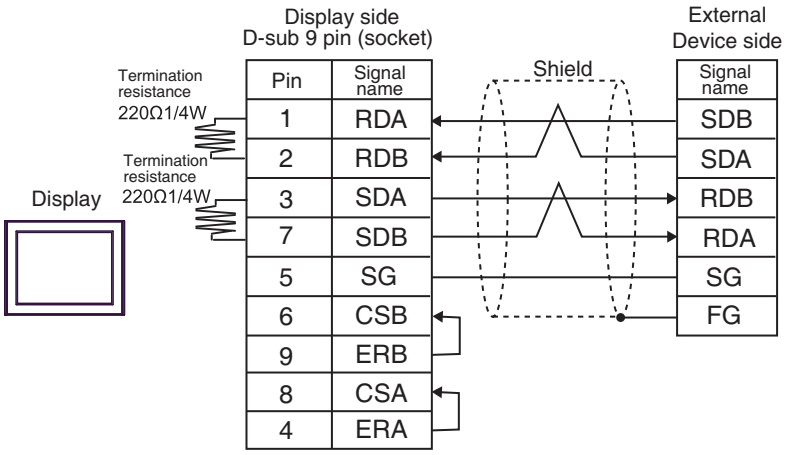



- 1:n Connection

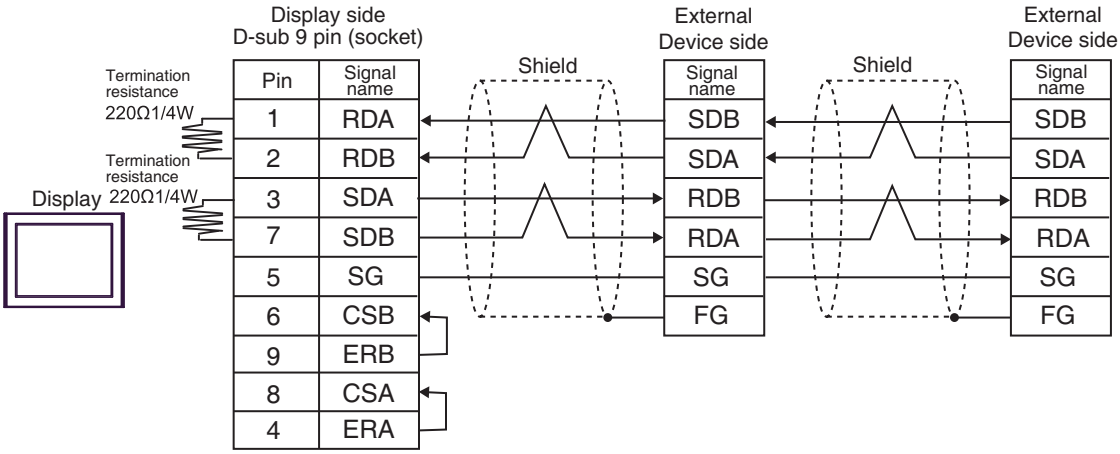


7C)

- 1:1 Connection




- 1:n Connection

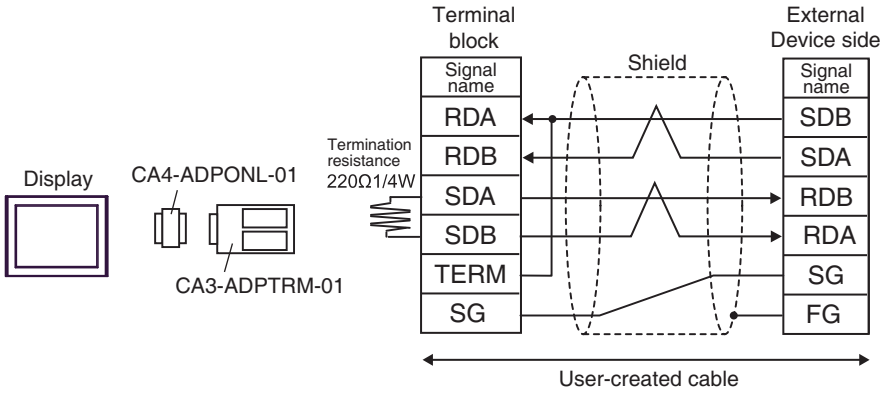



**NOTE**

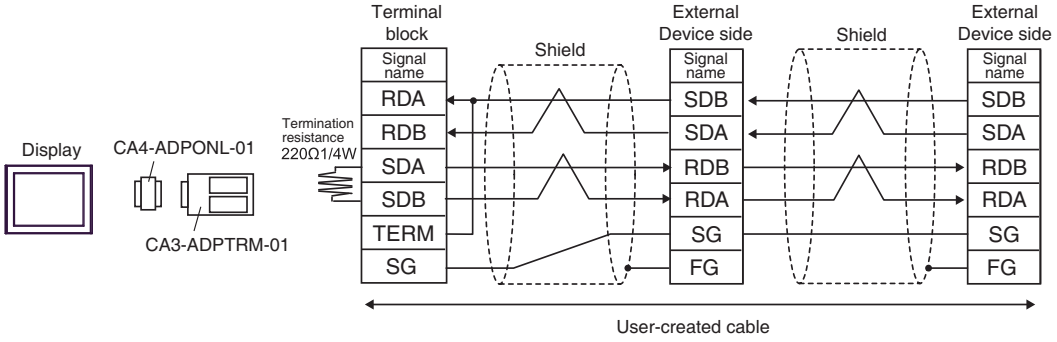
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

7D)

- 1:1 Connection

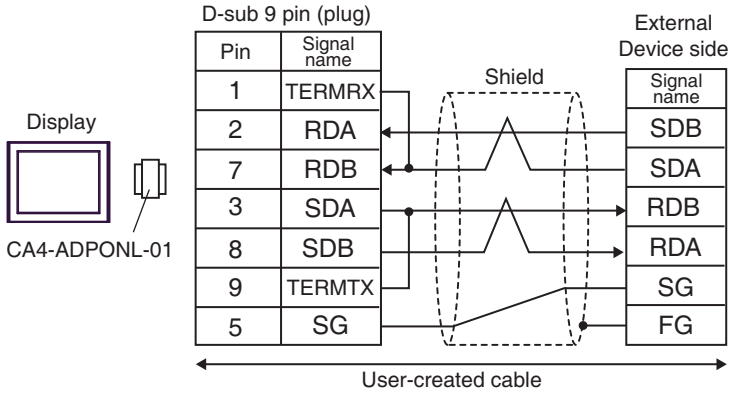



- 1:n Connection

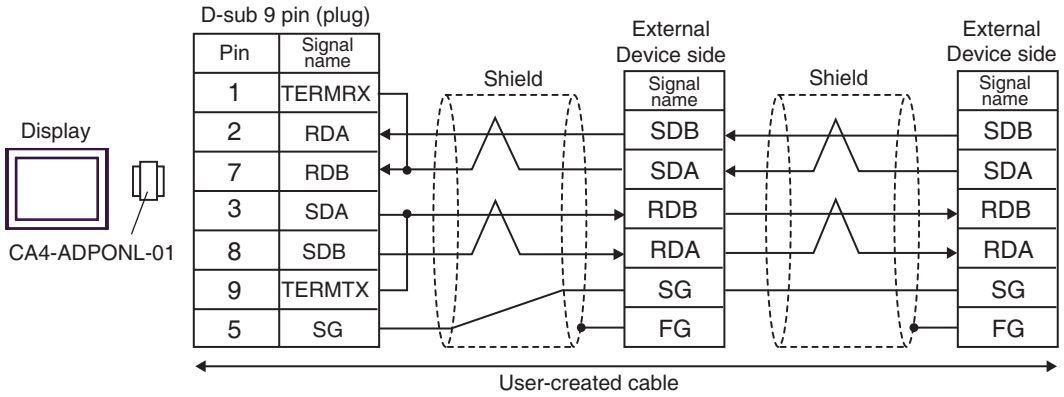


7E)

- 1:1 Connection

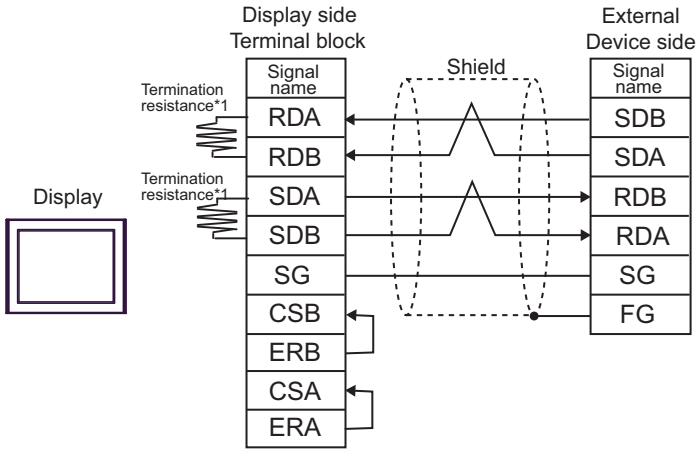



- 1:n Connection

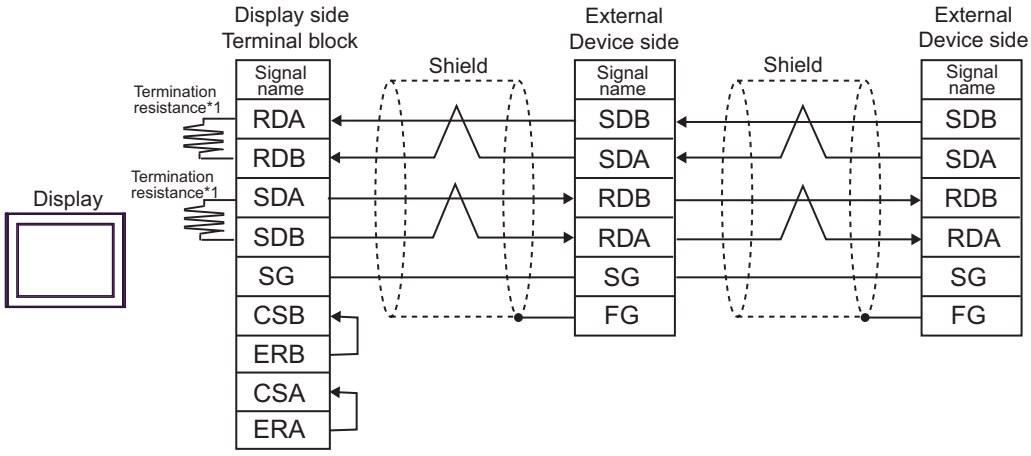


7F)

- 1:1 Connection




- 1:n Connection

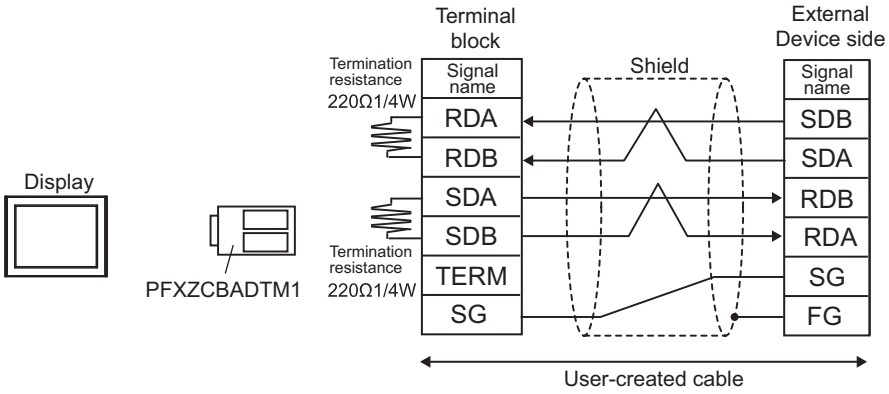



*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

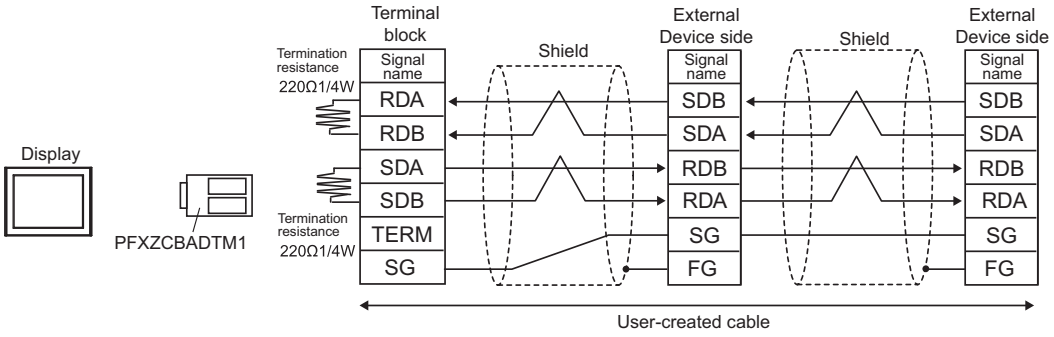
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

7G)

- 1:1 Connection

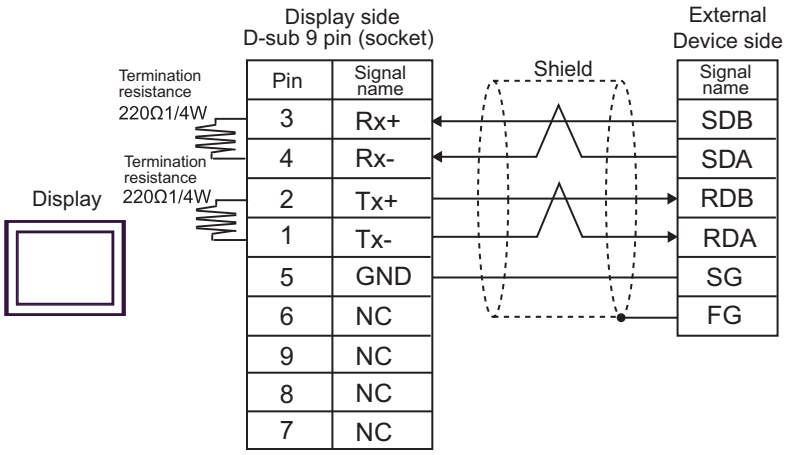



- 1:n Connection

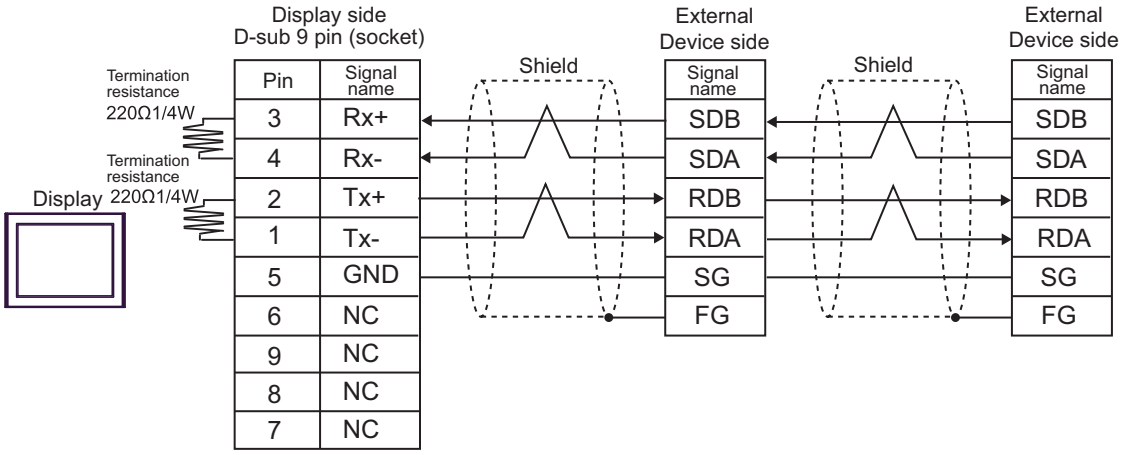


7H)

- 1:1 Connection




- 1:n Connection



Cable Diagram 8

| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000 (COM1)<br>GP4000*1 (COM1)<br>SP5000*2 (COM1/2)<br>SP-5B00 (COM1)<br>ST3000 (COM1)<br>ST6000 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000 (COM1)<br>LT3000 (COM1)<br>IPC*3<br>PC/AT | 8A | User-created cable<br>+<br>CS1W-CN225 (2m) or CS1W-CN625 (6m)<br>by OMRON Corporation | The cable length must be 15m or less. |
| | 8B | User-created cable<br>+<br>CS1W-CN226 (2m) or CS1W-CN626 (6m)<br>by OMRON Corporation | |
| GP-4105 (COM1)<br>GP-4115T (COM1)<br>GP-4115T3 (COM1) | 8C | User-created cable<br>+<br>CS1W-CN225 (2m) or CS1W-CN625 (6m)<br>by OMRON Corporation | The cable length must be 15m or less. |
| | 8D | User-created cable<br>+<br>CS1W-CN226 (2m) or CS1W-CN626 (6m)<br>by OMRON Corporation | |
| LT-4*01TM (COM1)<br>LT-Rear Module (COM1) | 8E | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21<br>+<br>CS1W-CN225 (2m) or CS1W-CN625 (6m)<br>by OMRON Corporation | The cable length must be 11m or less. |
| | 8F | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21<br>+<br>CS1W-CN226 (2m) or CS1W-CN626 (6m)<br>by OMRON Corporation | |

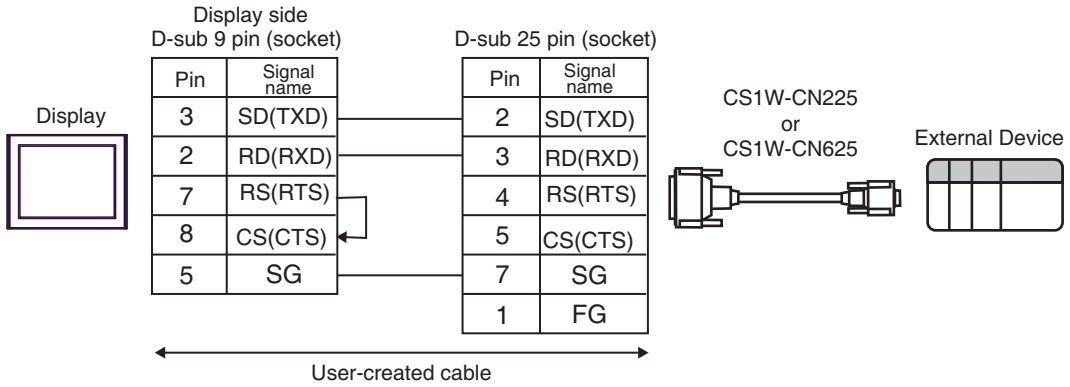
*1 All GP4000 models except GP-4100 Series and GP-4203T

*2 Except SP-5B00

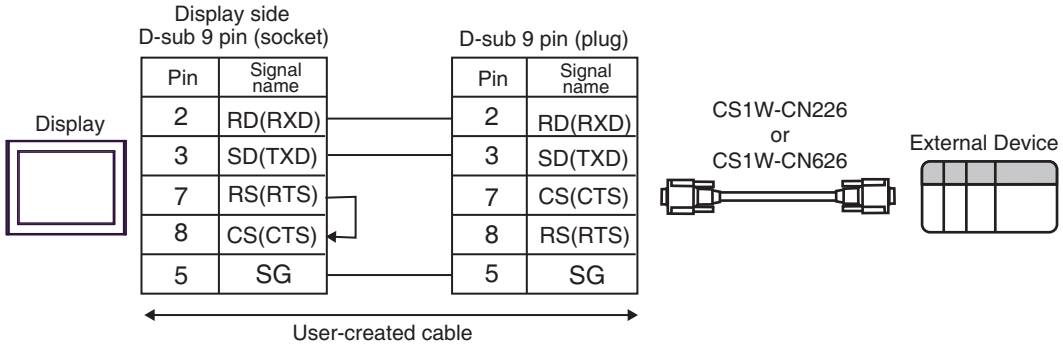
*3 Only the COM port which can communicate by RS-232C can be used.

"■ IPC COM Port" (page 12)

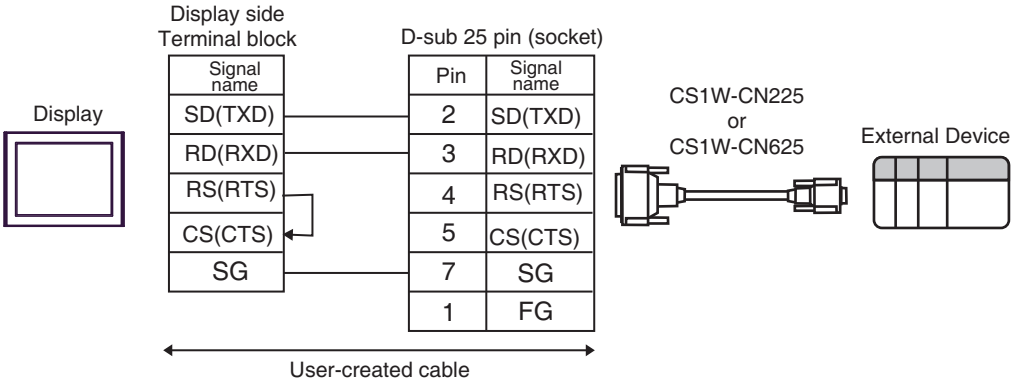
8A)



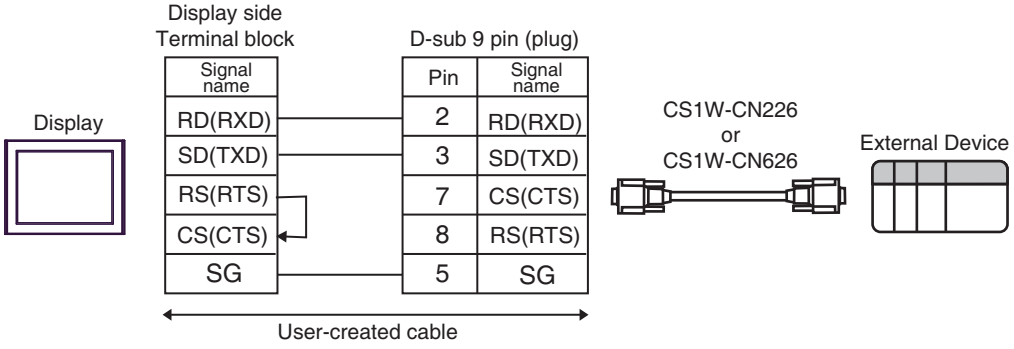
8B)


Display side
D-sub 9 pin (socket)
D-sub 9 pin (plug)
Pin
Signal name
2 RD(RXD)
3 SD(TXD)
7 RS(RTS)
8 CS(CTS)
5 SG
2 RD(RXD)
3 SD(TXD)
7 CS(CTS)
8 RS(RTS)
5 SG
Display
CS1W-CN226
or
CS1W-CN626
External Device
User-created cable

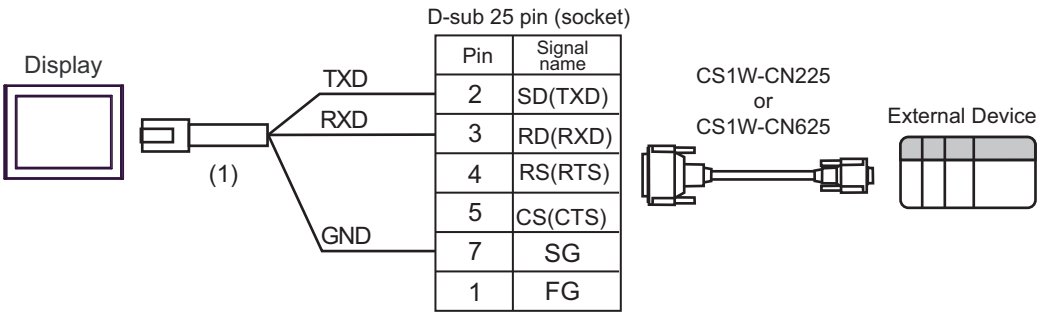
8C)


Display side
Terminal block
D-sub 25 pin (socket)
Signal name
SD(TXD)
RD(RXD)
RS(RTS)
CS(CTS)
SG
Pin
Signal name
2 SD(TXD)
3 RD(RXD)
4 RS(RTS)
5 CS(CTS)
7 SG
1 FG
Display
CS1W-CN225
or
CS1W-CN625
External Device
User-created cable

8D)

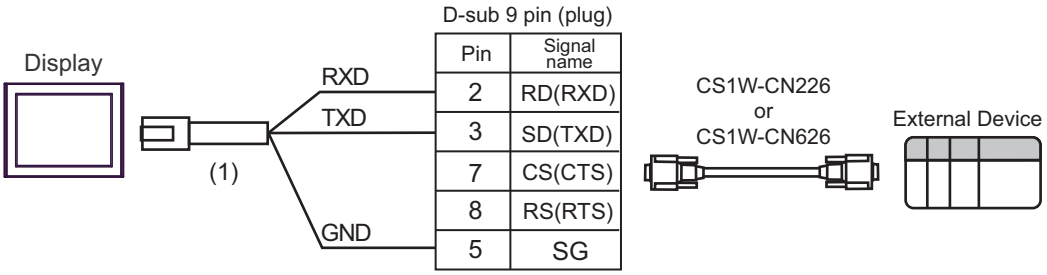

Display side
Terminal block
D-sub 9 pin (plug)
Signal name
RD(RXD)
SD(TXD)
RS(RTS)
CS(CTS)
SG
Pin
Signal name
2 RD(RXD)
3 SD(TXD)
7 CS(CTS)
8 RS(RTS)
5 SG
Display
CS1W-CN226
or
CS1W-CN626
External Device
User-created cable

8E)




| Number | Name | Notes |
|---|---|---|
| (1) | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21 | |

8F)




| Number | Name | Notes |
|---|---|---|
| (1) | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21 | |

Cable Diagram 9

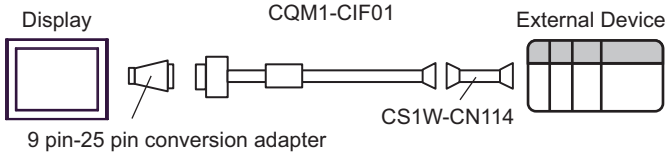
| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000 (COM1)<br>GP4000*1 (COM1)<br>SP5000*2 (COM1/2)<br>SP-5B00 (COM1)<br>ST3000 (COM1)<br>ST6000 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000 (COM1)<br>LT3000 (COM1)<br>IPC*3<br>PC/AT | 9A | Isolation cable by OMRON Corporation<br>CQM1-CIF01<br>+<br>Connector conversion cable by OMRON Corporation<br>CS1W-CN114 | Commercial 9 pin/25 pin conversion adapter is required. |
| GP-4105 (COM1)<br>GP-4115T (COM1)<br>GP-4115T3 (COM1) | 9B | User-created cable<br>+<br>Isolation cable by OMRON Corporation<br>CQM1-CIF01<br>+<br>Connector conversion cable by OMRON Corporation<br>CS1W-CN114 | |

*1 All GP4000 models except GP-4100 Series and GP-4203T

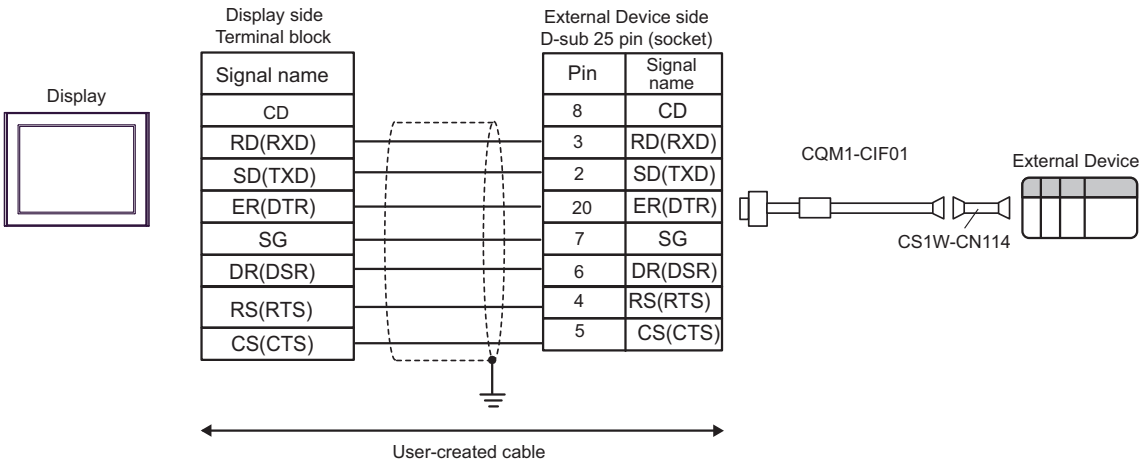
*2 Except SP-5B00

*3 Only the COM port which can communicate by RS-232C can be used.
☞"■ IPC COM Port" (page 12)

9A)




9B



Cable Diagram 10

| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 10A | 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>User-created cable | The cable length must be 500m or less. |
| | 10B | RS422 cable by Pro-face<br>CA3-CBL422/5M-01 | |
| | 10C | User-created cable | |
| GP3000[*4] (COM2) | 10D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 10E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 10F | User-created cable | The cable length must be 500m or less. |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 10G | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 10B | RS422 cable by Pro-face<br>CA3-CBL422/5M-01 | |
| | 10C | User-created cable | |
| PE-4000B[*10]<br>PS5000[*10]<br>PS6000 (Optional Interface)[*10] | 10H | User-created cable | The cable length must be 500m or less. |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

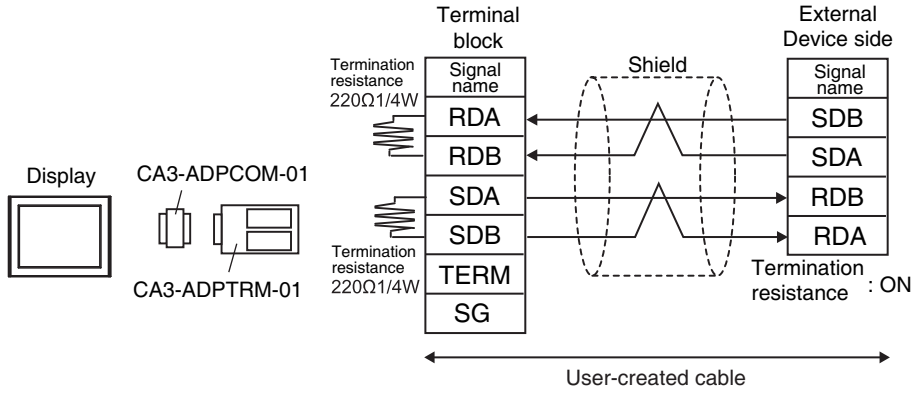
*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 10A.

*10 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

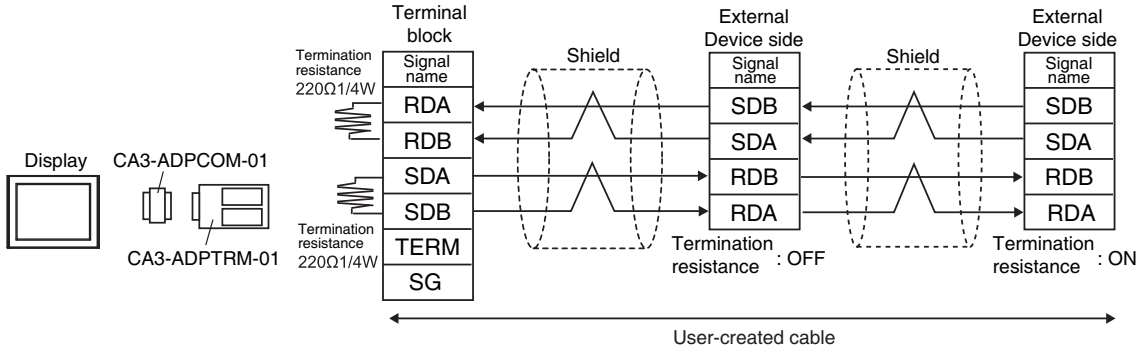
⚠CAUTION
- When connecting the External Device, use the link adapter B500-AL001 or the terminal block by OMRON Corporation.

10A)

- 1:1 Connection




- 1:n Connection

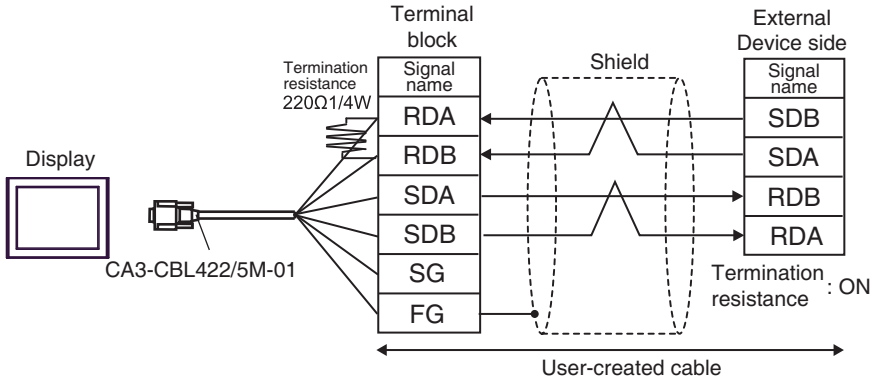



**NOTE**

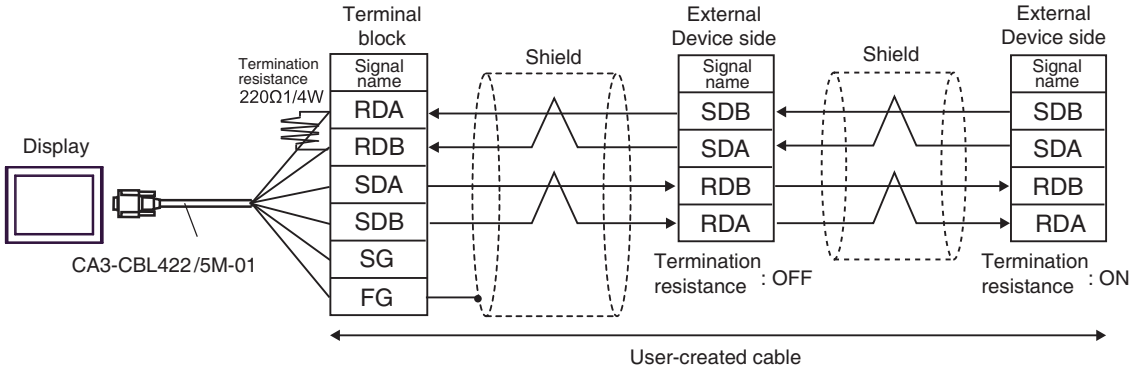
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

10B)

- 1:1 Connection

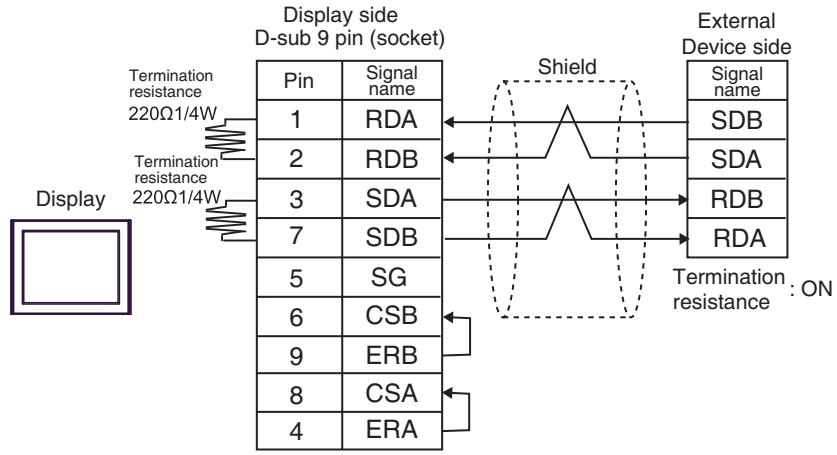



- 1:n Connection

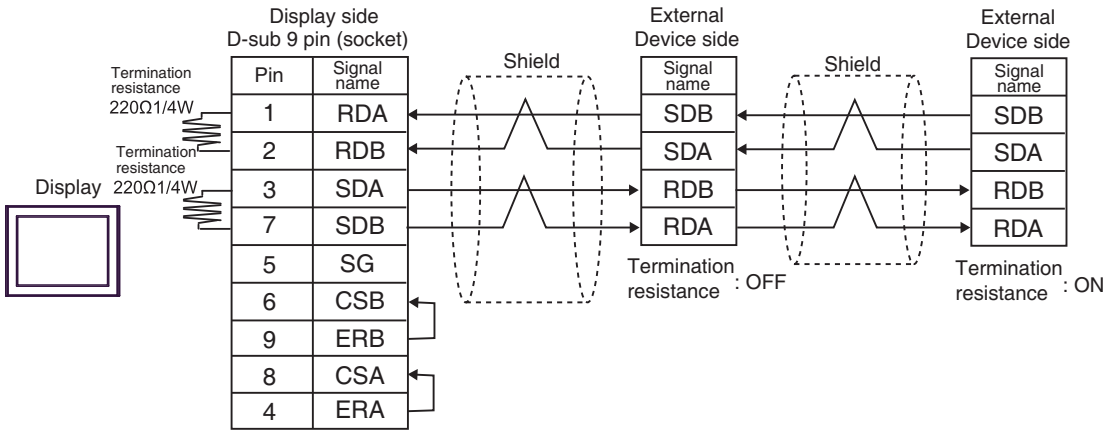


10C)

- 1:1 Connection




- 1:n Connection

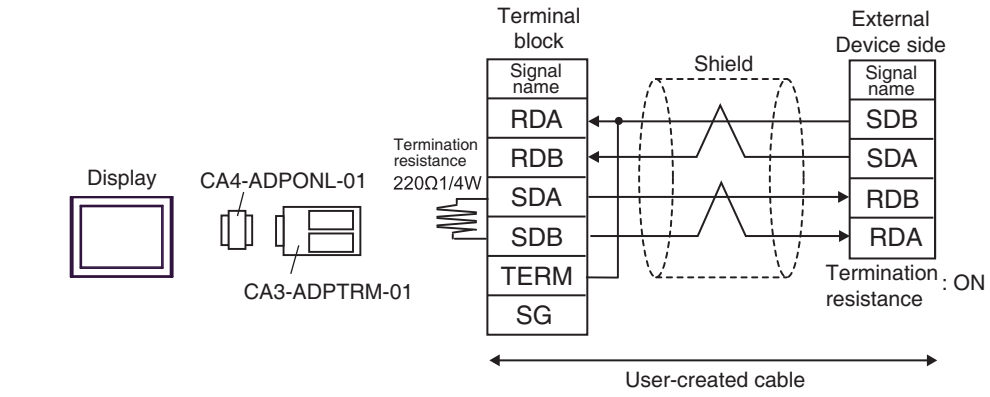



**NOTE**

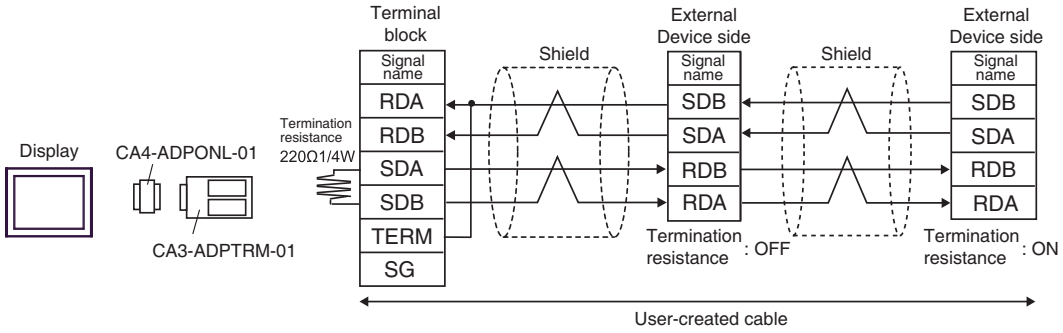
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

10D)

- 1:1 Connection

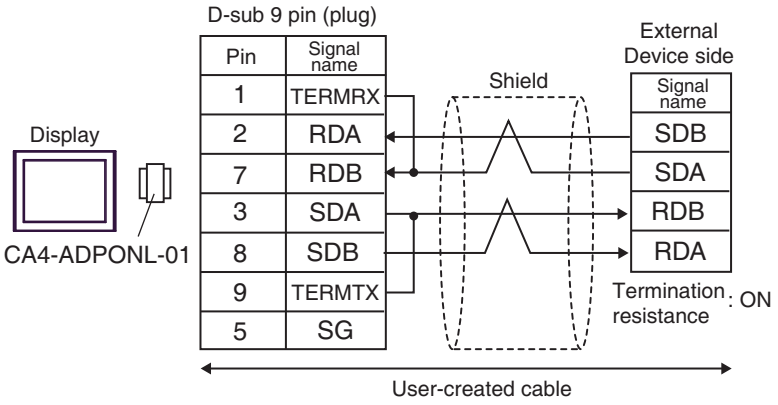



- 1:n Connection

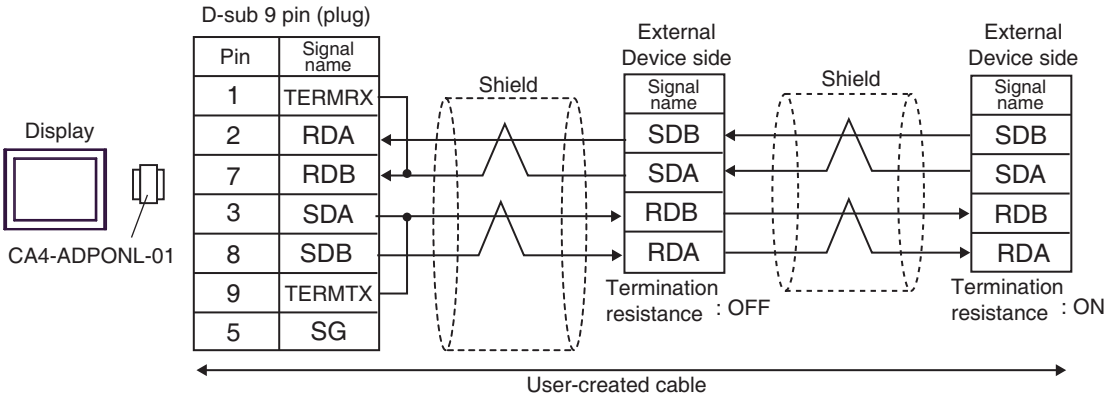


10E)

- 1:1 Connection

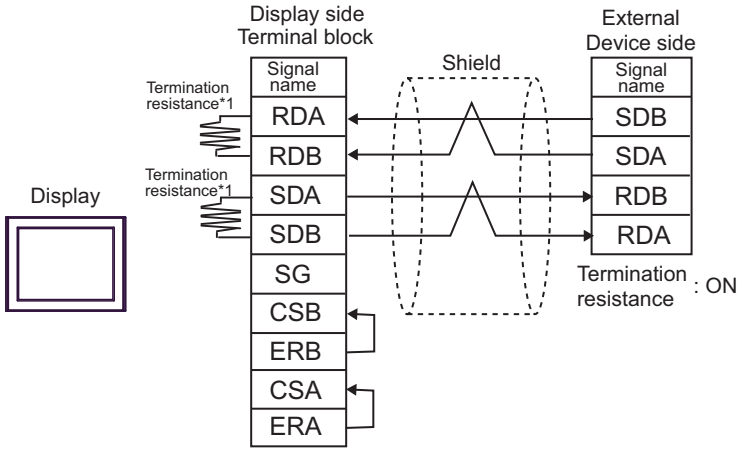



- 1:n Connection

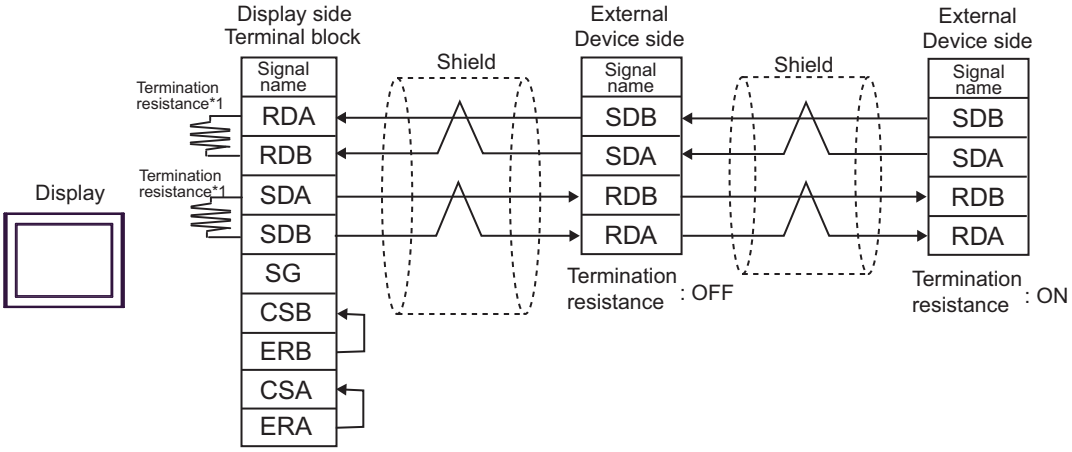


10F)

- 1:1 Connection




- 1:n Connection

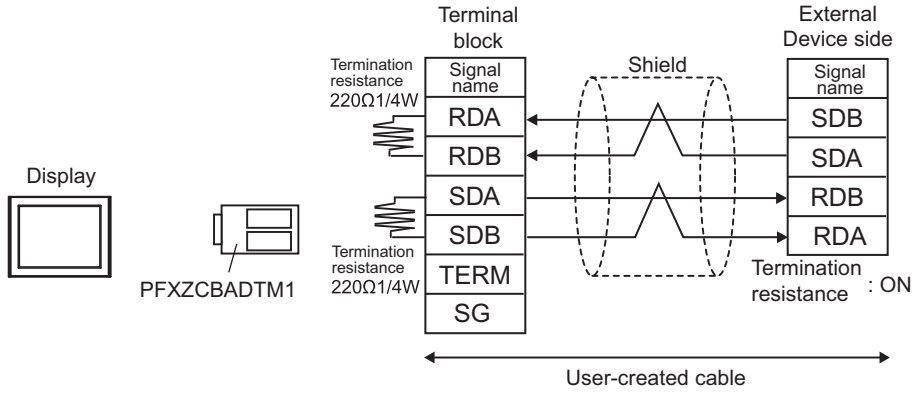



*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

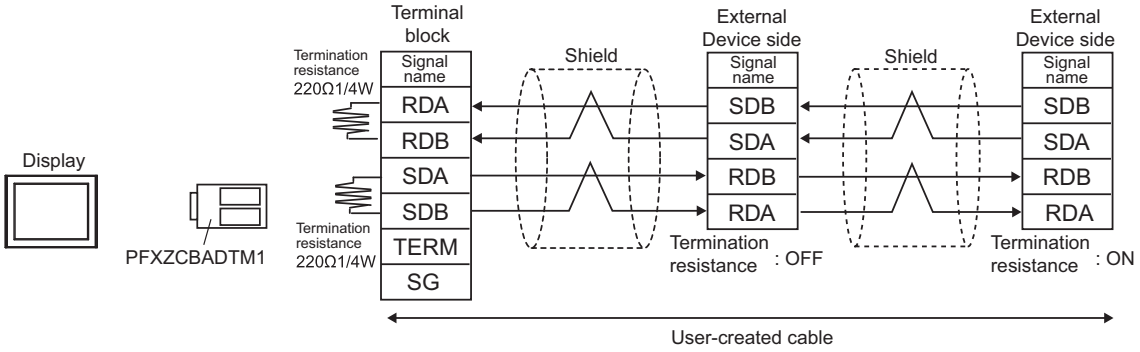
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

10G)

- 1:1 Connection

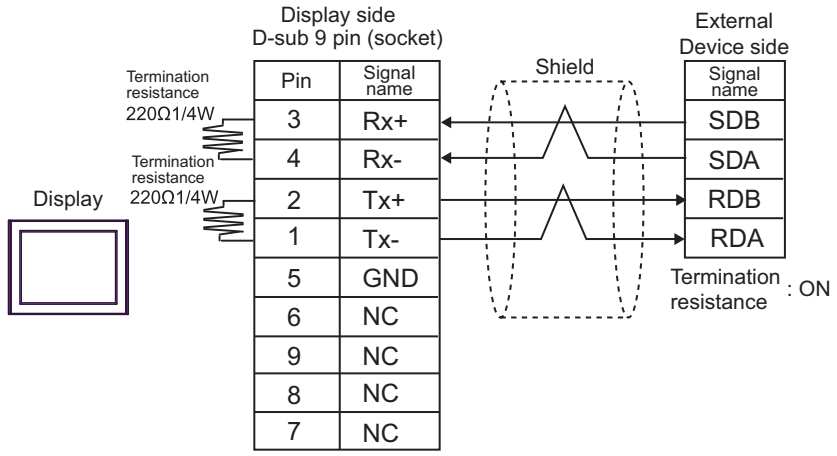



- 1:n Connection

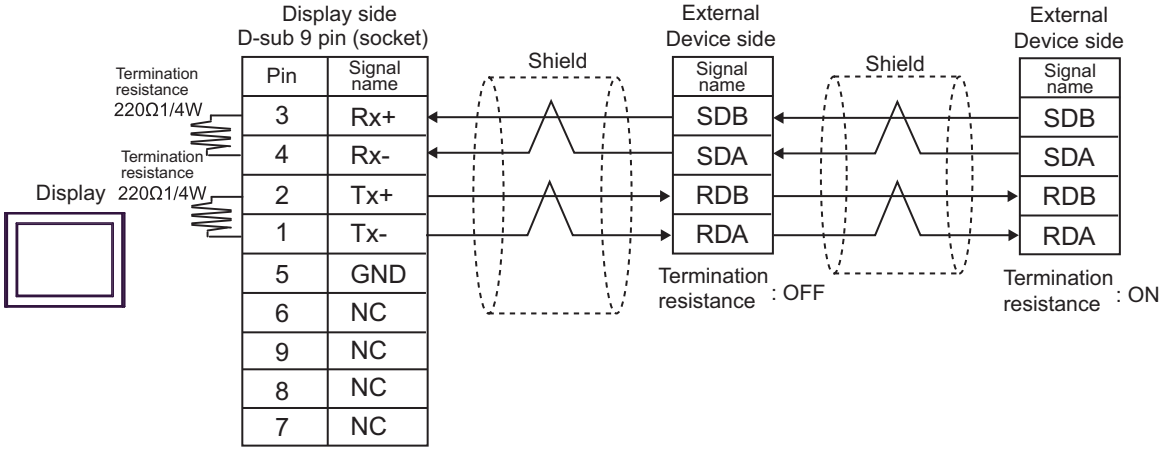


10H)

- 1:1 Connection




- 1:n Connection



Cable Diagram 11

| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 11A | 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>User-created cable | The cable length must be 500m or less. |
| | 11B | RS422 cable by Pro-face<br>CA3-CBL422/5M-01 | |
| | 11C | User-created cable | |
| GP3000[*4] (COM2) | 11D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 11E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 11F | User-created cable | The cable length must be 500m or less. |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 11G | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 11B | RS422 cable by Pro-face<br>CA3-CBL422/5M-01 | |
| | 11C | User-created cable | |
| PE-4000B[*10]<br>PS5000[*10]<br>PS6000 (Optional Interface)[*10] | 11H | User-created cable | The cable length must be 500m or less. |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

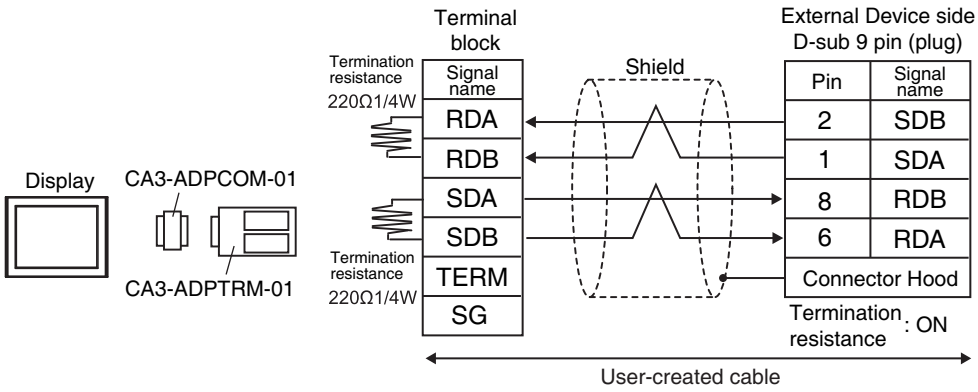
*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 11A.

*10 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

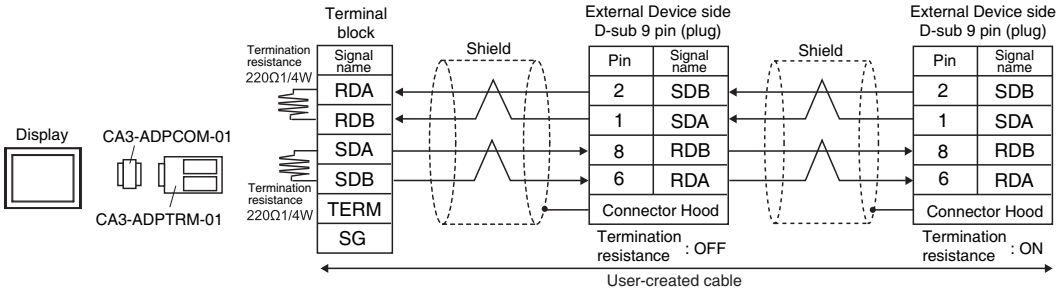
* When connecting the External Device, use the link adapter B500-AL001 or the terminal block by OMRON Corporation.

11A)

- 1:1 Connection




- 1:n Connection

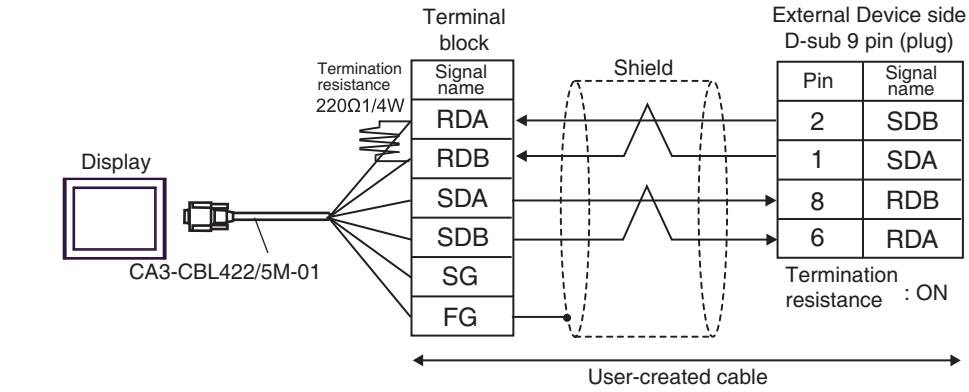



**NOTE**

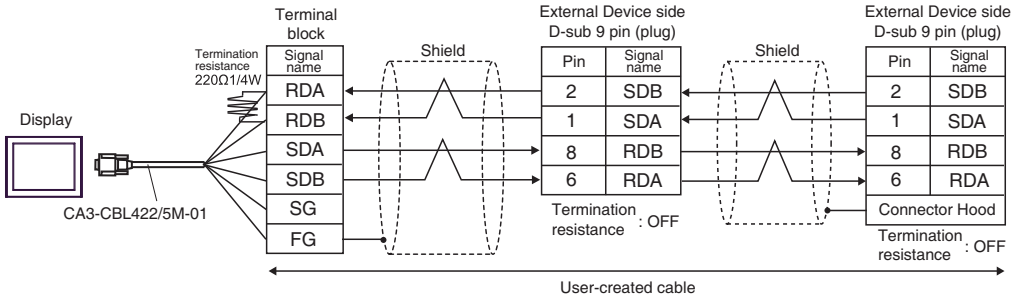
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

11B)

- 1:1 Connection

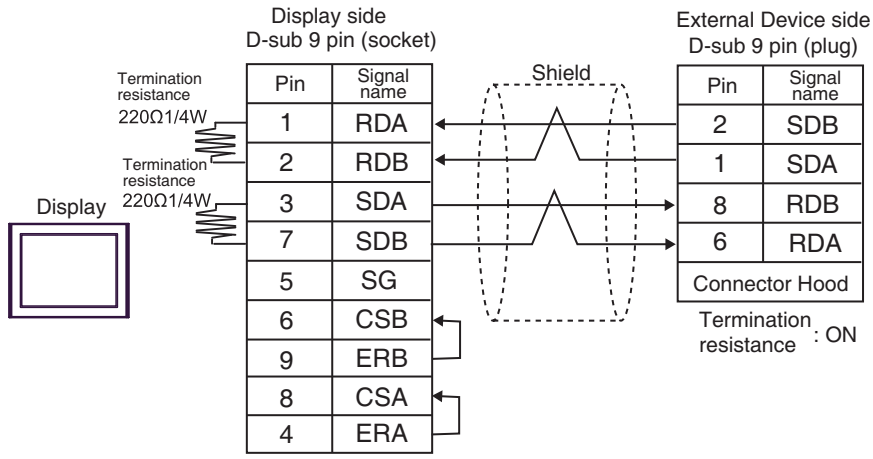



- 1:n Connection

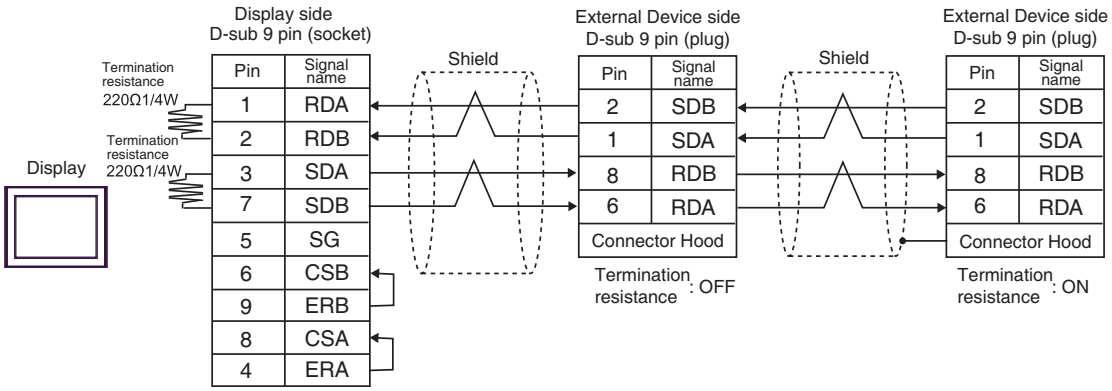


11C)

- 1:1 Connection




- 1:n Connection

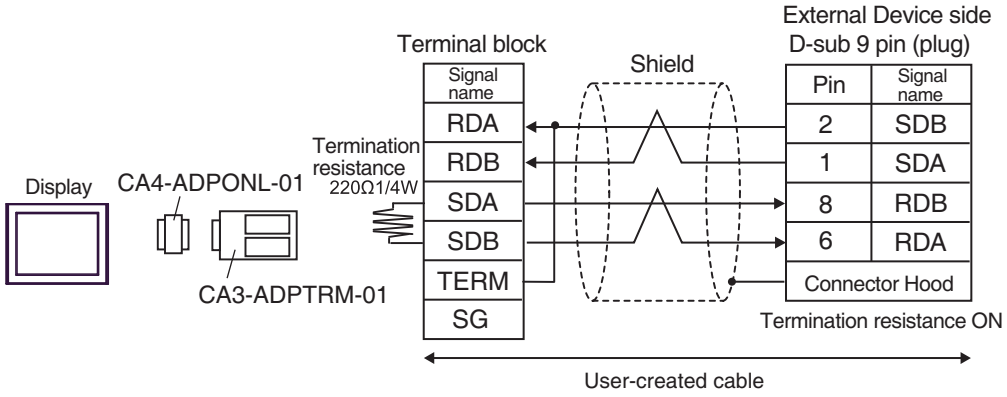



**NOTE**

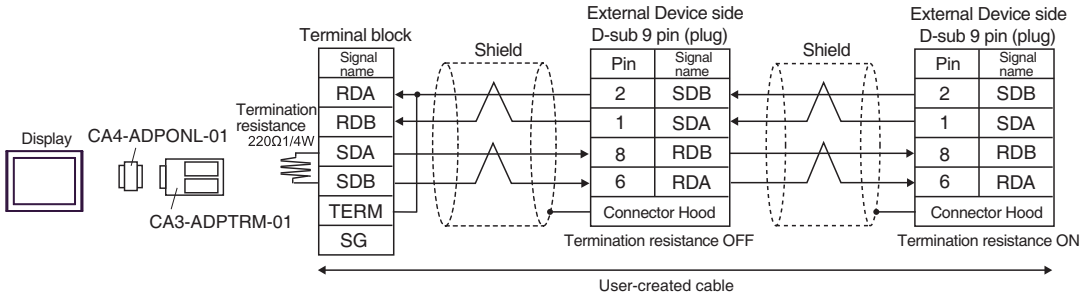
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

11D)

- 1:1 Connection

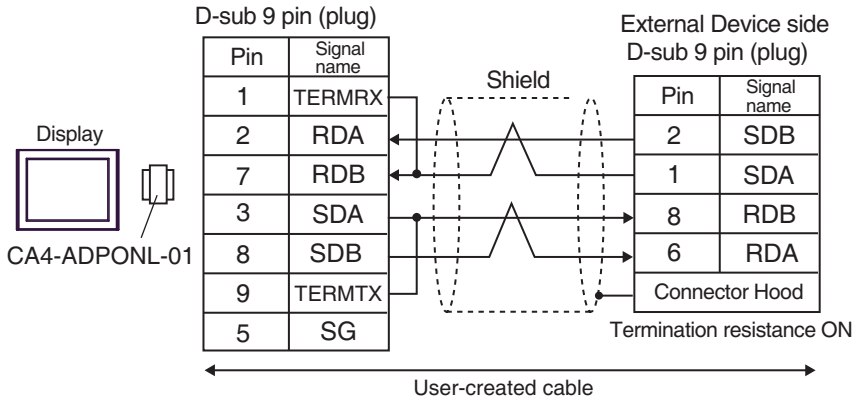



- 1:n Connection

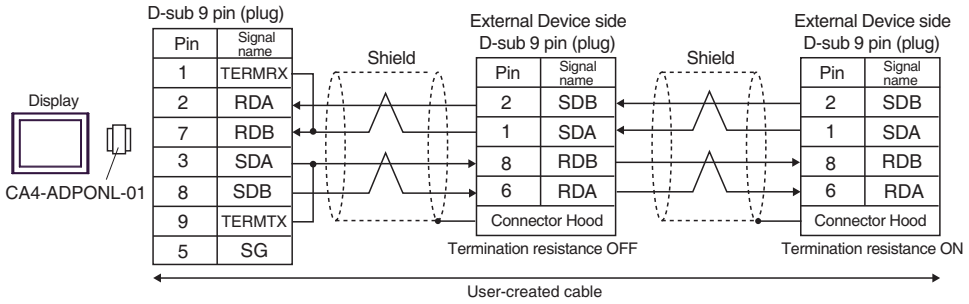


11E)

- 1:1 Connection

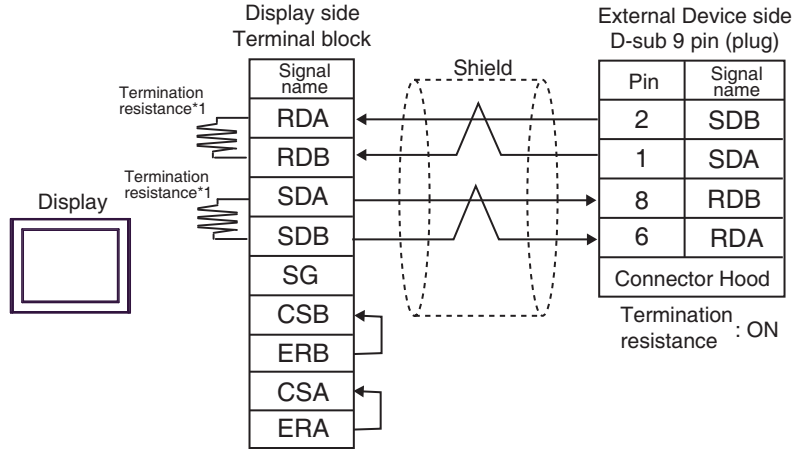



- 1:n Connection

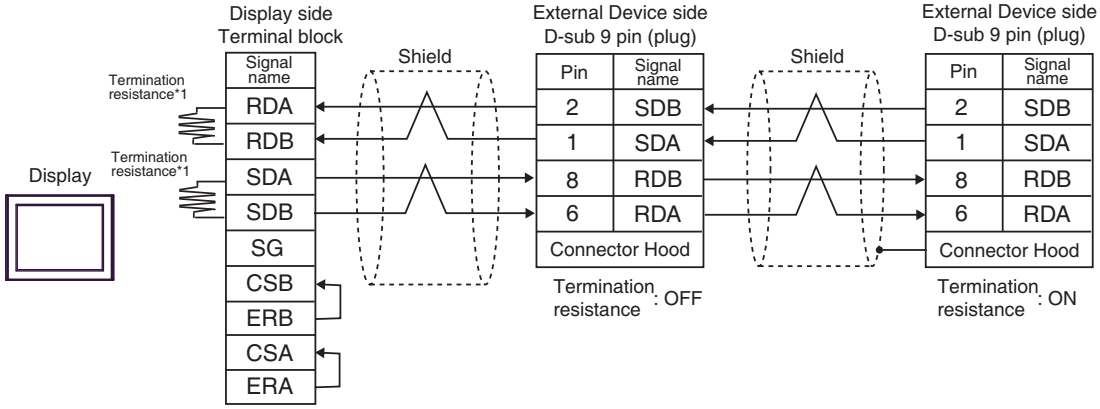


11F)

- 1:1 Connection




- 1:n Connection

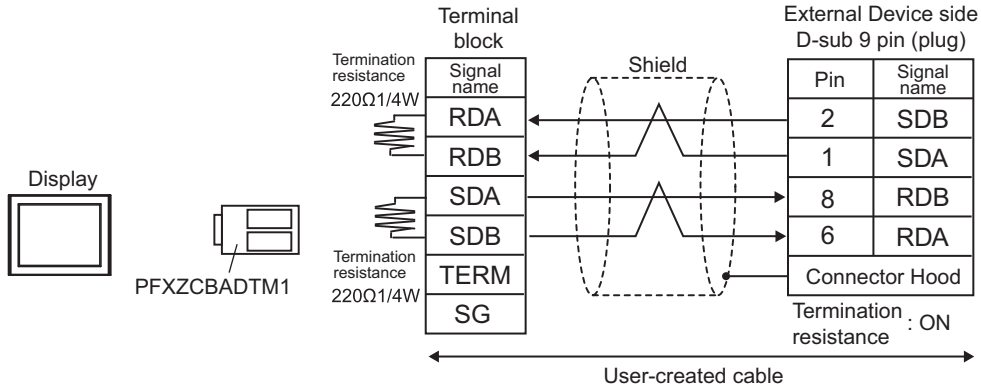



*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

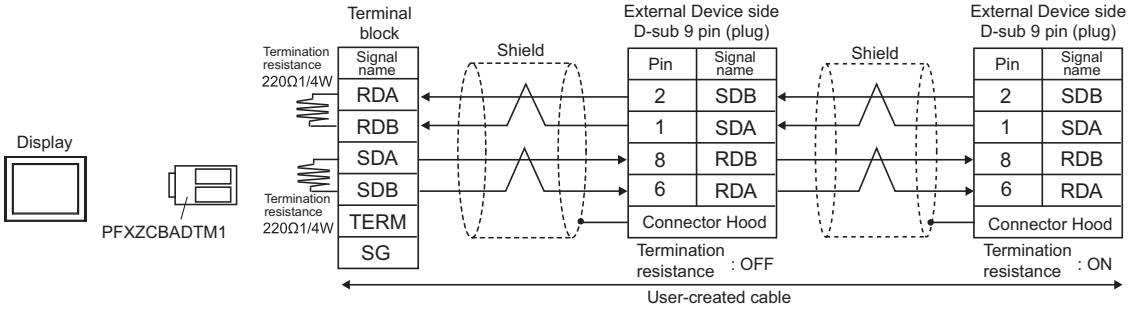
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

11G)

- 1:1 Connection

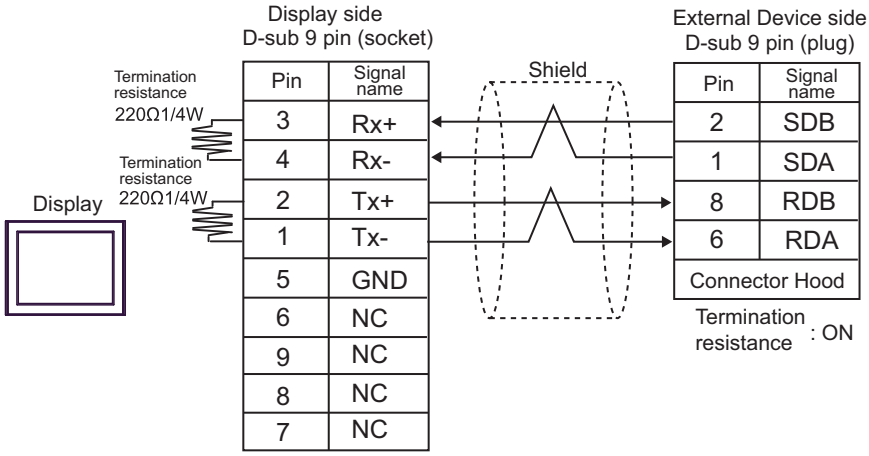



- 1:n Connection

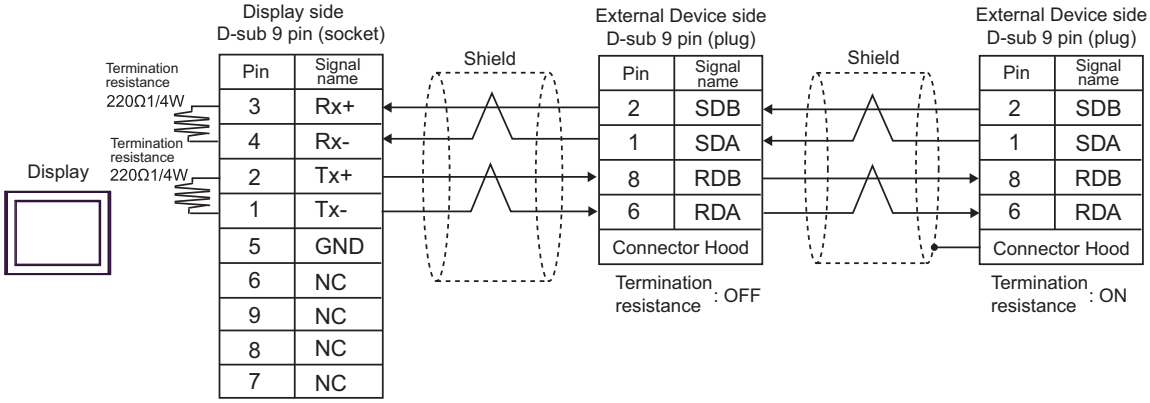


11H)

- 1:1 Connection




- 1:n Connection



Cable Diagram 12

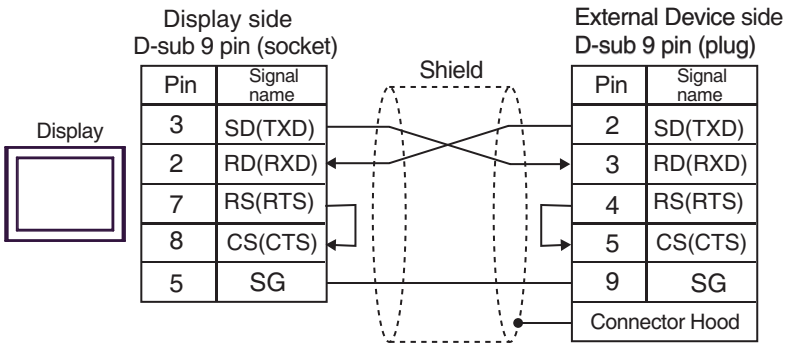
| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000 (COM1)<br>GP4000*1 (COM1)<br>SP5000*2 (COM1/2)<br>SP-5B00 (COM1)<br>ST3000 (COM1)<br>ST6000 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000 (COM1)<br>LT3000 (COM1)<br>IPC*3<br>PC/AT | 12A | User-created cable | The cable length must be 15m or less. |
| GP-4105 (COM1)<br>GP-4115T (COM1)<br>GP-4115T3 (COM1) | 12B | User-created cable | The cable length must be 15m or less. |
| LT-4*01TM (COM1)<br>LT-Rear Module (COM1) | 12C | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21 | The cable length must be 5m or less. |

*1 All GP4000 models except GP-4100 Series and GP-4203T

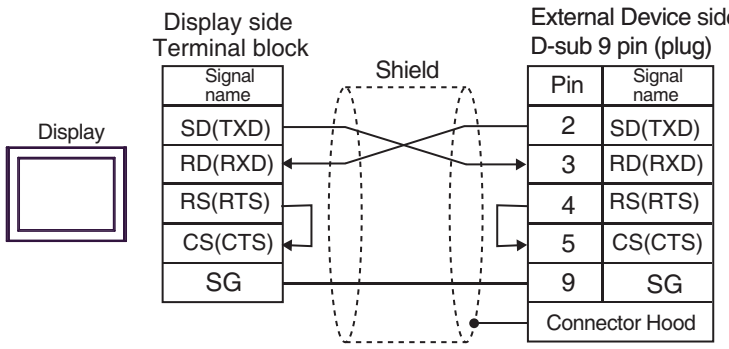
*2 Except SP-5B00

*3 Only the COM port which can communicate by RS-232C can be used.
☞"■ IPC COM Port" (page 12)

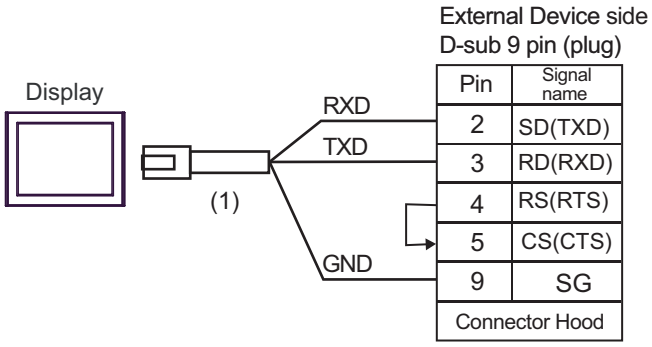
12A)



12B)




12C)




| Number | Name | Notes |
|---|---|---|
| (1) | RJ45 RS-232C Cable (5m) by Pro-face<br>PFXZLMCBRJR21 | |

Cable Diagram 13

| Display | Cable | | Remarks |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 13A | 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>User-created cable | The cable length must be 500m or less. |
| | 13B | User-created cable | |
| GP3000[*4] (COM2) | 13C | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 13D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 13E | User-created cable | The cable length must be 500m or less. |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 13F | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | The cable length must be 500m or less. |
| | 13B | User-created cable | |
| PE-4000B[*10]<br>PS5000[*10]<br>PS6000 (Optional Interface)[*10] | 13G | User-created cable | The cable length must be 500m or less. |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

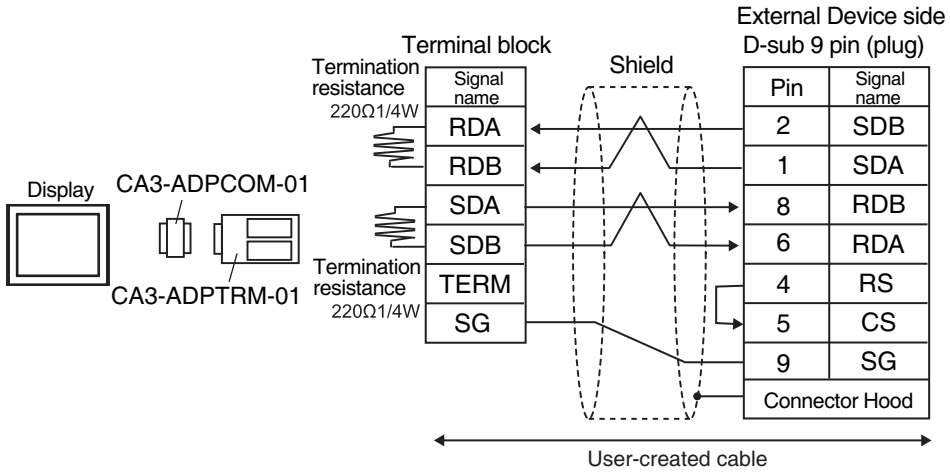
*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 13A.

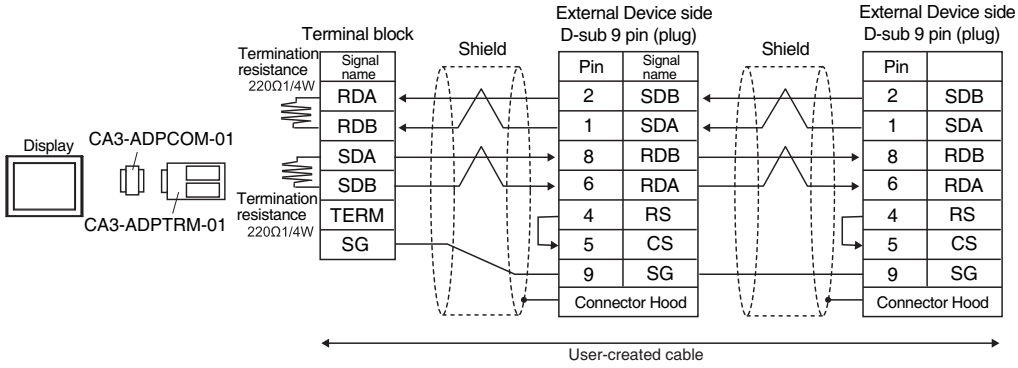
*10 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

13A)

- 1:1 Connection




- 1:n Connection

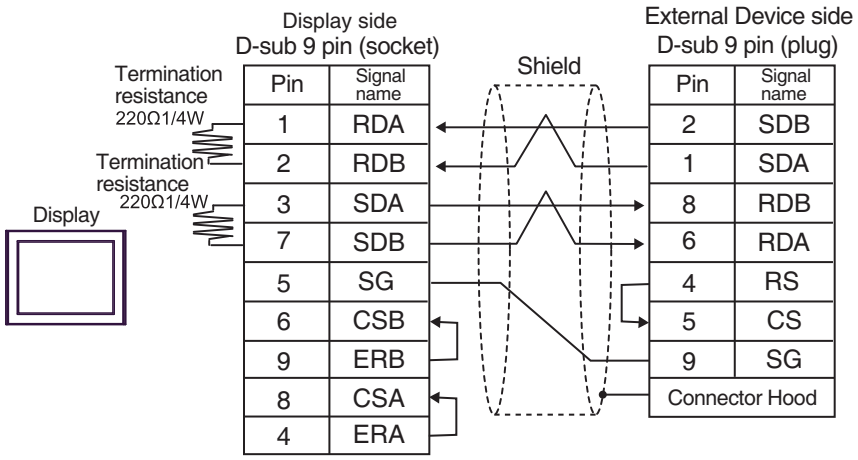



**NOTE**

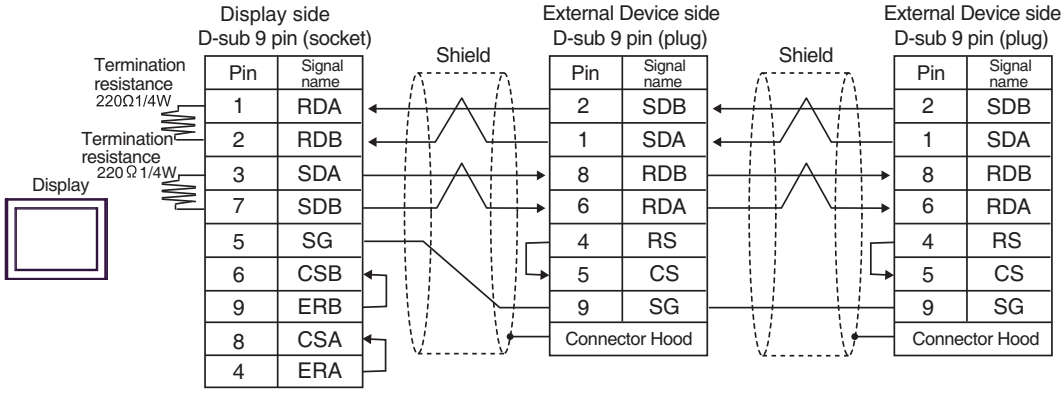
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.
- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

13B)

- 1:1 Connection




- 1:n Connection

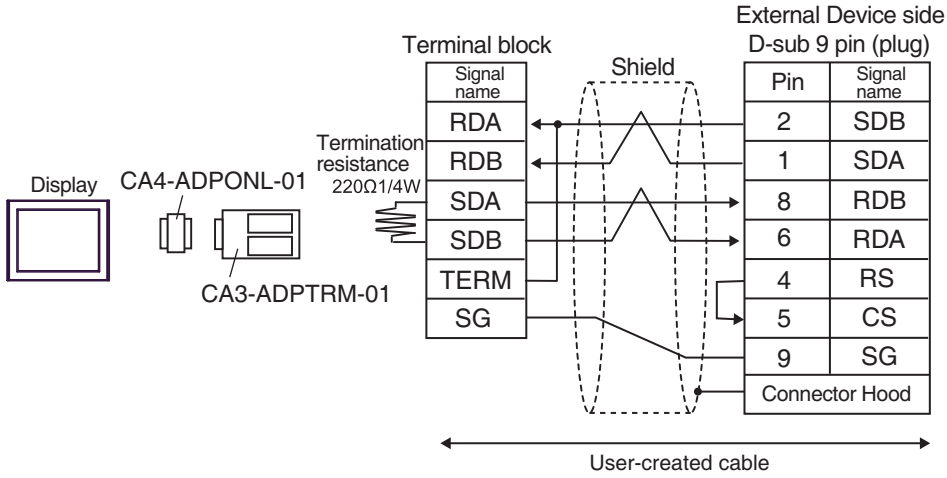



**NOTE**

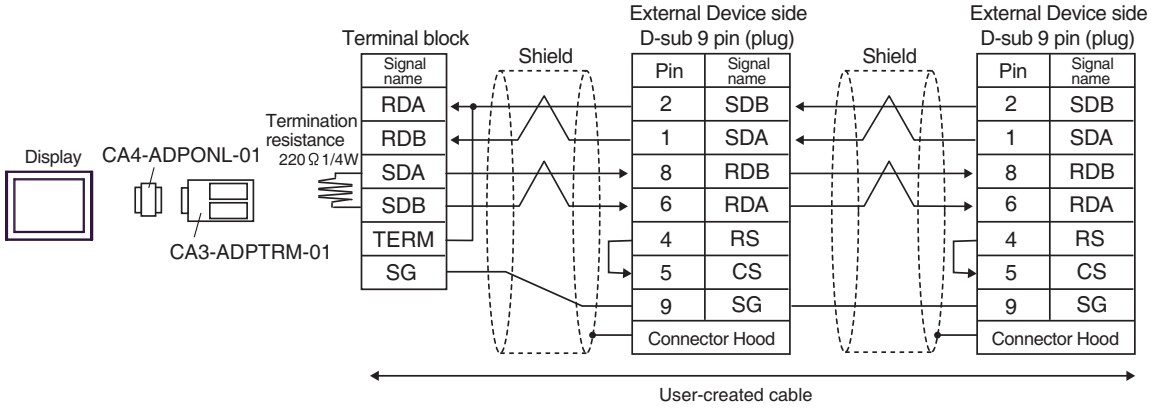
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.
- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

13C)

- 1:1 Connection



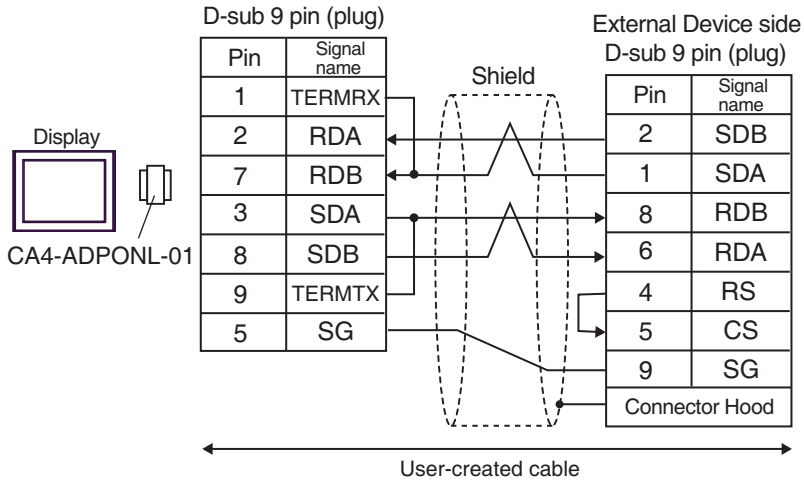

- 1:n Connection



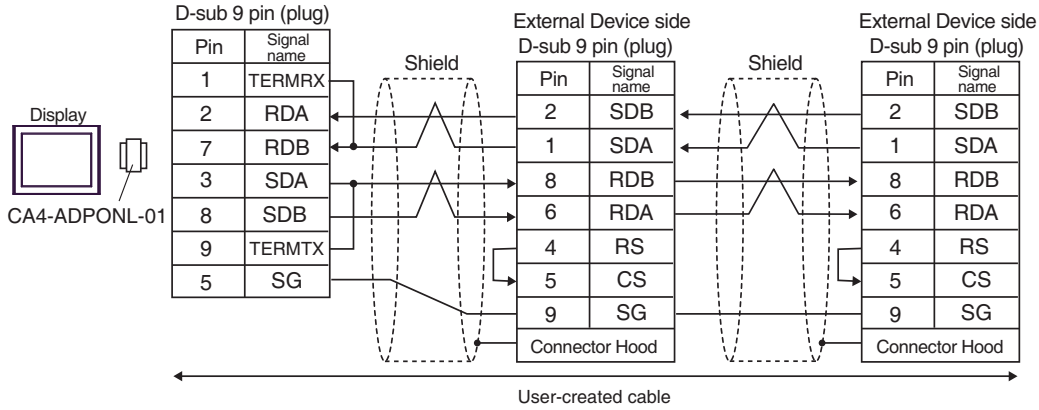

**NOTE** • When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

13D)

- 1:1 Connection




- 1:n Connection

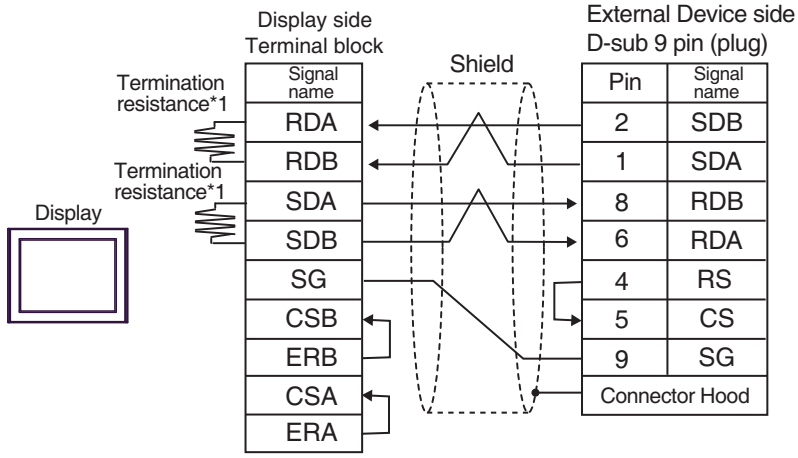



**NOTE**

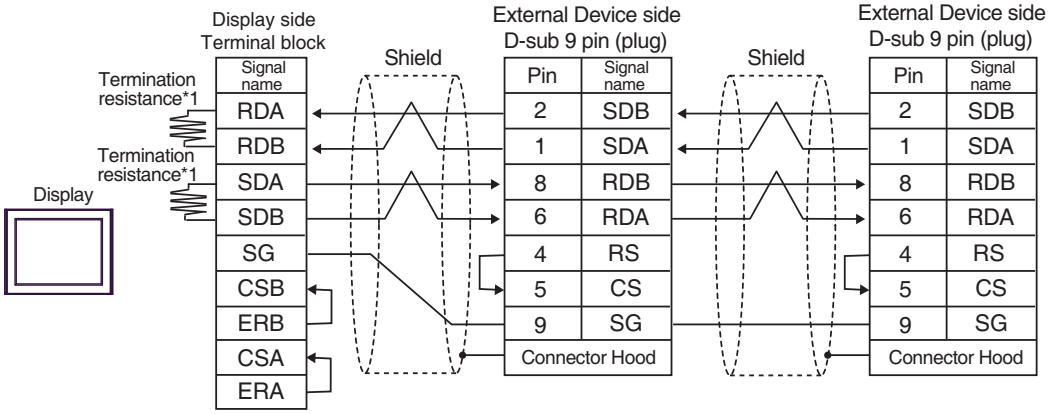
- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

13E)

- 1:1 Connection




- 1:n Connection




*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

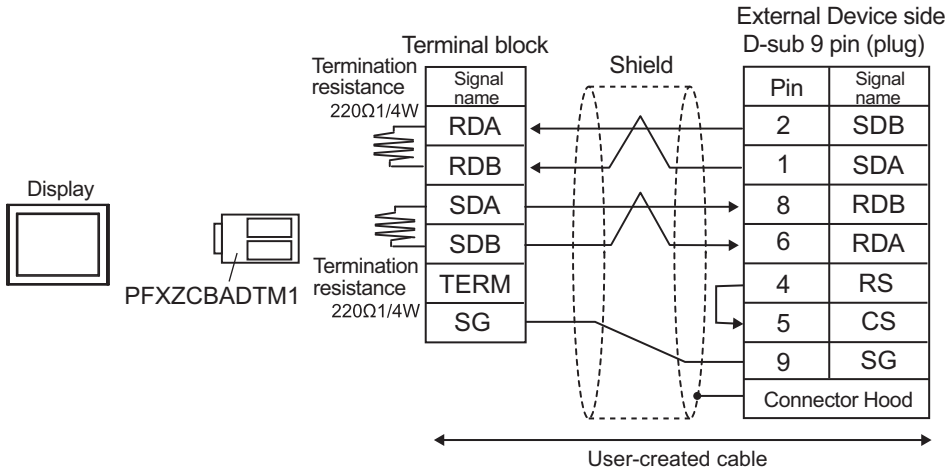
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

**NOTE**

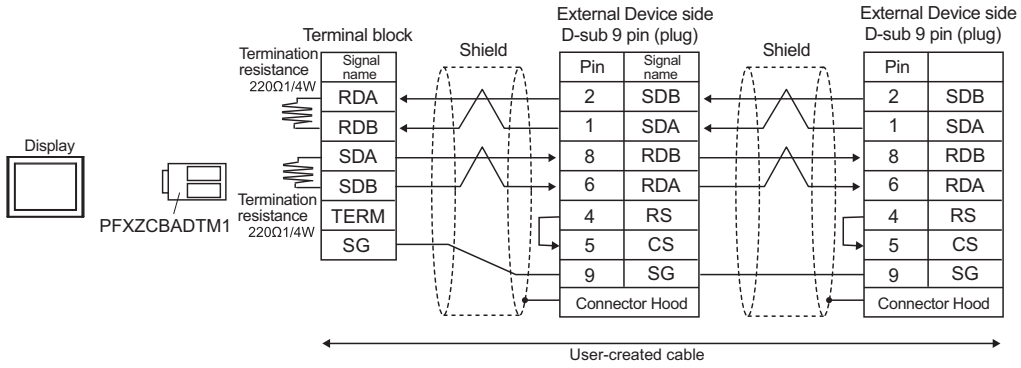
- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

13F)

- 1:1 Connection




- 1:n Connection

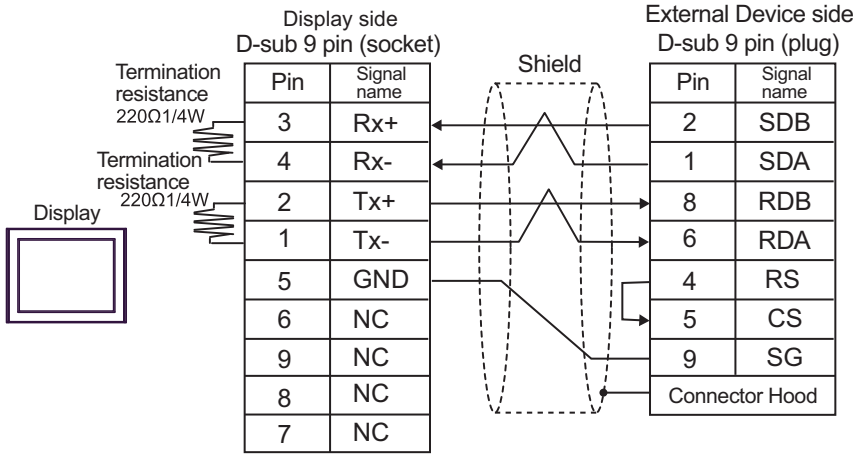



**NOTE**

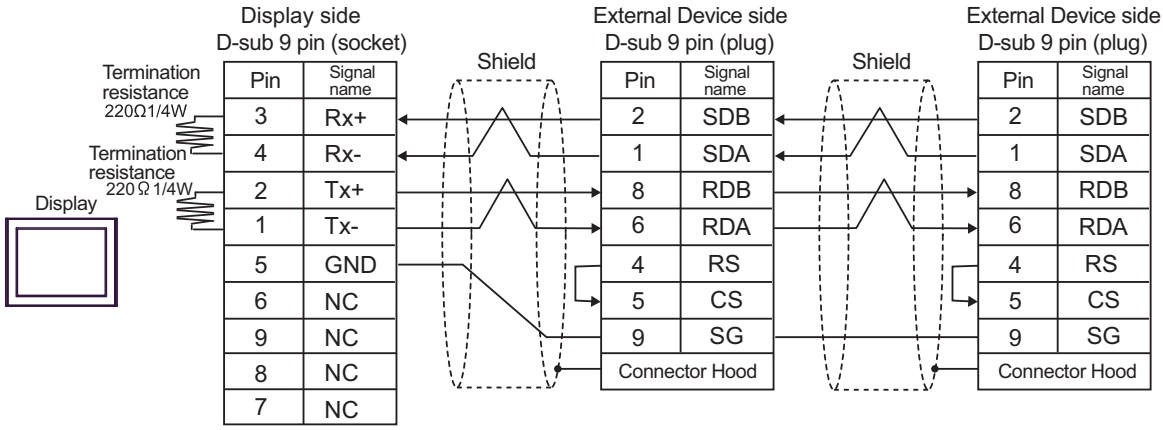
- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

13G)

- 1:1 Connection




- 1:n Connection




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

Cable Diagram 14

| Display (Connection Port) | Cable | | Notes |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 14A | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | Cable length:<br>500m max |
| | 14B | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 14C | User-created cable | |
| GP3000 [*4] (COM2) | 14D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-0<br>+<br>User-created cable | Cable length:<br>500m max |
| | 14E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 14F | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 14G | User-created cable | Cable length:<br>500m max |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 14H | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | Cable length:<br>500m max |
| | 14I | Multilink cable by Pro-face<br>PFXZCBCBML1[*10]<br>+<br>User-created cable | |
| | 14C | User-created cable | |
| PE-4000B[*11]<br>PS5000[*11]<br>PS6000 (Optional Interface)[*11] | 14J | User-created cable | Cable length:<br>500m max |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)
☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

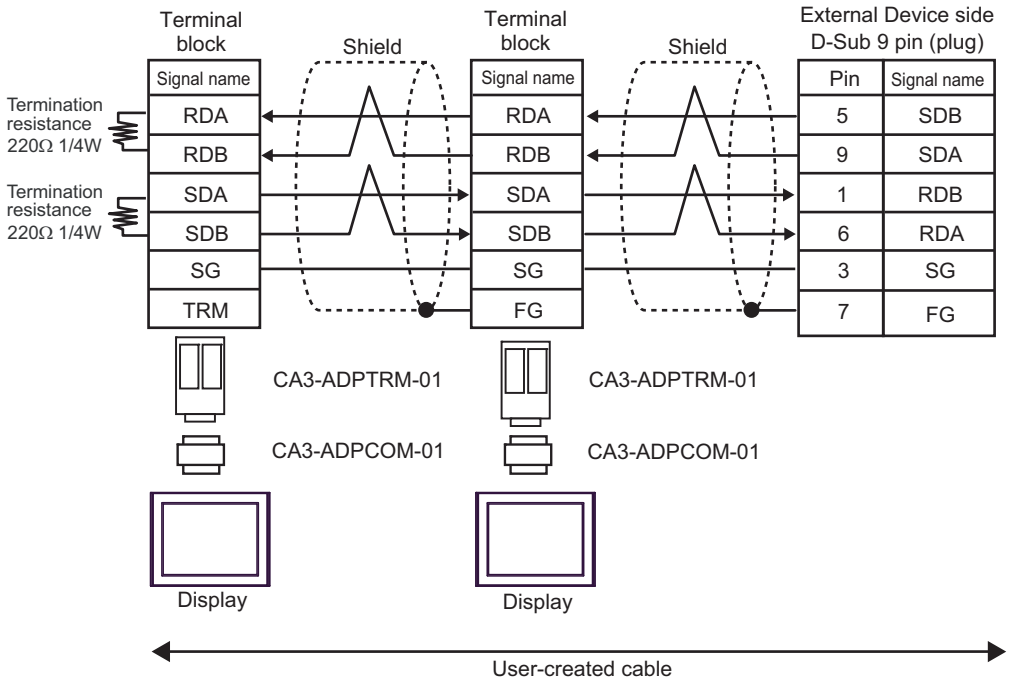
*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 14A.

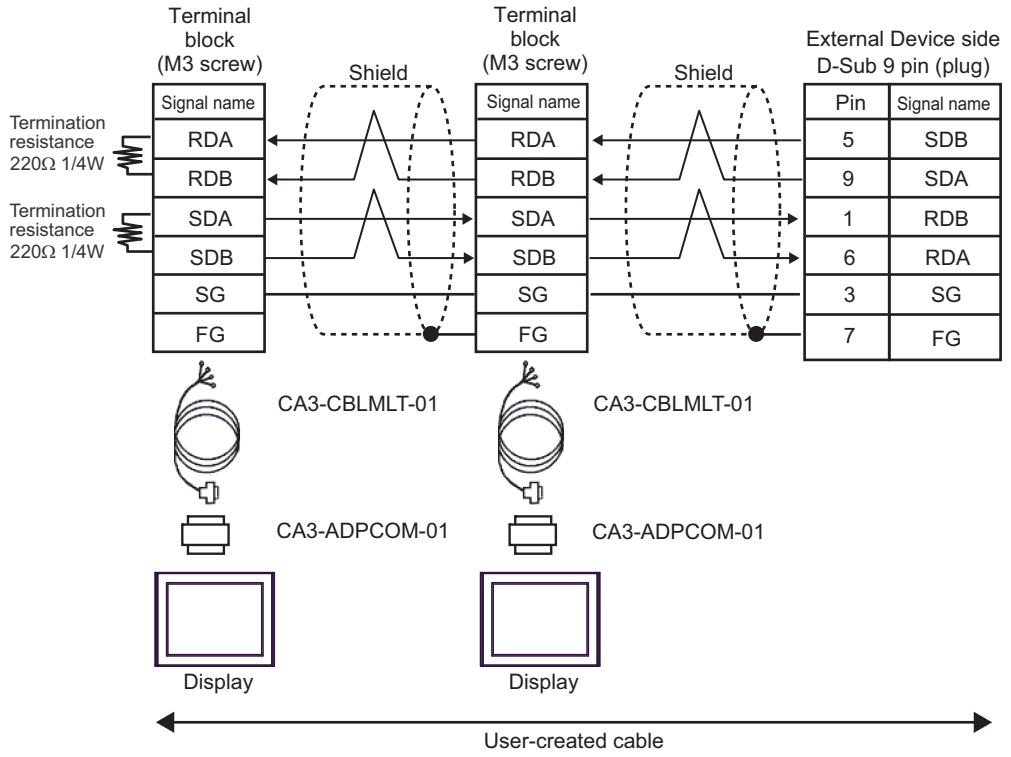
*10 When using a Multilink Cable (CA3-CBLMLT-01) instead of the Multilink Cable, refer to Cable Diagram 14B.

*11 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

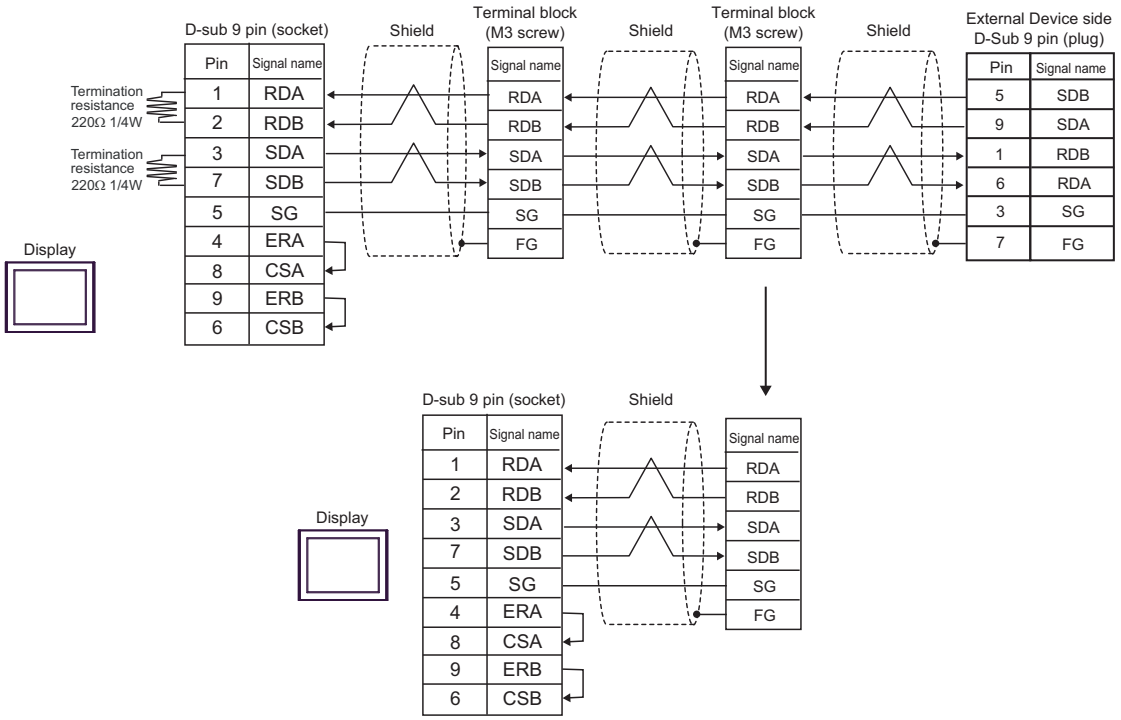
14A)


Terminal block
Shield
Terminal block
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
TRM
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-ADPTRM-01
CA3-ADPCOM-01
CA3-ADPTRM-01
CA3-ADPCOM-01
Display
Display
User-created cable

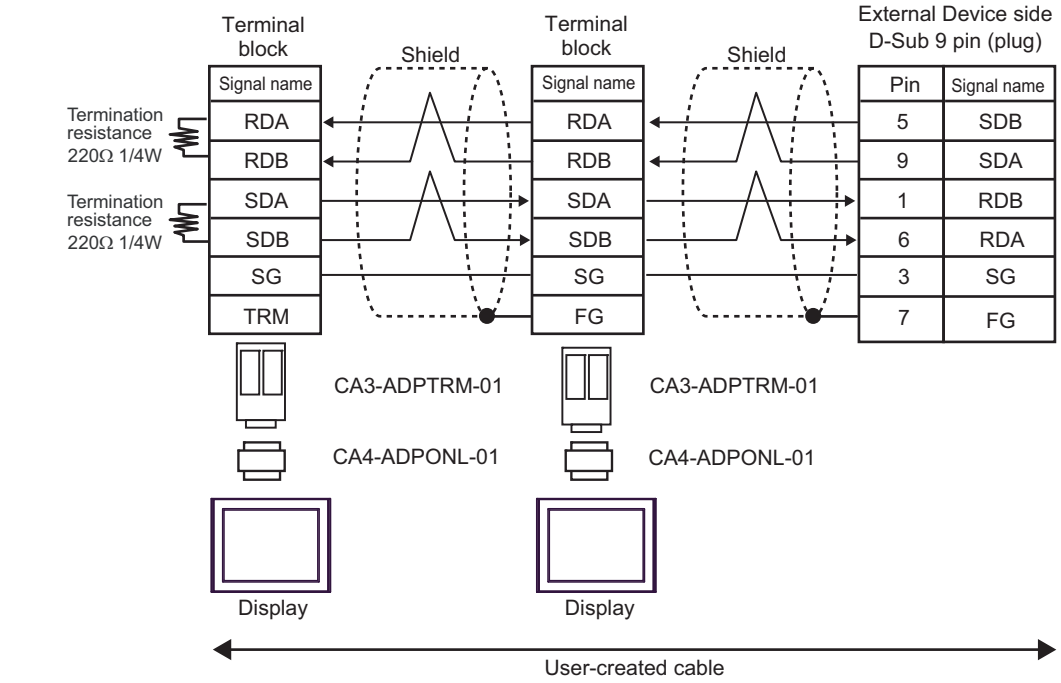
14B)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-CBLMLT-01
CA3-ADPCOM-01
CA3-CBLMLT-01
CA3-ADPCOM-01
Display
Display
User-created cable

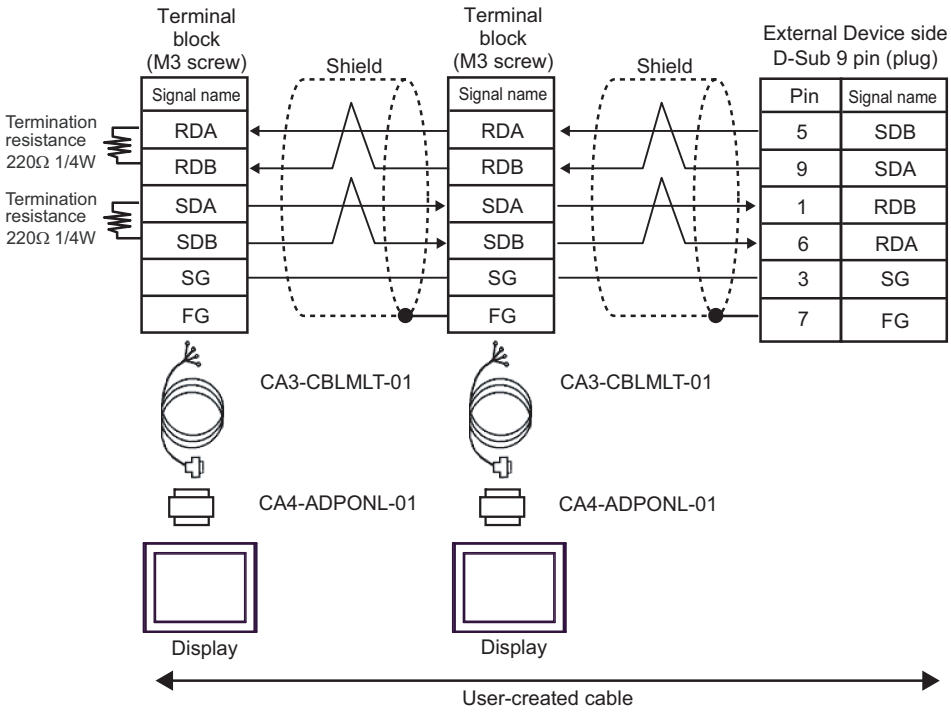
14C)


D-sub 9 pin (socket)
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Pin
Signal name
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
1 RDA
2 RDB
3 SDA
7 SDB
5 SG
4 ERA
8 CSA
9 ERB
6 CSB
RDA
RDB
SDA
SDB
SG
FG
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
Display
D-sub 9 pin (socket)
Shield
Display

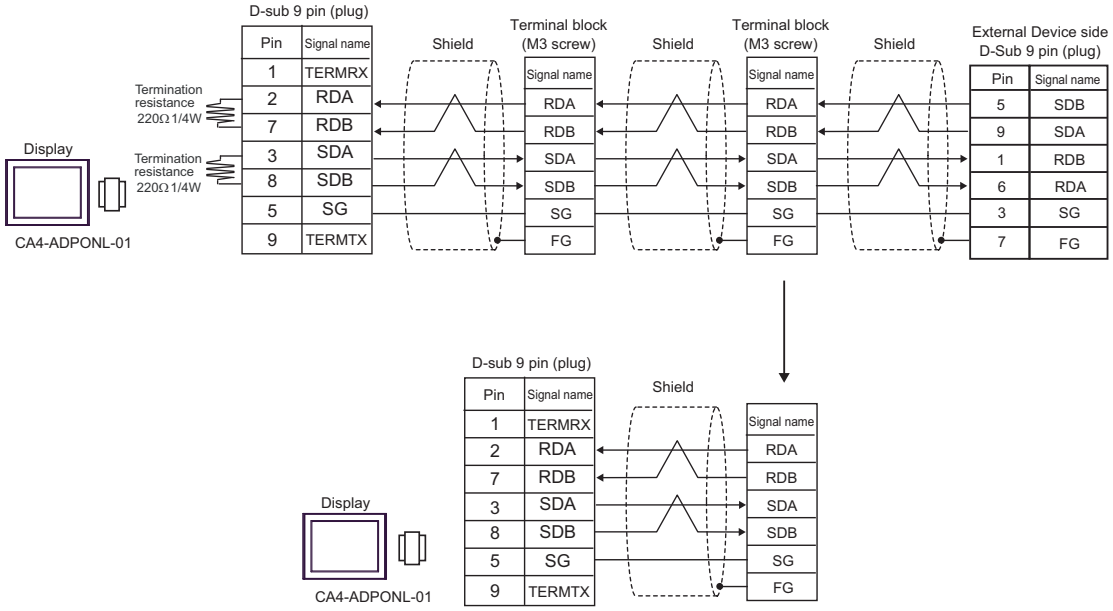
14D)


Terminal block
Shield
Terminal block
Shield
External Device side D-Sub 9 pin (plug)
Signal name
Pin
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
RDA
RDB
SDA
SDB
SG
TRM
FG
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
CA3-ADPTRM-01
CA4-ADPONL-01
CA3-ADPTRM-01
CA4-ADPONL-01
Display
Display
User-created cable

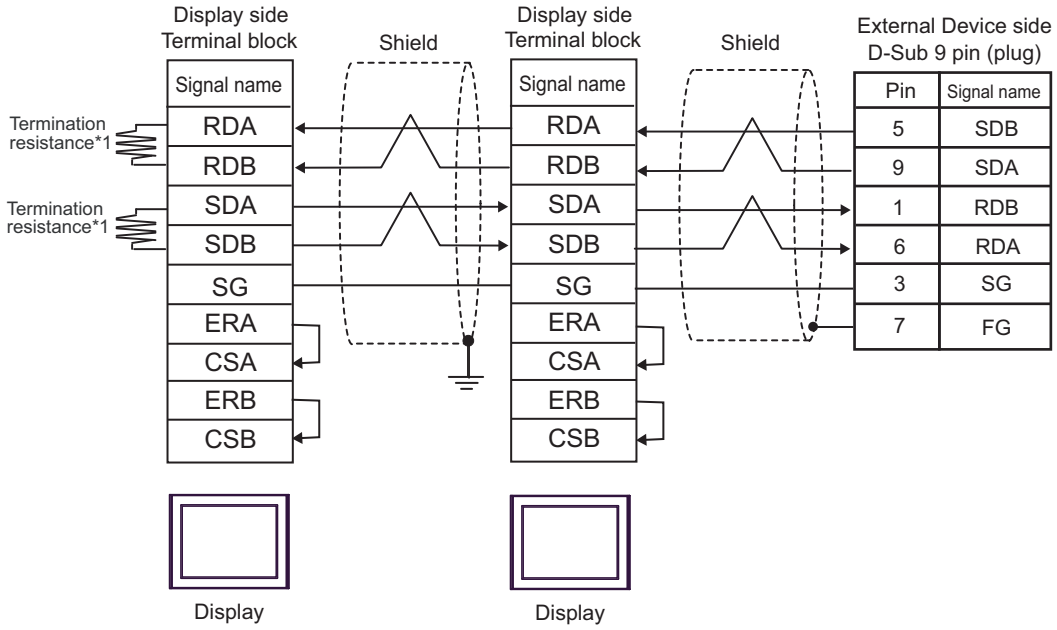
14E)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-CBLMLT-01
CA3-CBLMLT-01
CA4-ADPONL-01
CA4-ADPONL-01
Display
Display
User-created cable

14F)


D-sub 9 pin (plug)
Pin
Signal name
1 TERMRX
2 RDA
7 RDB
3 SDA
8 SDB
5 SG
9 TERMTX
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
Display
CA4-ADPONL-01
D-sub 9 pin (plug)
Pin
Signal name
1 TERMRX
2 RDA
7 RDB
3 SDA
8 SDB
5 SG
9 TERMTX
Shield
Signal name
RDA
RDB
SDA
SDB
SG
FG
Display
CA4-ADPONL-01

14G)

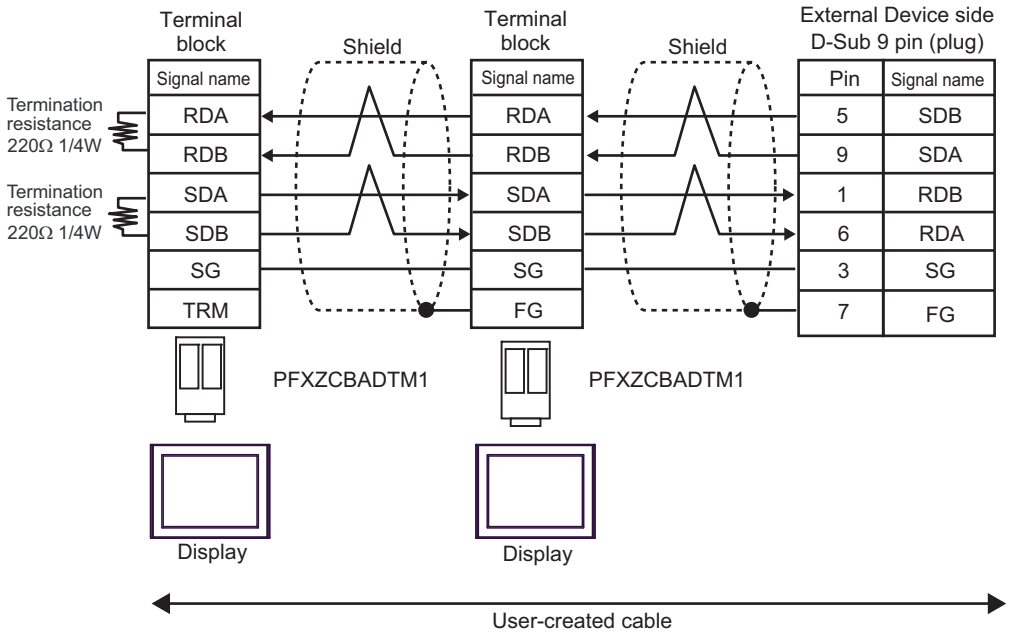



*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

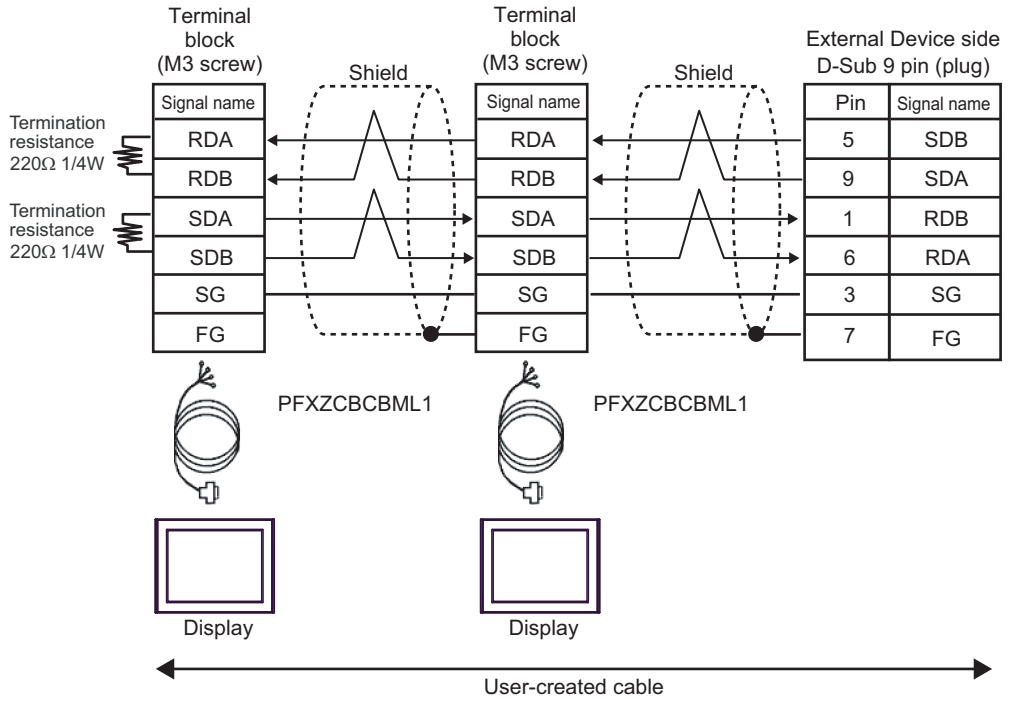
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

For the Displays other than that used as the terminal, set the DIP Switch 1-4 on the rear of the Display to OFF in the n:1 connection.

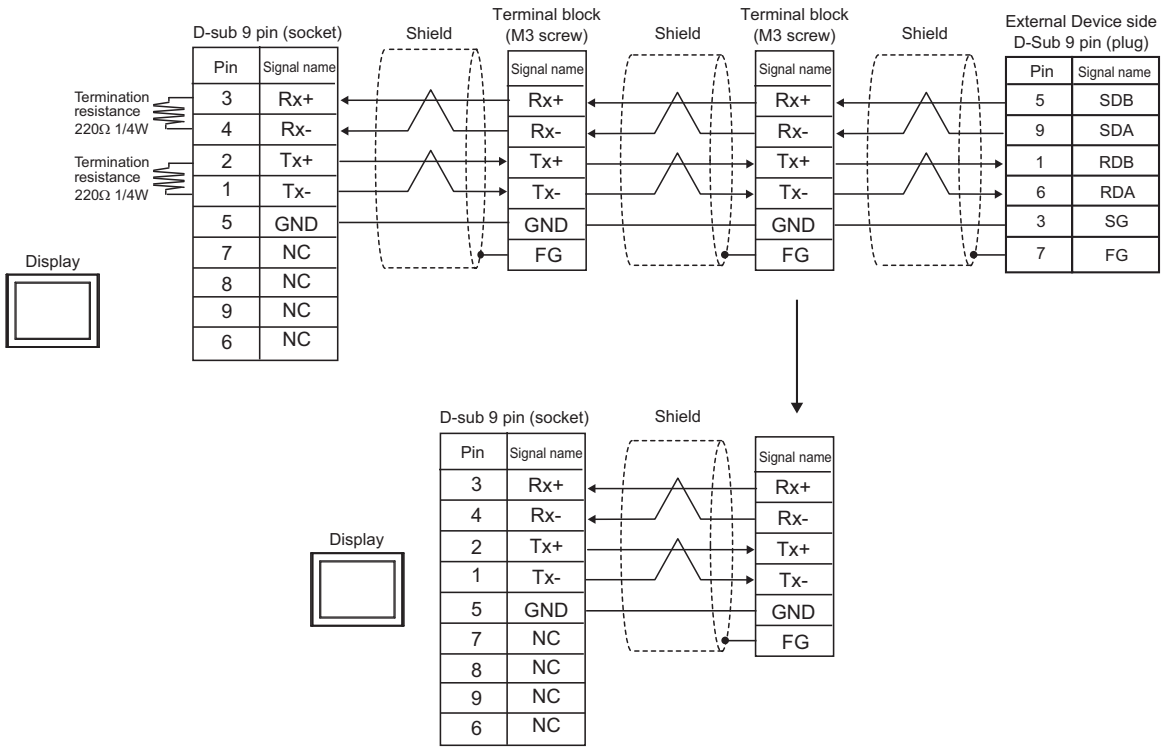
14H)


Terminal block
Shield
Terminal block
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
TRM
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
PFXZCBADTM1
PFXZCBADTM1
Display
Display
User-created cable

14I)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
PFXZCBCBML1
PFXZCBCBML1
Display
Display
User-created cable

14J)


D-sub 9 pin (socket)
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Pin
Signal name
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
3 Rx+
4 Rx-
2 Tx+
1 Tx-
5 GND
7 NC
8 NC
9 NC
6 NC
Rx+
Rx-
Tx+
Tx-
GND
FG
5 SDB
9 SDA
1 RDB
6 RDA
3 SG
7 FG
Display
D-sub 9 pin (socket)
Shield
Display

Cable Diagram 15

| Display (Connection Port) | Cable | | Notes |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 15A | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | Cable length:<br>500m max |
| | 15B | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 15C | User-created cable | |
| GP3000 [*4] (COM2) | 15D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-0<br>+<br>User-created cable | Cable length:<br>500m max |
| | 15E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 15F | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 15G | User-created cable | Cable length:<br>500m max |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 15H | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | Cable length:<br>500m max |
| | 15I | Multilink cable by Pro-face<br>PFXZCBCBML1[*10]<br>+<br>User-created cable | |
| | 15C | User-created cable | |
| PE-4000B[*11]<br>PS5000[*11]<br>PS6000 (Optional Interface)[*11] | 15J | User-created cable | Cable length:<br>500m max |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)
☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

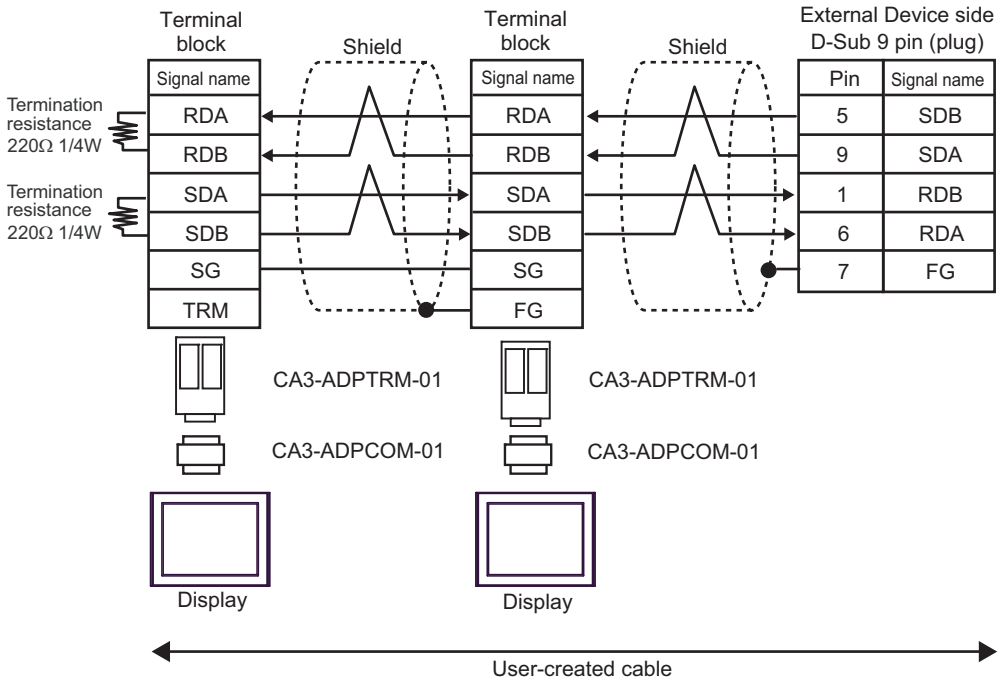
*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 15A.

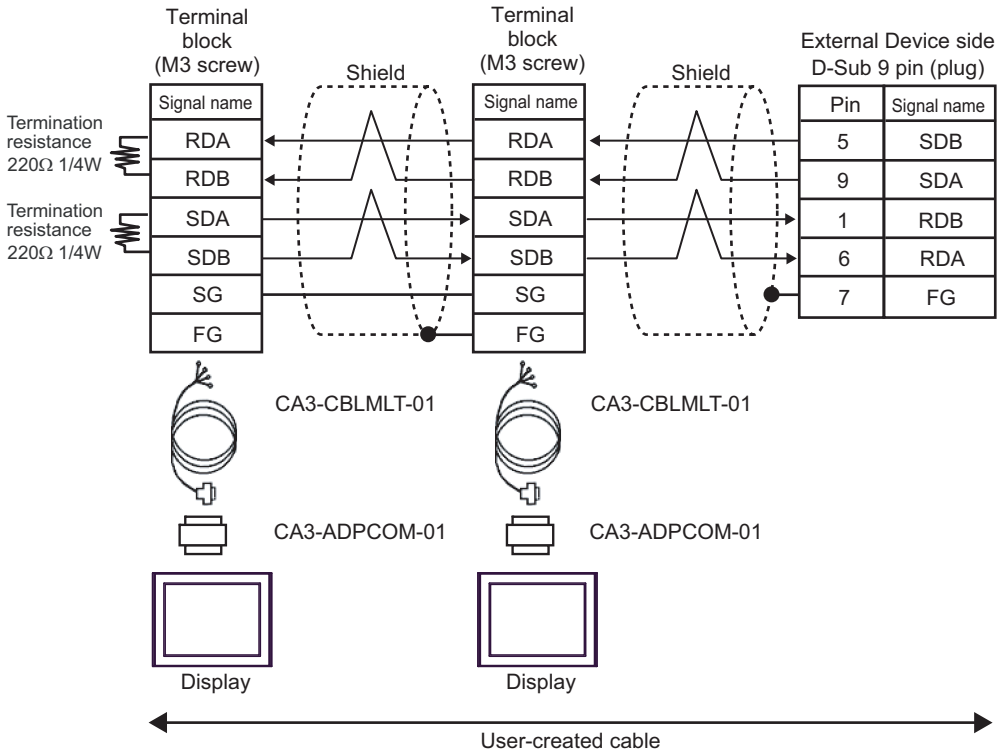
*10 When using a Multilink Cable (CA3-CBLMLT-01) instead of the Multilink Cable, refer to Cable Diagram 15B.

*11 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

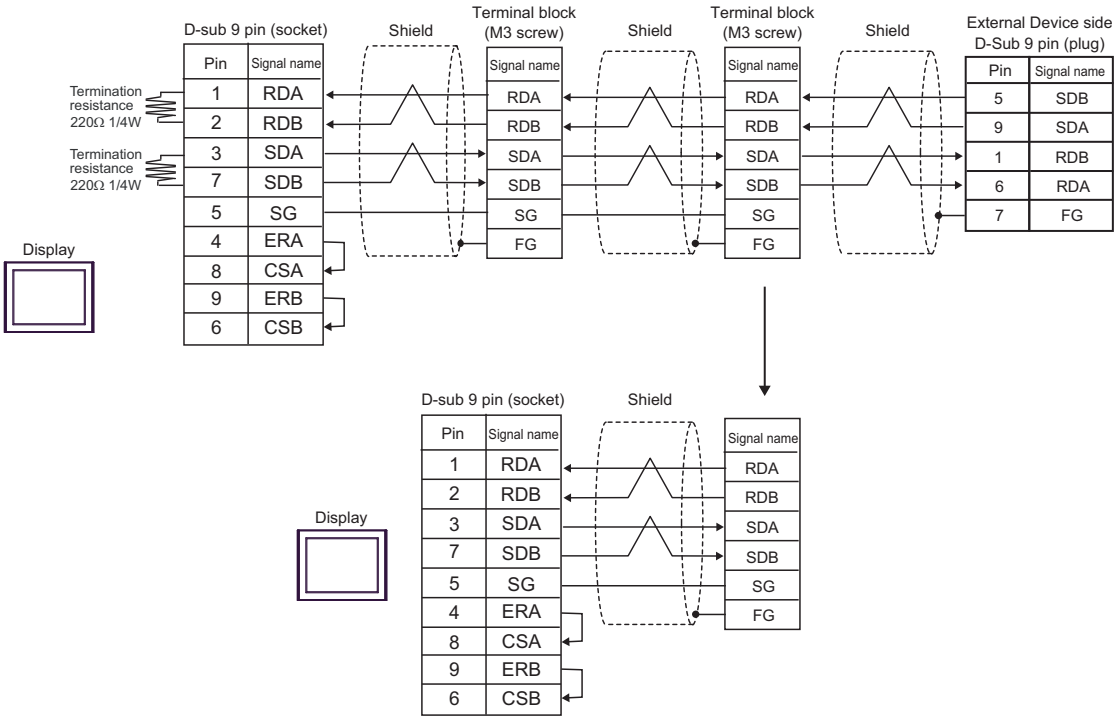
15A)


Terminal block
Shield
Terminal block
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
TRM
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-ADPTRM-01
CA3-ADPCOM-01
CA3-ADPTRM-01
CA3-ADPCOM-01
Display
Display
User-created cable

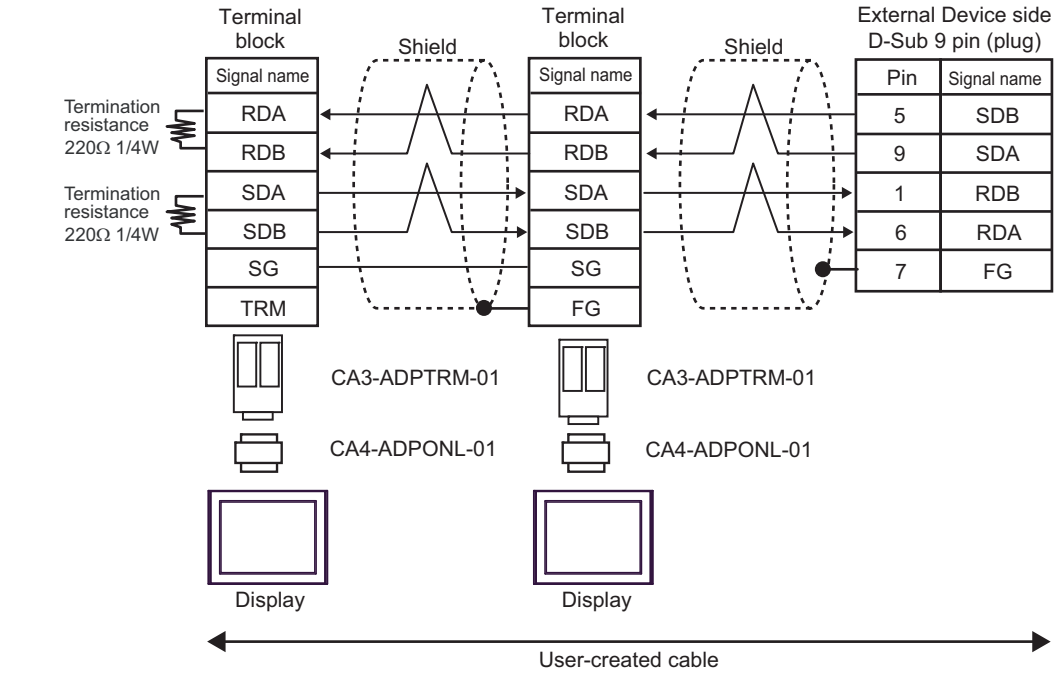
15B)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-CBLMLT-01
CA3-ADPCOM-01
CA3-CBLMLT-01
CA3-ADPCOM-01
Display
Display
User-created cable

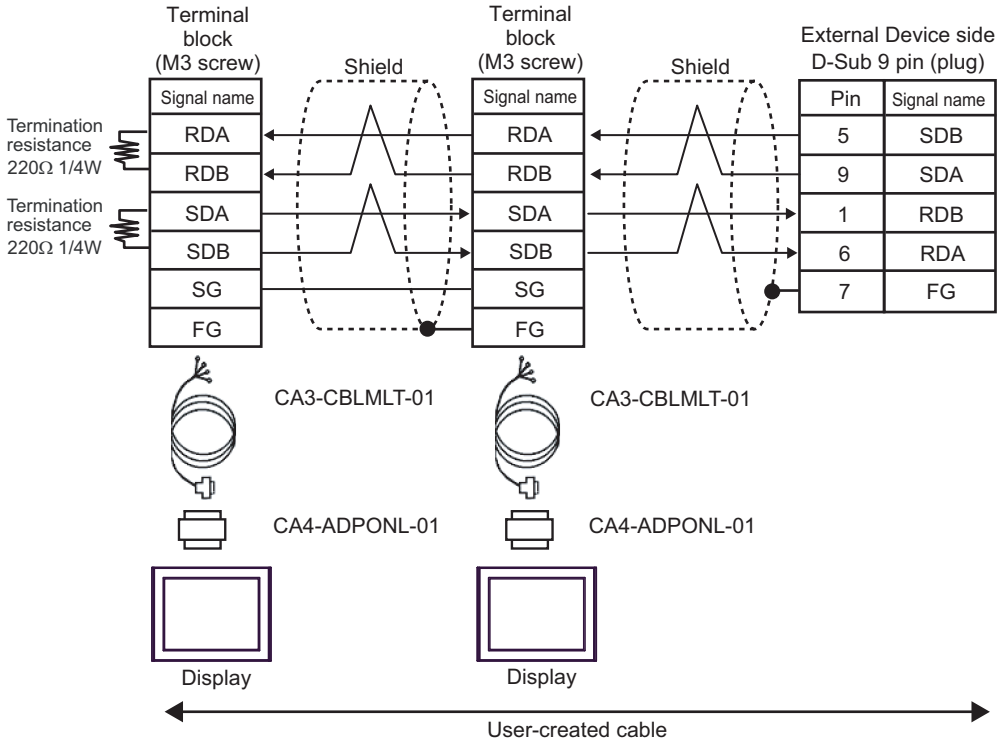
15C)


D-sub 9 pin (socket)
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Pin
Signal name
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
1 RDA
2 RDB
3 SDA
7 SDB
5 SG
4 ERA
8 CSA
9 ERB
6 CSB
RDA
RDB
SDA
SDB
SG
FG
5 SDB
9 SDA
1 RDB
6 RDA
7 FG
Display
D-sub 9 pin (socket)
Shield
Display

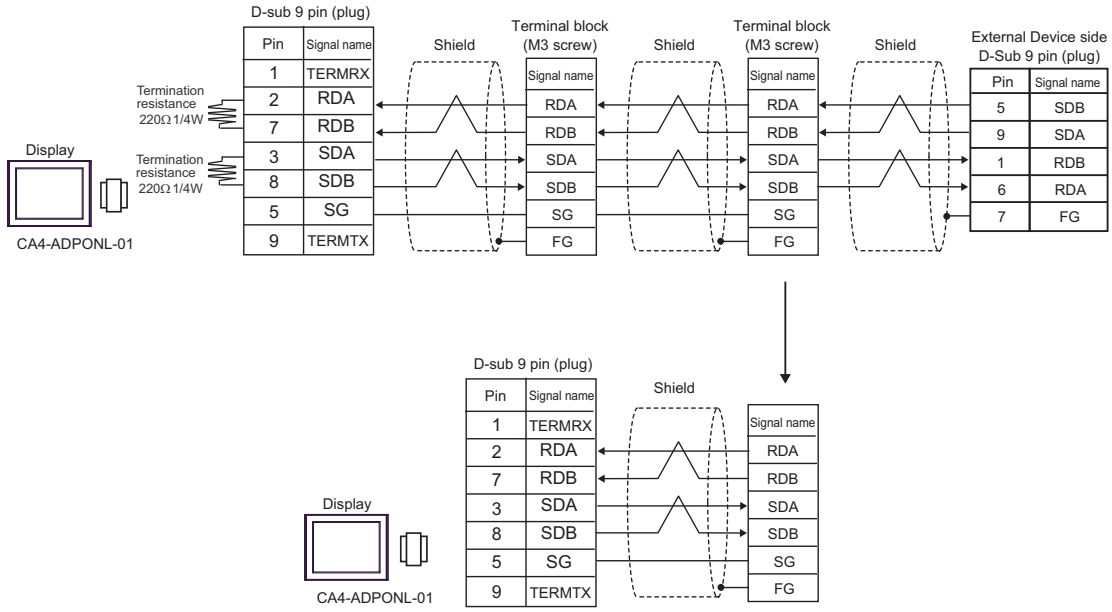
15D)


Terminal block
Shield
Terminal block
Shield
External Device side D-Sub 9 pin (plug)
Signal name
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
RDA
RDB
SDA
SDB
SG
TRM
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
7 FG
CA3-ADPTRM-01
CA4-ADPONL-01
CA3-ADPTRM-01
CA4-ADPONL-01
Display
Display
User-created cable

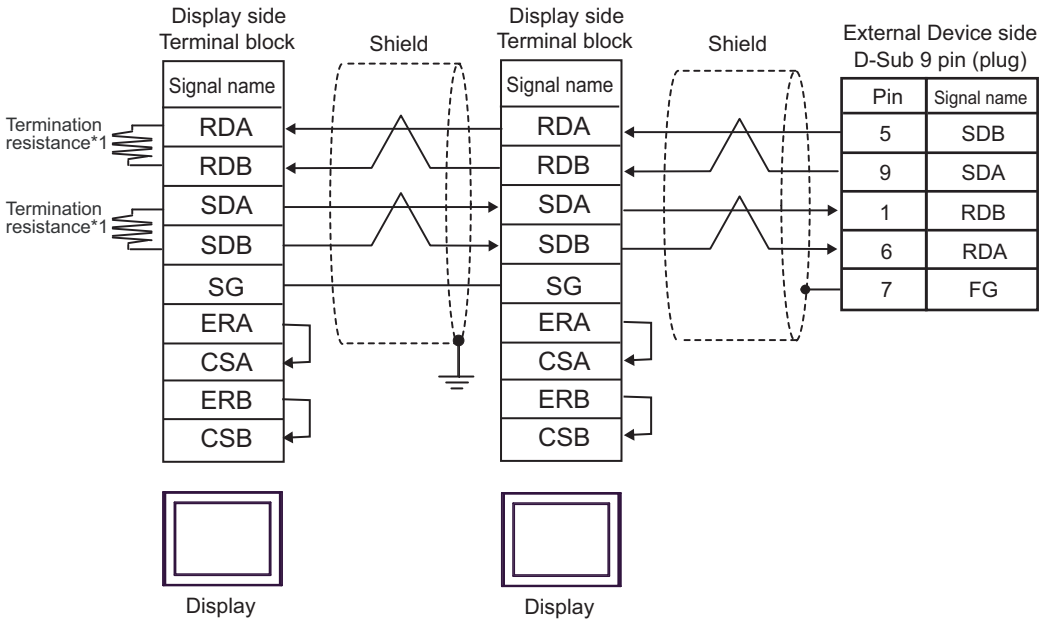
15E)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-CBLMLT-01
CA3-CBLMLT-01
CA4-ADPONL-01
CA4-ADPONL-01
Display
Display
User-created cable

15F)


D-sub 9 pin (plug)
Pin
Signal name
1 TERMRX
2 RDA
7 RDB
3 SDA
8 SDB
5 SG
9 TERMTX
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
FG
Pin
Signal name
5 SDB
9 SDA
1 RDB
6 RDA
7 FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
Display
CA4-ADPONL-01
D-sub 9 pin (plug)
Shield
Display
CA4-ADPONL-01

15G)

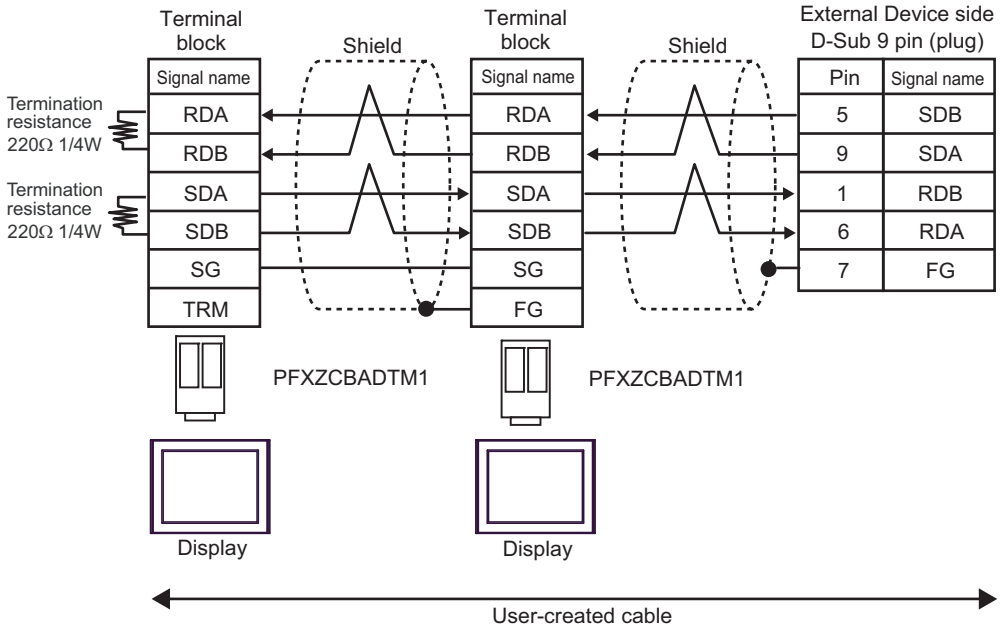



*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

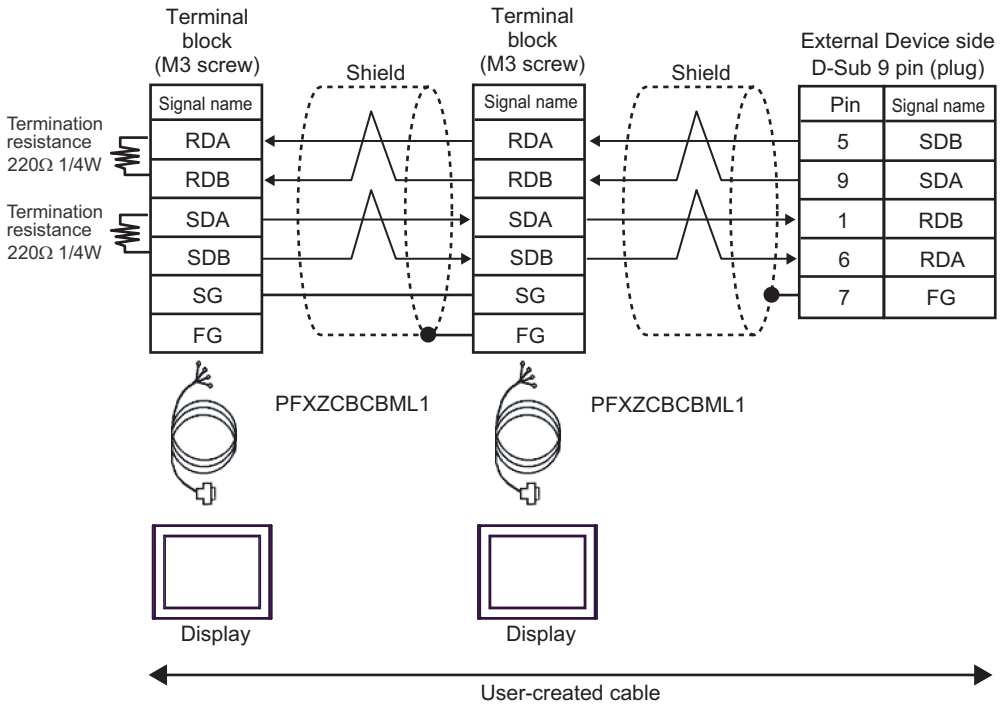
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

For the Displays other than that used as the terminal, set the DIP Switch 1-4 on the rear of the Display to OFF in the n:1 connection.

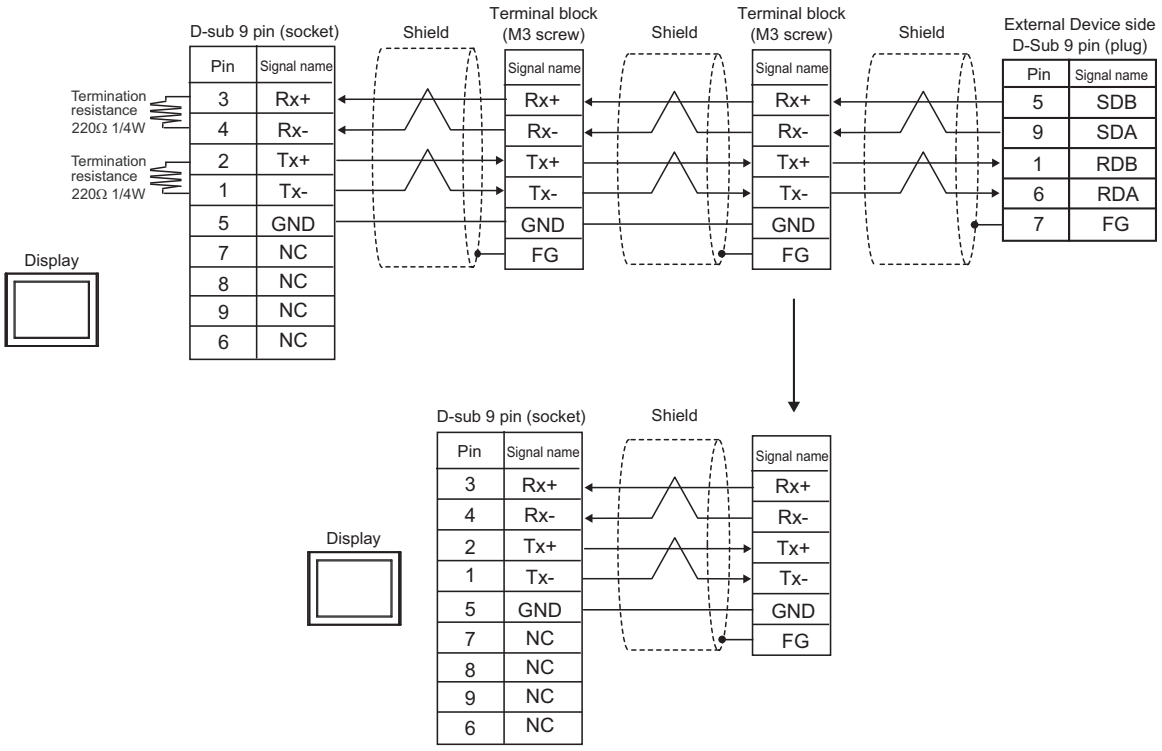
15H)


Terminal block
Shield
Terminal block
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
TRM
FG
Pin
Signal name
5
SDB
9
SDA
1
RDB
6
RDA
7
FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
PFXZCBADTM1
PFXZCBADTM1
Display
Display
User-created cable

15I)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Signal name
RDA
RDB
SDA
SDB
SG
FG
Pin
Signal name
5
SDB
9
SDA
1
RDB
6
RDA
7
FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
PFXZCBCBML1
PFXZCBCBML1
Display
Display
User-created cable

15J)


D-sub 9 pin (socket)
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side D-Sub 9 pin (plug)
Pin
Signal name
3 Rx+
4 Rx-
2 Tx+
1 Tx-
5 GND
7 NC
8 NC
9 NC
6 NC
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
Display
Rx+
Rx-
Tx+
Tx-
GND
FG
5 SDB
9 SDA
1 RDB
6 RDA
7 FG
D-sub 9 pin (socket)
Shield
Display

Cable Diagram 16

| Display (Connection Port) | Cable | | Notes |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 16A | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | Cable length:<br>500m max |
| | 16B | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 16C | User-created cable | |
| GP3000 [*4] (COM2) | 16D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-0<br>+<br>User-created cable | Cable length:<br>500m max |
| | 16E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 16F | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 16G | User-created cable | Cable length:<br>500m max |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 16H | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | Cable length:<br>500m max |
| | 16I | Multilink cable by Pro-face<br>PFXZCBCBML1[*10]<br>+<br>User-created cable | |
| | 16C | User-created cable | |
| PE-4000B[*11]<br>PS5000[*11]<br>PS6000 (Optional Interface)[*11] | 16J | User-created cable | Cable length:<br>500m max |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)
☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

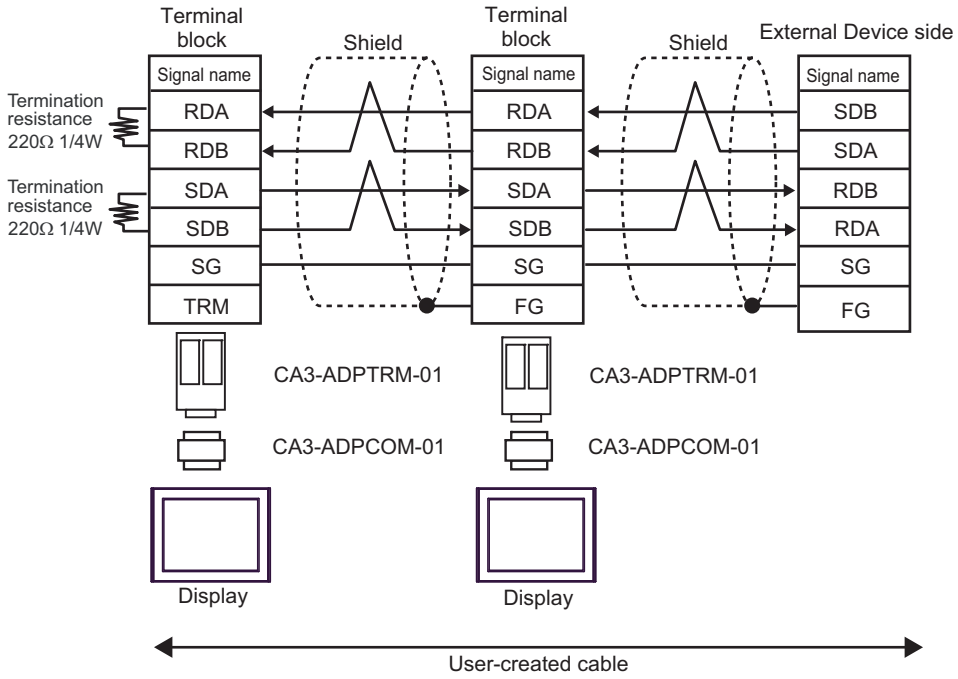
*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 16A.

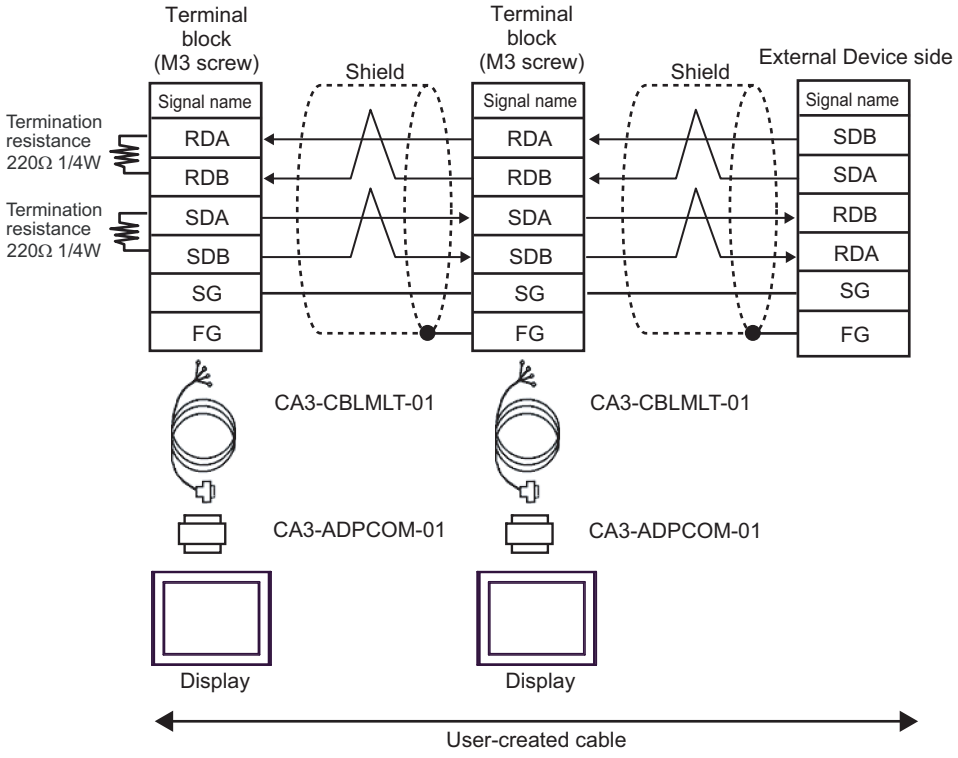
*10 When using a Multilink Cable (CA3-CBLMLT-01) instead of the Multilink Cable, refer to Cable Diagram 16B.

*11 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

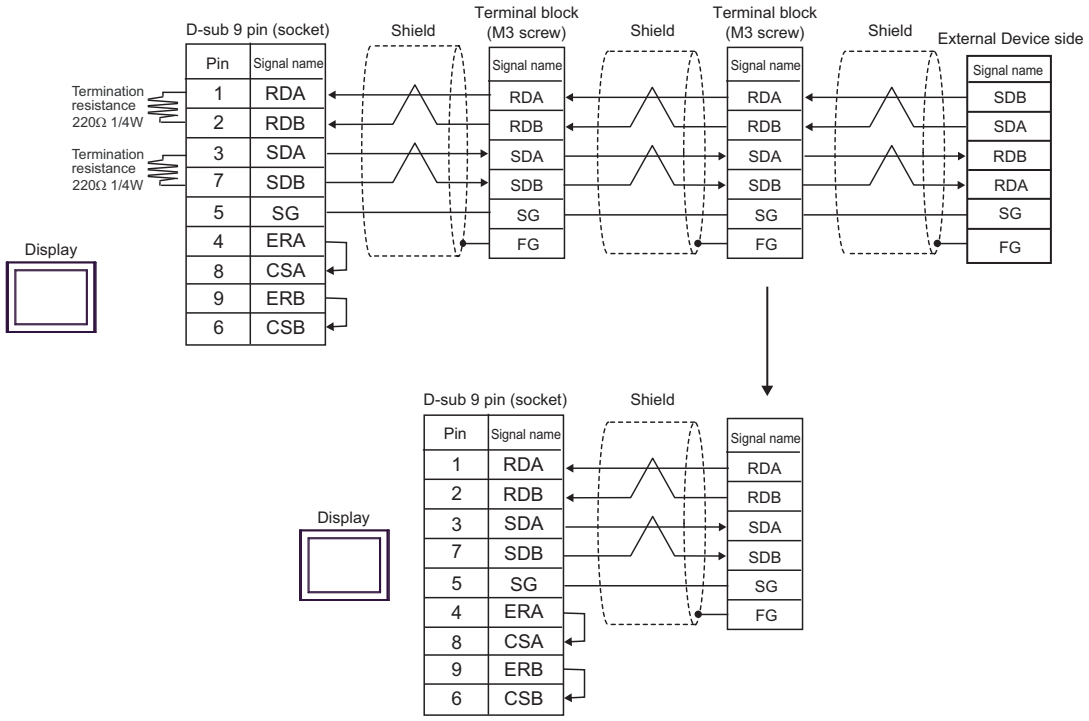
16A)


Terminal block
Shield
Terminal block
Shield
External Device side
Signal name
RDA
RDB
SDA
SDB
SG
TRM
FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-ADPTRM-01
CA3-ADPCOM-01
Display
User-created cable

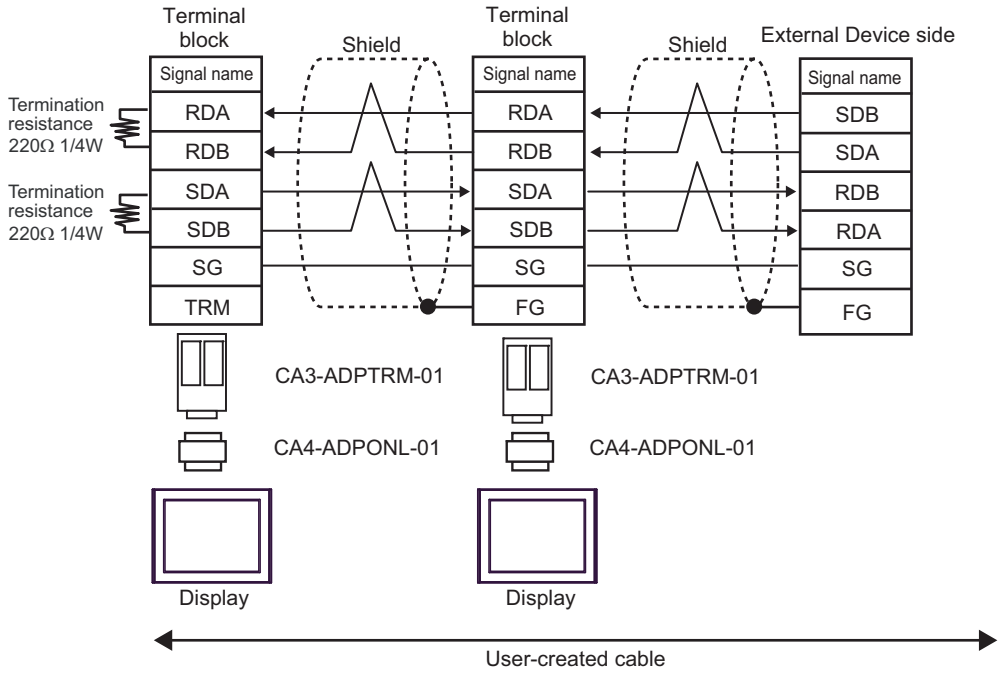
16B)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side
Signal name
RDA
RDB
SDA
SDB
SG
FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-CBLMLT-01
CA3-ADPCOM-01
Display
User-created cable

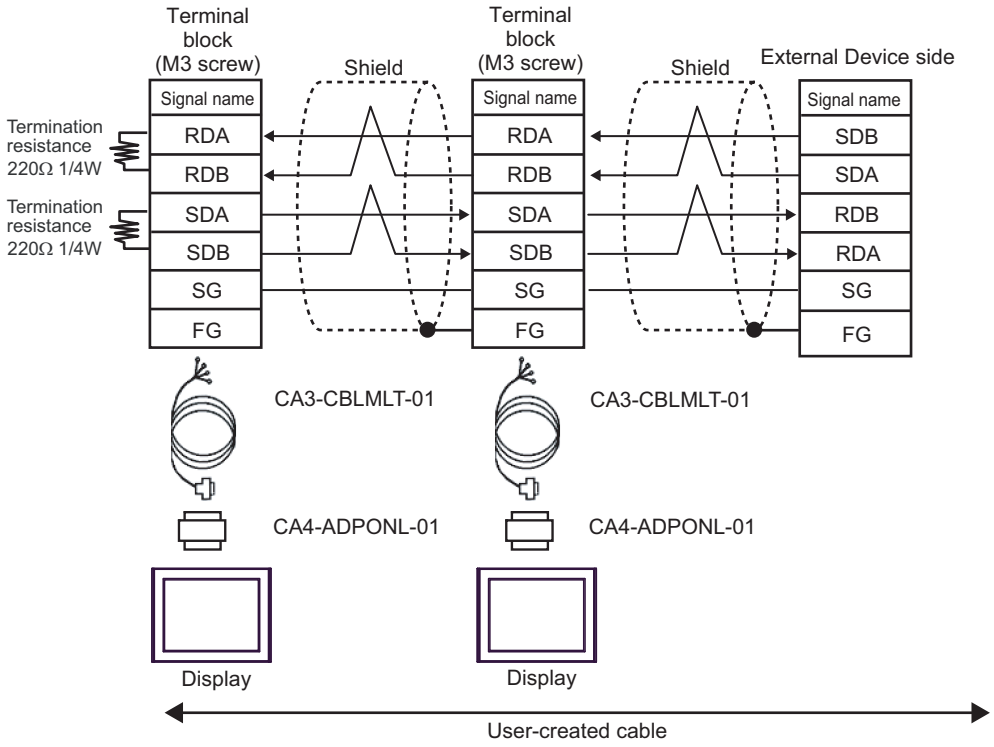
16C)


D-sub 9 pin (socket)
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side
Pin
Signal name
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
1 RDA
2 RDB
3 SDA
7 SDB
5 SG
4 ERA
8 CSA
9 ERB
6 CSB
RDA
RDB
SDA
SDB
SG
FG
SDB
SDA
RDB
RDA
SG
FG
Display
D-sub 9 pin (socket)
Shield
Display

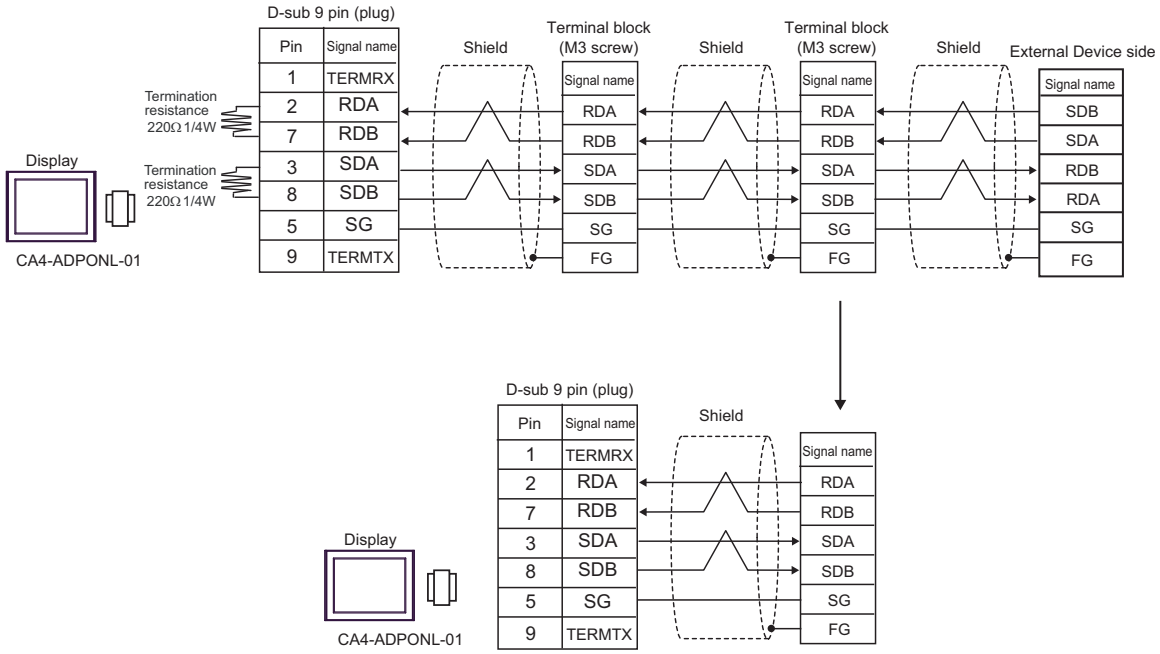
16D)


Terminal block
Shield
Terminal block
Shield
External Device side
Signal name
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
RDA
RDB
SDA
SDB
SG
TRM
FG
SDB
SDA
RDB
RDA
SG
FG
CA3-ADPTRM-01
CA4-ADPONL-01
CA3-ADPTRM-01
CA4-ADPONL-01
Display
Display
User-created cable

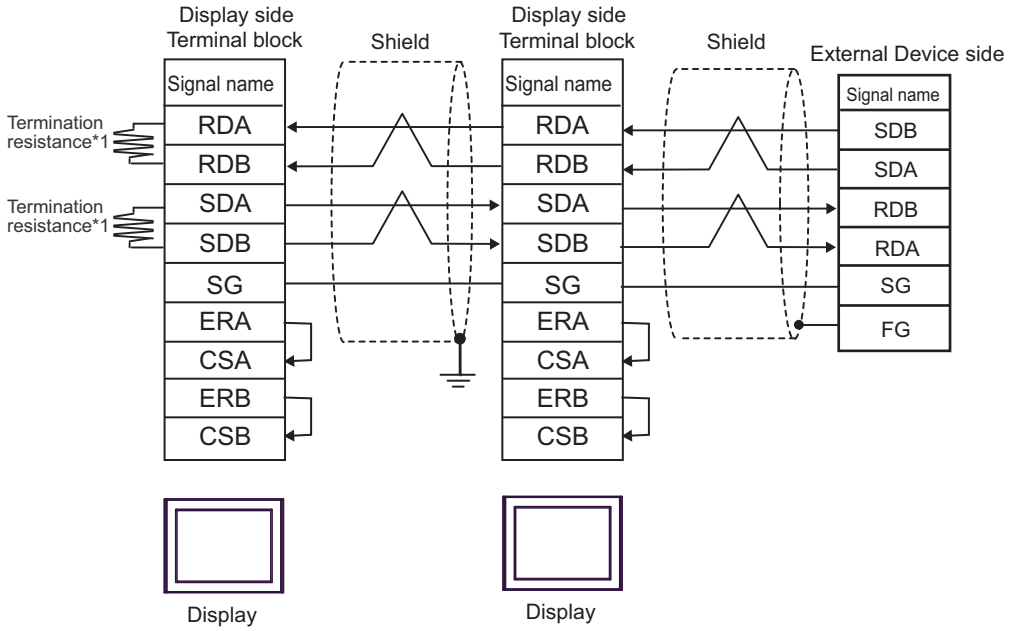
16E)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side
Signal name
RDA
RDB
SDA
SDB
SG
FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
CA3-CBLMLT-01
CA3-CBLMLT-01
CA4-ADPONL-01
CA4-ADPONL-01
Display
Display
User-created cable

16F)


D-sub 9 pin (plug)
Pin
Signal name
1 TERMRX
2 RDA
7 RDB
3 SDA
8 SDB
5 SG
9 TERMTX
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side
Signal name
RDA
RDB
SDA
SDB
SG
FG
SDB
SDA
RDB
RDA
SG
FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
Display
CA4-ADPONL-01
D-sub 9 pin (plug)
Shield
Display
CA4-ADPONL-01

16G)

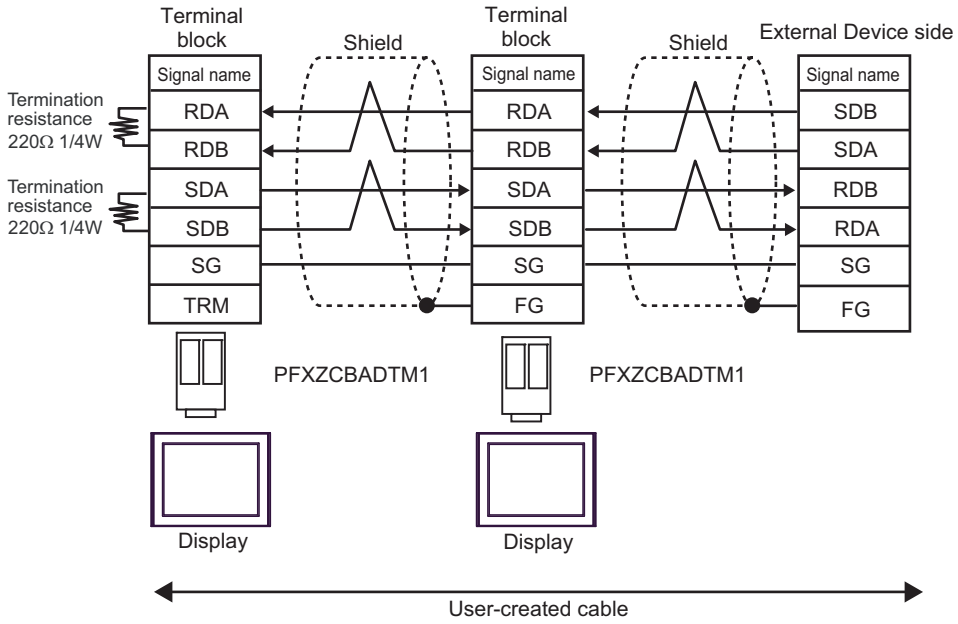



*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

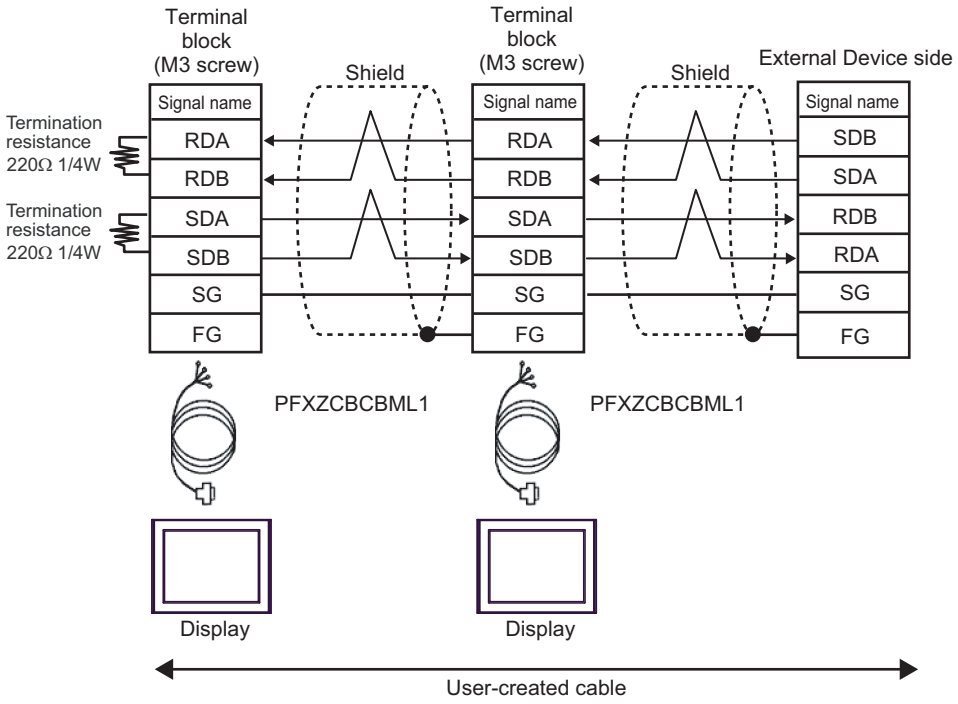
| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

For the Displays other than that used as the terminal, set the DIP Switch 1-4 on the rear of the Display to OFF in the n:1 connection.

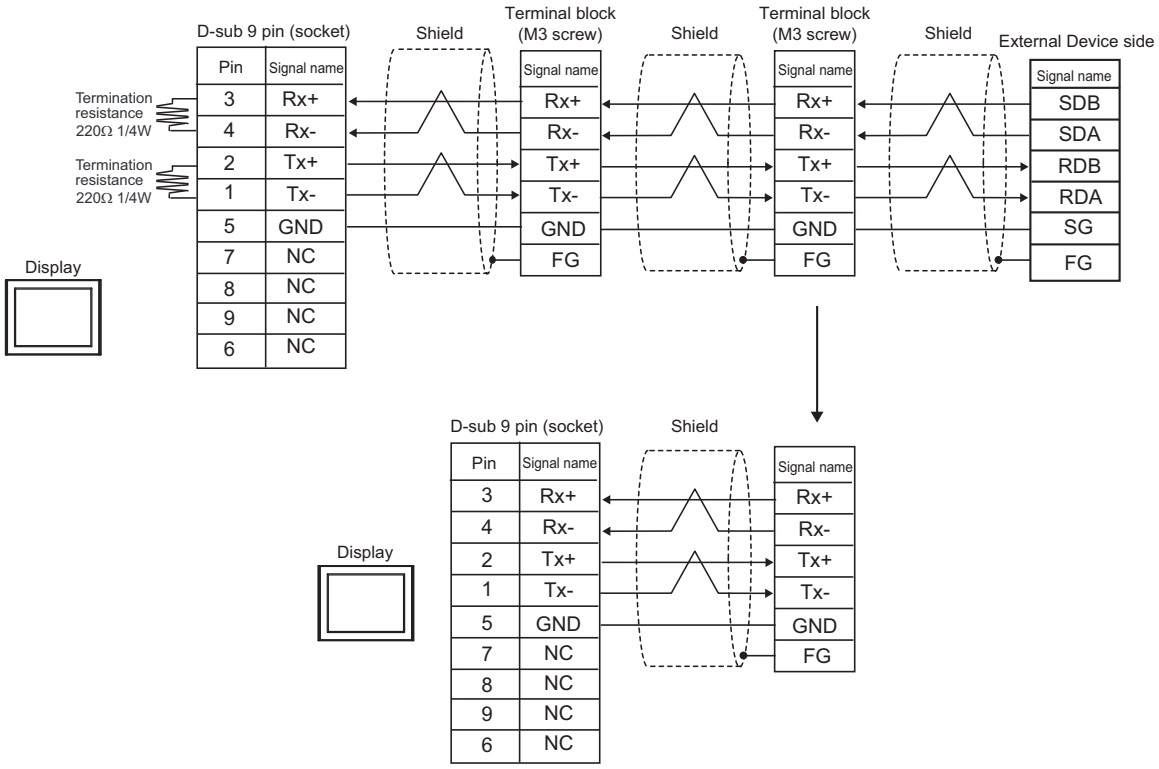
16H)


Terminal block
Shield
Terminal block
Shield
External Device side
Signal name
RDA
RDB
SDA
SDB
SG
TRM
FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
PFXZCBADTM1
PFXZCBADTM1
Display
Display
User-created cable

16I)


Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side
Signal name
RDA
RDB
SDA
SDB
SG
FG
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
PFXZCBCBML1
PFXZCBCBML1
Display
Display
User-created cable

16J)


D-sub 9 pin (socket)
Shield
Terminal block (M3 screw)
Shield
Terminal block (M3 screw)
Shield
External Device side
Pin
Signal name
Termination resistance 220Ω 1/4W
Termination resistance 220Ω 1/4W
3 Rx+
4 Rx-
2 Tx+
1 Tx-
5 GND
7 NC
8 NC
9 NC
6 NC
Rx+
Rx-
Tx+
Tx-
GND
FG
SDB
SDA
RDB
RDA
SG
FG
Display
D-sub 9 pin (socket)
Shield
Display

Cable Diagram 17

| Display (Connection Port) | Cable | | Notes |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 17A | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | Cable length:<br>500m max |
| | 17B | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 17C | User-created cable | |
| GP3000 [*4] (COM2) | 17D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-0<br>+<br>User-created cable | Cable length:<br>500m max |
| | 17E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 17F | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 17G | User-created cable | Cable length:<br>500m max |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 17H | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | Cable length:<br>500m max |
| | 17I | Multilink cable by Pro-face<br>PFXZCBCBML1[*10]<br>+<br>User-created cable | |
| | 17C | User-created cable | |
| PE-4000B[*11]<br>PS5000[*11]<br>PS6000 (Optional Interface)[*11] | 17J | User-created cable | Cable length:<br>500m max |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)
☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

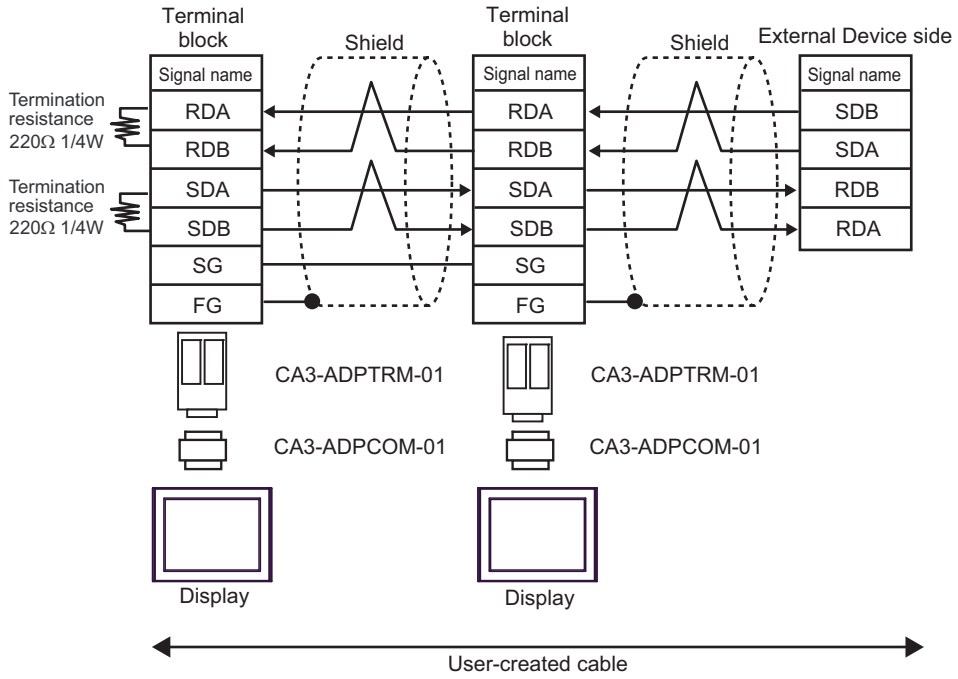
*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 17A.

*10 When using a Multilink Cable (CA3-CBLMLT-01) instead of the Multilink Cable, refer to Cable Diagram 17B.

*11 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

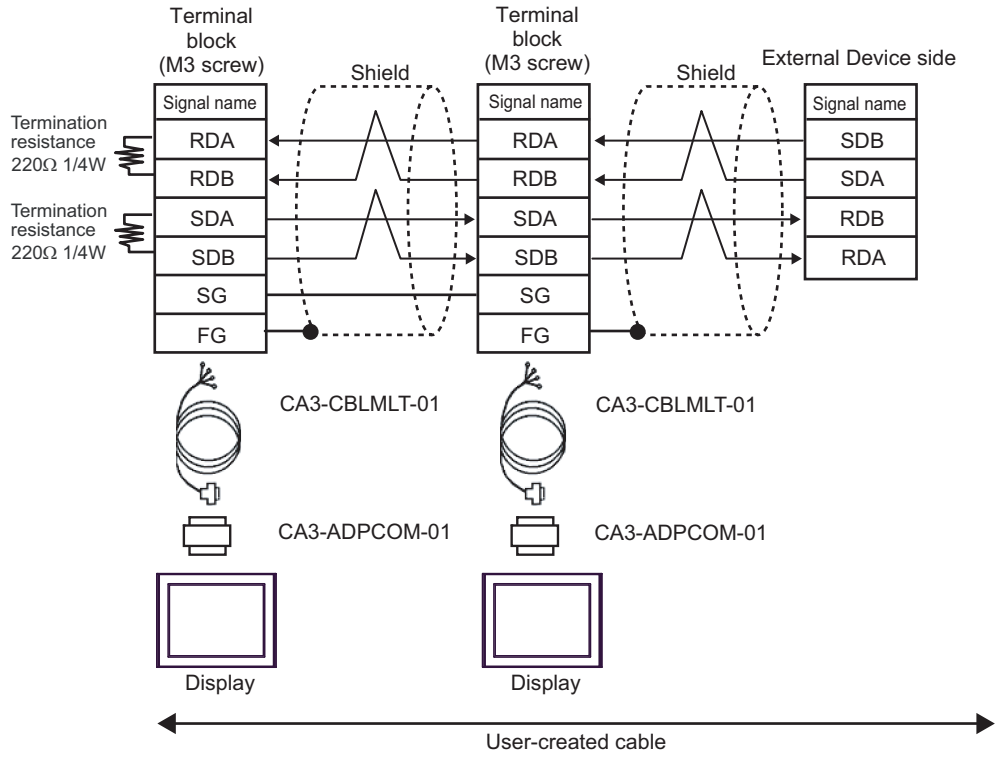
**NOTE**
- When connecting the External Device, use the link adapter B500-AL001 or the terminal block by OMRON Corporation.

17A)




**NOTE**
- Turn on the termination resistor switch on the External Device located at the end.

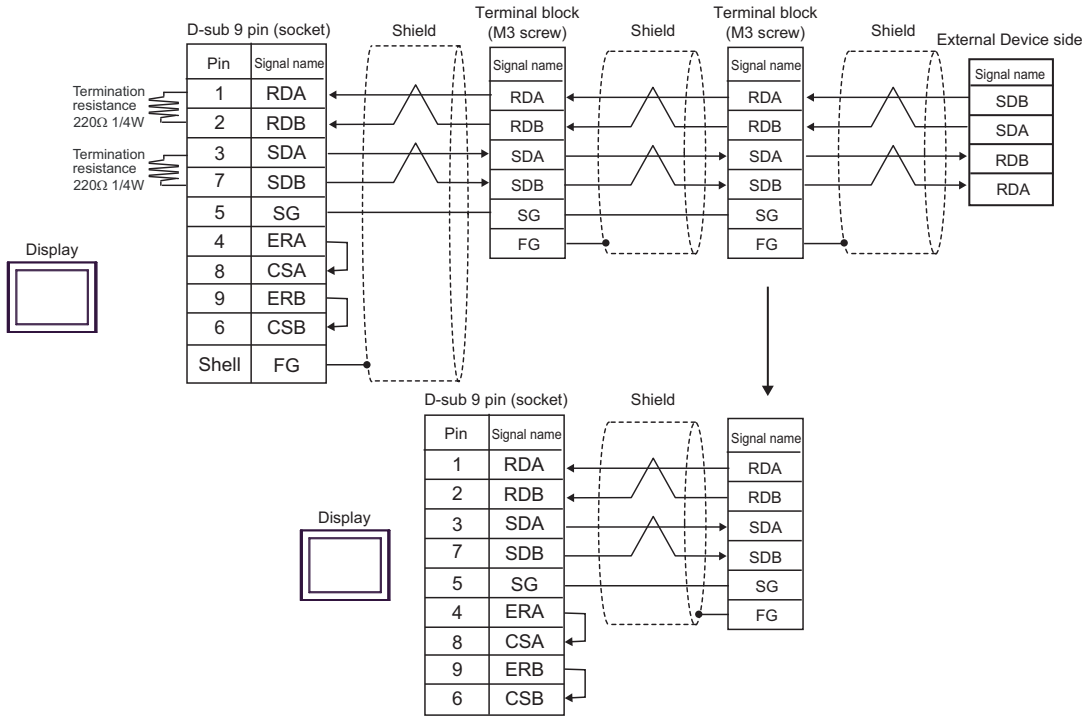
17B)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

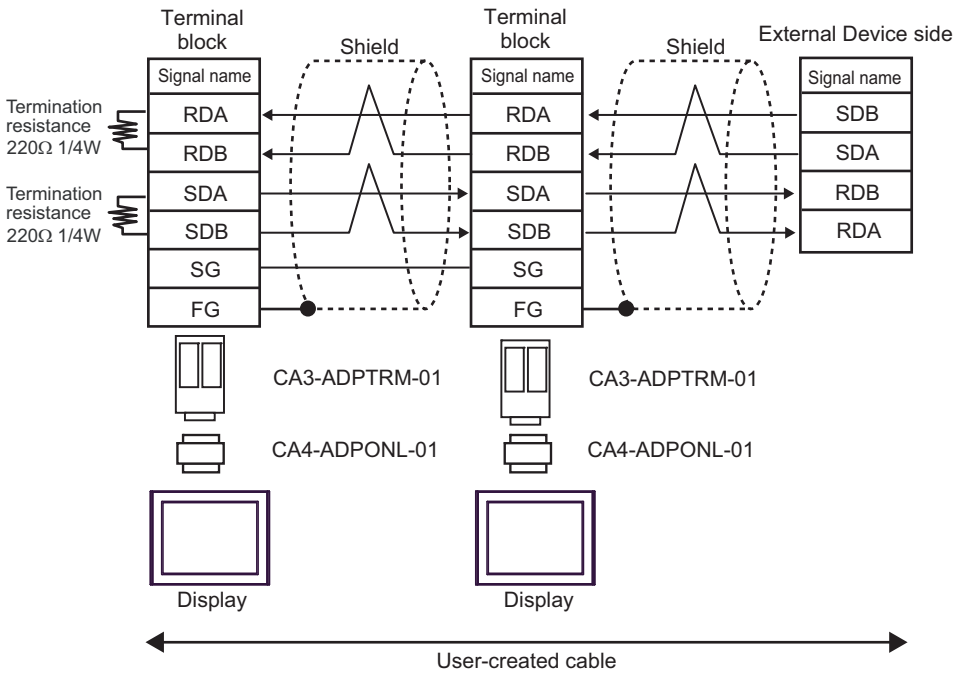
17C)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

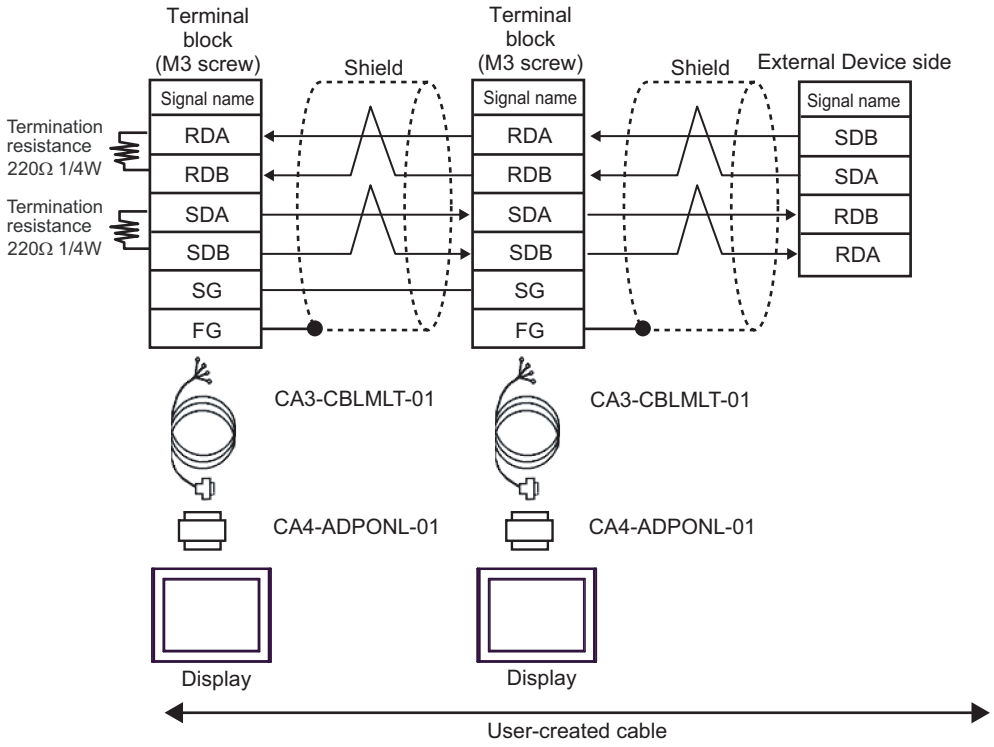
17D)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

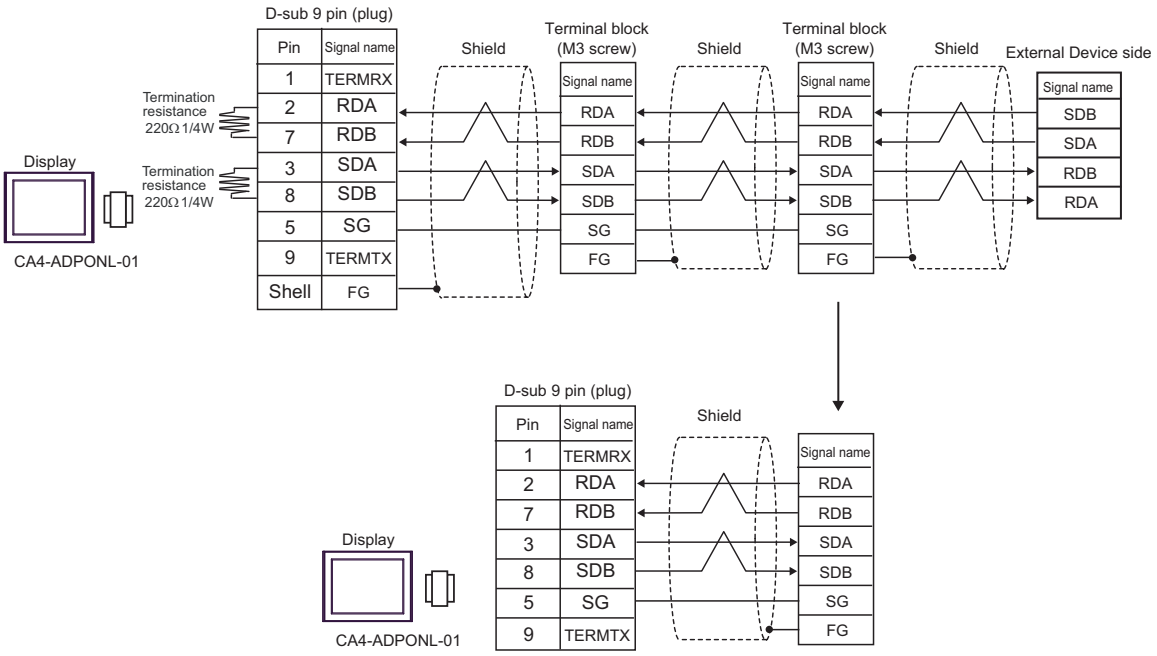
17E)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

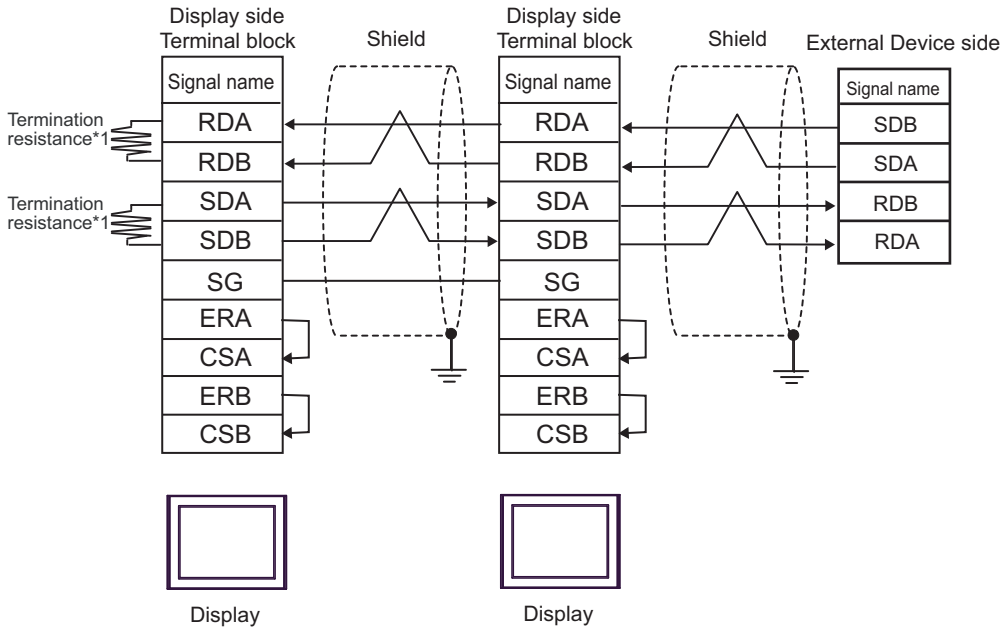
17F)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

17G)




**NOTE**

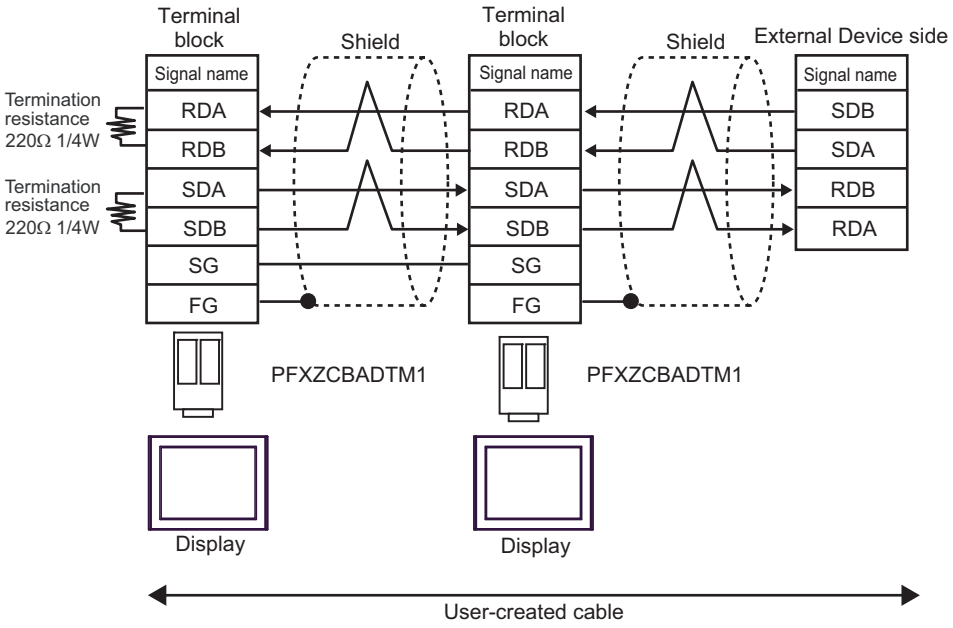
- Turn on the termination resistor switch on the External Device located at the end.

*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

For the Displays other than that used as the terminal, set the DIP Switch 1-4 on the rear of the Display to OFF in the n:1 connection.

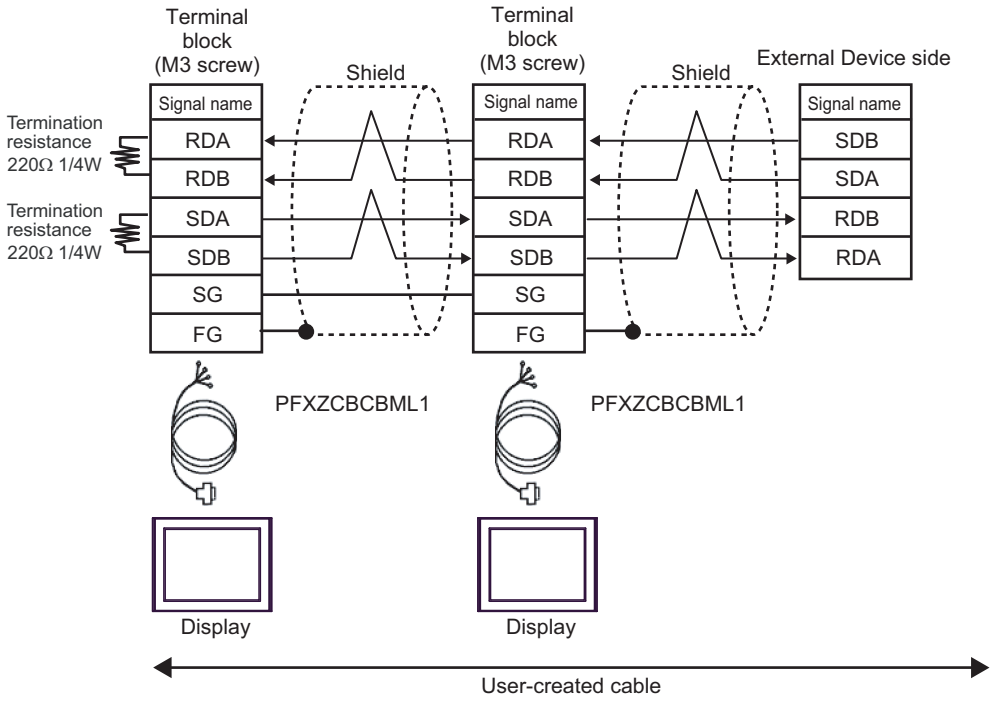
17H)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

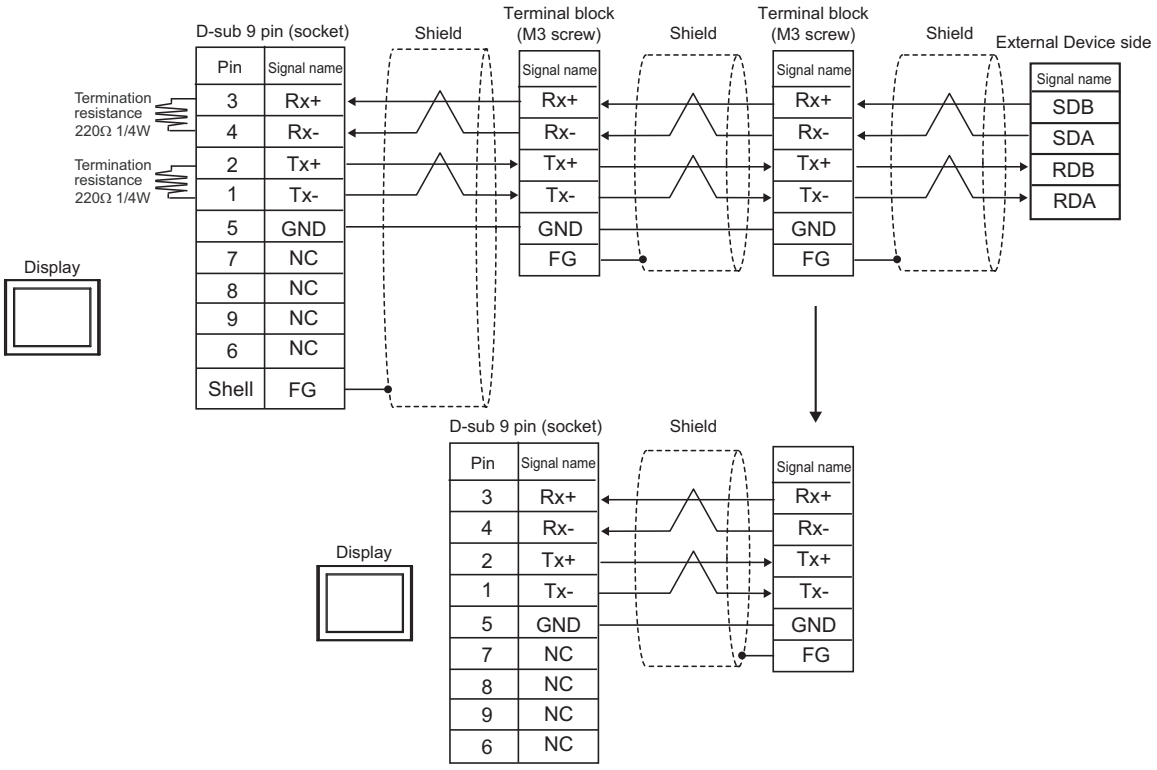
17I)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

17J)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

Cable Diagram 18

| Display (Connection Port) | Cable | | Notes |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 18A | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | Cable length:<br>500m max |
| | 18B | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 18C | User-created cable | |
| GP3000 [*4] (COM2) | 18D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-0<br>+<br>User-created cable | Cable length:<br>500m max |
| | 18E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 18F | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 18G | User-created cable | Cable length:<br>500m max |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 18H | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | Cable length:<br>500m max |
| | 18I | Multilink cable by Pro-face<br>PFXZCBCBML1[*10]<br>+<br>User-created cable | |
| | 18C | User-created cable | |
| PE-4000B[*11]<br>PS5000[*11]<br>PS6000 (Optional Interface)[*11] | 18J | User-created cable | Cable length:<br>500m max |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)
☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

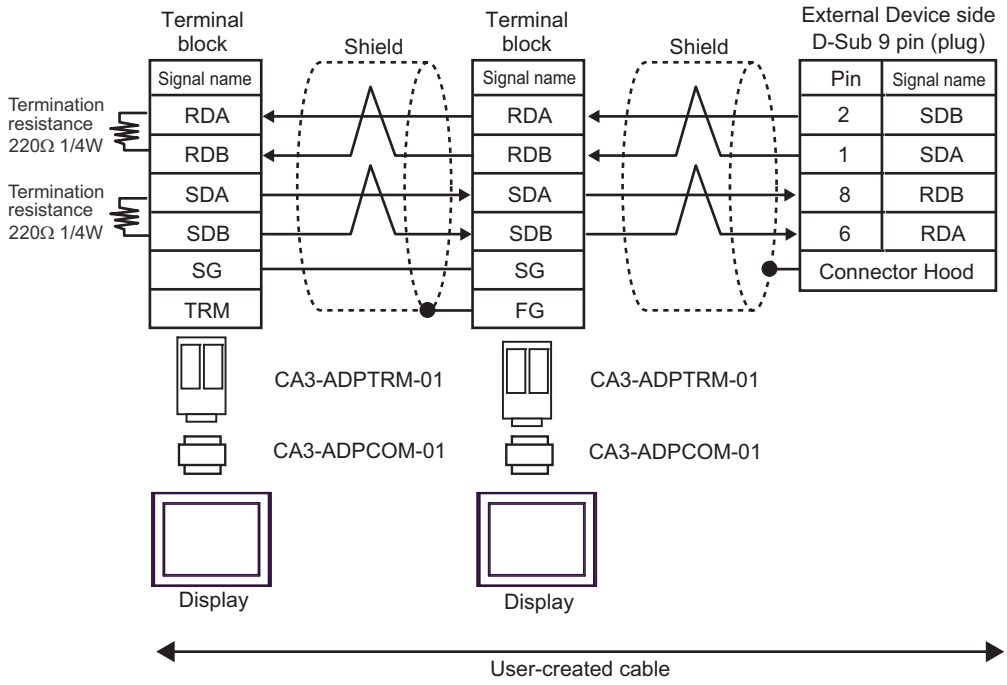
*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 18A.

*10 When using a Multilink Cable (CA3-CBLMLT-01) instead of the Multilink Cable, refer to Cable Diagram 18B.

*11 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

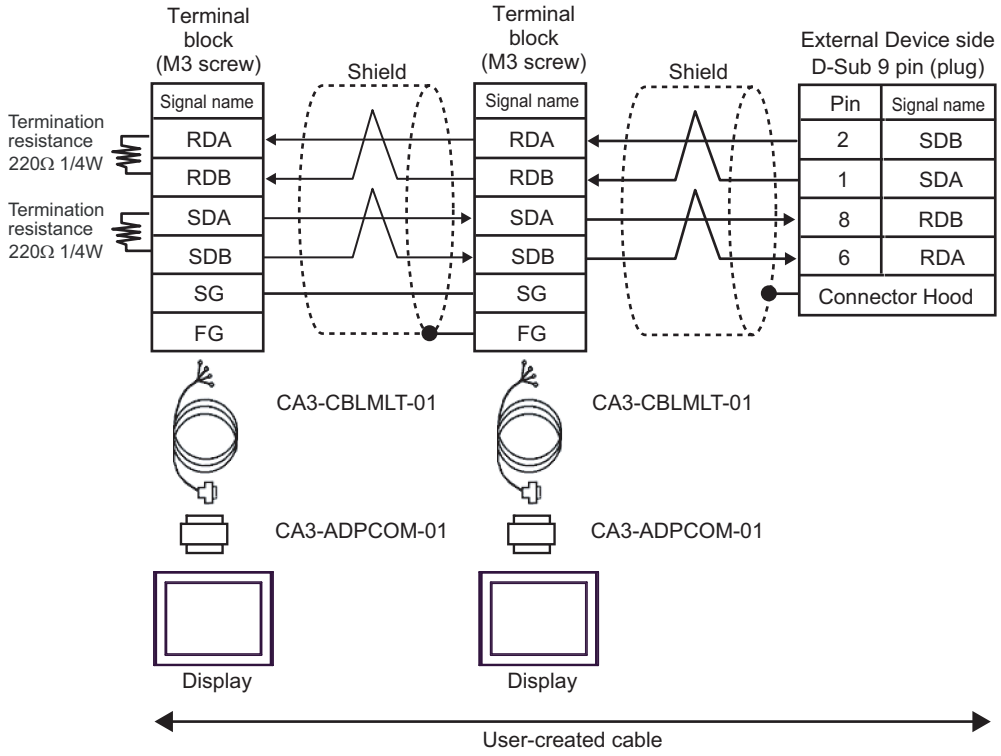
**NOTE**
- When connecting the External Device, use the link adapter B500-AL001 or the terminal block by OMRON Corporation.

18A)




**NOTE**
- Turn on the termination resistor switch on the External Device located at the end.

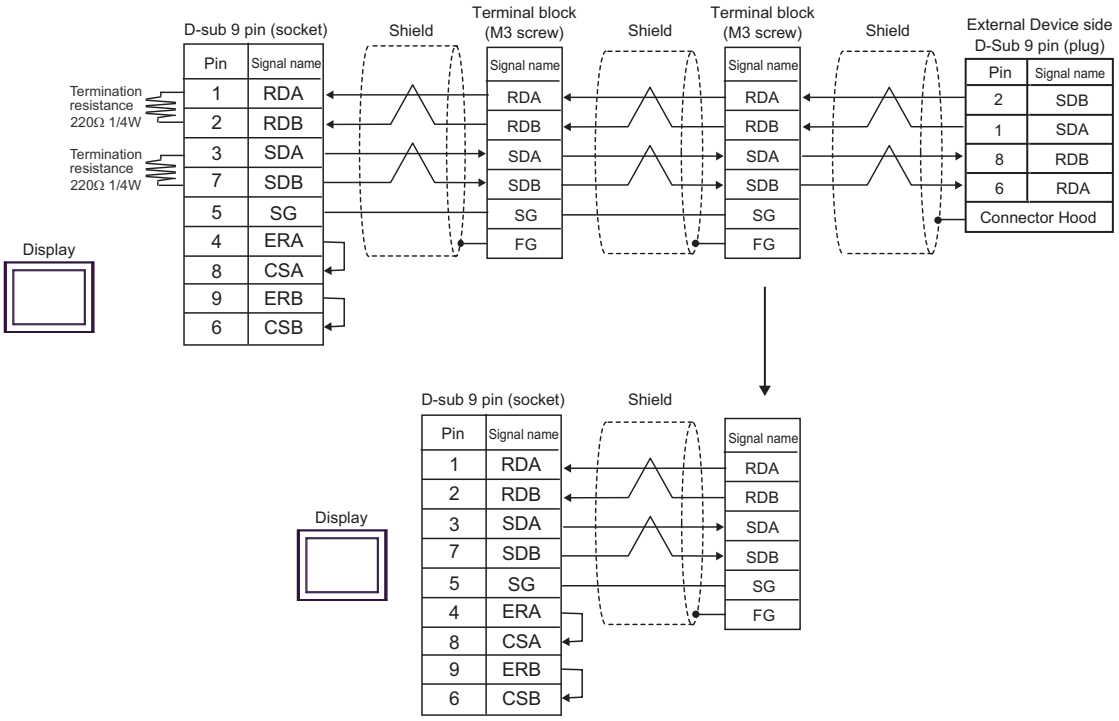
18B)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

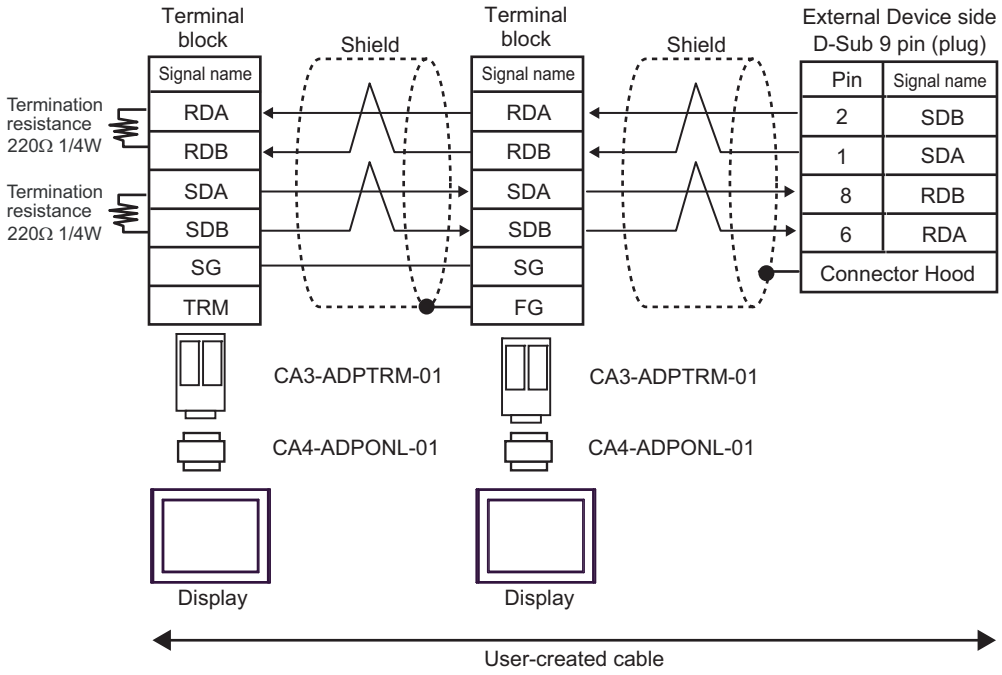
18C)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

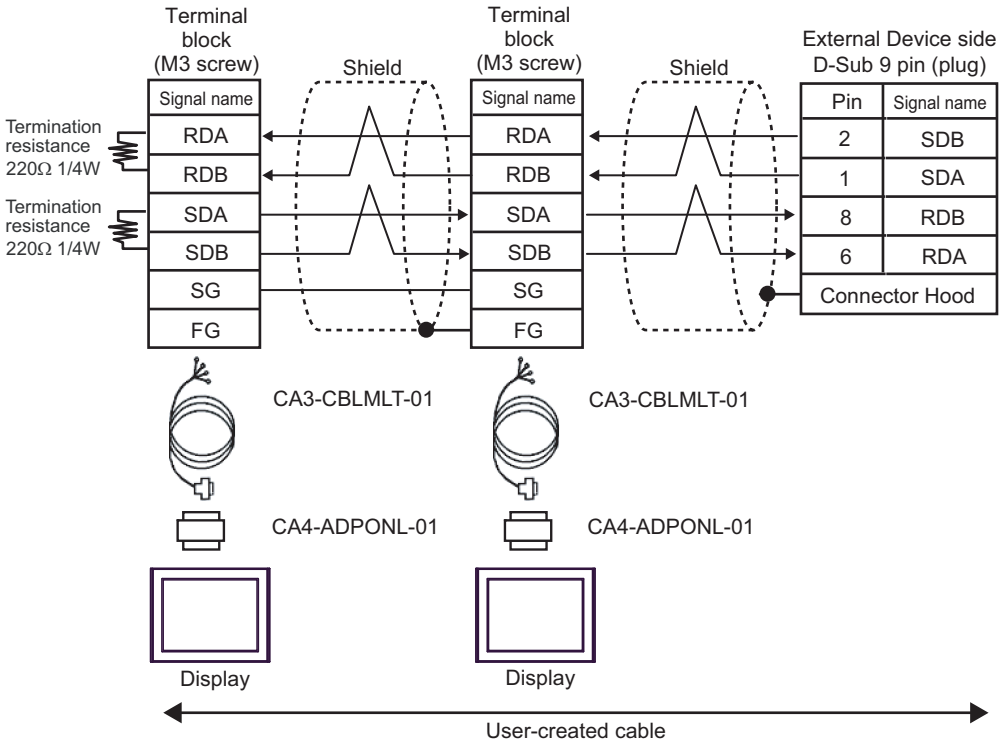
18D)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

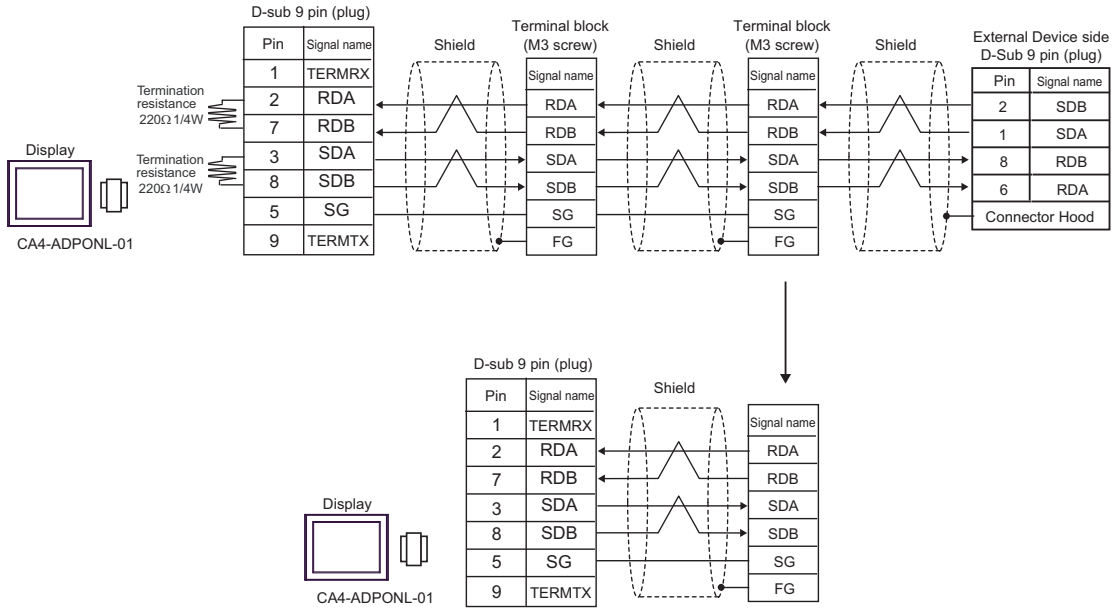
18E)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

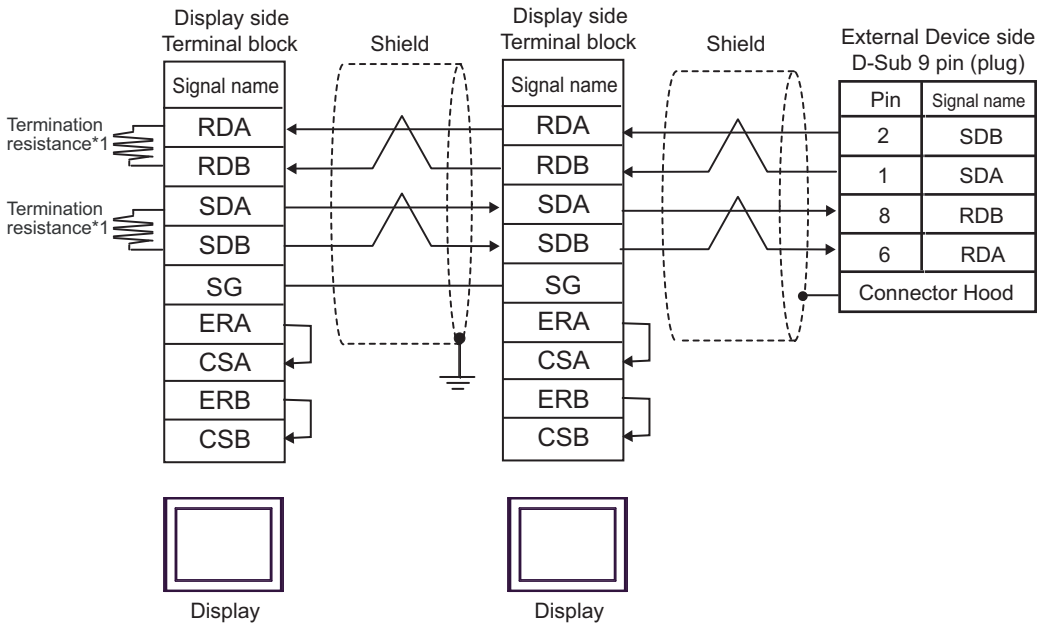
18F)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

18G)




**NOTE**

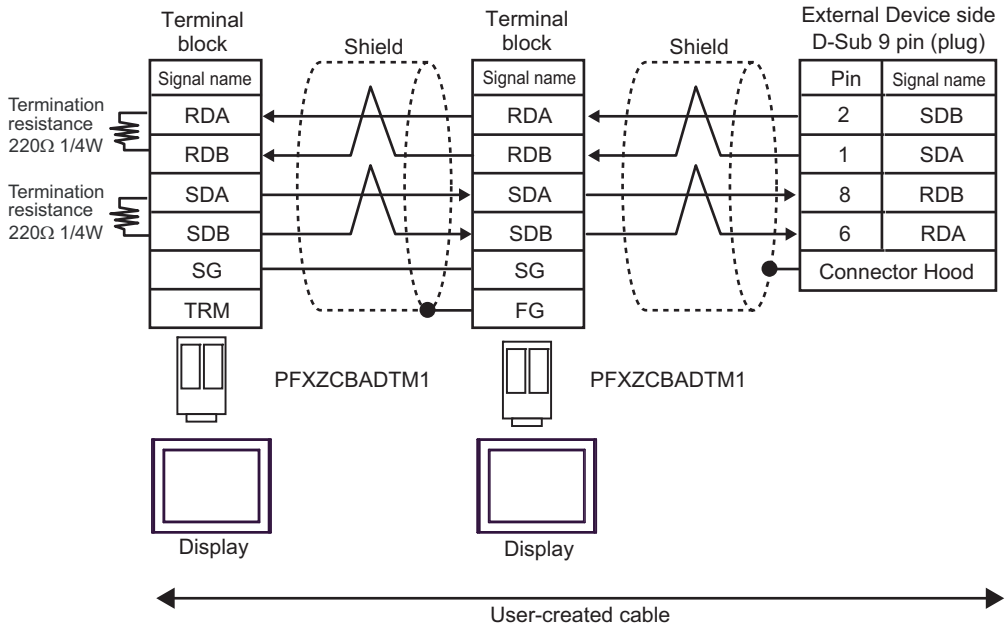
- Turn on the termination resistor switch on the External Device located at the end.

*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

For the Displays other than that used as the terminal, set the DIP Switch 1-4 on the rear of the Display to OFF in the n:1 connection.

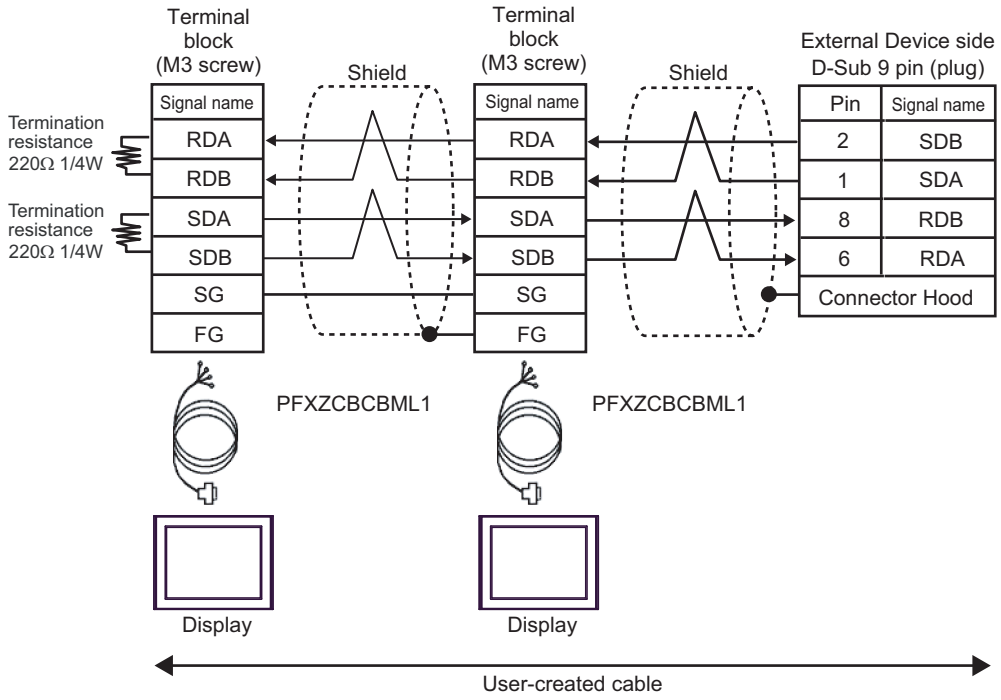
18H)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

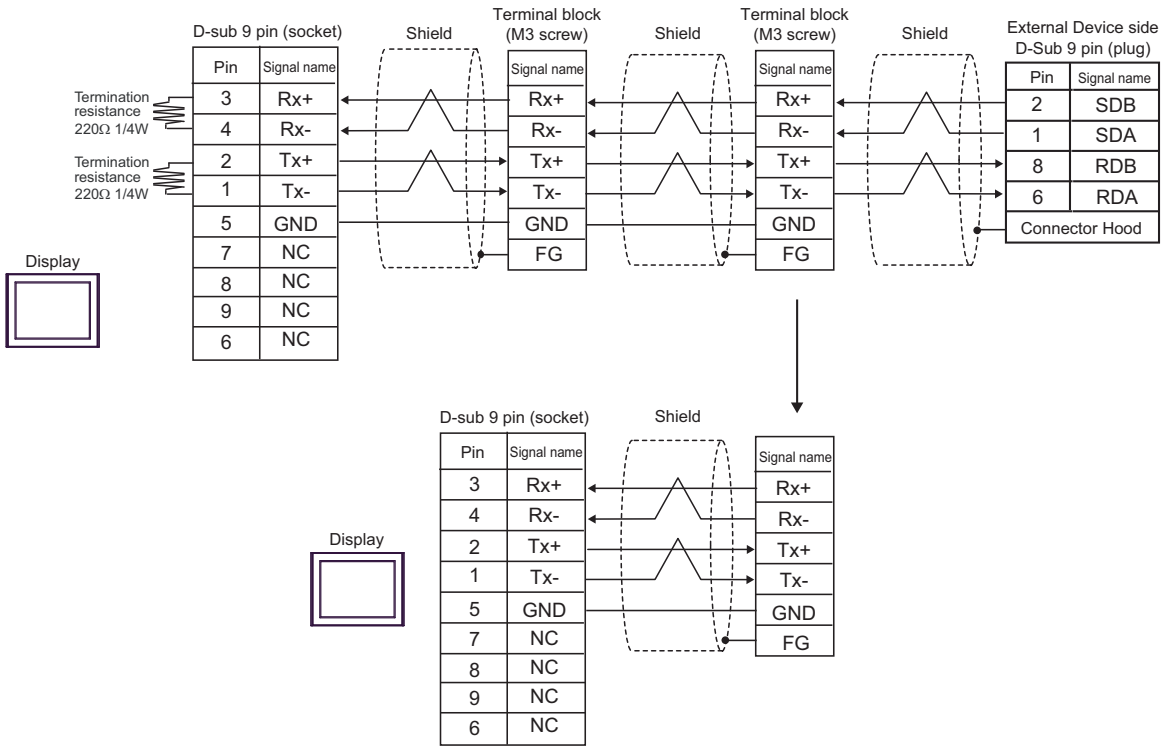
18I)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

18J)




**NOTE**

- Turn on the termination resistor switch on the External Device located at the end.

Cable Diagram 19

| Display (Connection Port) | Cable | | Notes |
|---|---|---|---|
| GP3000[*1] (COM1)<br>AGP-3302B (COM2)<br>GP-4*01TM (COM1)<br>GP-Rear Module (COM1)<br>ST3000[*2] (COM2)<br>LT3000 (COM1)<br>IPC[*3] | 19A | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>User-created cable | Cable length:<br>500m max |
| | 19B | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 19C | User-created cable | |
| GP3000 [*4] (COM2) | 19D | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Connector terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-0<br>+<br>User-created cable | Cable length:<br>500m max |
| | 19E | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Multilink cable by Pro-face<br>CA3-CBLMLT-01<br>+<br>User-created cable | |
| | 19F | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>User-created cable | |
| GP-4106 (COM1)<br>GP-4116T (COM1) | 19G | User-created cable | Cable length:<br>500m max |
| GP4000[*5] (COM2)<br>GP-4201T (COM1)<br>SP5000[*6] (COM1/2)<br>SP-5B00 (COM2)<br>ST6000[*7] (COM2)<br>ST-6200 (COM1)<br>STM6000 (COM1)<br>STC6000 (COM1)<br>ET6000[*8] (COM2)<br>PS6000 (Basic Box) (COM1/2) | 19H | RS-422 terminal block conversion adapter by Pro-face<br>PFXZCBADTM1[*9]<br>+<br>User-created cable | Cable length:<br>500m max |
| | 19I | Multilink cable by Pro-face<br>PFXZCBCBML1[*10]<br>+<br>User-created cable | |
| | 19C | User-created cable | |
| PE-4000B[*11]<br>PS5000[*11]<br>PS6000 (Optional Interface)[*11] | 19J | User-created cable | Cable length:<br>500m max |

*1 All GP3000 models except AGP-3302B

*2 Except AST-3211A and AST-3302B

*3 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. (Except PE-4000B, PS5000, and PS6000)
☞"■ IPC COM Port" (page 12)

*4 All GP3000 models except GP-3200 series and AGP-3302B

*5 All GP4000 models except GP-4100 series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T

*6 Except SP-5B00

*7 Except ST-6200

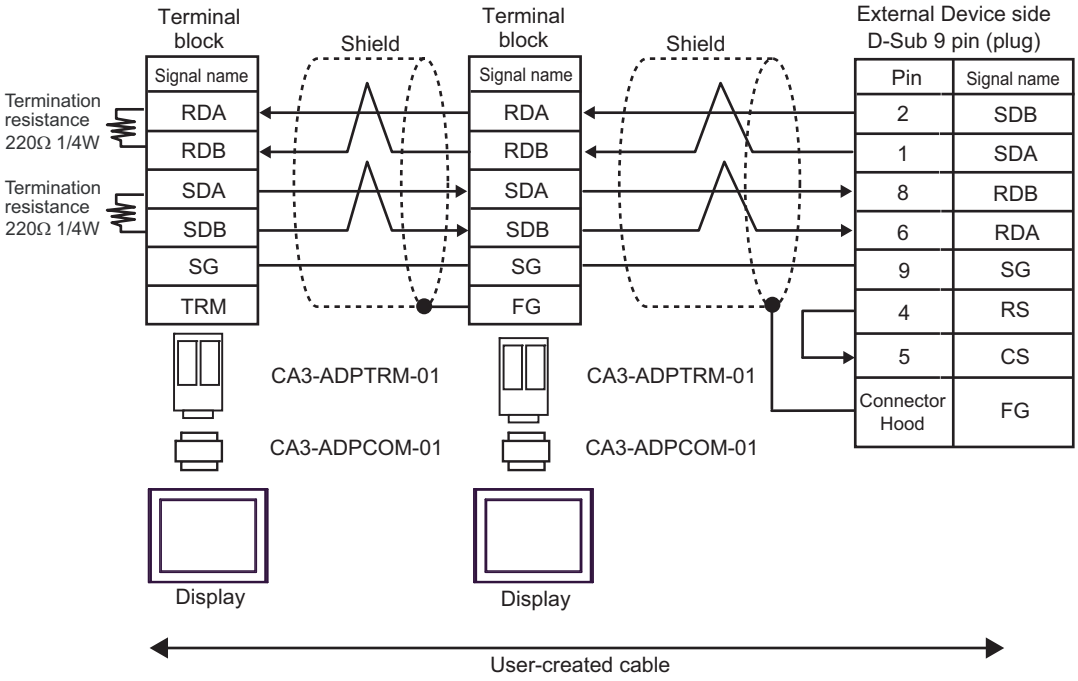
*8 Due to the COM port specifications, flow control is not possible. Omit wiring the control pins on the Display side of the cable diagram.

*9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 19A.

*10 When using a Multilink Cable (CA3-CBLMLT-01) instead of the Multilink Cable, refer to Cable Diagram 19B.

*11 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.
☞"■ IPC COM Port" (page 12)

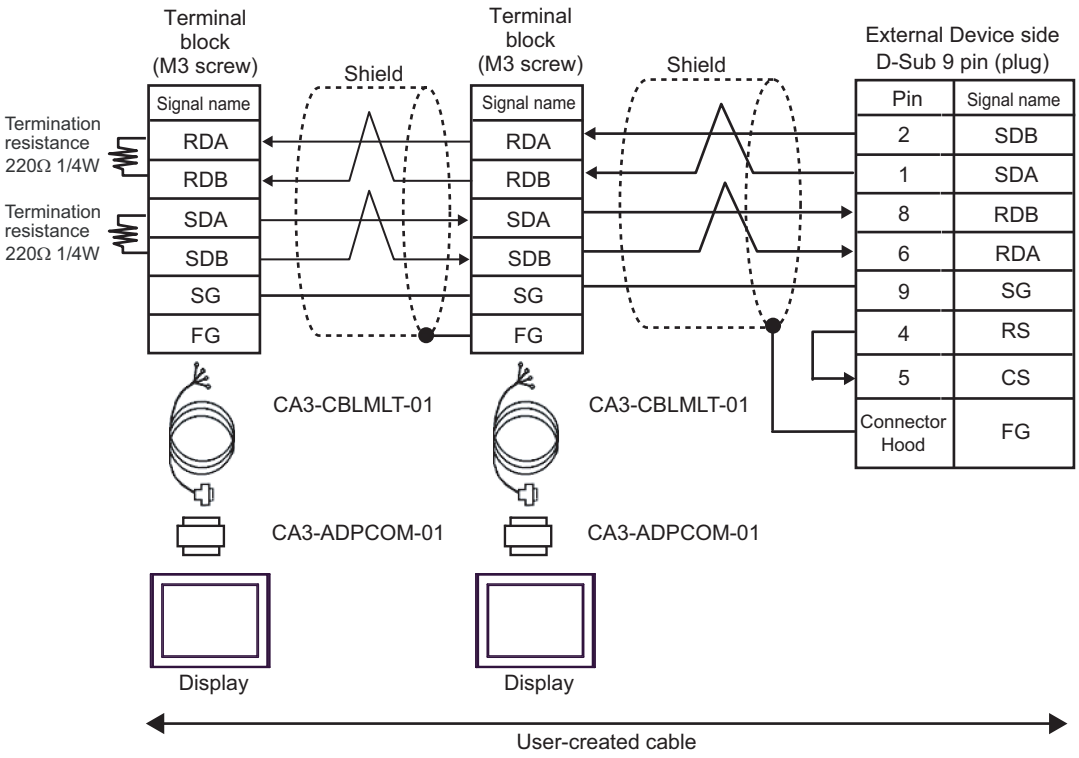
19A)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

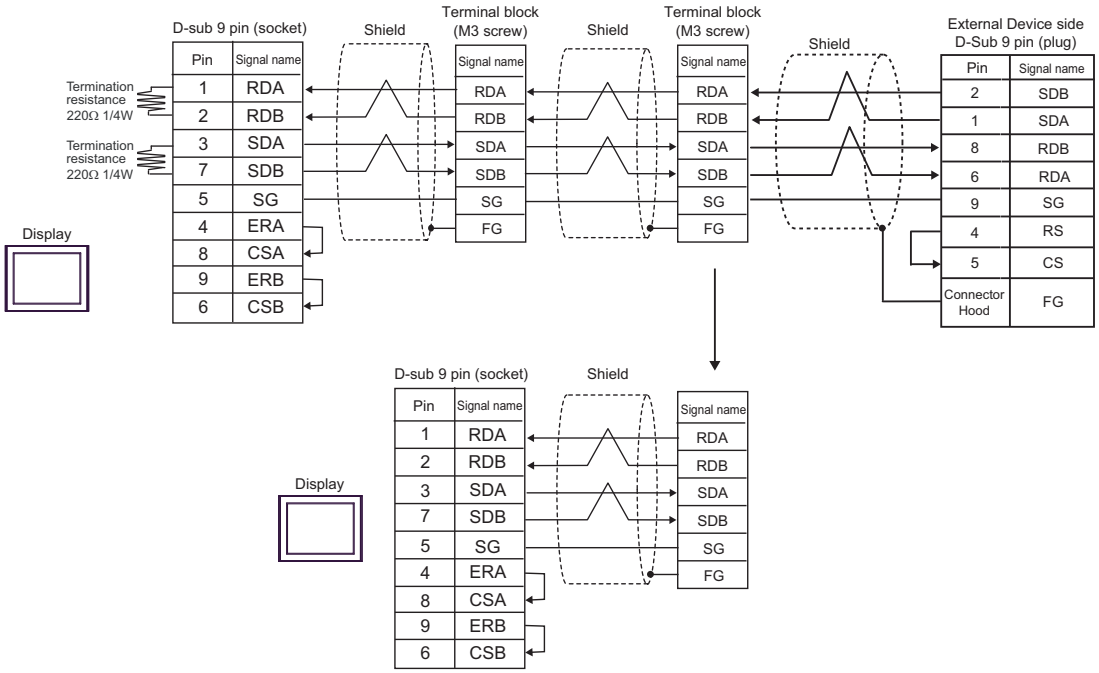
19B)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

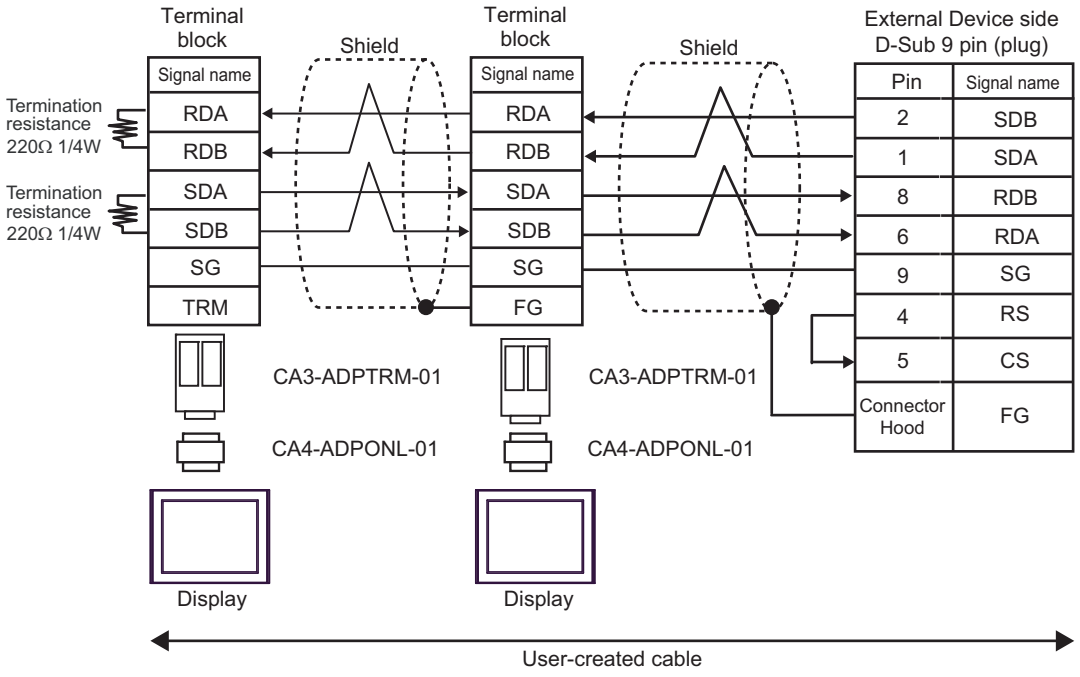
19C)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

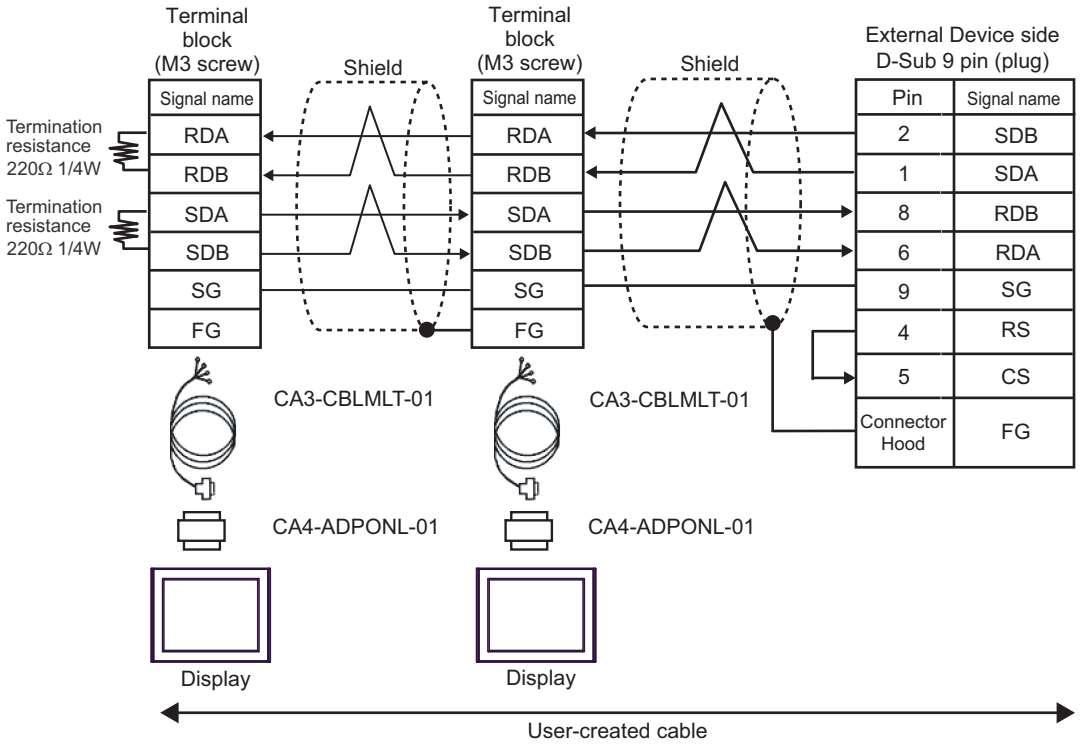
19D)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

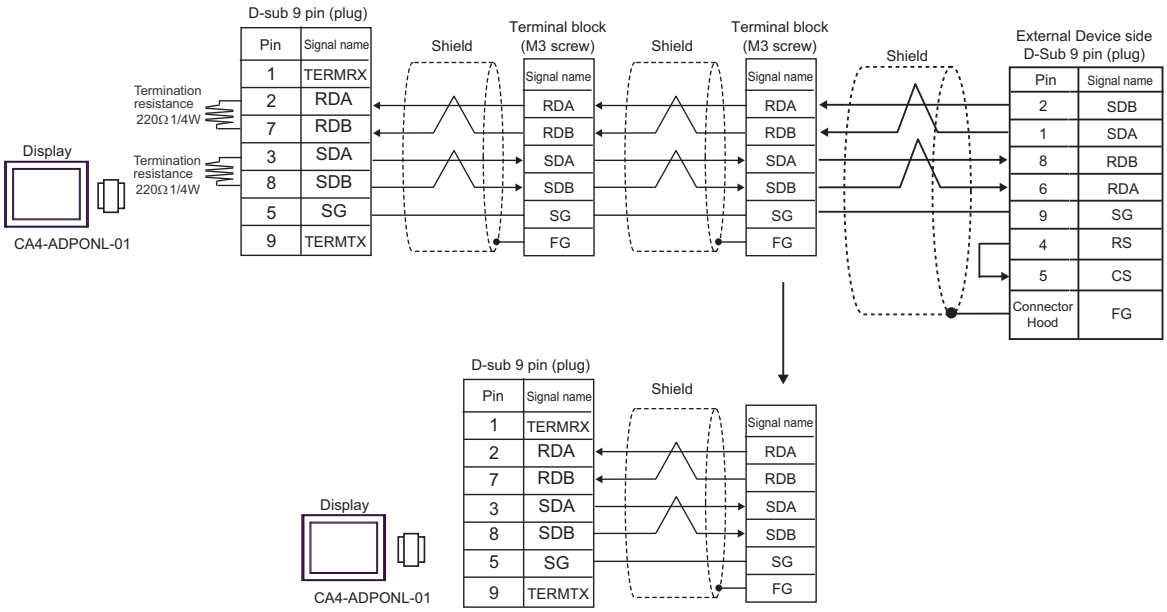
19E)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

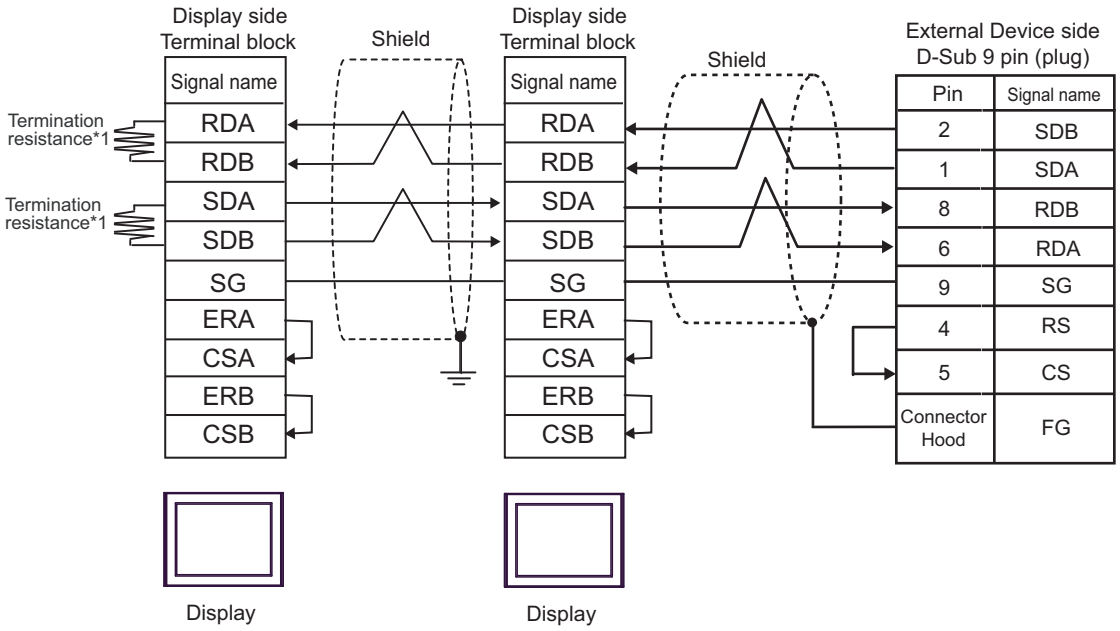
19F)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

19G)



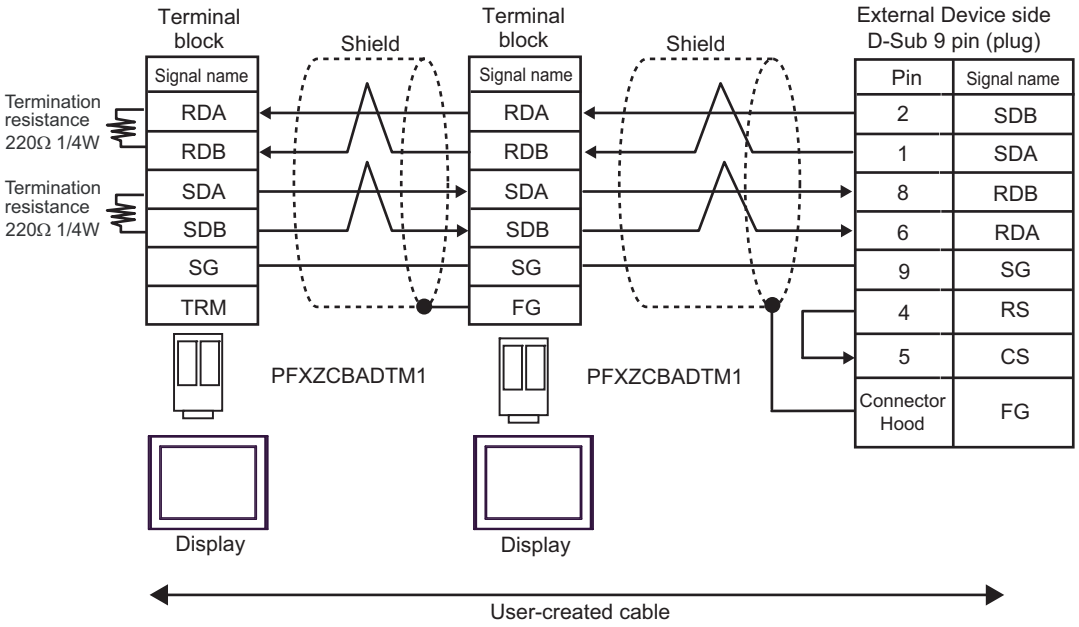

*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

| DIP Switch No. | Set Value |
|---|---|
| 1 | OFF |
| 2 | ON |
| 3 | OFF |
| 4 | ON |

For the Displays other than that used as the terminal, set the DIP Switch 1-4 on the rear of the Display to OFF in the n:1 connection.

**NOTE** • When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

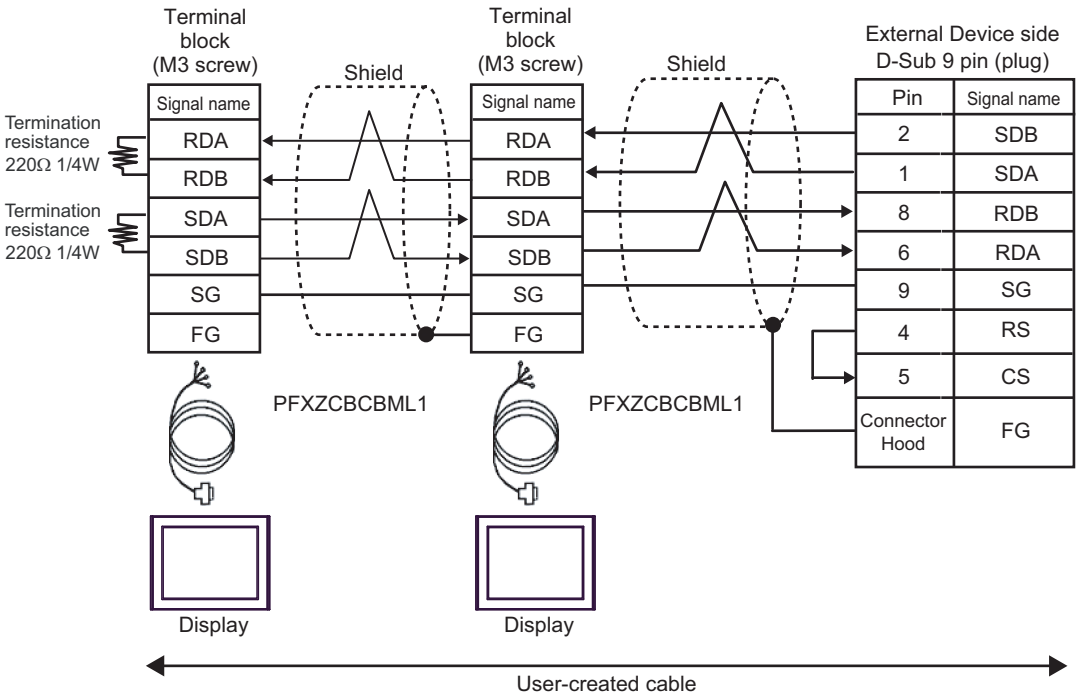
19H)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

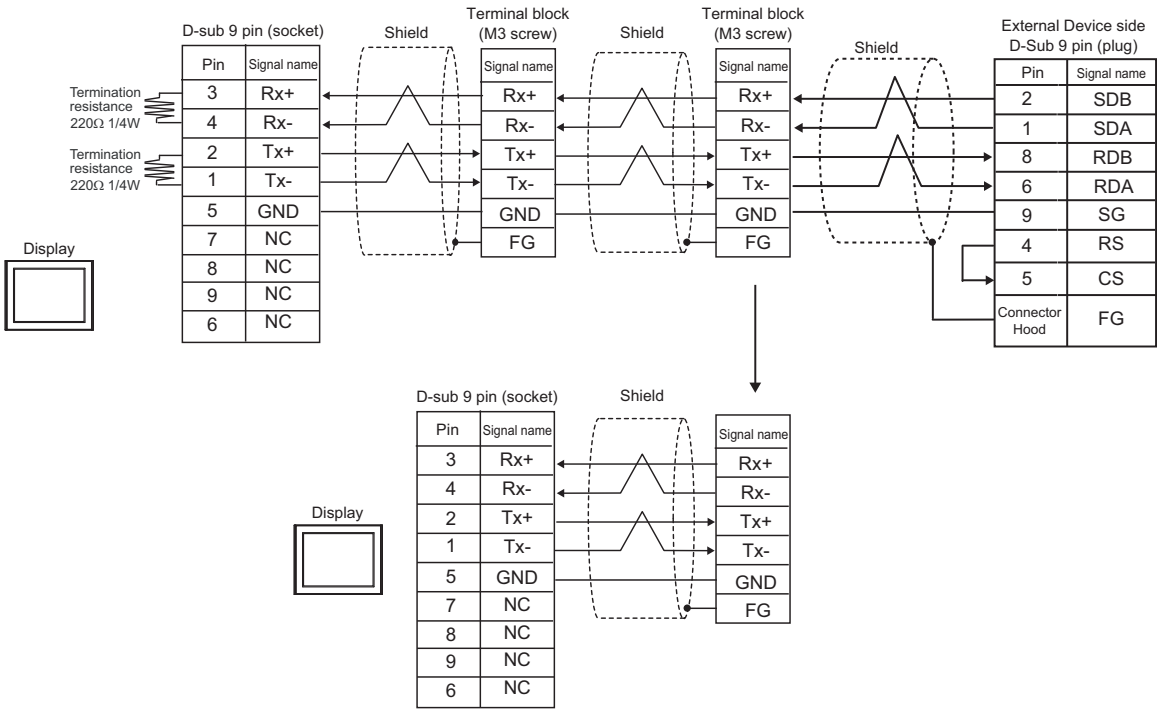
19I)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

19J)




**NOTE**

- When the port on the External Device does not have a SG terminal, SG connection is unnecessary.

# 6 Supported Device

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

## 6.1 SYSMAC-C Series

:Available to set to the head address of the system device

| Device | Bit Address | Word Address | 32bits | Remarks |
|---|---|---|---|---|
| I/O Relay | 000.00 - 511.15 | 000-511 | L/H | *1 *3 |
| Internal Auxiliary Relay | | | | |
| Special Auxiliary Relay | | | | |
| Analog Setting Value Stored Area | 220.00 - 223.15 | 220 - 223 | | *2 *3 |
| Data Link Relay | LR00.00 - LR63.15 | LR00-LR63 | | *3 |
| Auxiliary Memory Relay | AR00.00 - AR27.15 | AR00-AR27 | | *3 |
| Latch Relay | HR00.00 - HR99.15 | HR00-HR99 | | *3 |
| Timer (Contact) | TIM000-TIM511 | ------ | | |
| Counter (Contact) | CNT000-CNT511 | ------ | | |
| Timer (Current Value) | ------ | TIM000-TIM511 | | *4 |
| Counter (Current Value) | ------ | CNT000-CNT511 | | *4 |
| Data Memory | ------ | DM0000-DM6655 | | Bit 15 |

*1 Note that the actually supported range of the devices and whether write enable or disable may vary depending on the CPU. Please refer to the CPU manual for checking.

*2 Can be used only in CQM1-CPU42.

*3 When you write the bit address, the Display reads the word address corresponding to that of the External Device first. Then, it changes the target bit address among the word data once read and returns the word data to the External Device. Note that the correct data may not be written if you change the word address value in the ladder program while the Display reads the data of the External Device and returns it to the External Device.

*4 BCD only

**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"

## 6.2 SYSMAC-C Series (CQM1H-CPU51/CQM1H-CPU61)

:Available to set to the head address of the system device

| Device | Bit Address | Word Address | 32bits | Remarks |
|---|---|---|---|---|
| I/O Relay | 000.00 - 243.15 | 000-243 | L/H | *1 *3 |
| Internal Auxiliary Relay | | | | |
| Special Auxiliary Relay | 244.00-255.07 | 244-255 | | *2 *3 |
| Link Relay | LR00.00-LR63.15 | LR00-LR63 | | *3 |
| Auxiliary Memory Relay | AR00.00-AR27.15 | AR00-AR27 | | *3 |
| Latch Relay | HR00.00-HR99.15 | HR00-HR99 | | *3 |
| Timer (Contact) | TIM000-TIM511 | ------ | | |
| Counter (Contact) | CNT000-CNT511 | ------ | | |
| Timer (Current Value) | ------ | TIM000-TIM511 | | *4 |
| Counter (Current Value) | ------ | CNT000-CNT511 | | *4 |
| Data Memory | ------ | DM0000-DM6655 | | Bit 15 *5 |
| Extension Data Memory | ------ | EM0000-EM6143 | | Bit 15 *6 |

*1 There is an area in which any address does not exist within the address range of input relay/internal auxiliary relay. Please refer to the SYSMAC-CQM1H User Manual by OMRON Corporation.

*2 Bit address of the special auxiliary relay is 244.00-254.15/255.00-07. Bit address of 255.08-255.15 does not exist.

*3 When you write the bit address, the Display reads the word address corresponding to that of the External Device first. Then, it changes the target bit address among the word data once read and returns the word data to the External Device. Note that the correct data may not be written if you change the word address value in the ladder program while the Display reads the data of the External Device and returns it to the External Device.

*4 BCD only

*5 Do not write in the store area beyond data memory DM, DM6569-DM6599 and PC system setting area DM6600-DM6655.

*6 Extension data memory EM supports only CQM1H-CPU61.

**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"

## 6.3 SYSMAC-α Series

: Available to set to the head address of the system device

| Device | Bit Address | Word Address | 32bits | Remarks |
|---|---|---|---|---|
| I/O Relay I | 000.00-029.15 | 000-029 | L/H | *1 |
| I/O Relay II | 300.00-309.15 | 300-309 | | *1 |
| Internal Auxiliary Relay I | 030.00-235.15 | 030-235 | | *1 |
| Internal Auxiliary Relay II | 310.00-511.15 | 310-511 | | *1 |
| Special Auxiliary Relay I | 236.00-255.07 | 236-255 | | *1 |
| Special Auxiliary Relay II | 256.00-299.15 | 256-299 | | *1 |
| Link Relay | LR00.00-LR63.15 | LR00-LR63 | | *1 |
| Auxiliary Memory Relay | AR00.00-AR27.15 | AR00-AR27 | | *1 |
| Latch Relay | HR00.00-HR99.15 | HR00-HR99 | | *1 |
| Timer (Contact) | TIM000-TIM511 | ------ | | |
| Counter (Contact) | CNT000-CNT511 | ------ | | |
| Timer (Current Value) | ------ | TIM000-TIM511 | | *2 |
| Counter (Current Value) | ------ | CNT000-CNT511 | | *2 |
| Data Memory | ------ | DM0000-DM6655 | | Bit 15 *3 |
| Extension Fixed Data Memory | ------ | DM7000-DM9999 | | Bit 15 *4 |
| Extension Data Memory | ------ | EM0000-EM6143 | | Bit 15 *5 |

*1 When you write the bit address, the Display reads the word address corresponding to that of the External Device first. Then, it changes the target bit address among the word data once read and returns the word data to the External Device. Note that the correct data may not be written if you change the word address value in the ladder program while the Display reads the data of the External Device and returns it to the External Device.

*2 BCD only

*3 We cannot guarantee the operation when you access the nonexistent data memory area (DM6656 to DM6999).

*4 We cannot guarantee the operation when you access to DM7000 to DM9999 without the extension fixed DM setting.

*5 We cannot guarantee the operation when you specify the area within the range in the models in which the bank of the extension memory area does not exist.

**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"

## 6.4 SYSMAC-CV Series

: Available to set to the head address of the system device

| Device | Bit Address | Word Address | 32bits | Remarks |
|---|---|---|---|---|
| I/O Relay | 000.00 - 199.15 | 000-199 | L/H | *1 |
| Internal Auxiliary Relay | | | | *1 |
| SYSMAC BUS/2 Remote I/O Relay | 0200.00 - 0999.15 | 0200-0999 | | *1 |
| Data Link Relay | 1000.00 - 1199.15 | 1000-1199 | | *1 |
| Special Auxiliary Relay | A000.00 - A511.15 | A000-A511 | | *1 |
| Latch Relay | 1200.00 - 1499.15 | 1200-1499 | | *1 |
| Internal Auxiliary Relay | 1900.00 - 2299.15 | 1900-2299 | | *1 |
| SYSBUS Remote I/O Relay | 2300.00 - 2555.15 | 2300-2555 | | *1 |
| Timer (Contact) | T0000-T1023 | ------ | | *2 |
| Counter (Contact) | C0000-C1023 | ------ | | *2 |
| Timer (Current Value) | ------ | T0000-T1023 | | *3 |
| Counter (Current Value) | ------ | C0000-C1023 | | *3 |
| Data Memory | ------ | D0000-D9999 | | Bit 15 |

*1 When you write the bit address, the Display reads the word address corresponding to that of the External Device first. Then, it changes the target bit address among the word data once read and returns the word data to the External Device. Note that the correct data may not be written if you change the word address value in the ladder program while the Display reads the data of the External Device and returns it to the External Device.

*2 Write disable

*3 BCD only

**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 & Address" for the address type in data displays.

## 7.1 SYSMAC-C Series

| Device | Device Name | Device Code (HEX) | Address Code |
|---|---|---|---|
| I/O Relay | ------ | 0080 | Word Address |
| Internal Auxiliary Relay | | | |
| Special Auxiliary Relay | | | |
| Analog Setting Value Stored Area | LR | 0088 | Word Address |
| Data Link Relay | ------ | 0080 | Word Address |
| Auxiliary Memory Relay | AR | 0085 | Word Address |
| Latch Relay | HR | 0084 | Word Address |
| Timer (Contact) | TIM | 00E0 | Word Address |
| Counter (Contact) | CNT | 00E2 | Word Address |
| Timer (Current Value) | TIM | 0060 | Word Address |
| Counter (Current Value) | CNT | 0061 | Word Address |
| Data Memory | DM | 0000 | Word Address |

## 7.2 SYSMAC-C Series (CQM1H-CPU51/CQM1H-CPU61)

| Device | Device Name | Device Code (HEX) | Address Code |
|---|---|---|---|
| I/O Relay | ------ | 0080 | Word Address |
| Internal Auxiliary Relay | | | |
| Special Auxiliary Relay | | | |
| Link Relay | LR | 0088 | Word Address |
| Auxiliary Memory Relay | AR | 0085 | Word Address |
| Latch Relay | HR | 0084 | Word Address |
| Timer (Contact) | TIM | 00E0 | Word Address |
| Counter (Contact) | CNT | 00E2 | Word Address |
| Timer (Current Value) | TIM | 0060 | Word Address |
| Counter (Current Value) | CNT | 0061 | Word Address |

continued to next page

| Device | Device Name | Device Code (HEX) | Address Code |
|---|---|---|---|
| Data Memory | DM | 0000 | Word Address |
| Extension Data Memory | EM | 0001 | Word Address |

## 7.3 SYSMAC-α Series

| Device | Device Name | Device Code (HEX) | Address Code |
|---|---|---|---|
| I/O Relay I | ------ | 0080 | Word Address |
| I/O Relay II | | | |
| Internal Auxiliary Relay I | | | |
| Internal Auxiliary Relay II | | | |
| Special Auxiliary Relay I | | | |
| Special Auxiliary Relay II | | | |
| Link Relay | LR | 0088 | Word Address |
| Auxiliary Memory Relay | AR | 0085 | Word Address |
| Latch Relay | HR | 0084 | Word Address |
| Timer (Contact) | TIM | 00E0 | Word Address |
| Counter (Contact) | CNT | 00E2 | Word Address |
| Timer (Current Value) | TIM | 0060 | Word Address |
| Counter (Current Value) | CNT | 0061 | Word Address |
| Data Memory | DM | 0000 | Word Address |
| Extension Fixed Data Memory | DM | 0000 | Word Address |
| Extension Data Memory | EM | 0001 | Word Address |

## 7.4 SYSMAC-CV Series

| Device | Device Name | Device Code (HEX) | Address Code |
|---|---|---|---|
| I/O Relay | ------ | 0080 | Word Address |
| Internal Auxiliary Relay | | | |
| SYSMAC BUS/2 Remote I/O Relay | | | |
| Data Link Relay | | | |
| Special Auxiliary Relay | A | 0085 | Word Address |
| Latch Relay | - | 0080 | Word Address |
| Internal Auxiliary Relay | - | 0080 | Word Address |
| SYSBUS Remote I/O Relay | - | 0080 | Word Address |
| Timer (Contact) | T | 00E0 | Word Address |
| Counter (Contact) | C | 00E2 | Word Address |
| Timer (Current Value) | T | 0060 | Word Address |
| Counter (Current Value) | C | 0061 | Word Address |
| Data Memory | D | 0000 | Word Address |

# 8 Error Messages

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

| Item | Description |
|---|---|
| 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 | Displays IP address or device address of the External Device where error occurs, or error codes received from the External Device.<br>NOTE<br>• IP address is displayed such as "IP address(Decimal): MAC address( Hex)".<br>• Device address is diplayed such as "Address: Device address".<br>• Received error codes are displayed such as "Decimal[Hex]". |

Display Examples of Error Messages

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

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.