

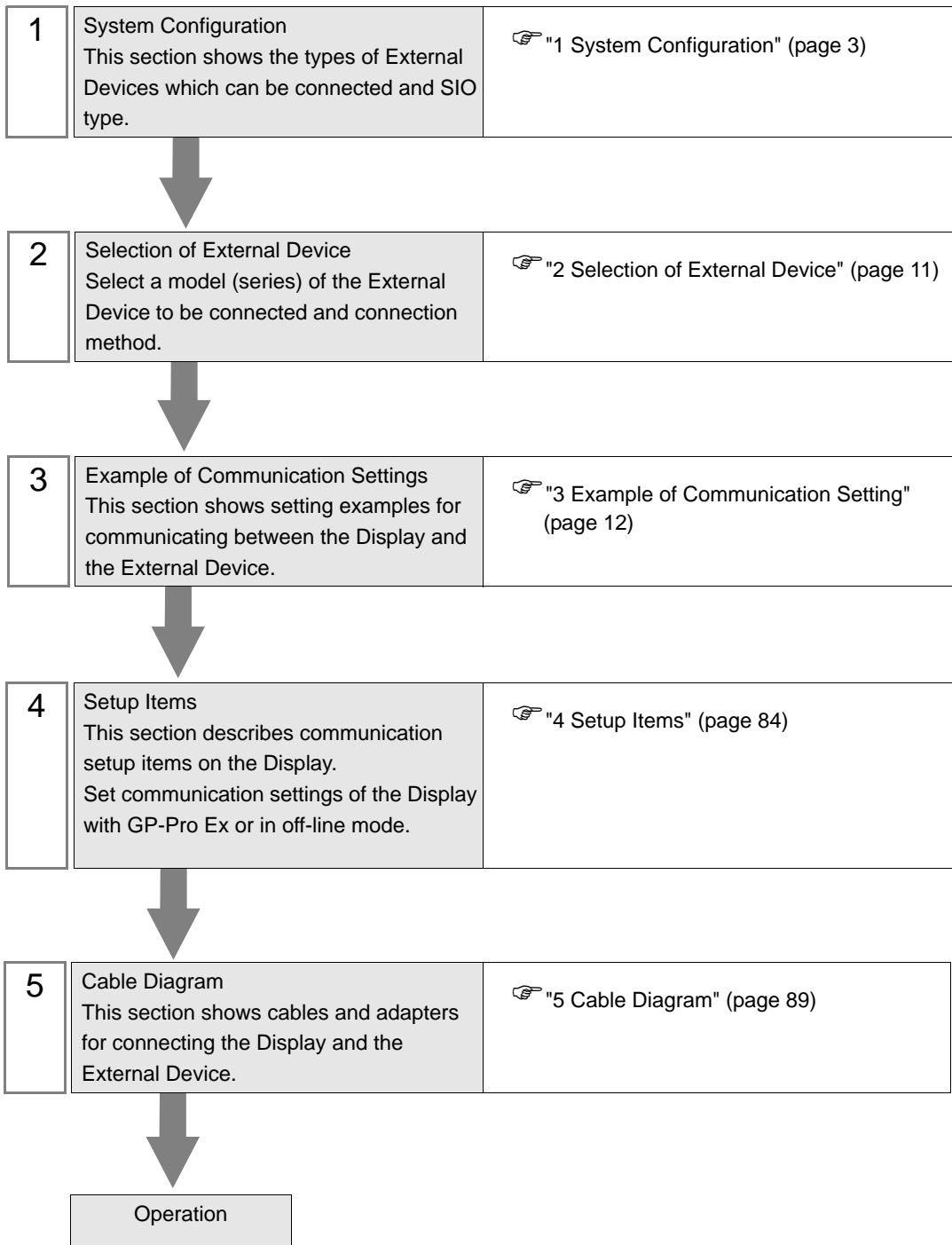
# Indicating Controller SIO Driver

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## 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

The system configuration in the case when the External Device of Shinko Technos Co.,Ltd. and the Display are connected is shown.

| Series | CPU*1             | Link I/F  | SIO Type              | Setting Example                | Cable Diagram                |
|--------|-------------------|---|-----------------------|--------------------------------|------------------------------|
| C      | CPT-20A*2         | Upper modular jack<br>(Lower modular jack use for cascade connection) | RS422/485<br>(4 wire) | Setting Example 1<br>(page 12) | Cable Diagram 3<br>(page 95) |
| FC     | FCD-13A-□/M,C     | Terminal of back panel  | RS-232C               | Setting Example 2<br>(page 14) | Cable Diagram 1<br>(page 89) |
|        | FCD-15A-R/M,□□,C  | Terminal of back panel  | RS-232C               | Setting Example 3<br>(page 16) | Cable Diagram 1<br>(page 89) |
|        | FCR-13A-□/M,C     | Terminal of back panel  | RS-232C               | Setting Example 4<br>(page 18) | Cable Diagram 1<br>(page 89) |
|        | FCR-15A-R/M,□□,C  | Terminal of back panel  | RS-232C               | Setting Example 5<br>(page 20) | Cable Diagram 1<br>(page 89) |
|        | FCR-23A-□/ M,□□,C | Terminal of back panel  | RS-232C               | Setting Example 6<br>(page 22) | Cable Diagram 1<br>(page 89) |
|        | FCD-13A-□/M,C5    | Terminal of back panel<br>(When using the IF-300-C5.)                 | RS-232C               | Setting Example 2<br>(page 14) | Cable Diagram 4<br>(page 98) |
|        |                   | Terminal of back panel<br>(When using the IF-400.)                    | RS-232C               | Setting Example 2<br>(page 14) | Cable Diagram 5<br>(page 99) |
|        |                   | Terminal of back panel  | RS422/485<br>(2 wire) | Setting Example 7<br>(page 24) | Cable Diagram 2<br>(page 90) |
|        | FCD-15A-R/M,□□,C5 | Terminal of back panel<br>(When using the IF-300-C5.)                 | RS-232C               | Setting Example 3<br>(page 16) | Cable Diagram 4<br>(page 98) |
|        |                   | Terminal of back panel<br>(When using the IF-400.)                    | RS-232C               | Setting Example 3<br>(page 16) | Cable Diagram 5<br>(page 99) |
|        |                   | Terminal of back panel  | RS422/485<br>(2 wire) | Setting Example 8<br>(page 26) | Cable Diagram 2<br>(page 90) |

| Series | CPU*1              | Link I/F  | SIO Type              | Setting Example                 | Cable Diagram                |
|--------|--------------------|---|-----------------------|---------------------------------|------------------------------|
| FC     | FCR-13A-□/M,C5     | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 4<br>(page 18)  | Cable Diagram 4<br>(page 98) |
|        |                    | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 4<br>(page 18)  | Cable Diagram 5<br>(page 99) |
|        |                    | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 9<br>(page 28)  | Cable Diagram 2<br>(page 90) |
|        | FCR-15A-R/M,□□,C5  | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 5<br>(page 20)  | Cable Diagram 4<br>(page 98) |
|        |                    | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 5<br>(page 20)  | Cable Diagram 5<br>(page 99) |
|        |                    | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 10<br>(page 30) | Cable Diagram 2<br>(page 90) |
|        | FCR-23A-□/ M,□□,C5 | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 6<br>(page 22)  | Cable Diagram 4<br>(page 98) |
|        |                    | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 6<br>(page 22)  | Cable Diagram 5<br>(page 99) |
|        |                    | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 11<br>(page 32) | Cable Diagram 2<br>(page 90) |
| FIR    | FIR-201-M,C        | Terminal of back panel                                | RS-232C               | Setting Example 12<br>(page 34) | Cable Diagram 1<br>(page 89) |
|        | FIR-201-M,C5       | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 12<br>(page 34) | Cable Diagram 4<br>(page 98) |
|        |                    | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 12<br>(page 34) | Cable Diagram 5<br>(page 99) |
|        |                    | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 13<br>(page 36) | Cable Diagram 2<br>(page 90) |

| Series | CPU*1          | Link I/F  | SIO Type              | Setting Example                 | Cable Diagram                |
|--------|----------------|---|-----------------------|---------------------------------|------------------------------|
| FIR    | JIR-301-M□,C5  | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 14<br>(page 38) | Cable Diagram 4<br>(page 98) |
|        |                | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 14<br>(page 38) | Cable Diagram 5<br>(page 99) |
|        |                | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 15<br>(page 40) | Cable Diagram 2<br>(page 90) |
| GC     | GCS-33□-□/□,C5 | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 16<br>(page 42) | Cable Diagram 4<br>(page 98) |
|        |                | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 16<br>(page 42) | Cable Diagram 5<br>(page 99) |
| JC     | JC□-13A-□/□,C5 | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 17<br>(page 44) | Cable Diagram 4<br>(page 98) |
|        |                | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 17<br>(page 44) | Cable Diagram 5<br>(page 99) |
|        |                | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 18<br>(page 46) | Cable Diagram 2<br>(page 90) |
|        | JCS-23A-□/□,C5 | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 19<br>(page 48) | Cable Diagram 4<br>(page 98) |
|        |                | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 19<br>(page 48) | Cable Diagram 5<br>(page 99) |
|        |                | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 20<br>(page 50) | Cable Diagram 2<br>(page 90) |
|        | JC□-33A-□/□,C5 | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 21<br>(page 52) | Cable Diagram 4<br>(page 98) |
|        |                | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 21<br>(page 52) | Cable Diagram 5<br>(page 99) |
|        |                | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 22<br>(page 54) | Cable Diagram 2<br>(page 90) |

| Series | CPU*1                       | Link I/F  | SIO Type              | Setting Example                 | Cable Diagram                |
|--------|-----------------------------|---|-----------------------|---------------------------------|------------------------------|
| JC     | JCL-33A-□/M□,C5             | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 23<br>(page 56) | Cable Diagram 4<br>(page 98) |
|        |                             | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 23<br>(page 56) | Cable Diagram 5<br>(page 99) |
|        |                             | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 24<br>(page 58) | Cable Diagram 2<br>(page 90) |
| AC     | ACS-13A-□/M□,C5             | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 25<br>(page 60) | Cable Diagram 4<br>(page 98) |
|        |                             | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 25<br>(page 60) | Cable Diagram 5<br>(page 99) |
|        |                             | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 26<br>(page 62) | Cable Diagram 2<br>(page 90) |
| NC     | NCL-13A-□/M,□□□             | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 27<br>(page 64) | Cable Diagram 4<br>(page 98) |
|        |                             | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 27<br>(page 64) | Cable Diagram 5<br>(page 99) |
|        |                             | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 28<br>(page 66) | Cable Diagram 2<br>(page 90) |
| DC     | DCL-33A-□/M□,C5             | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 29<br>(page 68) | Cable Diagram 4<br>(page 98) |
|        |                             | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 29<br>(page 68) | Cable Diagram 5<br>(page 99) |
|        |                             | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 30<br>(page 70) | Cable Diagram 2<br>(page 90) |
| FCL    | FCL-13A-□/□,C5,<br>□□□□□□*3 | Terminal of back panel<br>(When using the IF-300-C5.) | RS-232C               | Setting Example 31<br>(page 72) | Cable Diagram 4<br>(page 98) |
|        |                             | Terminal of back panel<br>(When using the IF-400.)    | RS-232C               | Setting Example 31<br>(page 72) | Cable Diagram 5<br>(page 99) |
|        |                             | Terminal of back panel                                | RS422/485<br>(2 wire) | Setting Example 32<br>(page 74) | Cable Diagram 2<br>(page 90) |

| Series | CPU*1                          | Link I/F   | SIO Type           | Setting Example              | Cable Diagram             |
|--------|--------------------------------|--|--------------------|------------------------------|---------------------------|
| PC-900 | PC-935-□/M,C<br>PC-955-□/M,C   | Terminal of back panel                             | RS-232C            | Setting Example 33 (page 76) | Cable Diagram 1 (page 89) |
|        | PC-935-□/M,C5<br>PC-955-□/M,C5 | Terminal of back panel (When using the IF-300-C5.) | RS-232C            | Setting Example 33 (page 76) | Cable Diagram 4 (page 98) |
|        |                                | Terminal of back panel (When using the IF-400.)    | RS-232C            | Setting Example 33 (page 76) | Cable Diagram 5 (page 99) |
|        |                                | Terminal of back panel                             | RS422/485 (2 wire) | Setting Example 34 (page 78) | Cable Diagram 2 (page 90) |
|        | PCD-33A-□/□M□,C5               | Terminal of back panel (When using the IF-300-C5.) | RS-232C            | Setting Example 35 (page 80) | Cable Diagram 4 (page 98) |
|        |                                | Terminal of back panel (When using the IF-400.)    | RS-232C            | Setting Example 35 (page 80) | Cable Diagram 5 (page 99) |
|        |                                | Terminal of back panel                             | RS422/485 (2 wire) | Setting Example 36 (page 82) | Cable Diagram 2 (page 90) |

- \*1 Type External Device depends on the specified options. Please refer to the brochure of each device for option details.  
Regarding the option for serial communication, use C if an RS-232C follows a “,”, and C5 if an RS422/485 follows a “.”.
- \*2 When using multiple channels in C series, a 2ch temperature control unit (CCT-235-2-\*\*) is required. Please refer to the manual of C series for details of types of \*\*.
- \*3 FCL-13A,C5 is indicated as FCL-100 series in the manual.

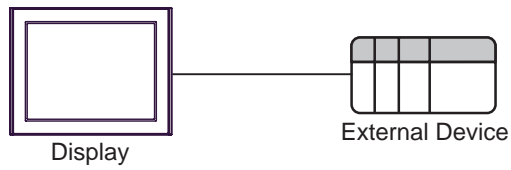
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**IMPORTANT** • When connecting with a model that requires a pull-up and pull-down resistance connection in the communication line, use an IF-300-C5 converter (Cable Diagram 4) or an IF-400 converter (Cable Diagram 5).

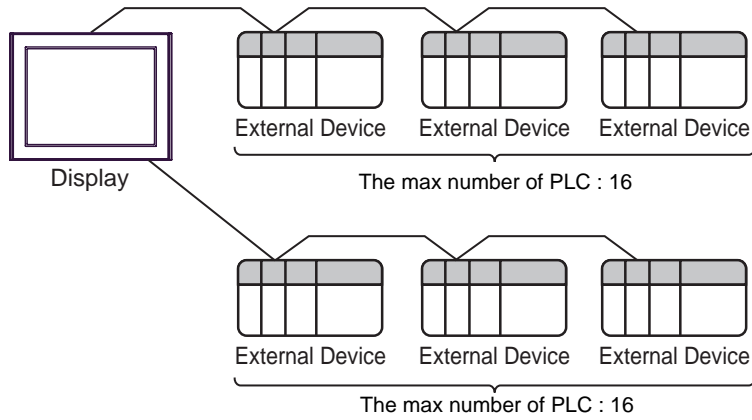
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## ■ Connection Configuration

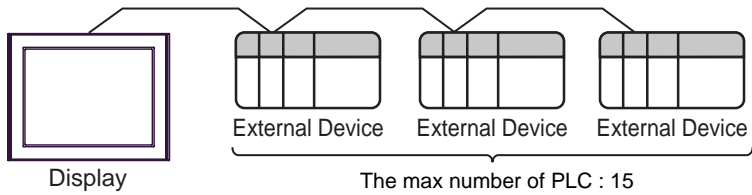
- 1:1 Connection



- 1:n Connection (Except C series)



- 1:n Connection (C series)





## ■ COM Port of IPC

When connecting IPC with External Device, the COM port which can be used changes with series and SIO type. Please refer to the manual of IPC for details.

### Usable port

| Series                             | Usable port  |                    |                    |
|------------------------------------|--|--------------------|--------------------|
|                                    | RS-232C  | RS-422/485(4 wire) | RS-422/485(2 wire) |
| PS-2000B                           | COM1 <sup>*1</sup> , COM2,<br>COM3 <sup>*1</sup> , COM4                | -                  | -                  |
| PS-3650A, PS-3651A                 | COM1 <sup>*1</sup>   | -                  | -                  |
| PS-3700A (Pentium®4-M)<br>PS-3710A | COM1 <sup>*1</sup> , COM2 <sup>*1</sup> ,<br>COM3 <sup>*2</sup> , COM4 | COM3 <sup>*2</sup> | COM3 <sup>*2</sup> |
| PS-3711A                           | COM1 <sup>*1</sup> , COM2 <sup>*2</sup>                                | COM2 <sup>*2</sup> | COM2 <sup>*2</sup> |

\*1 The RI/5V can be switched. Please switch with the change switch of IPC.

\*2 It is necessary to set up the SIO type with the Dip switch. Please set up as follows according to SIO type to be used.

### Dip switch setting: RS-232C

| Dip switch | Setting | Description  |
|------------|---------|--|
| 1          | OFF     | Reserve (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): Does not Exist |
| 8          | OFF     | Short-circuit of SDB (TXB) and RDB (RXB): Does not Exist |
| 9          | OFF     | RS (RTS) Auto control mode: Disable                      |
| 10         | OFF     |  |

Dip switch setting: RS-422/485 (4 wire)

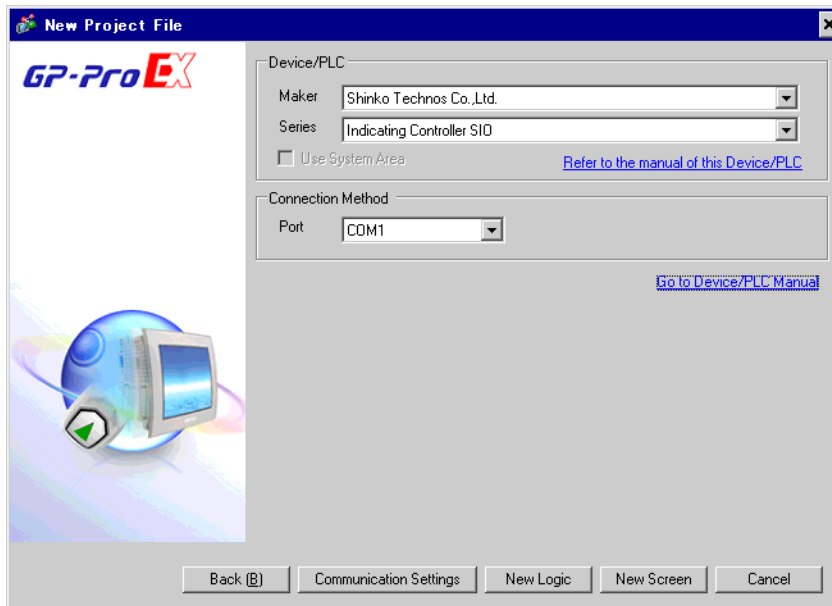
| Dip switch | Setting | Description  |
|------------|---------|--|
| 1          | OFF     | Reserve (always OFF)                                     |
| 2          | ON      | SIO type: RS-422/485                                     |
| 3          | ON      |  |
| 4          | OFF     | Output mode 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): Does not Exist |
| 8          | OFF     | Short-circuit of SDB (TXB) and RDB (RXB): Does not Exist |
| 9          | OFF     | RS (RTS) Auto control mode: Disable                      |
| 10         | OFF     |  |

Dip switch setting: RS-422/485 (2 wire)

| Dip switch | Setting | Description  |
|------------|---------|--|
| 1          | OFF     | Reserve (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): Exist        |
| 8          | ON      | Short-circuit of SDB (TXB) and RDB (RXB): Exist        |
| 9          | ON      | RS (RTS) Auto control mode: Enable                     |
| 10         | ON      |  |

## 2 Selection of External Device

Select the External Device to be connected to the Display.



| Setup Items     | Setup Description  |
|-----------------|--|
| Maker           | Select the maker of the External Device to be connected. Select "Shinko Technos Co.,Ltd."  |
| Driver          | Select a model (series) of the External Device to be connected and connection method. Select "Indicating Controller SIO".<br>Check the External Device which can be connected in "Indicating Controller SIO" in system configuration.<br>☞ "1 System Configuration" (page 3) |
| Use System Area | Cannot be set in this driver.  |
| Port            | Select the Display port to be connected to the External Device.  |

### 3 Example of Communication Setting

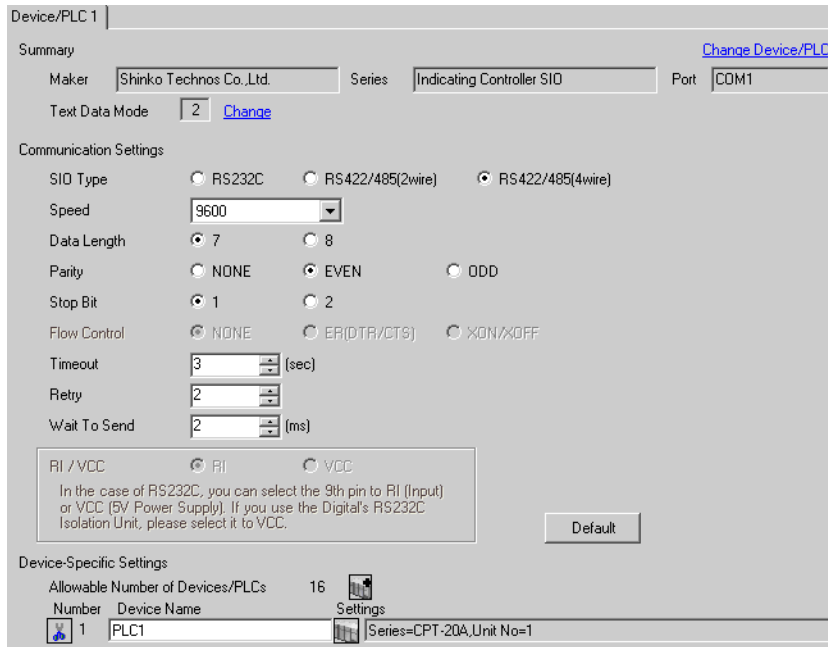
Examples of communication settings of the Display and the External Device, recommended by Pro-face, are shown.

#### 3.1 Setting Example 1

##### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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




#### IMPORTANT

- The setting value of the weight to send is different by the speed. Please set up as follows.

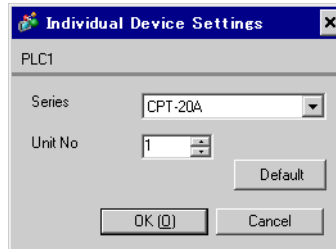
| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 2ms or more   |
| 19200bps | 2ms or more   |

- In the case of continuous writing, it may take time to write. For example, it takes 1 second to write 5 words.

◆ Device Setting

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

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



■ Settings of External Device

Use the rotary switch for instrument number setting and DIP switch for communication setting in the External Device for communication settings of the External Device.

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

◆ Setup Items

- Rotary switch for instrument number setting

| Settings | Setup Description                  |
|----------|------------------------------------|
| 1        | Instrument number setting: 0 to 15 |

- DIP switch for communication setting

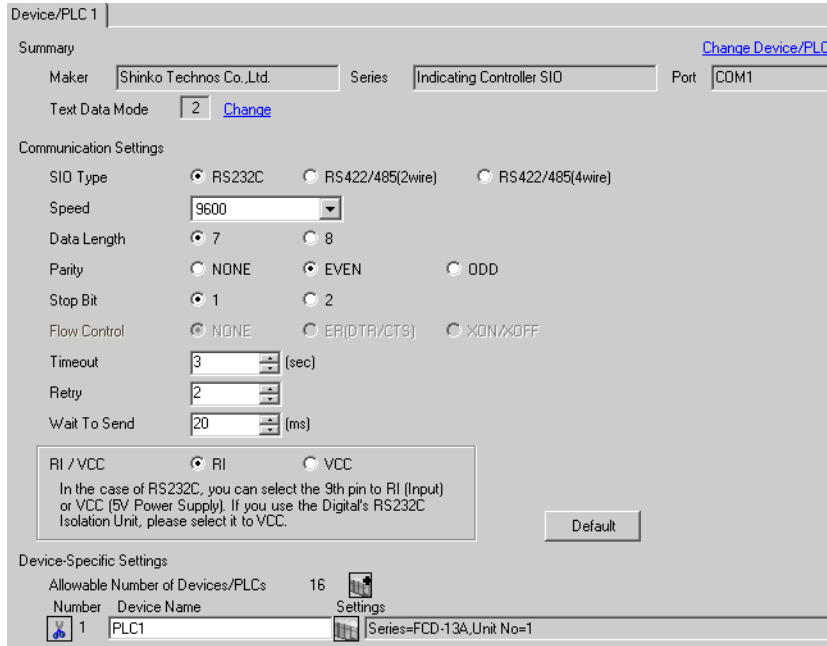
| DIP switch | Settings | Setup Description  |
|------------|----------|--|
| SW1        | OFF      | Communication speed: 9600bps                                       |
| SW2        | ON       | Terminating resistance setting: ON                                 |
| SW3        | OFF      | Communication form setting: Shinko Technos standard protocol       |
| SW4        | OFF      |  |
| SW5        | OFF      |  |
| SW6        | OFF      |  |
| SW7        | OFF      | Digital output setting: Turns ON/OFF by the communication command. |
| SW8        | OFF      |  |

### 3.2 Setting Example 2

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

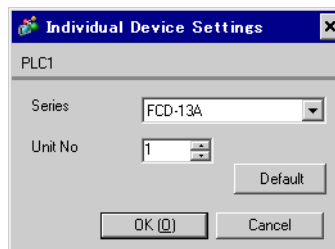
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 6 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

6. communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

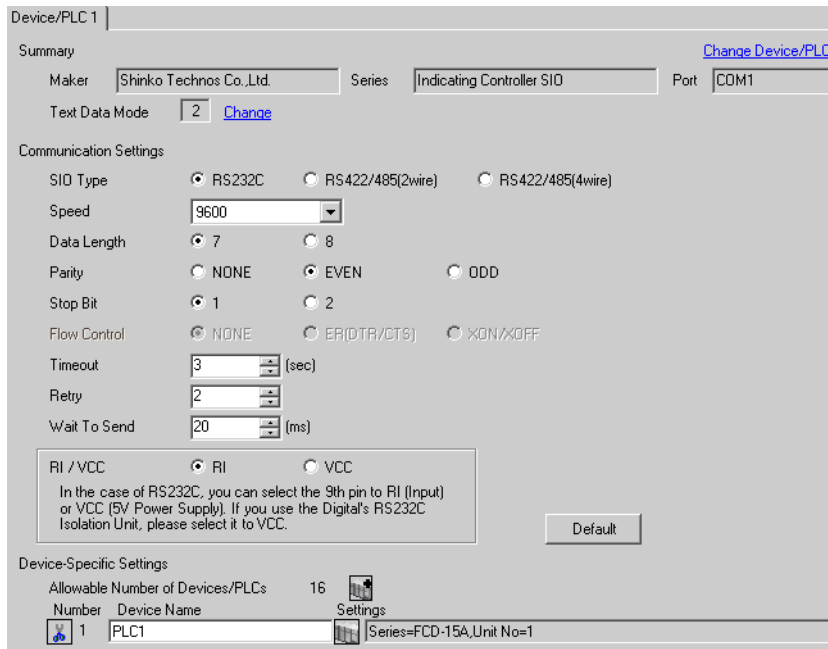
Completion of setting

### 3.3 Setting Example 3

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

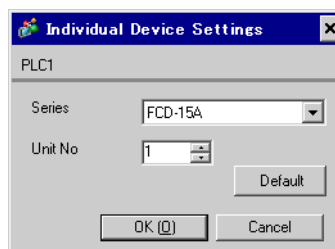
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 5 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

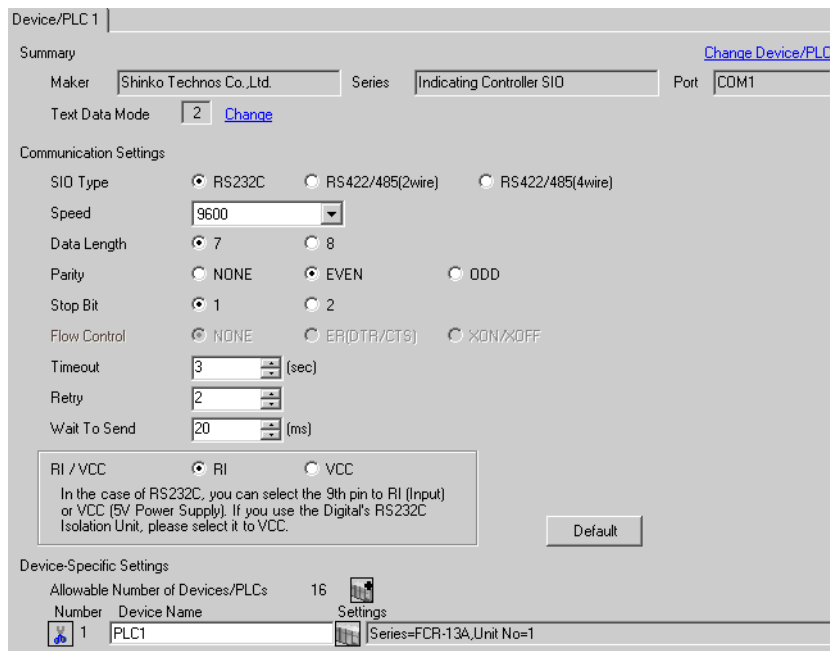
Completion of setting

### 3.4 Setting Example 4

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

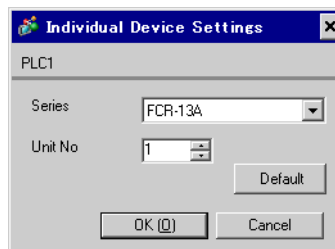
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 6 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

6. communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

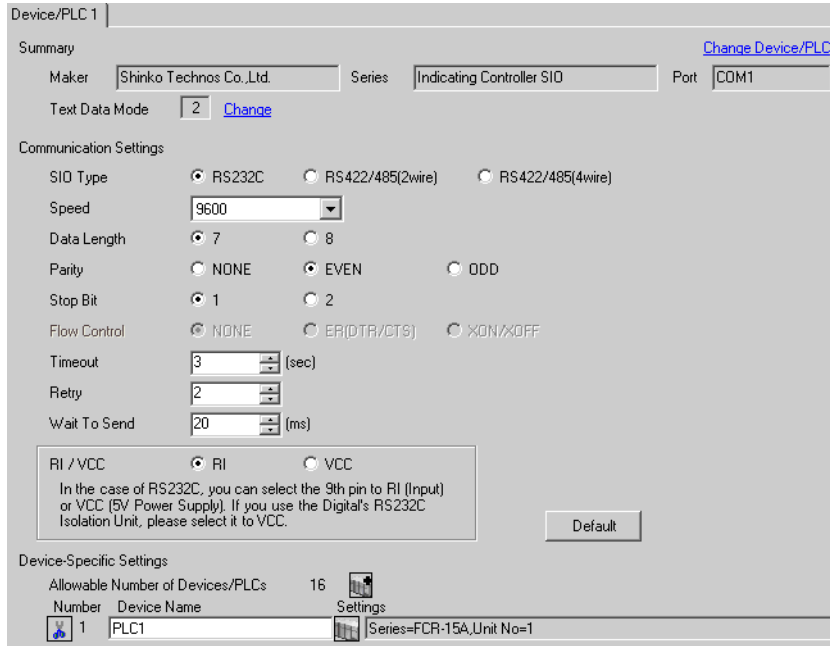
Completion of setting

### 3.5 Setting Example 5

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

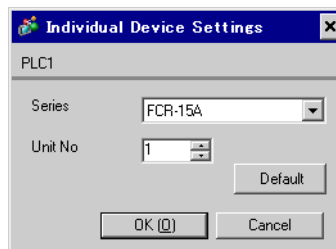
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 5 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

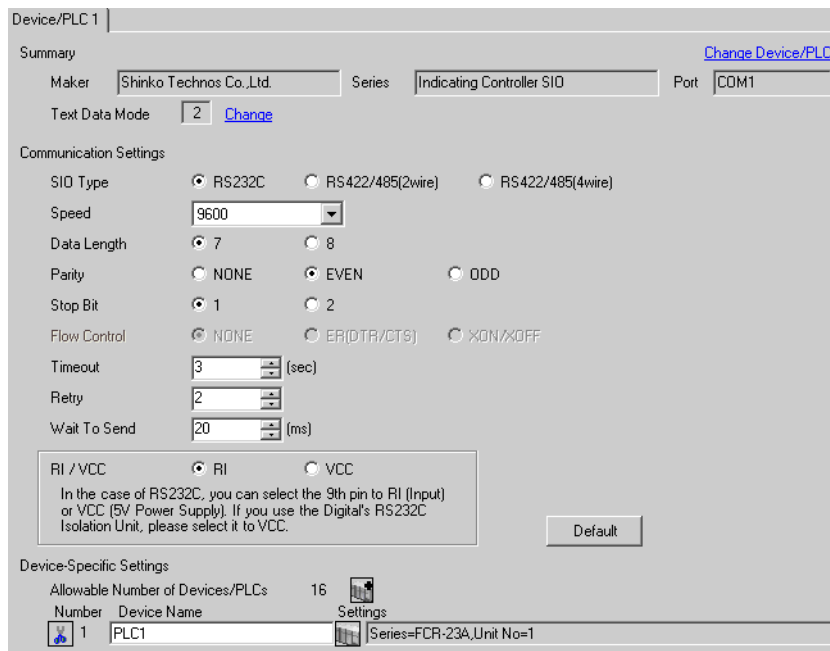
Completion of setting

### 3.6 Setting Example 6

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

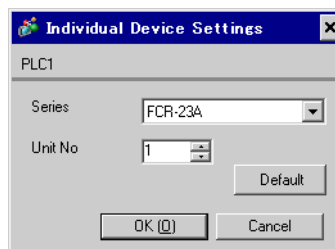
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 6 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

6. communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

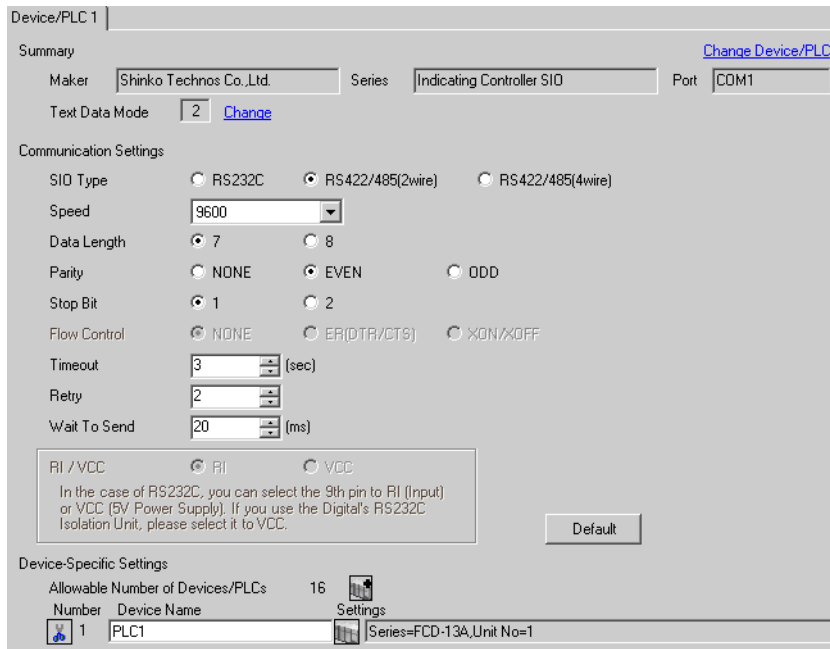
Completion of setting

### 3.7 Setting Example 7

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

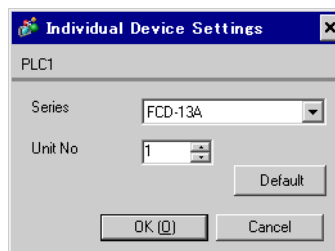
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 6 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

6. communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

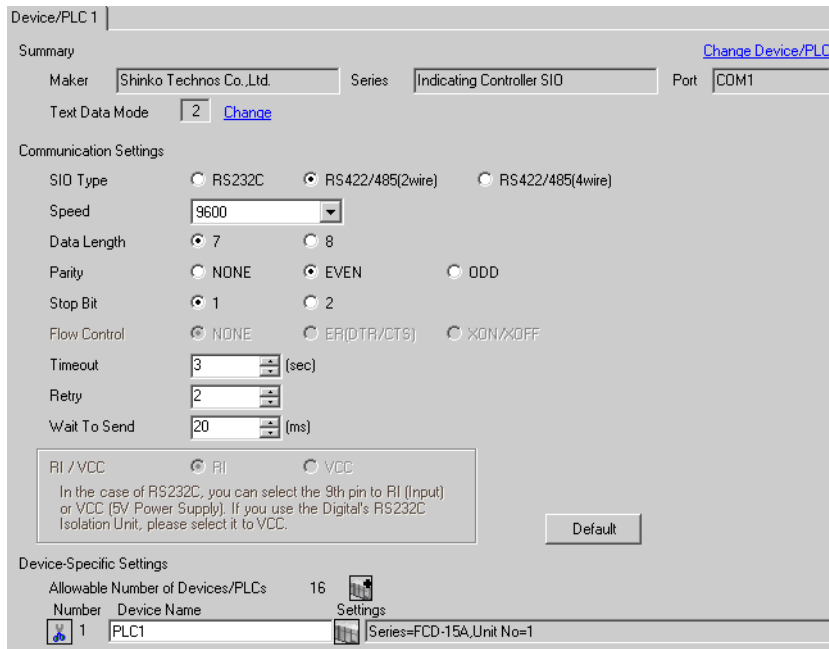
Completion of setting

### 3.8 Setting Example 8

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



**IMPORTANT**

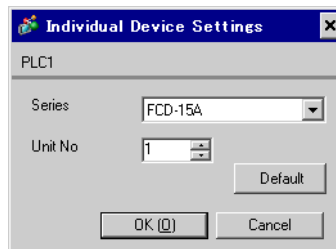
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 5 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

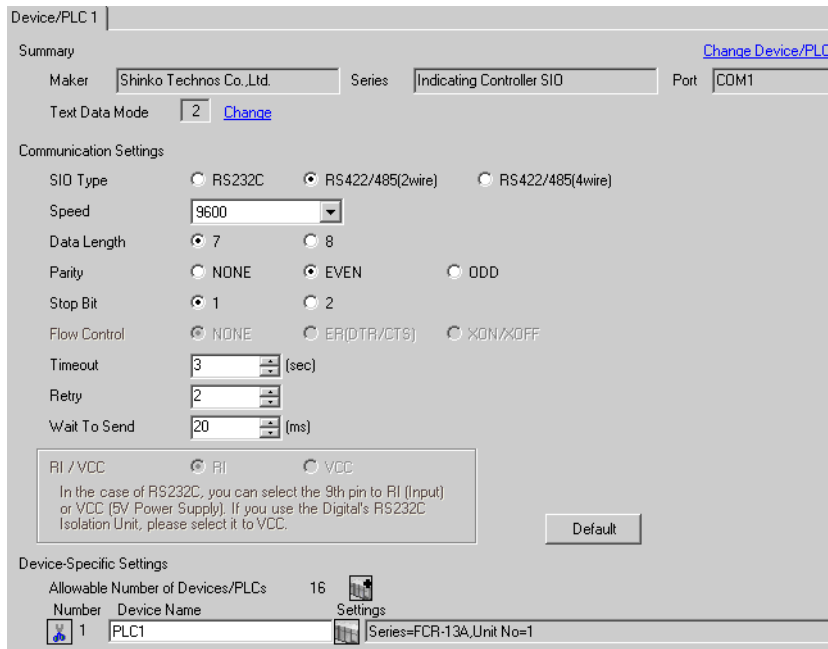
Completion of setting

### 3.9 Setting Example 9

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

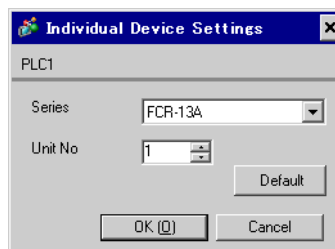
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 6 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

6. communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

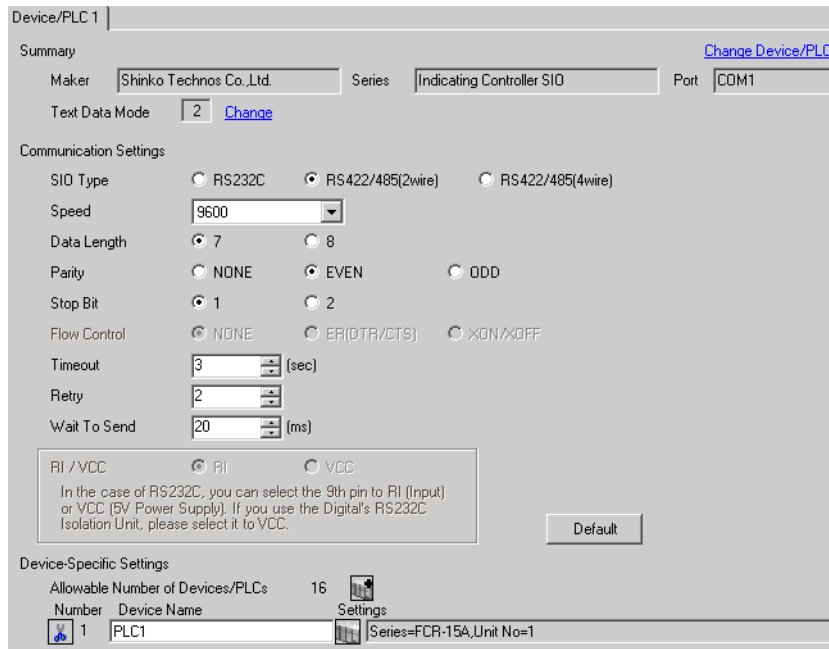
Completion of setting

### 3.10 Setting Example 10

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

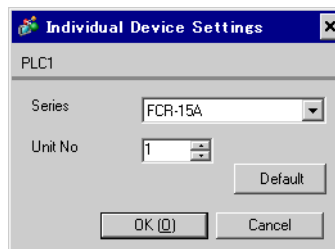
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 5 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

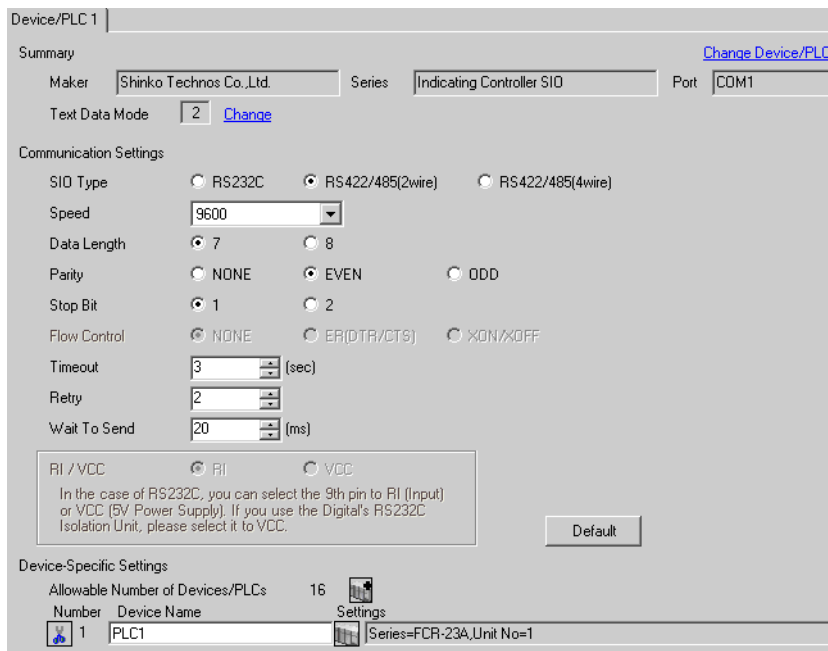
Completion of setting

### 3.11 Setting Example 11

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

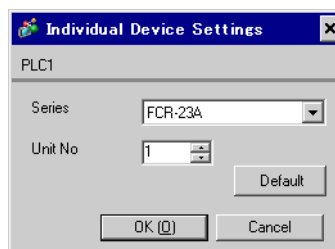
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 6 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

6. communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

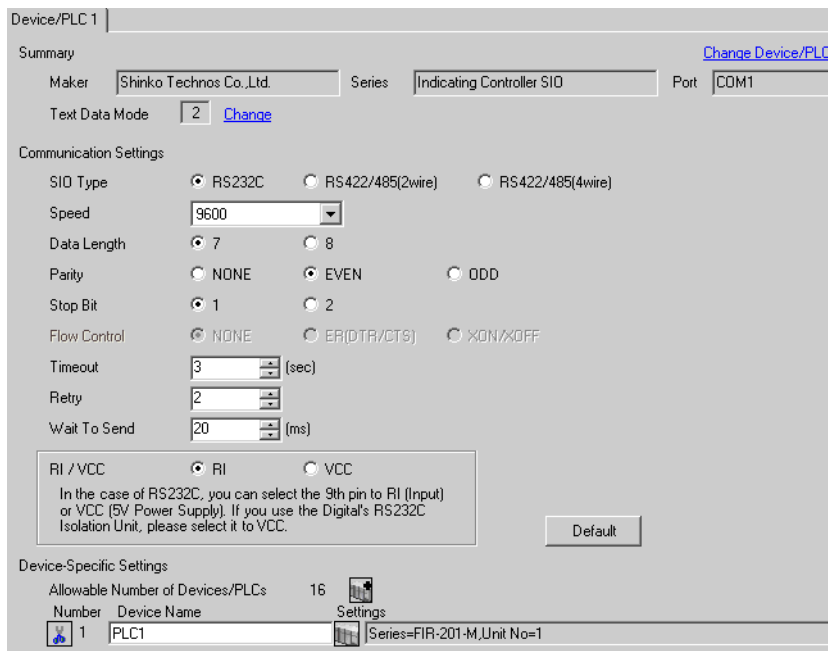
Completion of setting

### 3.12 Setting Example 12

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

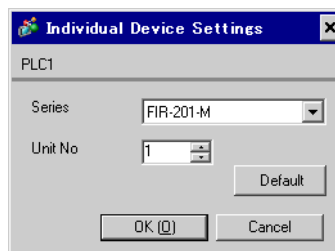
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key twice.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

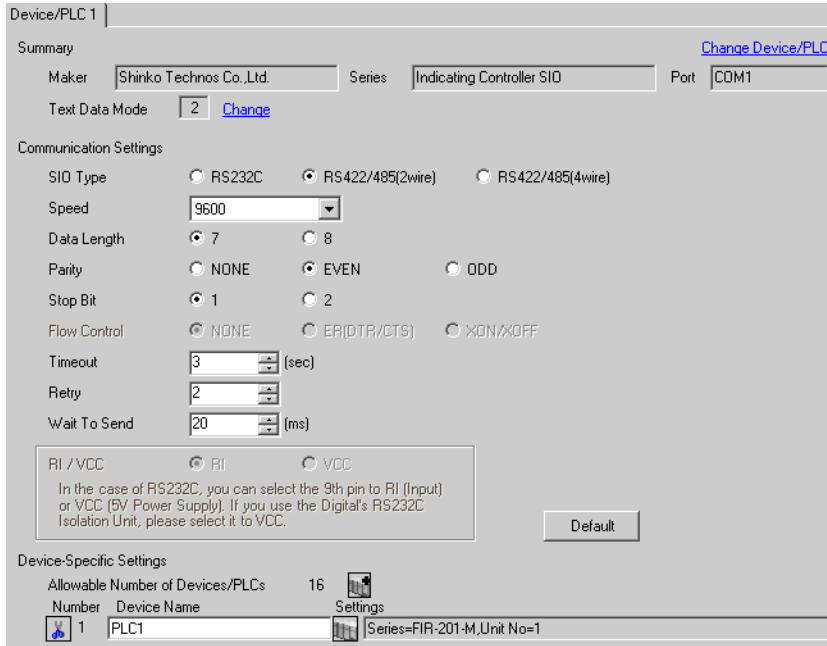
Completion of setting

### 3.13 Setting Example 13

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

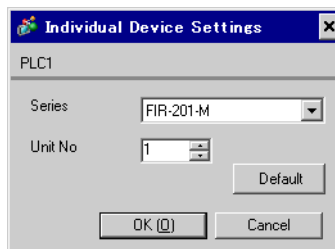
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 20ms or more  |
| 19200bps | 20ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key twice.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

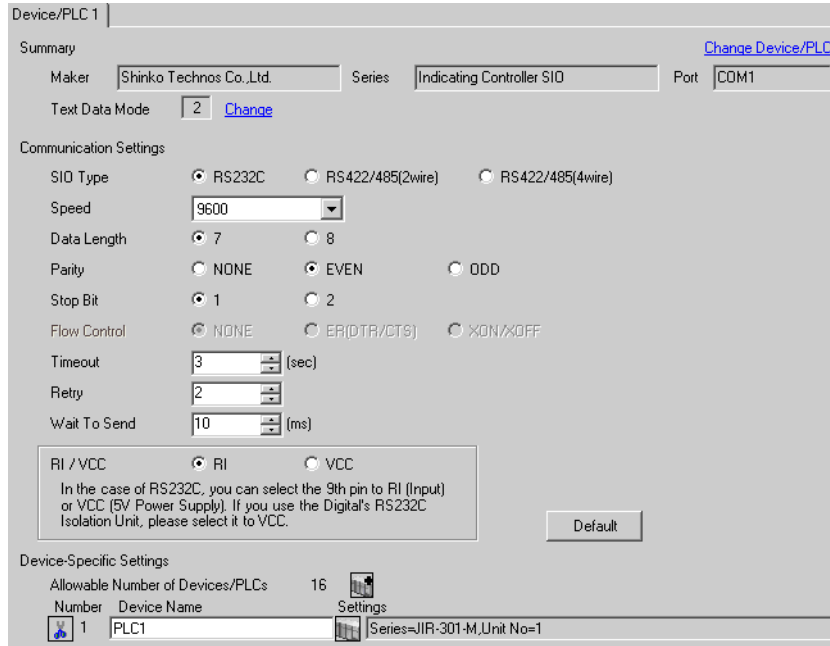
Completion of setting

### 3.14 Setting Example 14

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

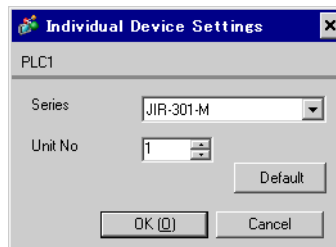
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key twice.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

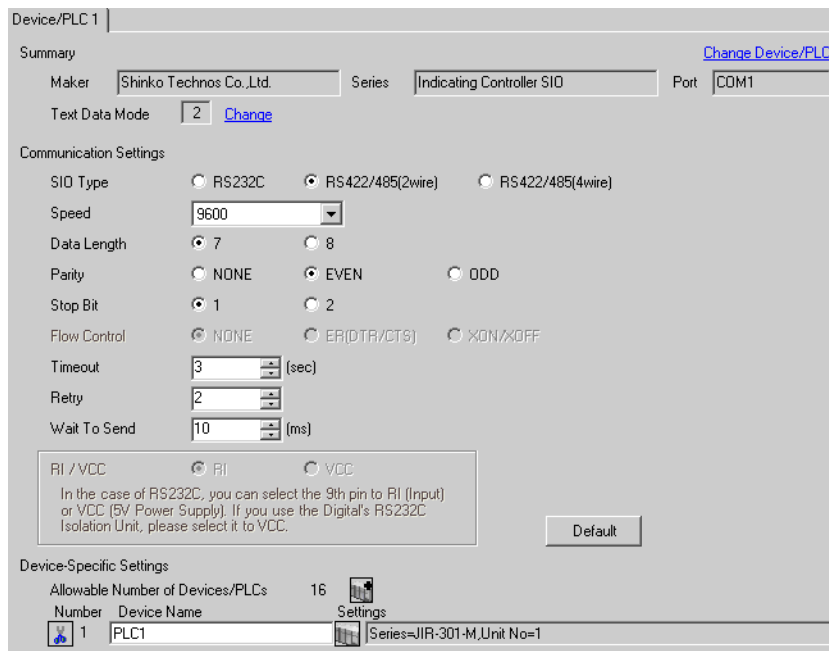
Completion of setting

### 3.15 Setting Example 15

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

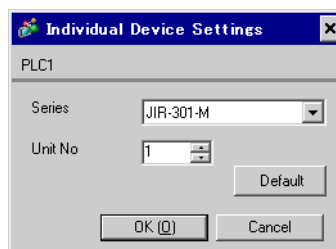
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key twice.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

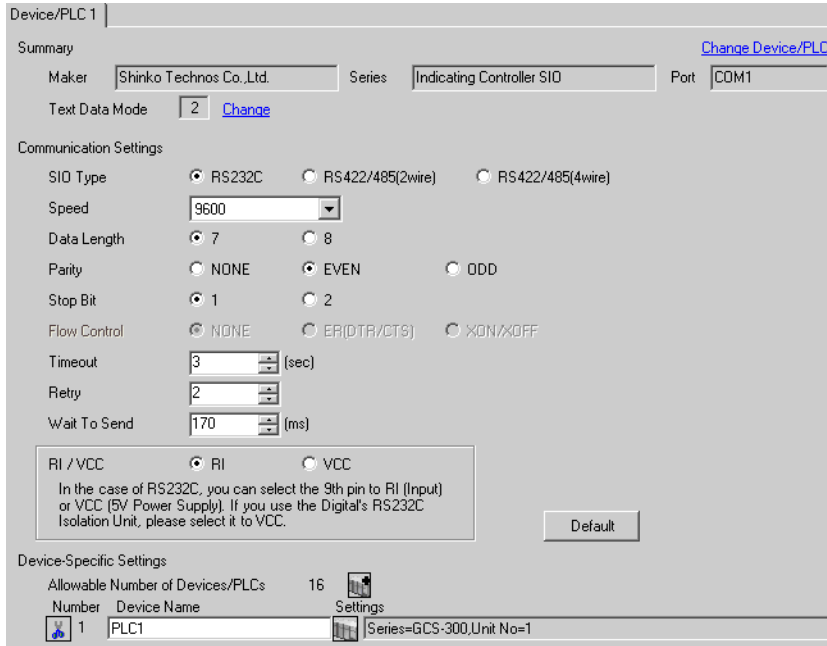
Completion of setting

### 3.16 Setting Example 16

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

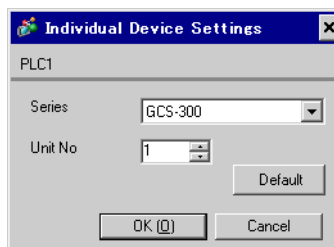
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value   |
|----------|---|
| 9600bps  | 180ms or more (When using the IF-300-C5.)<br>170ms or more (When using the IF-400.) |
| 19200bps | 200ms or more (When using the IF-300-C5.)<br>180ms or more (When using the IF-400.) |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 4 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

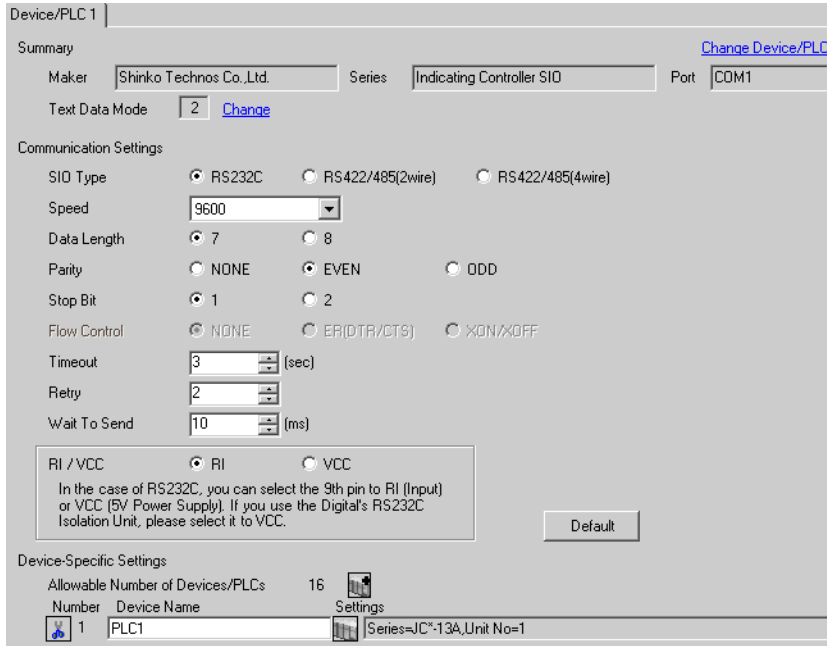
Completion of setting

### 3.17 Setting Example 17

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

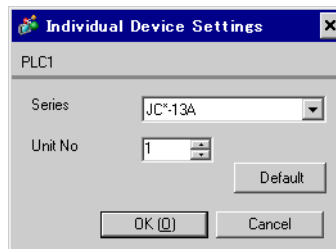
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 4 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed setting.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

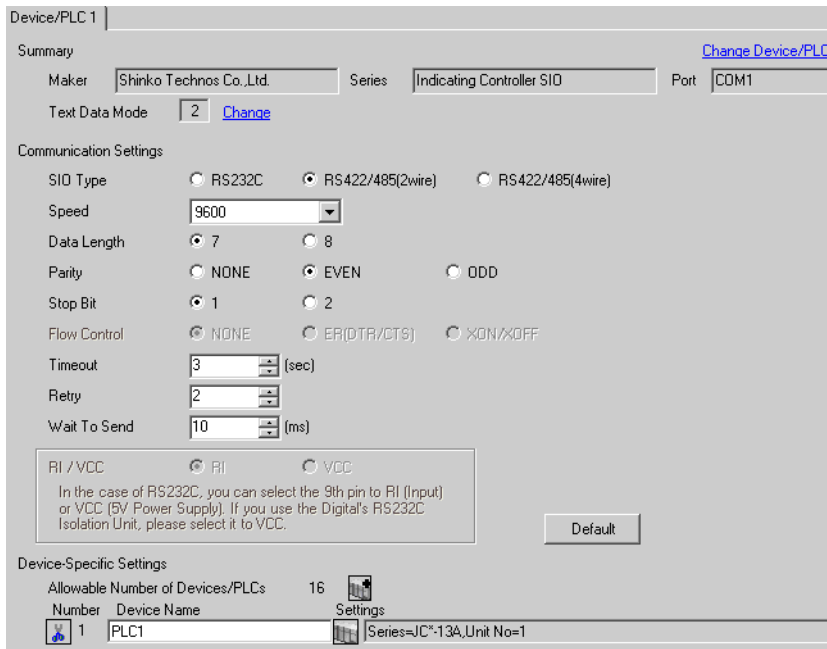
Completion of setting

### 3.18 Setting Example 18

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

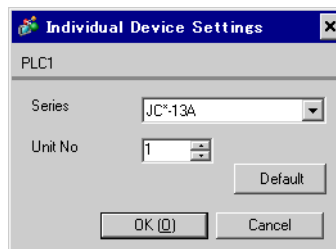
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 4 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed setting.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

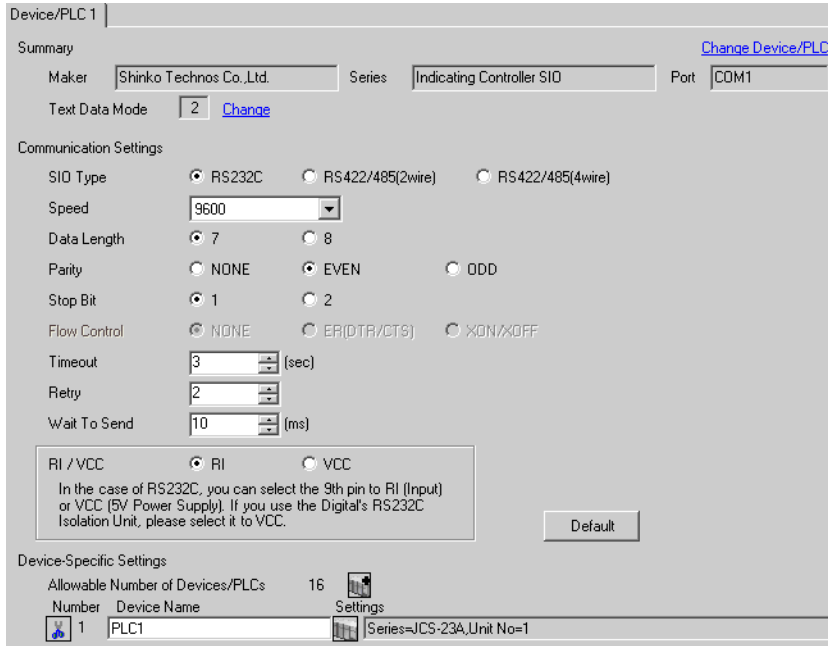
Completion of setting

### 3.19 Setting Example 19

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

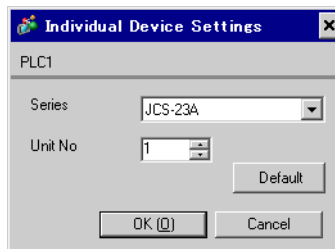
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 4 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed setting.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

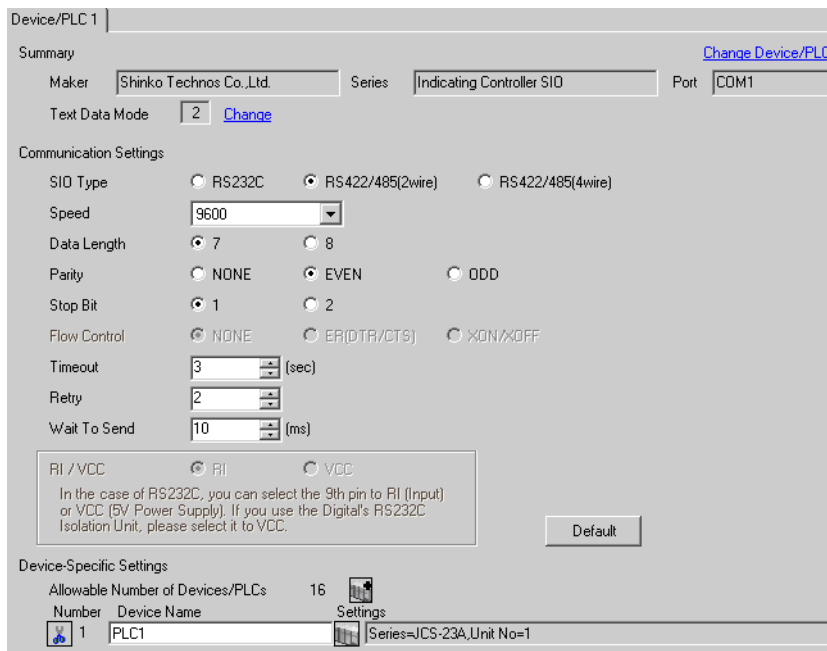
Completion of setting

### 3.20 Setting Example 20

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

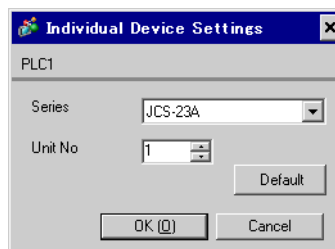
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key 4 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed setting.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

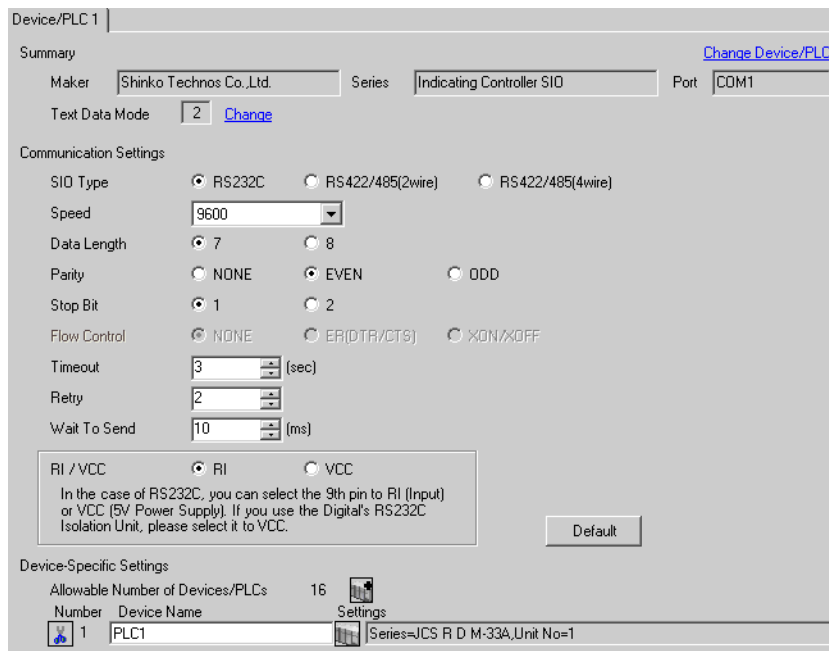
Completion of setting

### 3.21 Setting Example 21

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

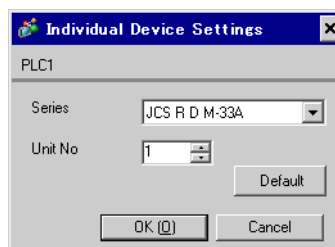
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value  |
|----------|--|
| 9600bps  | 10ms or more   |
| 19200bps | 10ms or more (In the cases of except JCS-33A.)<br>15ms or more (In the case of JCS-33A.) |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

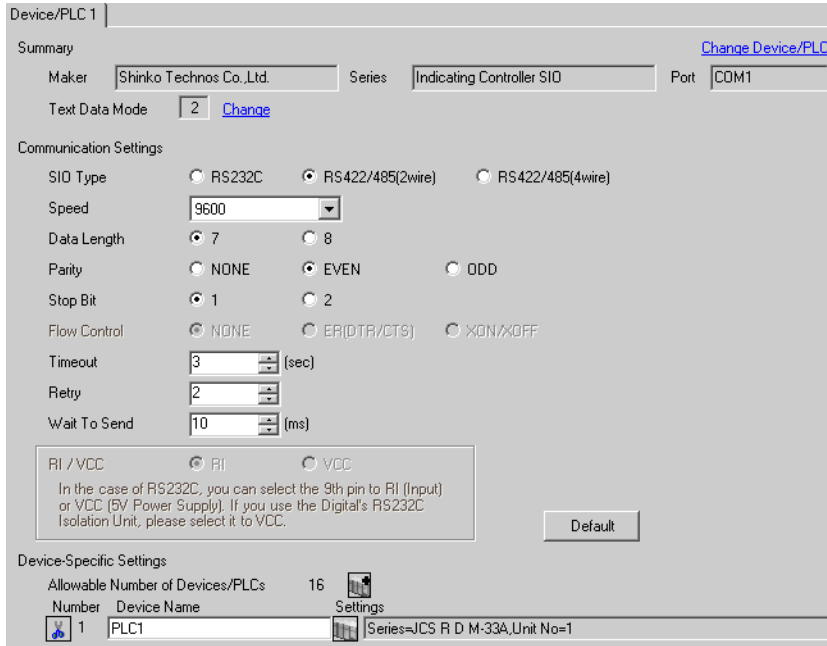
Completion of setting

### 3.22 Setting Example 22

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

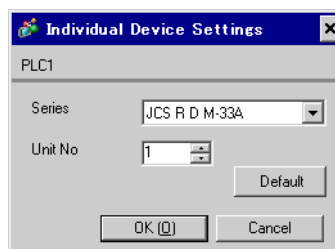
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value  |
|----------|--|
| 9600bps  | 10ms or more   |
| 19200bps | 10ms or more (In the cases of except JCS-33A.)<br>15ms or more (In the case of JCS-33A.) |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

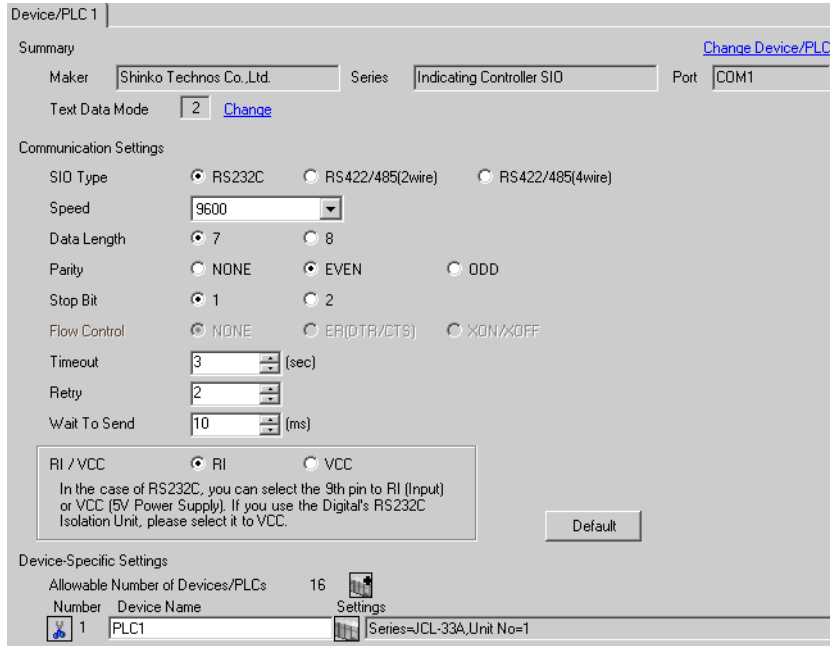
Completion of setting

### 3.23 Setting Example 23

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

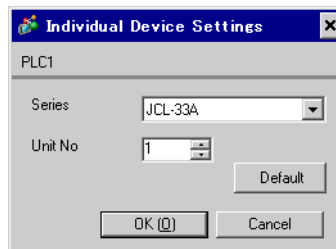
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

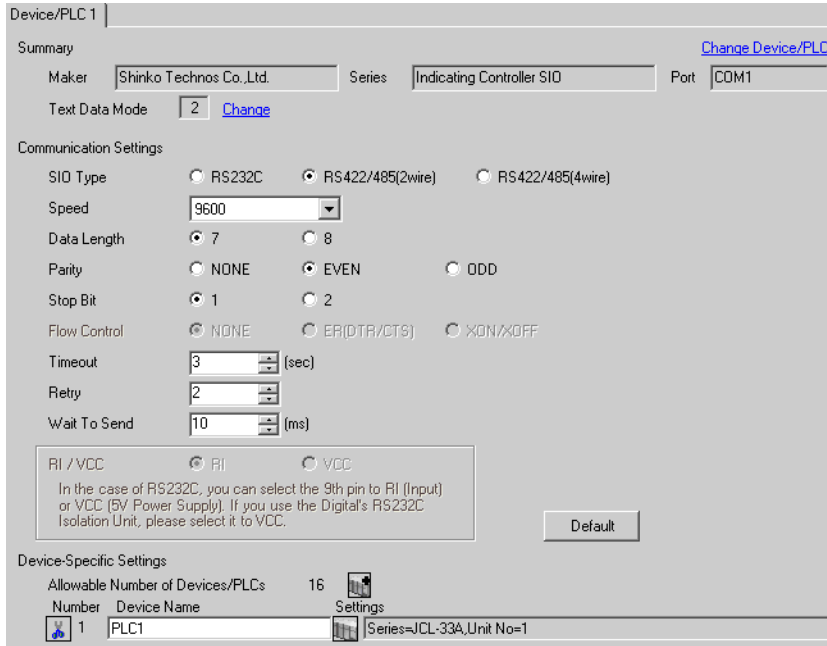
Completion of setting

### 3.24 Setting Example 24

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

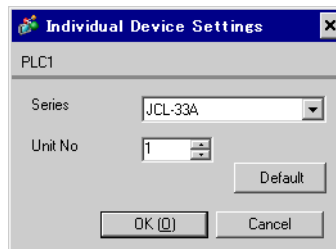
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

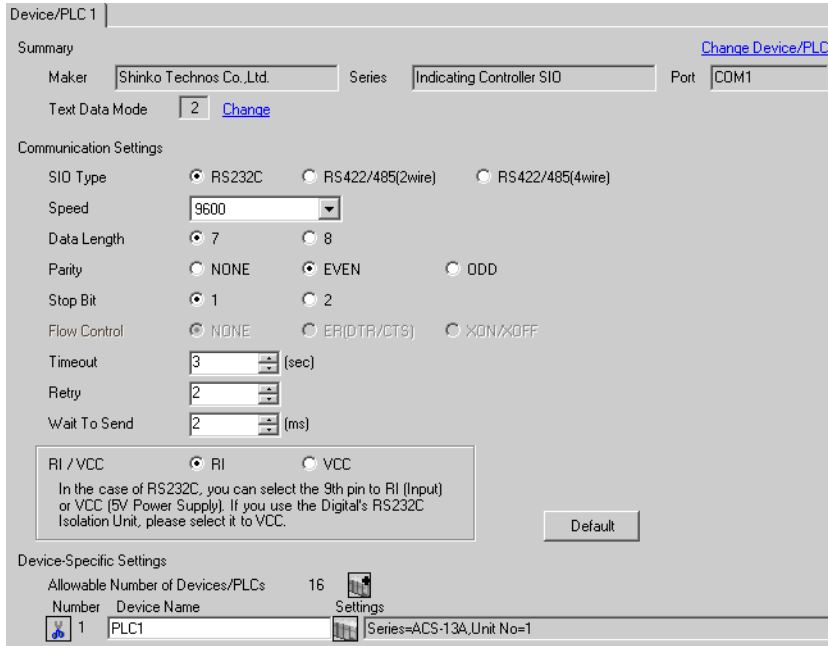
Completion of setting

### 3.25 Setting Example 25

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

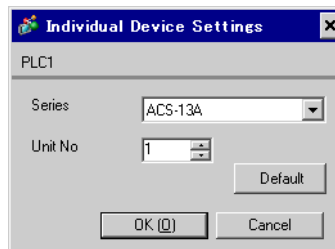
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value               |
|----------|-----------------------------|
| 9600bps  | 2ms or more                 |
| 19200bps | This speed can not be used. |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode (setting value lock setting).



Press the mode key twice.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

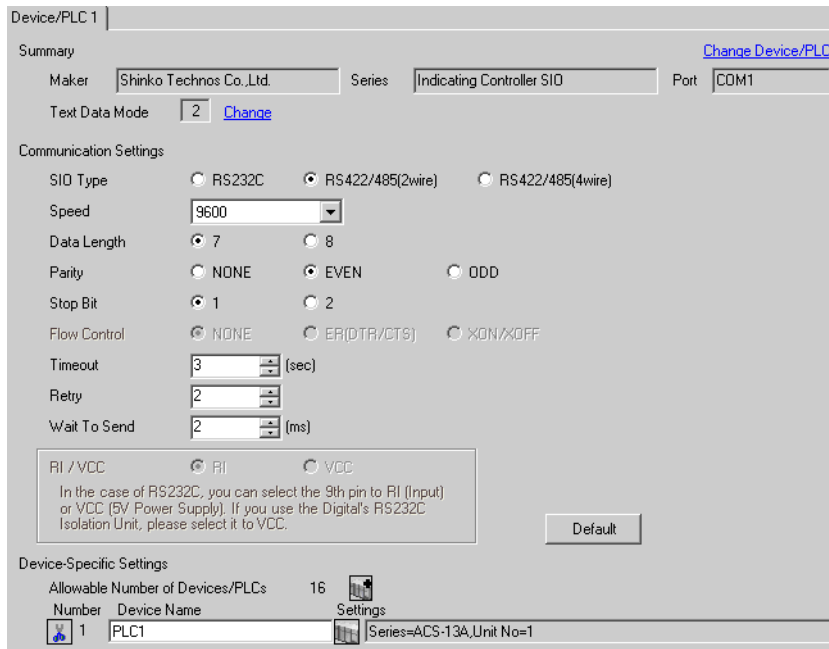
Completion of setting

### 3.26 Setting Example 26

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

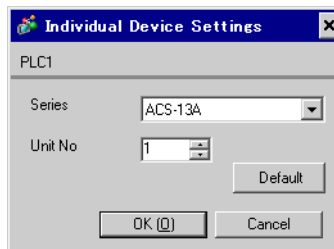
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value               |
|----------|-----------------------------|
| 9600bps  | 2ms or more                 |
| 19200bps | This speed can not be used. |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode (setting value lock setting).



Press the mode key twice.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

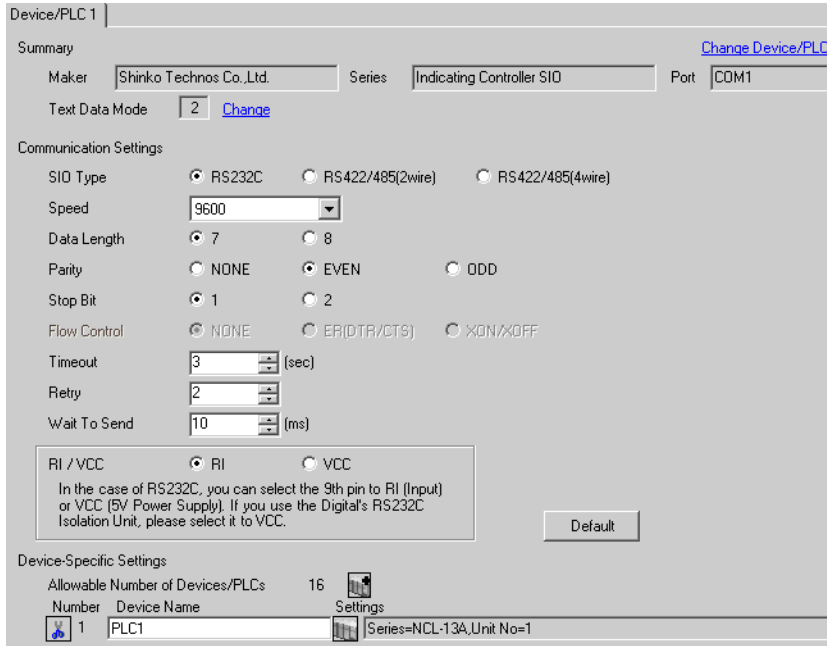
Completion of setting

### 3.27 Setting Example 27

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

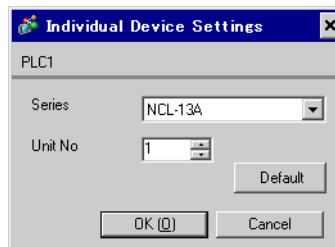
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 50ms or more  |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the rotary switch for instrument number setting and DIP switch for selecting communication speed and communication protocol in the External Device for communication settings of the External Device.

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

### ◆ Setup Items

- Rotary switch for instrument number setting

| Rotary switch | Settings | Setup Description                  |
|---------------|----------|------------------------------------|
| ×10           | 0        | Instrument number setting: 0 to 94 |
| ×1            | 1        |                                    |

- DIP switch for selecting communication speed and communication protocol

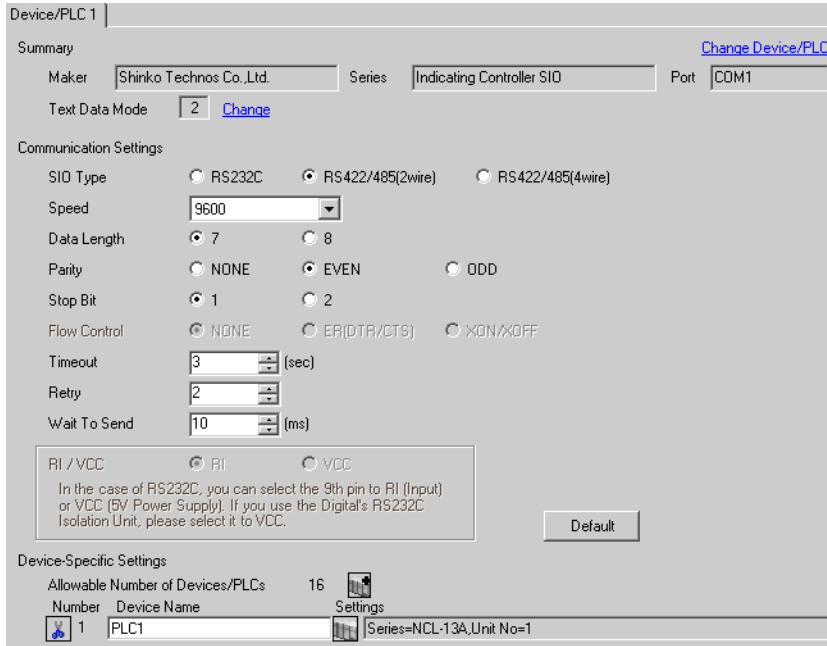
| DIP switch | Settings | Setup Description   |
|------------|----------|---|
| SW1        | OFF      | Communication speed: 9600bps  |
| SW2        | OFF      |   |
| SW3        | OFF      | Digital output setting: Shinko Technos standard protocol<br>Start bit: 1, Data length: 7<br>Stop bit: 1, Parity bit: Even |
| SW4        | OFF      |   |

### 3.28 Setting Example 28

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

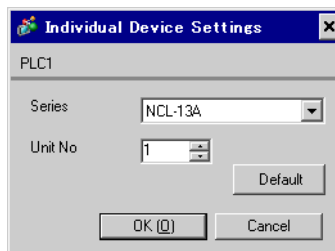
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 50ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the rotary switch for instrument number setting and DIP switch for selecting communication speed and communication protocol in the External Device for communication settings of the External Device.

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

### ◆ Setup Items

- Rotary switch for instrument number setting

| Rotary switch | Settings | Setup Description                  |
|---------------|----------|------------------------------------|
| ×10           | 0        | Instrument number setting: 0 to 94 |
| ×1            | 1        |                                    |

- DIP switch for selecting communication speed and communication protocol

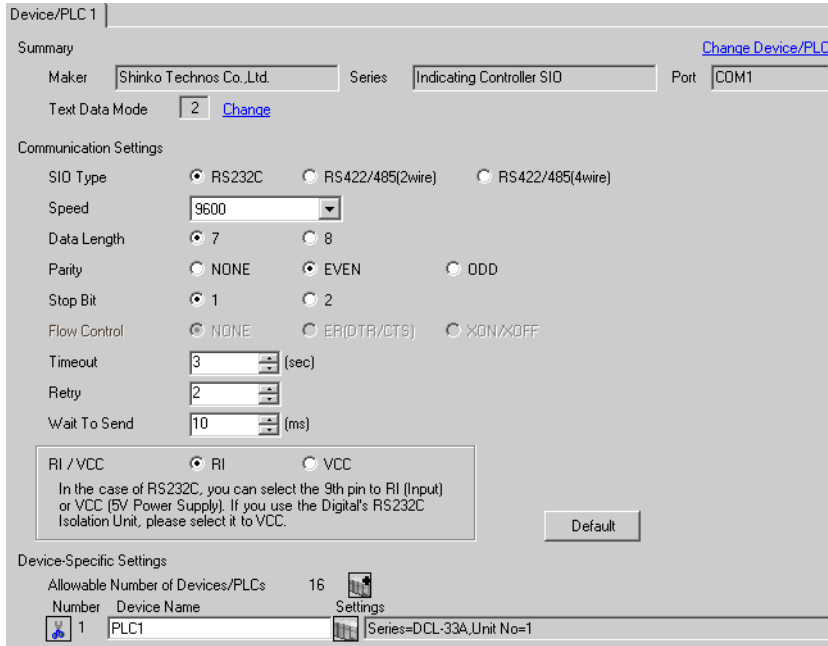
| DIP switch | Settings | Setup Description   |
|------------|----------|---|
| SW1        | OFF      | Communication speed: 9600bps  |
| SW2        | OFF      |   |
| SW3        | OFF      | Digital output setting: Shinko Technos standard protocol<br>Start bit: 1, Data length: 7<br>Stop bit: 1, Parity bit: Even |
| SW4        | OFF      |   |

### 3.29 Setting Example 29

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

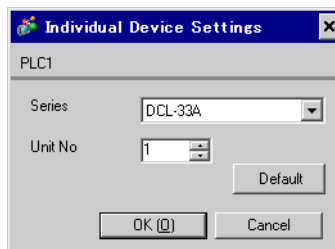
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key twice.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

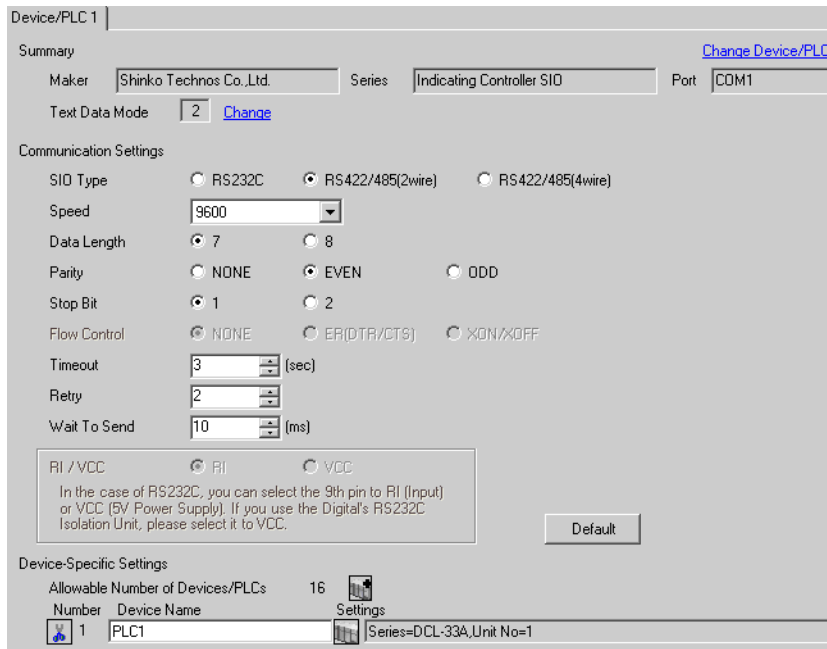
Completion of setting

### 3.30 Setting Example 30

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

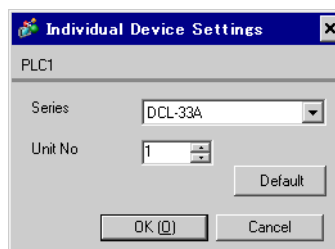
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (setting value lock setting).



Press the mode key twice.

4. Change to communication protocol selection.



Set to "NOML" (Shinko Technos standard protocol) with the down key or the up key, and press the mode key.

5. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

6. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

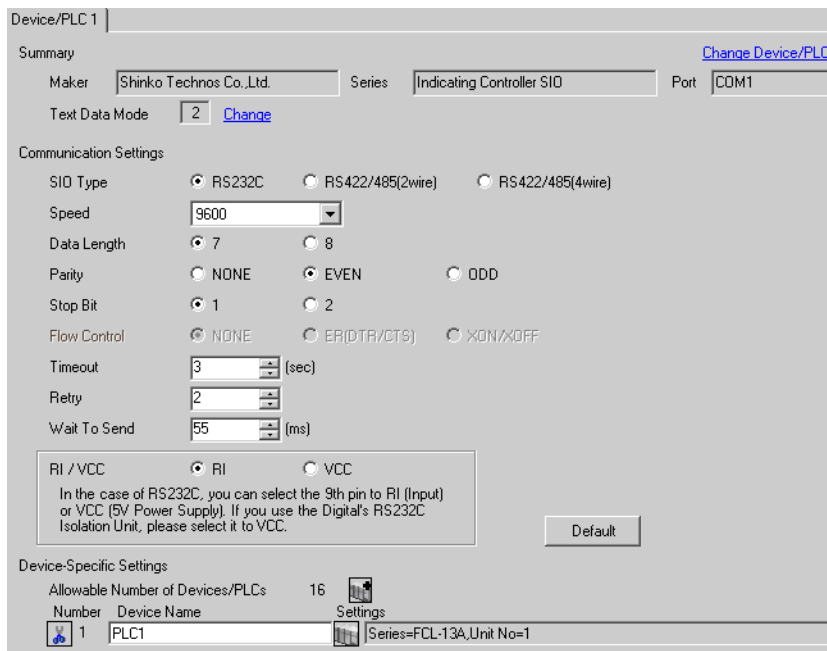
Completion of setting

### 3.31 Setting Example 31

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

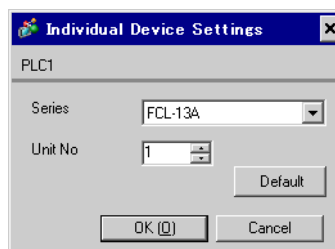
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 55ms or more  |
| 19200bps | 100ms or more |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (PV/SV display change).



Press the mode key 5 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

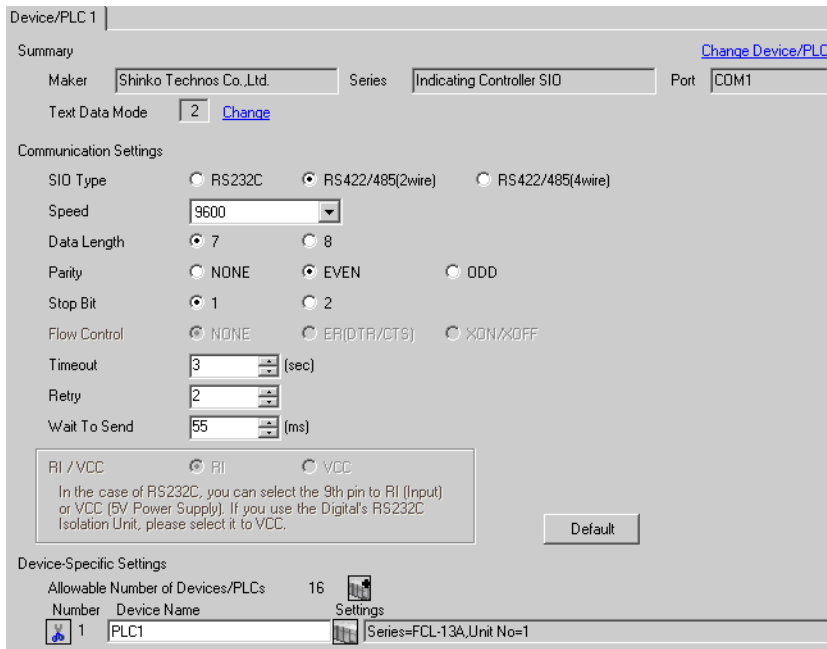
Completion of setting

### 3.32 Setting Example 32

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

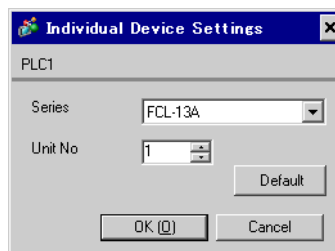
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 55ms or more  |
| 19200bps | 100ms or more |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the mode key, down key and up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to PV/SV display mode.



Press the down key and the mode key for about 3 seconds.

3. Change to auxiliary function setting mode 1 (PV/SV display change).



Press the mode key 5 times.

4. Change to instrument number setting.



Set to "1" with the down key or the up key, and press the mode key.

5. Change to communication speed selection.



Set to "96" (9600bps) with the down key or the up key, and press the mode key.

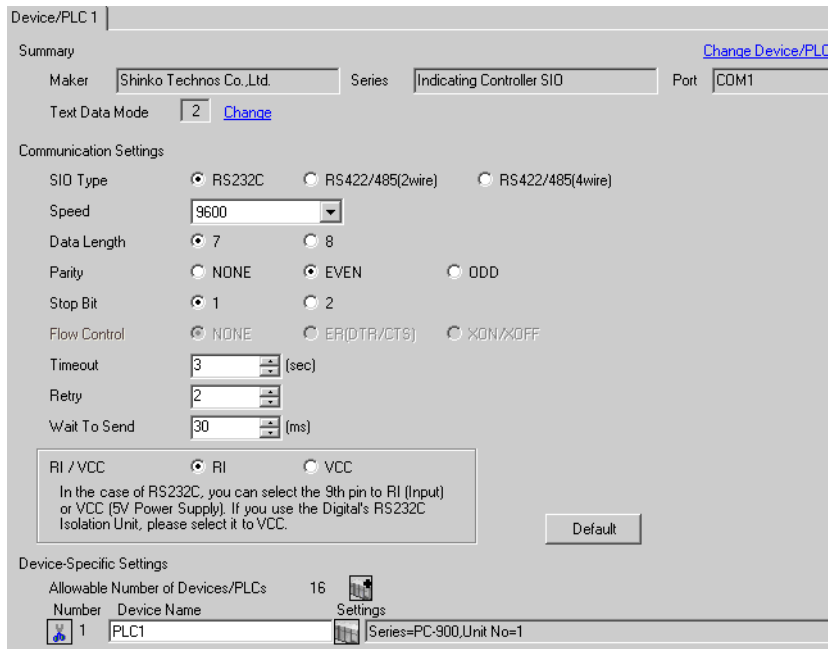
Completion of setting

### 3.33 Setting Example 33

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

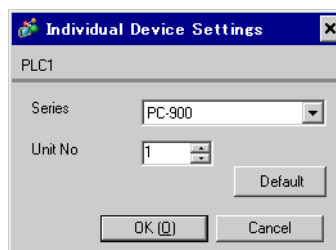
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 30ms or more  |
| 19200bps | 30ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the set/reset key, stop/mode key, hold/entry key, advance/down key and pattern/up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to program control execution mode.



Press the set/reset key.

3. Change to pattern setting mode.



Press the stop/mode key 4 times.

4. Change to auxiliary function setting mode.



Press the hold/entry key.

5. Change to alarm parameter.



Press the stop/mode key 5 times.

6. Change to communication parameter.



Press the hold/entry key.

7. Change to communication speed selection.



Set to "96" (9600bps) with the advance/down key or the pattern/up key, and press the hold/entry key.

8. Change to instrument number setting.



Set to "1" with the advance/down key or the pattern/up key, and press the hold/entry key.

9. Change to communication type selection.



Set to "NOML" (serial communication) with the advance/down key or the pattern/up key, and press the hold/entry key.

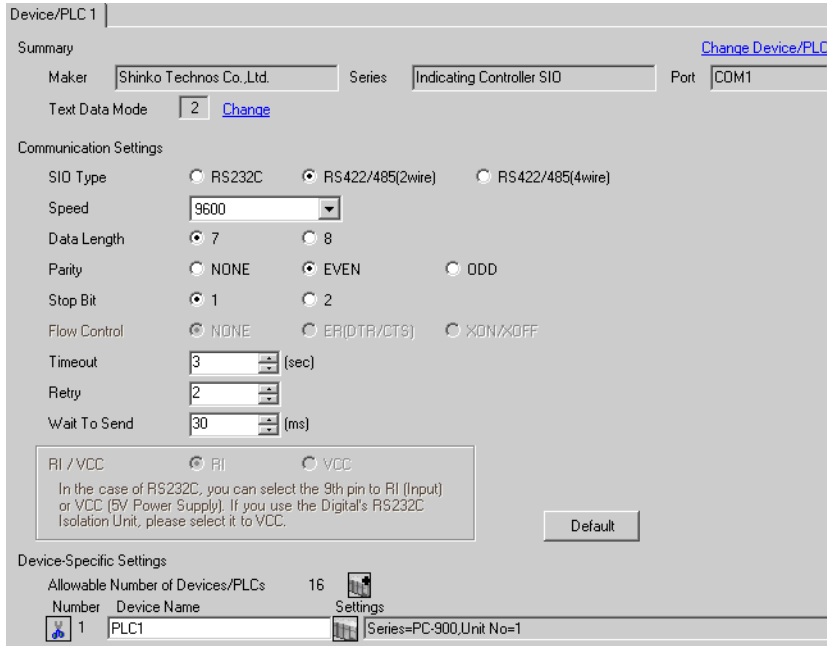
Completion of setting

### 3.34 Setting Example 34

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

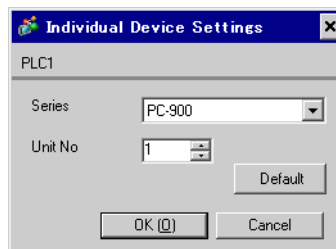
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 30ms or more  |
| 19200bps | 30ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the set/reset key, stop/mode key, hold/entry key, advance/down key and pattern/up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to program control execution mode.



Press the set/reset key.

3. Change to pattern setting mode.



Press the stop/mode key 4 times.

4. Change to auxiliary function setting mode.



Press the hold/entry key.

5. Change to alarm parameter.



Press the stop/mode key 5 times.

6. Change to communication parameter.



Press the hold/entry key.

7. Change to communication speed selection.



Set to "96" (9600bps) with the advance/down key or the pattern/up key, and press the hold/entry key.

8. Change to instrument number setting.



Set to "1" with the advance/down key or the pattern/up key, and press the hold/entry key.

9. Change to communication type selection.



Set to "NOML" (serial communication) with the advance/down key or the pattern/up key, and press the hold/entry key.

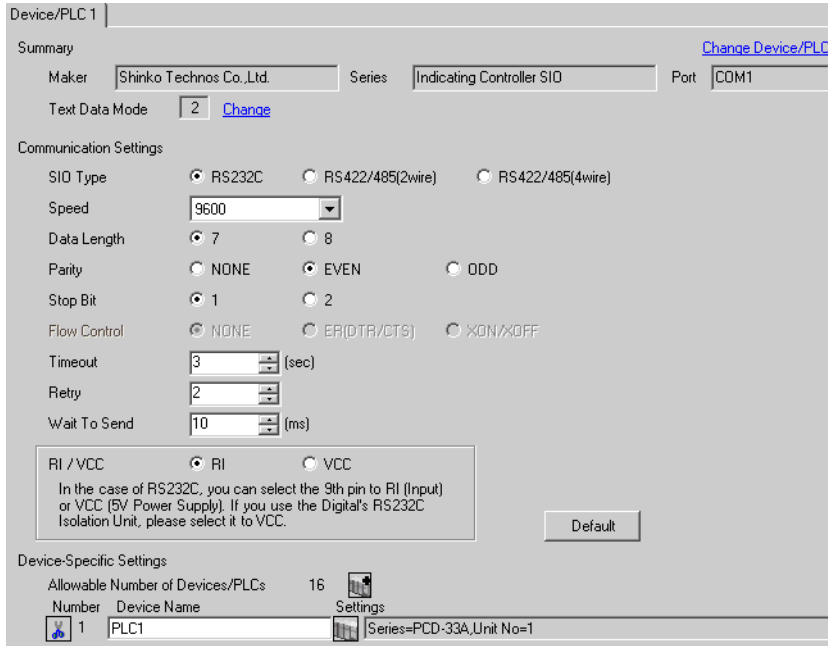
Completion of setting

### 3.35 Setting Example 35

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



#### IMPORTANT

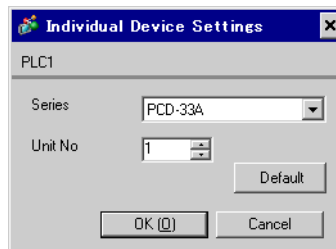
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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





## ■ Settings of External Device

Use the set/reset key, stop/mode key, hold/entry key, advance/down key and pattern/up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to program control execution mode.



Press the set/reset key.

3. Change to pattern setting mode.



Press the stop/mode key 4 times.

4. Change to auxiliary function setting mode.



Press the hold/entry key.

5. Change to alarm parameter.



Press the stop/mode key 5 times.

6. Change to communication parameter.



Press the hold/entry key.

7. Change to communication speed selection.



Set to "96" (9600bps) with the advance/down key or the pattern/up key, and press the hold/entry key.

8. Change to instrument number setting.



Set to "1" with the advance/down key or the pattern/up key, and press the hold/entry key.

9. Change to communication type selection.



Set to "NOML" (serial communication) with the advance/down key or the pattern/up key, and press the hold/entry key.

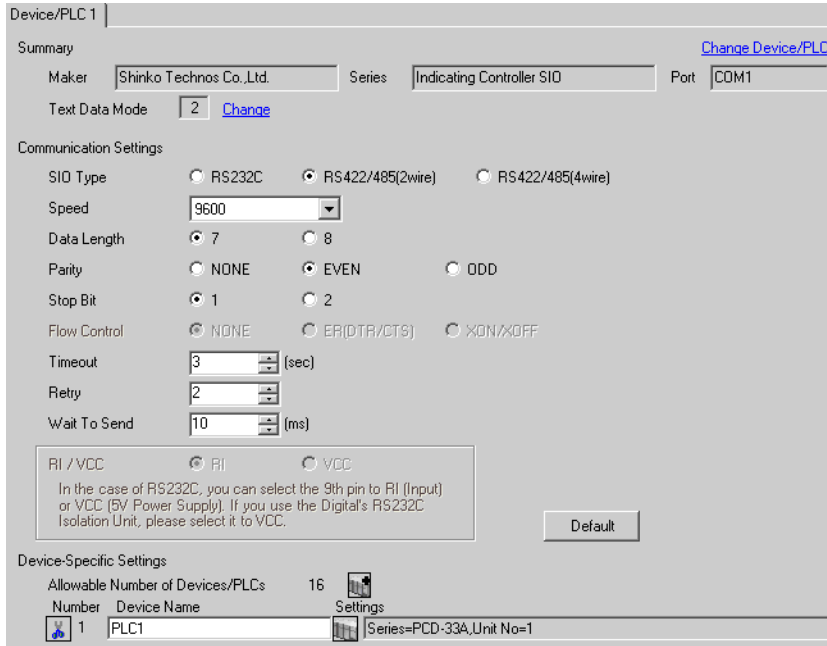
Completion of setting

### 3.36 Setting Example 36

#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

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



**IMPORTANT**

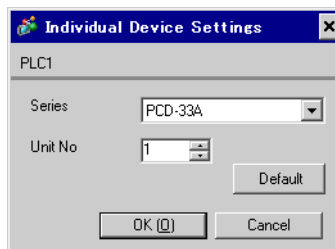
- The setting value of the weight to send is different by the speed. Please set up as follows.

| Speed    | Setting value |
|----------|---------------|
| 9600bps  | 10ms or more  |
| 19200bps | 10ms or more  |

##### ◆ Device Setting

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

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



## ■ Settings of External Device

Use the set/reset key, stop/mode key, hold/entry key, advance/down key and pattern/up key in front of the External Device for communication settings of the External Device.

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

1. Turn ON the power supply.



2. Change to program control execution mode.



Press the set/reset key.

3. Change to pattern setting mode.



Press the stop/mode key 4 times.

4. Change to auxiliary function setting mode.



Press the hold/entry key.

5. Change to alarm parameter.



Press the stop/mode key 5 times.

6. Change to communication parameter.



Press the hold/entry key.

7. Change to communication speed selection.



Set to "96" (9600bps) with the advance/down key or the pattern/up key, and press the hold/entry key.

8. Change to instrument number setting.



Set to "1" with the advance/down key or the pattern/up key, and press the hold/entry key.

9. Change to communication type selection.




Set to "NOML" (serial communication) with the advance/down key or the pattern/up key, and press the hold/entry key.

Completion of setting

## 4 Setup Items

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

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

 "3 Example of Communication Setting" (page 12)

### 4.1 Setup Items in GP-Pro EX


#### ■ Communication Settings

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

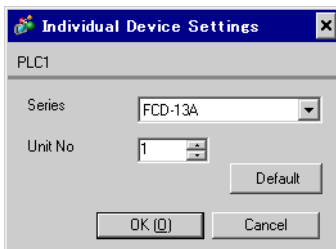
The screenshot shows the 'Device/PLC 1' settings window. Under 'Summary', the Maker is 'Shinko Technos Co.,Ltd.', Series is 'Indicating Controller SIO', and Port is 'COM1'. 'Text Data Mode' is set to '2'. Under 'Communication Settings', 'SIO Type' is 'RS422/485(4wire)', 'Speed' is '9600', 'Data Length' is '7', 'Parity' is 'EVEN', 'Stop Bit' is '1', 'Flow Control' is 'NONE', 'Timeout' is '3 (sec)', 'Retry' is '2', and 'Wait To Send' is '2 (ms)'. There are radio buttons for 'RI / VCC' with 'RI' selected. A 'Default' button is at the bottom right. The 'Device-Specific Settings' section shows 'Allowable Number of Devices/PLCs' as 16 and a table with 'Number' 1 and 'Device Name' 'PLC1'.

| 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 | Display the communication control method to prevent overflow of transmission and reception data.  |
| Timeout      | Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device.   |
| Retry        | In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.  |
| Wait To Send | Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.   |
| RI/VCC       | You can switch RI/VCC of the 9th pin when you select RS232C for SIO type. It is necessary to change RI/5V by changeover switch of IPC when connect with IPC. Please refer to the manual of the IPC for more detail. |

■ Device Setting

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

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



| Setup Items | Setup Description   |
|-------------|---|
| Series      | Select the External Device series.  |
| Unit No     | Use an integer from 0 to 94 to enter the Unit No. of the External Device. |

## 4.2 Setup Items in Off-Line Mode

**NOTE**

- Please refer to Maintenance/Troubleshooting for more information on how to enter off-line mode or about operation.

Cf. Maintenance/Troubleshooting "2.2 Offline Mode"

### ■ Communication Settings

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

| Comm.                     | Device   | Option |          |                        |
|---------------------------|--|--------|----------|------------------------|
| Indicating Controller SIO |  | [COM1] | Page 1/1 |                        |
| SIO Type                  | RS422/485(4wire)   |        |          |                        |
| Speed                     | 9600   |        |          |                        |
| Data Length               | <input checked="" type="radio"/> 7 <input type="radio"/> 8                                 |        |          |                        |
| Parity                    | <input type="radio"/> NONE <input checked="" type="radio"/> EVEN <input type="radio"/> ODD |        |          |                        |
| Stop Bit                  | <input checked="" type="radio"/> 1 <input type="radio"/> 2                                 |        |          |                        |
| Flow Control              | NONE   |        |          |                        |
| Timeout(s)                | 3  |        |          |                        |
| Retry                     | 2  |        |          |                        |
| Wait To Send(ms)          | 2  |        |          |                        |
| Exit                      |  | Back   |          | 2007/02/08<br>00:30:10 |

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

Continues to the next page.

| Setup Items  | Setup Description  |
|--------------|--|
| Retry        | In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command. |
| Wait To Send | Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.              |

### ■ Device Settings

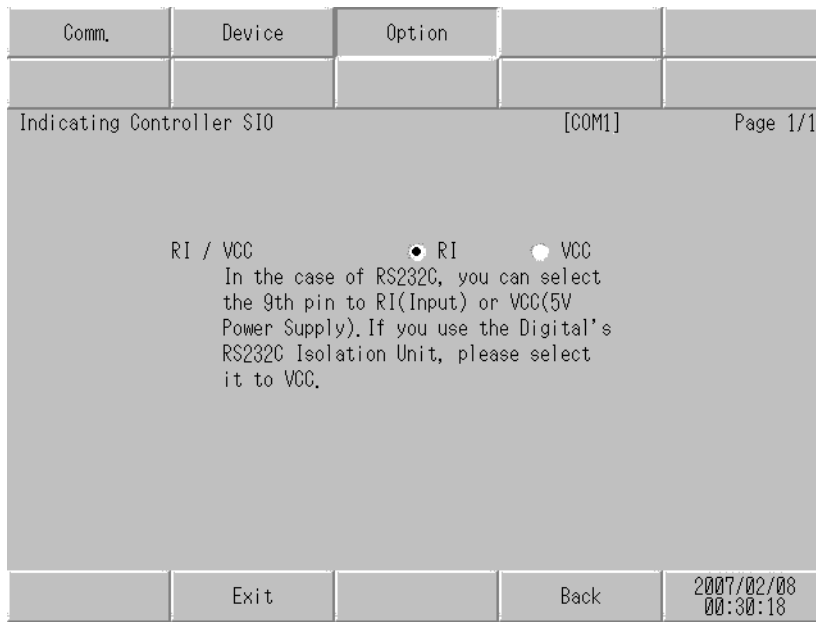
To display the setting screen, touch [Device/PLC Settings] from [Peripheral Equipment Settings]. Touch the External Device you want to set from the displayed list, and touch [Device Settings].

| Comm.                     | Device        | Option |          |                        |
|---------------------------|---------------|--------|----------|------------------------|
|                           |               |        |          |                        |
| Indicating Controller SIO |               | [COM1] | Page 1/1 |                        |
| Device/PLC Name           | [PLC1]        |        |          |                        |
| Series                    | NCS-13A       |        |          |                        |
| Unit No.                  | [ 1 ] [▼] [▲] |        |          |                        |
|                           | Exit          |        | Back     | 2007/02/08<br>00:30:13 |

| Setup Items     | Setup Description   |
|-----------------|---|
| Device/PLC name | Select the External Device to set. Device name is a title of the External Device set with GP-Pro EX. (Initial value [PLC1]) |
| Unit No.        | Enter the unit No. (0 to 94) of the External Device.  |

■ Option

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



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




## 5 Cable Diagram

The cable diagram shown below may be different from the cable diagram recommended by Shinko Technos Co.,Ltd.. Please be assured there is no operational problem in applying the cable diagram shown in this manual.

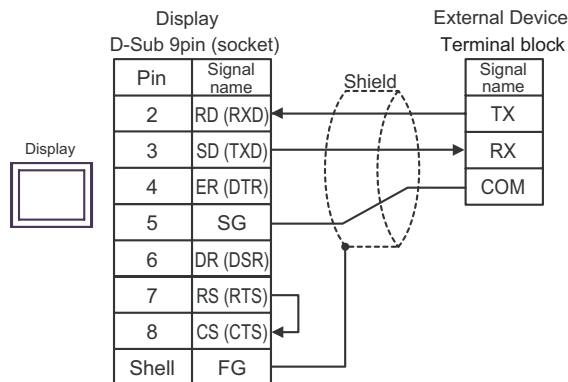
- The FG pin of the External Device body must be D-class grounded. Please refer to the manual of the External Device for more details.
- SG and FG are connected inside the Display. When connecting SG to the External Device, design the system not to form short-circuit loop.
- Connect the isolation unit, when communication is not stabilized under the influence of a noise etc..

Cable Diagram 1

| Display<br>(Connection Port) | Cable          | Notes                                 |
|------------------------------|----------------|---------------------------------------|
| GP (COM1)<br>IPC*1           | Your own cable | The cable length must be 15m or less. |

\*1 Only the COM port which can communicate by RS-232C can be used.  
 " ■ COM Port of IPC" (page 9)

When using your own cable




Cable Diagram 2

| Display<br>(Connection Port)    | Cable |  | Notes                                     |
|---------------------------------|-------|--|---|
| GP*1 (COM1)<br>AGP-3302B (COM2) | A     | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable | The cable length must be<br>500m or less. |
|                                 | B     | Your own cable   |   |
| GP*2 (COM2)                     | C     | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable              |   |
|                                 | D     | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Your own cable   |   |
| IPC*3                           | E     | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable |   |
|                                 | F     | Your own cable   |   |

\*1 All GP models except AGP-3302B

\*2 All GP models except GP-3200 series and AGP-3302B

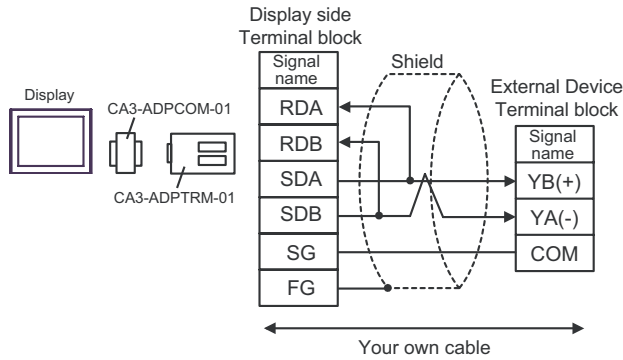
\*3 Only the COM port which can communicate by RS-422/485 (2 wire) can be used.  
 " ■ COM Port of IPC" (page 9)

**NOTE**

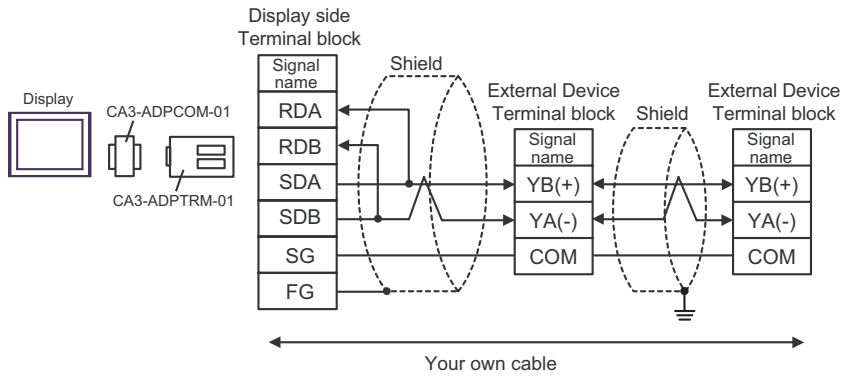
- When connecting DCL-33A, CDM cable by Shinko Technos Co., Ltd. and terminal block can be used.
- When connecting NCL-13A, use terminal block (ATB-001-1) by Shinko Technos Co., Ltd.

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

- 1:1 Connection

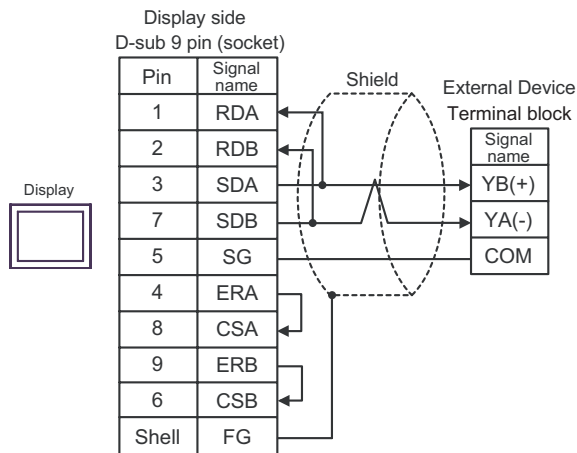


- 1:n Connection

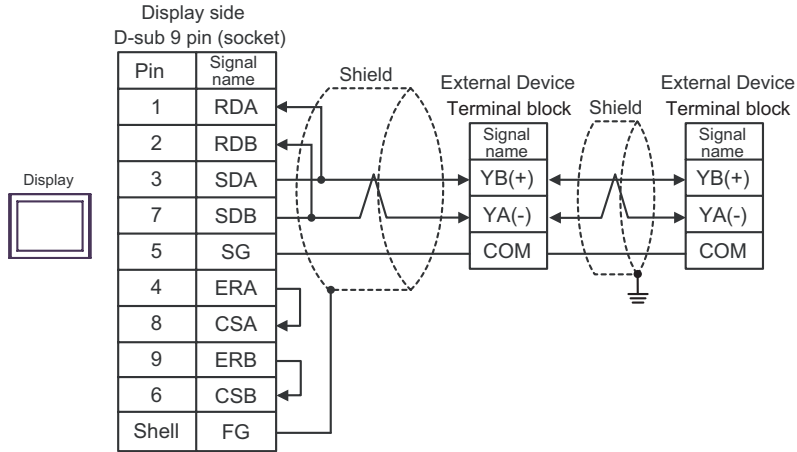


B) When using your own cable

- 1:1 Connection

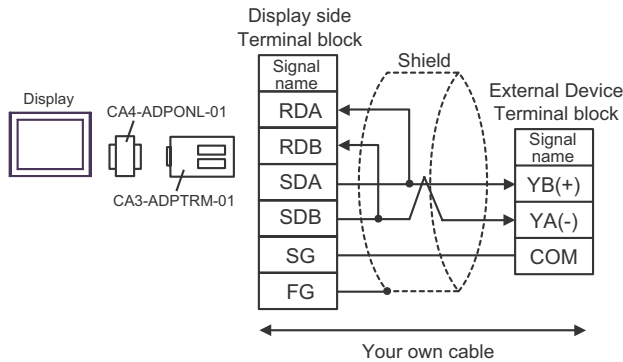


- 1:n Connection

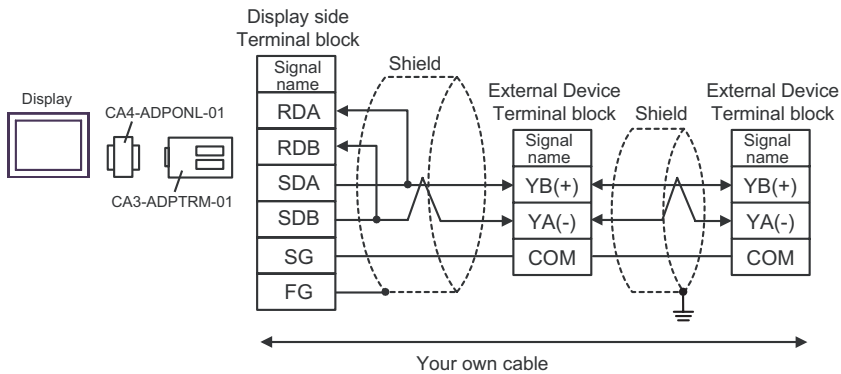


C) When using the online adapter (CA4-ADPONL-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable

- 1:1 Connection

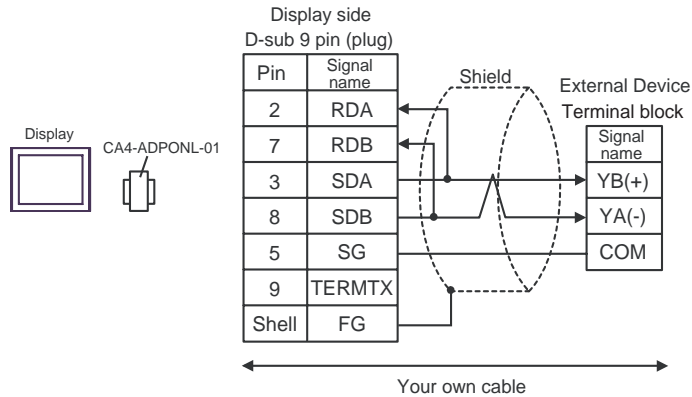


- 1:n Connection

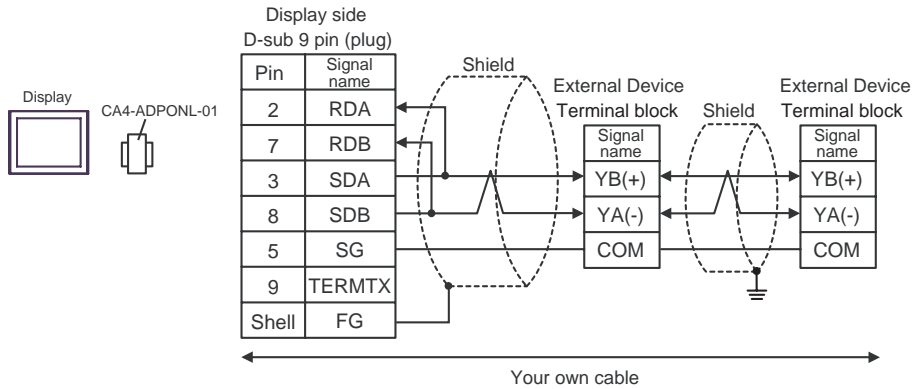


D) When using the online adapter (CA4-ADPONL-01) by Pro-face and your own cable

- 1:1 Connection

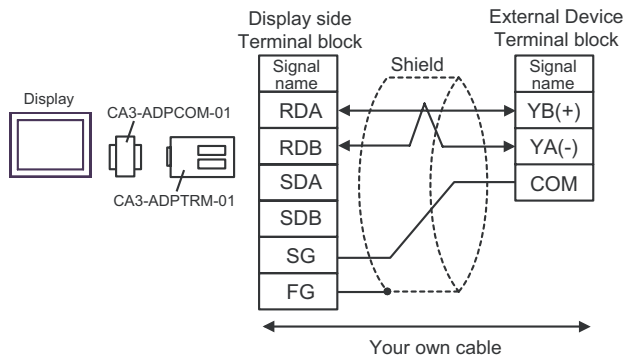


- 1:n Connection

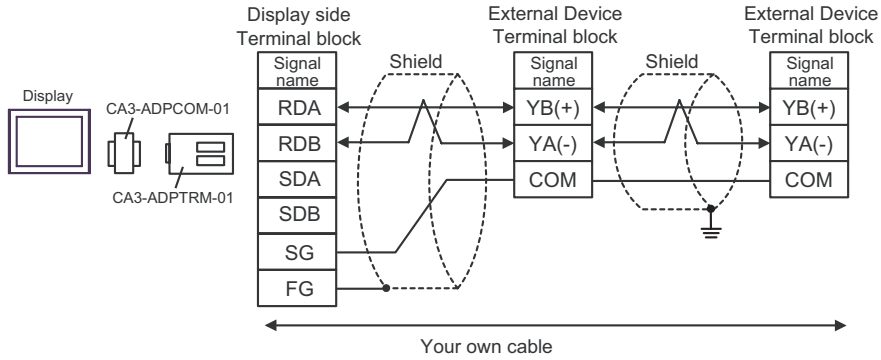


E) When using the COM port conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable

- 1:1 Connection

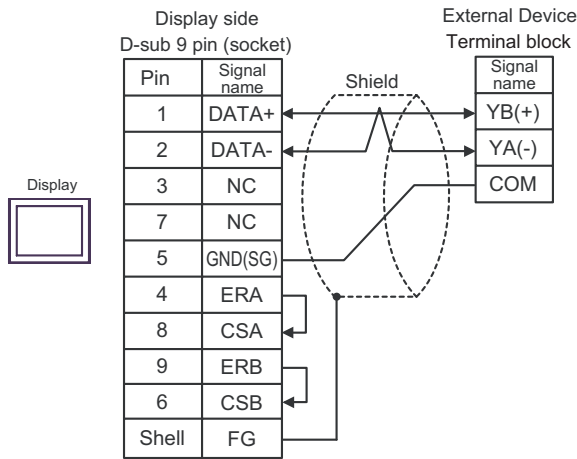


- 1:n Connection

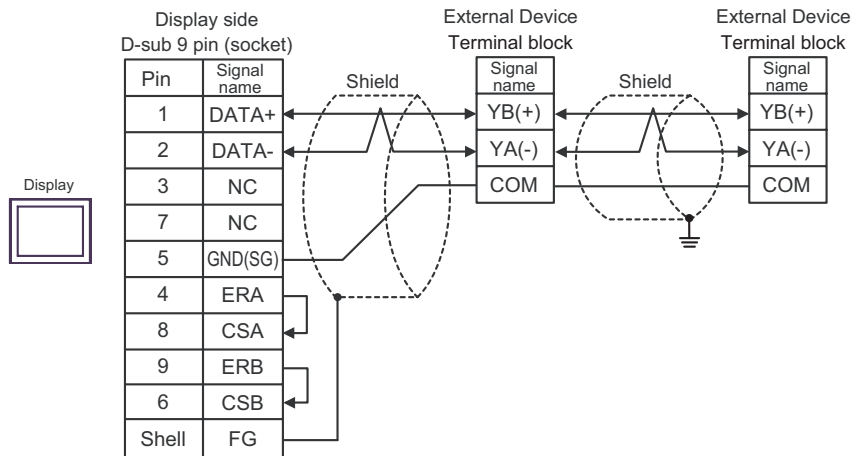


F) When using your own cable

- 1:1 Connection




- 1:n Connection



Cable Diagram 3

| Display<br>(Connection Port)                                     | Cable |   | Notes   |
|--|-------|---|---|
| GP* <sup>1</sup> (COM1)<br>AGP-3302B (COM2)<br>IPC* <sup>2</sup> | A     | COM port conversion adapter by Pro-face<br>CA3-ADPCOM-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable<br>+<br>Terminal block<br>+<br>CPM cable by Shinko Technos Co., Ltd. | <ul style="list-style-type: none"> <li>• The cable length must be 1000m or less.</li> <li>• The cable length can be extended at the 1m unit.</li> </ul> |
| GP* <sup>3</sup> (COM2)  | B     | Online adapter by Pro-face<br>CA4-ADPONL-01<br>+<br>Terminal block conversion adapter by Pro-face<br>CA3-ADPTRM-01<br>+<br>Your own cable<br>+<br>Terminal block<br>+<br>CPM cable by Shinko Technos Co., Ltd.              |   |

\*1 All GP models except AGP-3302B

\*2 Only the COM port which can communicate by RS-422/485 (4 wire) can be used.  
 " ■ COM Port of IPC" (page 9)

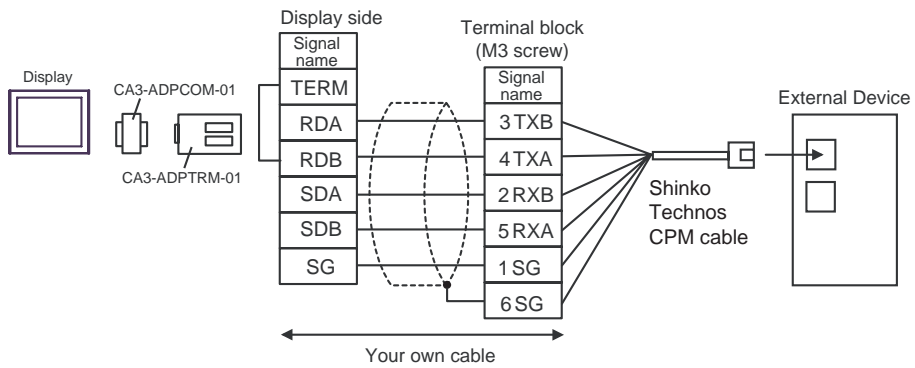
\*3 All GP models except GP-3200 series and AGP-3302B

**NOTE**

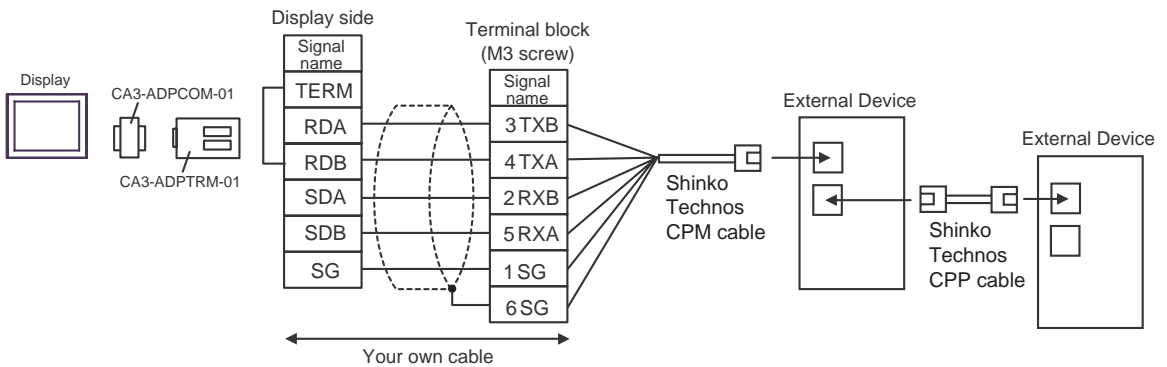
- Turn on No.2 DIP switch to perform communication settings of the end External Device to the insert termination resistance (120Ω 1/2W).
- The names of poles A and B are inverted between the Display and the External Device.

A) When using the COM port conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face, your own cable, terminal block and CPM cable by Shinko Technos Co., Ltd.

- 1:1 Connection



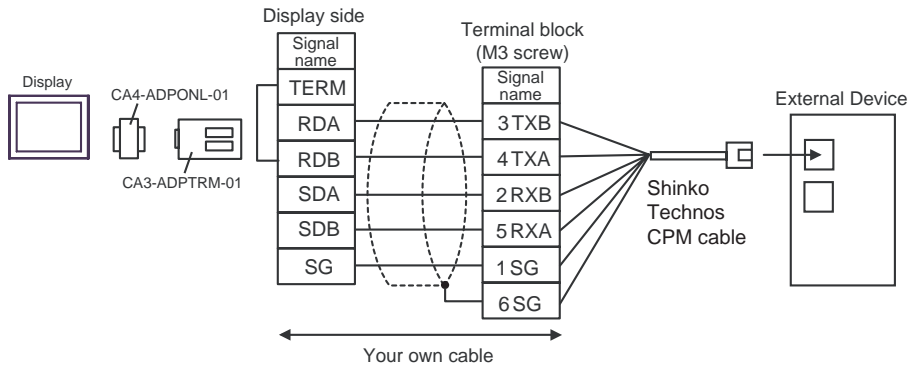
- 1:n Connection



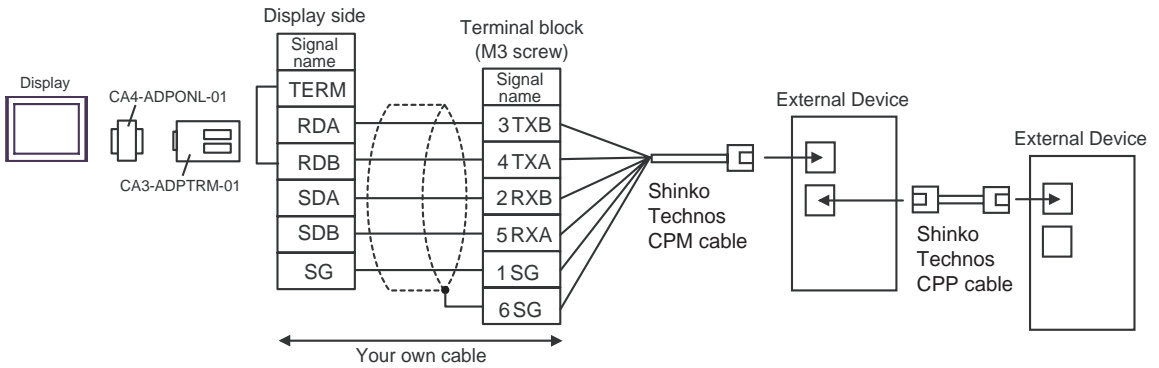


B) When using the online adapter (CA4-ADPONL-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face, your own cable, terminal block and CPM cable by Shinko Technos Co., Ltd.

- 1:1 Connection



- 1:n Connection



Cable Diagram 4

| Display<br>(Connection Port) | Cable  | Notes  |
|------------------------------|--|--|
| GP (COM1)<br>IPC*1           | Your own cable<br>+<br>RS-232C ↔ RS-485 converter (IF-300-C5)*2<br>by Shinko Technos Co., Ltd. | <ul style="list-style-type: none"> <li>Between Display and IF-300-C5<br/>Cable length :15m max.</li> <li>Between IF-300-C5 and Controller<br/>Cable length :1200m total</li> </ul> |

\*1 Only the COM port which can communicate by RS-232C can be used.  
☞ " ■ COM Port of IPC" (page 9)

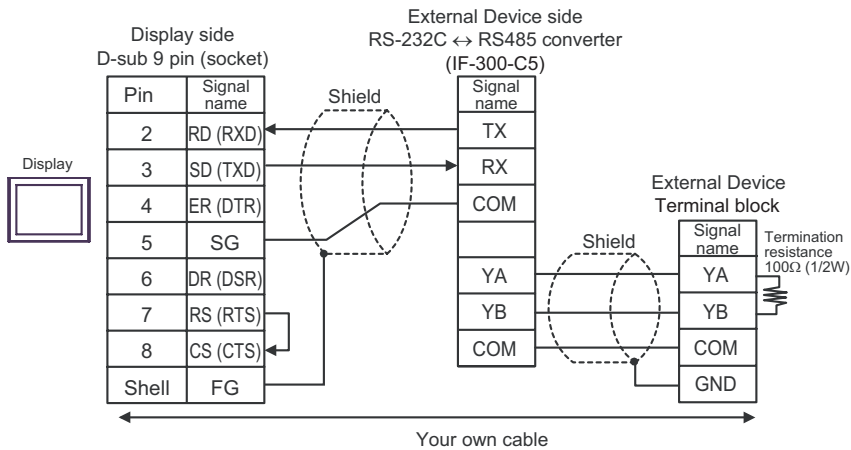
\*2 When using an RS-232C ↔ RS-485 converter (IF-300-C5) by Shinko Technos Co., Ltd., set the RS-232C for the communication setting on the Display side. (RS-232C ↔ RS-485 commercial type converters are unusable.)

**NOTE**

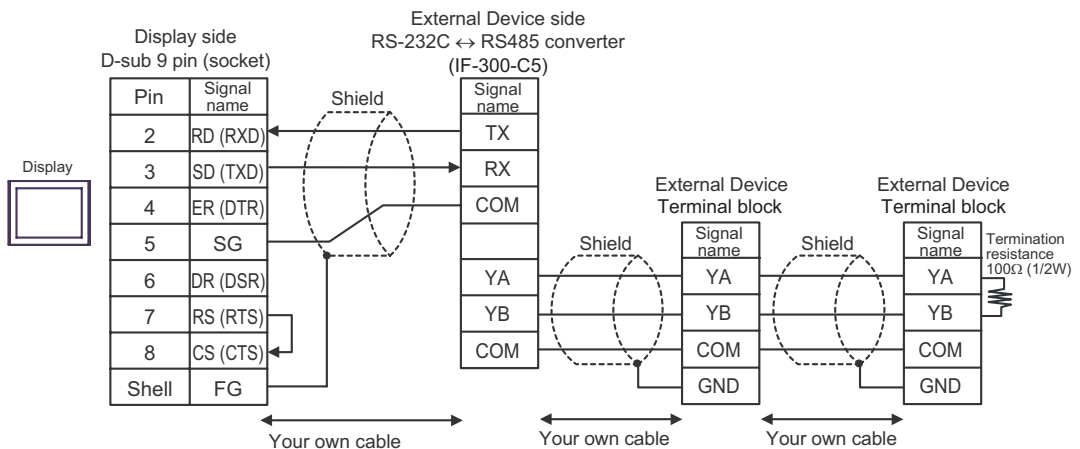
- Termination resistance (100Ω) is built in the RS-232C ↔ RS-485 converter.

When using your own cable and the RS-232C ↔ RS-485 converter (IF-300-C5) by Shinko Technos Co., Ltd.

- 1:1 Connection



- 1:n Connection



Cable Diagram 5

| Display<br>(Connection Port) | Cable |  | Notes  |
|------------------------------|-------|--|--|
| GP (COM1)<br>IPC*1           | A     | Your own cable<br>+<br>RS-232C ↔ RS-485 converter<br>IF-400 (with DCL-33A)*2<br>by Shinko Technos Co., Ltd.                          | <ul style="list-style-type: none"> <li>Between Display and IF-400<br/>Cable length :15m max.</li> <li>Between IF-400 and Controller<br/>Cable length :1200m total</li> </ul> |
|                              | B     | Your own cable<br>+<br>RS-232C ↔ RS-485 converter<br>IF-400 (Controller of terminal block connection)<br>by Shinko Technos Co., Ltd. |  |
|                              | C     | Your own cable<br>+<br>RS-232C ↔ RS-485 converter<br>IF-400 (Controller of screw plug connection)<br>by Shinko Technos Co., Ltd.     |  |

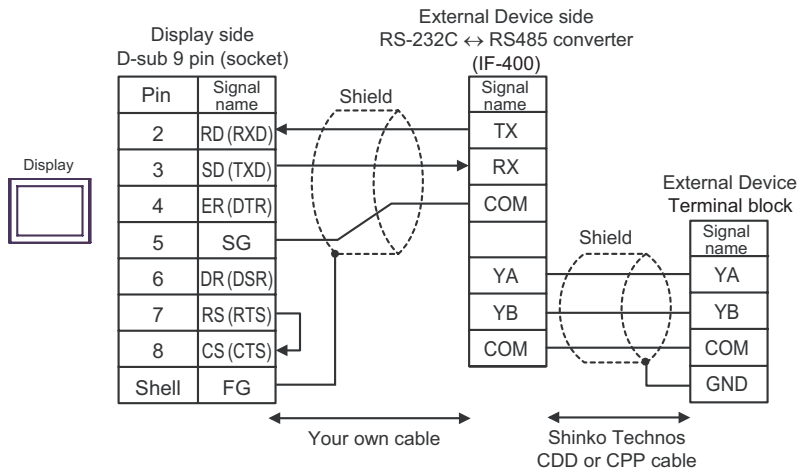
\*1 Only the COM port which can communicate by RS-232C can be used.

☞ " ■ COM Port of IPC" (page 9)

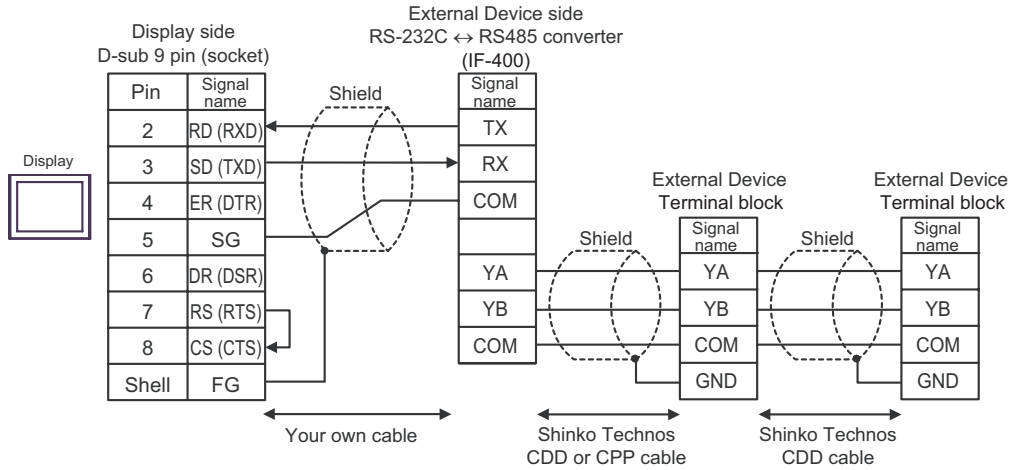
\*2 When using an RS-232C ↔ RS-485 converter (IF-400) by Shinko Technos Co., Ltd., set the RS-232C for the communication setting on the Display side. (RS-232C ↔ RS-485 commercial type converters are unusable.)

A) When using your own cable and the RS-232C ↔ RS-485 converter (IF-400 (with DCL-33A)) by Shinko Technos Co., Ltd.

- 1:1 Connection

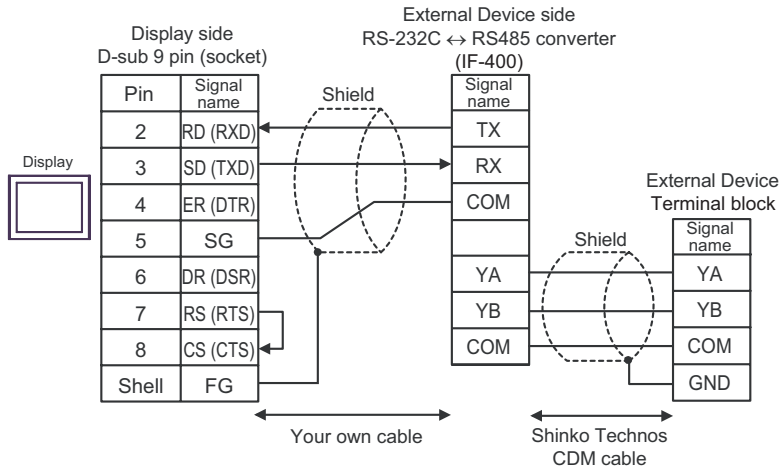


- 1:n Connection

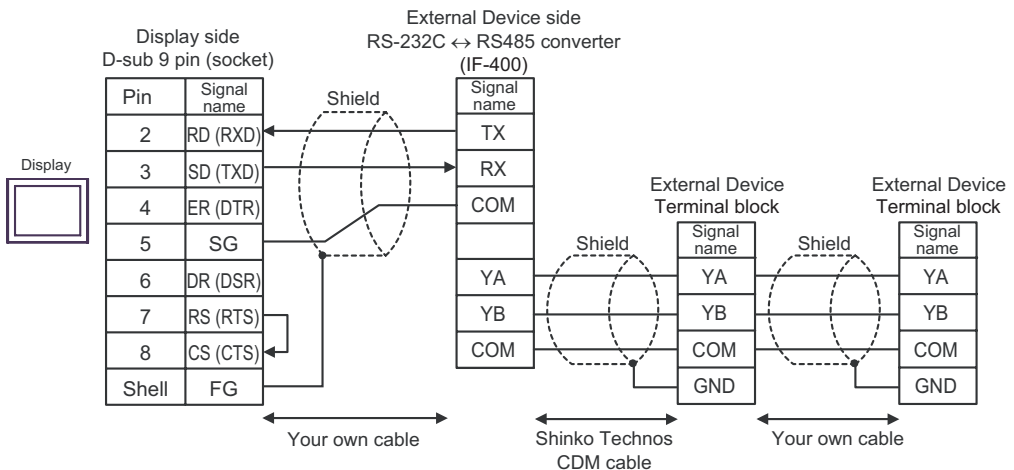


B) When using your own cable and the RS-232C ↔ RS-485 converter (IF-400 (Controller of terminal block connection)) by Shinko Technos Co., Ltd.

- 1:1 Connection

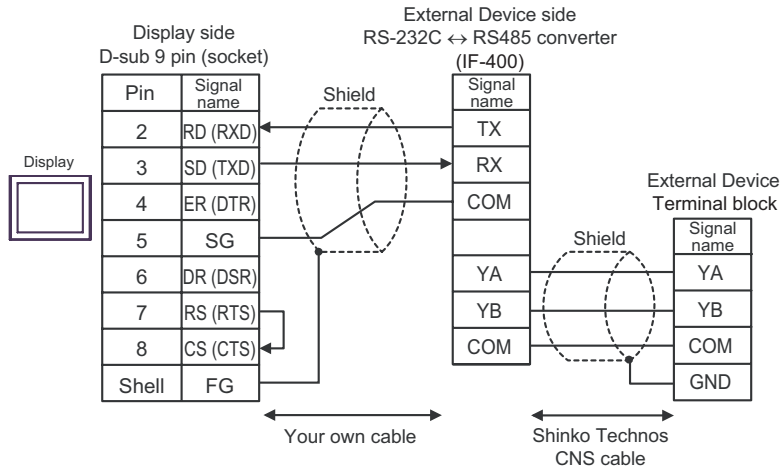


- 1:n Connection

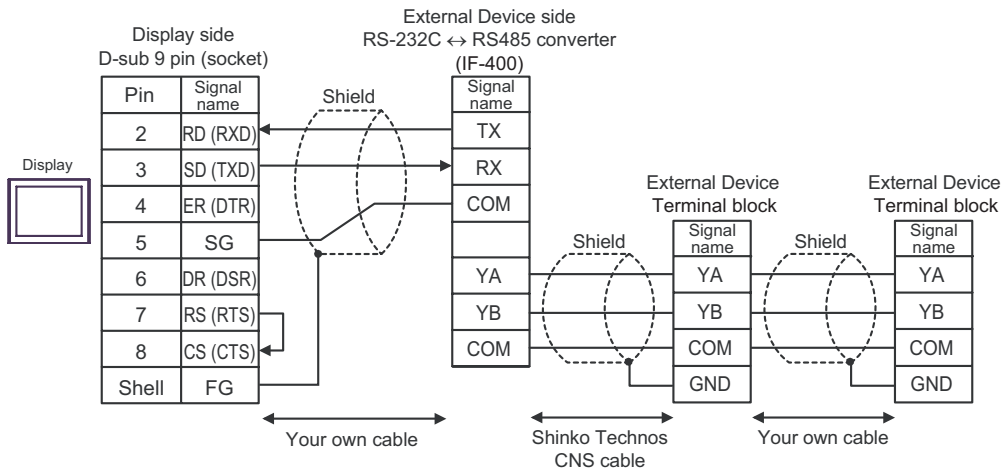


C) When using your own cable and the RS-232C ↔ RS-485 converter (IF-400 (Controller of screw plug connection)) by Shinko Technos Co., Ltd.

- 1:1 Connection



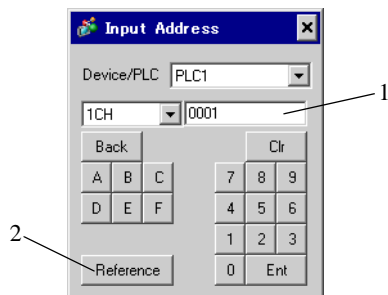
- 1:n Connection



## 6 Supported Device

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

Enter the External Device address in the dialog below.




1. Address
2. Reference

Enter the address.

Available parameter list is displayed.

Click the parameter to use and press “Select”, then the address is entered.


6.1 C series

 This address can be specified as system data area.


| Device     | Bit Address             | Word Address        | 16 bits    | Notes |
|------------|-------------------------|---------------------|------------|-------|
| Channel 1  | 1CH0001.0 - 1CH00A1.F   | 1CH0001 - 1CH00A1   | <b>H/L</b> | *1    |
| Channel 2  | 2CH0001.0 - 2CH00A1.F   | 2CH0001 - 2CH00A1   |            | *1    |
| Channel 3  | 3CH0001.0 - 3CH00A1.F   | 3CH0001 - 3CH00A1   |            | *1    |
| Channel 4  | 4CH0001.0 - 4CH00A1.F   | 4CH0001 - 4CH00A1   |            | *1    |
| Channel 5  | 5CH0001.0 - 5CH00A1.F   | 5CH0001 - 5CH00A1   |            | *1    |
| Channel 6  | 6CH0001.0 - 6CH00A1.F   | 6CH0001 - 6CH00A1   |            | *1    |
| Channel 7  | 7CH0001.0 - 7CH00A1.F   | 7CH0001 - 7CH00A1   |            | *1    |
| Channel 8  | 8CH0001.0 - 8CH00A1.F   | 8CH0001 - 8CH00A1   |            | *1    |
| Channel 9  | 9CH0001.0 - 9CH00A1.F   | 9CH0001 - 9CH00A1   |            | *1    |
| Channel 10 | 10CH0001.0 - 10CH00A1.F | 10CH0001 - 10CH00A1 |            | *1    |
| Channel 11 | 11CH0001.0 - 11CH00A1.F | 11CH0001 - 11CH00A1 |            | *1    |
| Channel 12 | 12CH0001.0 - 12CH00A1.F | 12CH0001 - 12CH00A1 |            | *1    |
| Channel 13 | 13CH0001.0 - 13CH00A1.F | 13CH0001 - 13CH00A1 |            | *1    |
| Channel 14 | 14CH0001.0 - 14CH00A1.F | 14CH0001 - 14CH00A1 |            | *1    |
| Channel 15 | 15CH0001.0 - 15CH00A1.F | 15CH0001 - 15CH00A1 |            | *1    |
| Channel 16 | 16CH0001.0 - 16CH00A1.F | 16CH0001 - 16CH00A1 |            | *1    |
| Channel 17 | 17CH0001.0 - 17CH00A1.F | 17CH0001 - 17CH00A1 |            | *1    |
| Channel 18 | 18CH0001.0 - 18CH00A1.F | 18CH0001 - 18CH00A1 |            | *1    |
| Channel 19 | 19CH0001.0 - 19CH00A1.F | 19CH0001 - 19CH00A1 |            | *1    |
| Channel 20 | 20CH0001.0 - 20CH00A1.F | 20CH0001 - 20CH00A1 |            | *1    |

\*1 When writing the data from the Display, the Display reads word addresses of 20CH of the External Device, changes read word addresses, and returns those changed 20CH addresses to the External Device. If the data is changed on the External Device side while the Display reads data and returns them to the External Device, correct data may not be able to be written.

**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"
- Please refer to the precautions on manual notation for icons in the table.  
 "Manual Symbols and Terminology"


## 6.2 FC series

 This address can be specified as system data area.


| Device                 | Bit Address         | Word Address    | 16 bits    | Notes |
|------------------------|---------------------|-----------------|------------|-------|
| Data item              | 0002.0 - 0086.F     | 0002 - 0086     | <b>H/L</b> | *1    |
| Setting value memory 1 | 1S0001.0 - 1S0036.F | 1S0001 - 1S0036 |            | *1    |
| Setting value memory 2 | 2S0001.0 - 2S0036.F | 2S0001 - 2S0036 |            | *1    |
| Setting value memory 3 | 3S0001.0 - 3S0036.F | 3S0001 - 3S0036 |            | *1    |
| Setting value memory 4 | 4S0001.0 - 4S0036.F | 4S0001 - 4S0036 |            | *1    |
| Setting value memory 5 | 5S0001.0 - 5S0036.F | 5S0001 - 5S0036 |            | *1    |
| Setting value memory 6 | 6S0001.0 - 6S0036.F | 6S0001 - 6S0036 |            | *1    |
| Setting value memory 7 | 7S0001.0 - 7S0036.F | 7S0001 - 7S0036 |            | *1    |

\*1 When bit writing is done, the Display reads corresponding word addresses of the External Device, a bit is made in the read word addresses, and it returns them to the External Device. If the word addresses are changed by the External Device while the Display reads data of the External Device and returns them to the External Device, correct data may not be able to be written.

**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"
- Please refer to the precautions on manual notation for icons in the table.  
 "Manual Symbols and Terminology"


## 6.3 JC\*-13A, JCS-23A, GCS-300, FCL-13A, FIR-201-M

 This address can be specified as system data area.

| Device    | Bit Address     | Word Address | 16 bits    | Notes |
|-----------|-----------------|--------------|------------|-------|
| Data item | 0001.0 - 00A3.F | 0001 - 00A3  | <b>H/L</b> | *1    |


\*1 When bit writing is done, the Display reads corresponding word addresses of the External Device, a bit is made in the read word addresses, and it returns them to the External Device. If the word addresses are changed by the External Device while the Display reads data of the External Device and returns them to the External Device, correct data may not be able to be written.

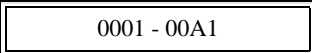

**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"
- Please refer to the precautions on manual notation for icons in the table.  
 "Manual Symbols and Terminology"



6.4 JCS-33A, JCR-33A, JCD-33A, JCM-33A, ACS-13A, NCL-13A, DCL-33A, JIR-301-M


 This address can be specified as system data area.

| Device    | Bit Address     | Word Address  | 16 bits  | Notes |
|-----------|-----------------|---|--|-------|
| Data item | 0001.0 - 00A1.F |  0001 - 00A1 |  | *1    |

\*1 When bit writing is done, the Display reads corresponding word addresses of the External Device, a bit is made in the read word addresses, and it returns them to the External Device. If the word addresses are changed by the External Device while the Display reads data of the External Device and returns them to the External Device, correct data may not be able to be written.

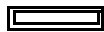
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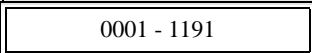

**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"
- Please refer to the precautions on manual notation for icons in the table.  
 "Manual Symbols and Terminology"

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6.5 JCL-33A


 This address can be specified as system data area.

| Device    | Bit Address     | Word Address  | 16 bits  | Notes |
|-----------|-----------------|---|--|-------|
| Data item | 0001.0 - 1191.F |  0001 - 1191 |  | *1    |

\*1 When bit writing is done, the Display reads corresponding word addresses of the External Device, a bit is made in the read word addresses, and it returns them to the External Device. If the word addresses are changed by the External Device while the Display reads data of the External Device and returns them to the External Device, correct data may not be able to be written.


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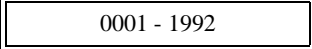

**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"
- Please refer to the precautions on manual notation for icons in the table.  
 "Manual Symbols and Terminology"

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6.6 PCD-33A

 This address can be specified as system data area.


| Device    | Bit Address     | Word Address  | 16 bits   | Notes |
|-----------|-----------------|---|---|-------|
| Data item | 0001.0 - 1992.F |  0001 - 1992 |  *1 |       |

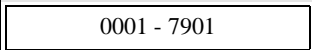

\*1 When bit writing is done, the Display reads corresponding word addresses of the External Device, a bit is made in the read word addresses, and it returns them to the External Device. If the word addresses are changed by the External Device while the Display reads data of the External Device and returns them to the External Device, correct data may not be able to be written.

**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"
- Please refer to the precautions on manual notation for icons in the table.  
 "Manual Symbols and Terminology"


6.7 PC-900

 This address can be specified as system data area.

| Device    | Bit Address     | Word Address  | 16 bits   | Notes |
|-----------|-----------------|---|---|-------|
| Data item | 0001.0 - 7901.F |  0001 - 7901 |  *1 |       |

\*1 When bit writing is done, the Display reads corresponding word addresses of the External Device, a bit is made in the read word addresses, and it returns them to the External Device. If the word addresses are changed by the External Device while the Display reads data of the External Device and returns them to the External Device, correct data may not be able to be written.

**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"
- Please refer to the precautions on manual notation for icons in the table.  
 "Manual Symbols and Terminology"

## 7 Device Code and Address Code

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

| Device                 | Device Name | Device Code (HEX) | Address Code |
|------------------------|-------------|-------------------|--------------|
| Data item              | -           | 0000              | Word Address |
| Setting value memory 1 | 1S          | 0001              | Word Address |
| Setting value memory 2 | 2S          | 0002              | Word Address |
| Setting value memory 3 | 3S          | 0003              | Word Address |
| Setting value memory 4 | 4S          | 0004              | Word Address |
| Setting value memory 5 | 5S          | 0005              | Word Address |
| Setting value memory 6 | 6S          | 0006              | Word Address |
| Setting value memory 7 | 7S          | 0007              | Word Address |
| Channel 1              | 1CH         | 0011              | Word Address |
| Channel 2              | 2CH         | 0012              | Word Address |
| Channel 3              | 3CH         | 0013              | Word Address |
| Channel 4              | 4CH         | 0014              | Word Address |
| Channel 5              | 5CH         | 0015              | Word Address |
| Channel 6              | 6CH         | 0016              | Word Address |
| Channel 7              | 7CH         | 0017              | Word Address |
| Channel 8              | 8CH         | 0018              | Word Address |
| Channel 9              | 9CH         | 0019              | Word Address |
| Channel 10             | 10CH        | 001A              | Word Address |
| Channel 11             | 11CH        | 001B              | Word Address |
| Channel 12             | 12CH        | 001C              | Word Address |
| Channel 13             | 13CH        | 001D              | Word Address |
| Channel 14             | 14CH        | 001E              | Word Address |
| Channel 15             | 15CH        | 001F              | Word Address |
| Channel 16             | 16CH        | 0020              | Word Address |
| Channel 17             | 17CH        | 0021              | Word Address |
| Channel 18             | 18CH        | 0022              | Word Address |
| Channel 19             | 19CH        | 0023              | Word Address |
| Channel 20             | 20CH        | 0024              | Word Address |

## 8 Error Messages

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

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

Display Examples of Error Messages

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

**NOTE**

- Please refer to the manual of External Device for more detail of received error codes.
- Please refer to "When an error message is displayed (Error code list)" of "Maintenance/Troubleshooting" for a common error message to the driver.

### ■ Error Code Peculiar to Driver

Error code consists of 1byte in a hexadecimal numeral.

| Error Code | Error Name   | Cause  |
|------------|--|--|
| 30         | Error for unknown reasons  | Error for unknown reasons<br>This error occurs when a recoverable problem such as parity error occurs. This problem is recovered by resending a command. |
| 31         | The command does not exist.  | The command does not exist.  |
| 33         | The range of set value is exceeded.  | The range of set value is exceeded.  |
| 34         | In the state that setting cannot be implemented (AT is being executed or during warm-up after the power is turned on.) | In the state that setting cannot be implemented (AT is being executed or during warm-up after the power is turned on.)                                   |
| 35         | In the case during mode setting via key operation  | In the case during mode setting via key operation  |