Shinko Technos Co.,Ltd.

Indicating Controller SIO Driver

Introduction

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

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

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

| 2 | Selection of External Device
Select a model (series) of the External Device to be connected and connection method. | ☞ "2 Selection of External Device" (page 11) |

| 3 | Example of Communication Settings
This section shows setting examples for communicating between the Display and the External Device. | ☞ "3 Example of Communication Setting" (page 12) |

| 4 | Setup Items
This section describes communication setup items on the Display.
Set communication settings of the Display with GP-Pro Ex or in offline mode. | ☞ "4 Setup Items" (page 84) |

| 5 | Cable Diagram
This section shows cables and adapters for connecting the Display and the External Device. | ☞ "5 Cable Diagram" (page 89) |

Operation

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 (Lower modular jack use for cascade connection)	RS422/485 (4 wire)	Setting Example 1 (page 12)	Cable Diagram 3 (page 102)
FC	FCD-13A-☐/M,C	Terminal of back panel	RS-232C	Setting Example 2 (page 14)	Cable Diagram 1 (page 89)
	FCD-15A-R/M,☐☐,C	Terminal of back panel	RS-232C	Setting Example 3 (page 16)	Cable Diagram 1 (page 89)
	FCR-13A-☐/M,C	Terminal of back panel	RS-232C	Setting Example 4 (page 18)	Cable Diagram 1 (page 89)
	FCR-15A-R/M,☐☐,C	Terminal of back panel	RS-232C	Setting Example 5 (page 20)	Cable Diagram 1 (page 89)
	FCR-23A-☐/ M,☐☐,C	Terminal of back panel	RS-232C	Setting Example 6 (page 22)	Cable Diagram 1 (page 89)
	FCD-13A-☐/M,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 2 (page 14)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 2 (page 14)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 7 (page 24)	Cable Diagram 2 (page 91)
	FCD-15A-R/M,☐☐,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 3 (page 16)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 3 (page 16)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 8 (page 26)	Cable Diagram 2 (page 91)

Series	CPU[*1]	Link I/F	SIO Type	Setting Example	Cable Diagram
FC	FCR-13A-□/M,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 4 (page 18)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 4 (page 18)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 9 (page 28)	Cable Diagram 2 (page 91)
	FCR-15A-R/M,□□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 5 (page 20)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 5 (page 20)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 10 (page 30)	Cable Diagram 2 (page 91)
	FCR-23A-□/ M,□□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 6 (page 22)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 6 (page 22)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 11 (page 32)	Cable Diagram 2 (page 91)
FIR	FIR-201-M,C	Terminal of back panel	RS-232C	Setting Example 12 (page 34)	Cable Diagram 1 (page 89)
	FIR-201-M,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 12 (page 34)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 12 (page 34)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 13 (page 36)	Cable Diagram 2 (page 91)

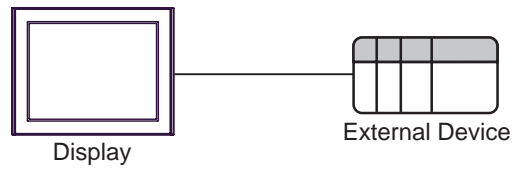| Series	CPU[*1]	Link I/F	SIO Type	Setting Example	Cable Diagram
FIR	JIR-301-M□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 14 (page 38)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 14 (page 38)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 15 (page 40)	Cable Diagram 2 (page 91)
GC	GCS-33□-□/□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 16 (page 42)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 16 (page 42)	Cable Diagram 5 (page 110)
JC	JC□-13A-□/M,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 17 (page 44)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 17 (page 44)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 18 (page 46)	Cable Diagram 2 (page 91)
	JCS-23A-□/□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 19 (page 48)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 19 (page 48)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 20 (page 50)	Cable Diagram 2 (page 91)
	JC□-33A-□/M□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 21 (page 52)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 21 (page 52)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 22 (page 54)	Cable Diagram 2 (page 91)

Series	CPU[*1]	Link I/F	SIO Type	Setting Example	Cable Diagram
JC	JCL-33A-□/M□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 23 (page 56)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 23 (page 56)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 24 (page 58)	Cable Diagram 2 (page 91)
AC	ACS-13A-□/M□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 25 (page 60)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 25 (page 60)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 26 (page 62)	Cable Diagram 2 (page 91)
NC	NCL-13A-□/M,□□□	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 27 (page 64)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 27 (page 64)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 28 (page 66)	Cable Diagram 2 (page 91)
DC	DCL-33A-□/M□,C5	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 29 (page 68)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 29 (page 68)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 30 (page 70)	Cable Diagram 2 (page 91)
FCL	FCL-13A-□/□,C5, □□□□□□□[*3]	Terminal of back panel (When using the IF-300-C5.)	RS-232C	Setting Example 31 (page 72)	Cable Diagram 4 (page 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 31 (page 72)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 32 (page 74)	Cable Diagram 2 (page 91)

Series	CPU[*1]	Link I/F	SIO Type	Setting Example	Cable Diagram
PC-900	PC-935-□/M,C PC-955-□/M,C	Terminal of back panel	RS-232C	Setting Example 33 (page 76)	Cable Diagram 1 (page 89)
	PC-935-□/M,C5 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 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 33 (page 76)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 34 (page 78)	Cable Diagram 2 (page 91)
	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 107)
		Terminal of back panel (When using the IF-400.)	RS-232C	Setting Example 35 (page 80)	Cable Diagram 5 (page 110)
		Terminal of back panel	RS422/485 (2 wire)	Setting Example 36 (page 82)	Cable Diagram 2 (page 91)

*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.

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).

■ Connection Configuration

- 1:1 Connection

Display   External Device

- 1:n Connection (Except C series)

External Device External Device External Device

Display

The max number of PLC : 16

External Device External Device External Device

The max number of PLC : 16

- 1:n Connection (C series)

External Device External Device External Device

Display   The max number of PLC : 15
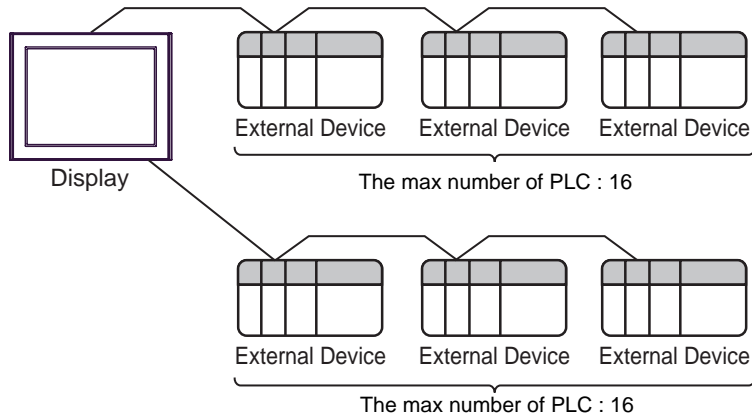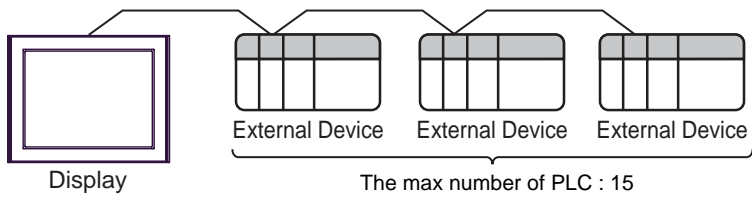
■ IPC COM Port

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

Usable port

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

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

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

*3   When making communication between an External Device and COM port on the Expansion slot, only RS-232C is supported. However, ER (DTR/CTS) control cannot be executed because of the specification of COM port.
For connection with External Device, use user-created cables and disable Pin Nos. 1, 4, 6 and 9.
Please refer to the IPC manual for details of pin layout.

DIP Switch setting: RS-232C

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

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

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

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

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

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

2 Selection of External Device

Select the External Device to be connected to the Display.

Setup Items	Setup Description
Number of Devices/ PLCs	Enter an integer from 1 to 4 to define the number of Devices/PLCs to connect to the display.
Manufacturer	Select the manufacturer of the External Device to connect. Select "Shinko Technos Co.,Ltd.".
Series	Select the External Device model (series) and the connection method. Select "Indicating Controller SIO". In System configuration, make sure the External Device you are connecting is supported by "Indicating Controller SIO". ☞ "1 System Configuration" (page 3)
Port	Select the Display port to be connected to the External Device.
Use System Area	Cannot be set in this driver.

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

IMPORTANT

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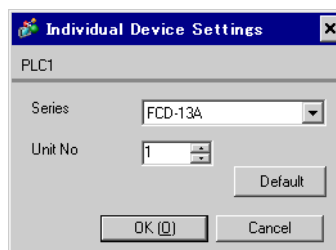 Please set up as follows.

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

- Set Retry to 2 times 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 [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] ⬛ .

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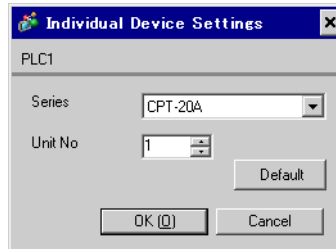
■ Settings of External Device

Use the rotary switch 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	

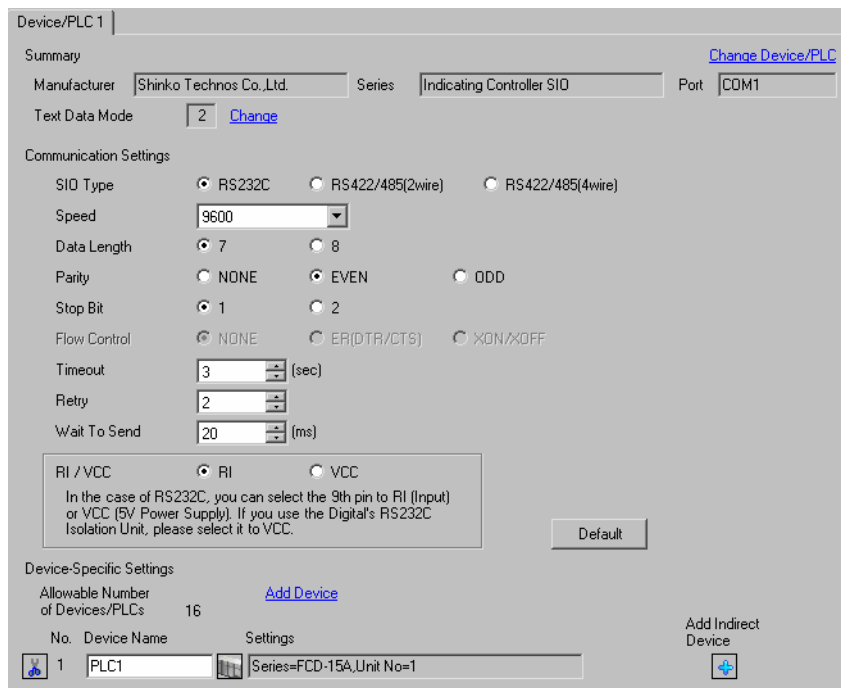## 3.2　　Setting Example 2

■ Settings of GP-Pro EX

◆ Communication Settings

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

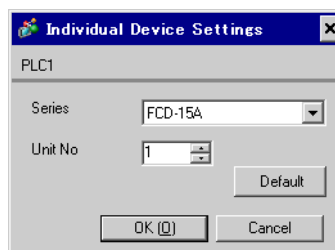| IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

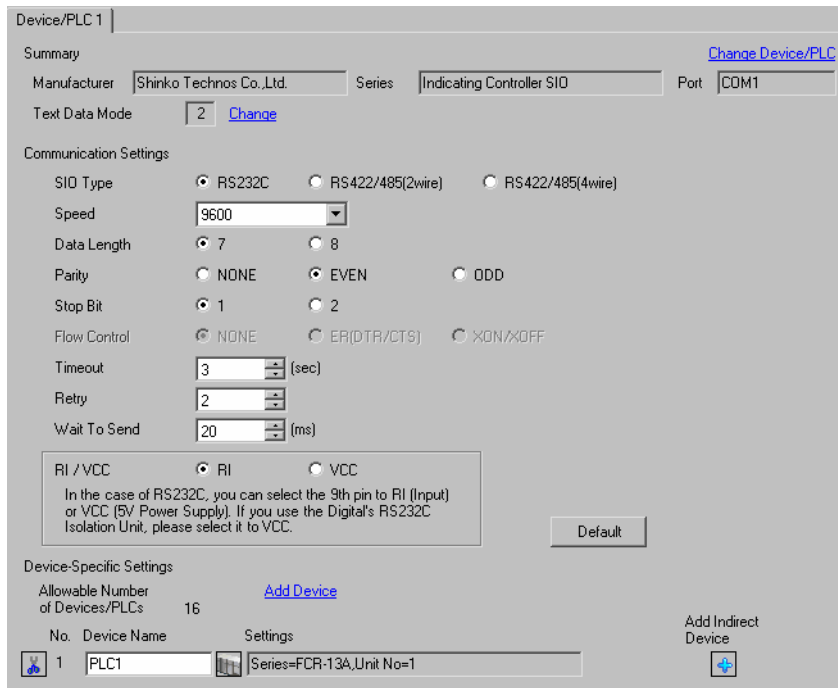   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

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

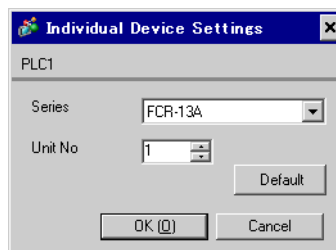|	IMPORTANT	•	The setting value of the weight to send is different by the speed. Please set up as follows.

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

　　　　　　• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

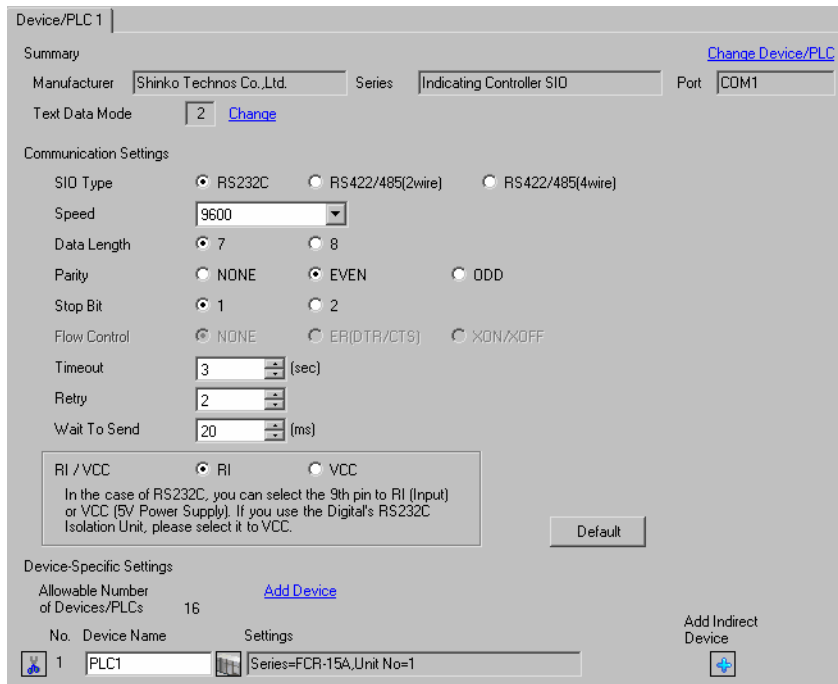   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.4 Setting Example 4

■ Settings of GP-Pro EX

◆ Communication Settings

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

IMPORTANT

- The setting value of the weight to send is different by the speed. Please set up as follows.
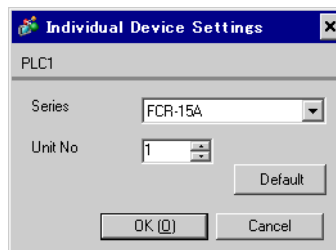
Speed	Setting value
9600bps	20ms or more
19200bps	20ms or more

- Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

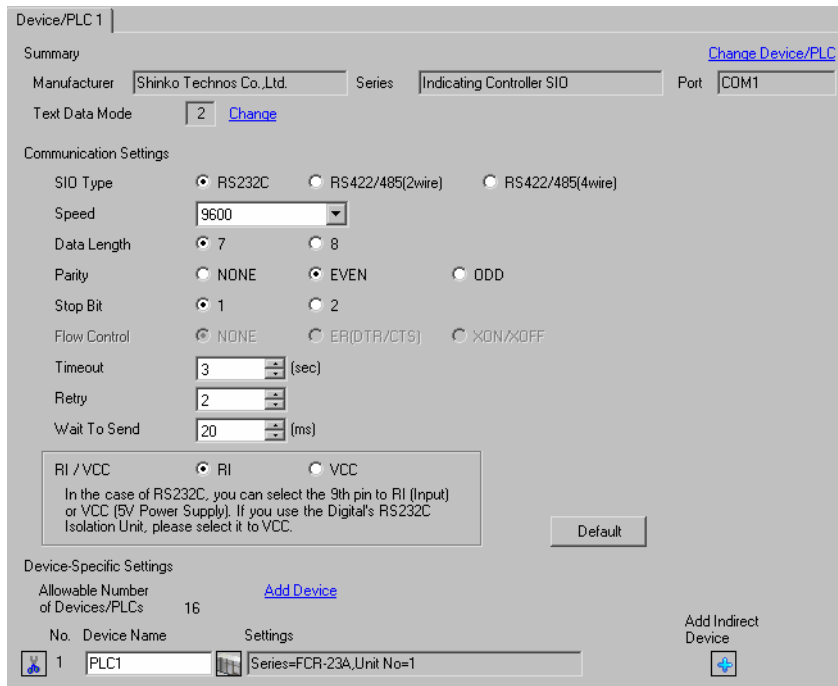   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

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

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

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

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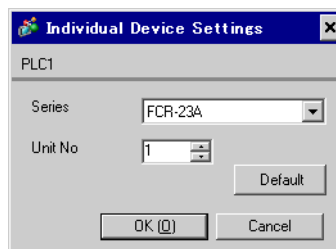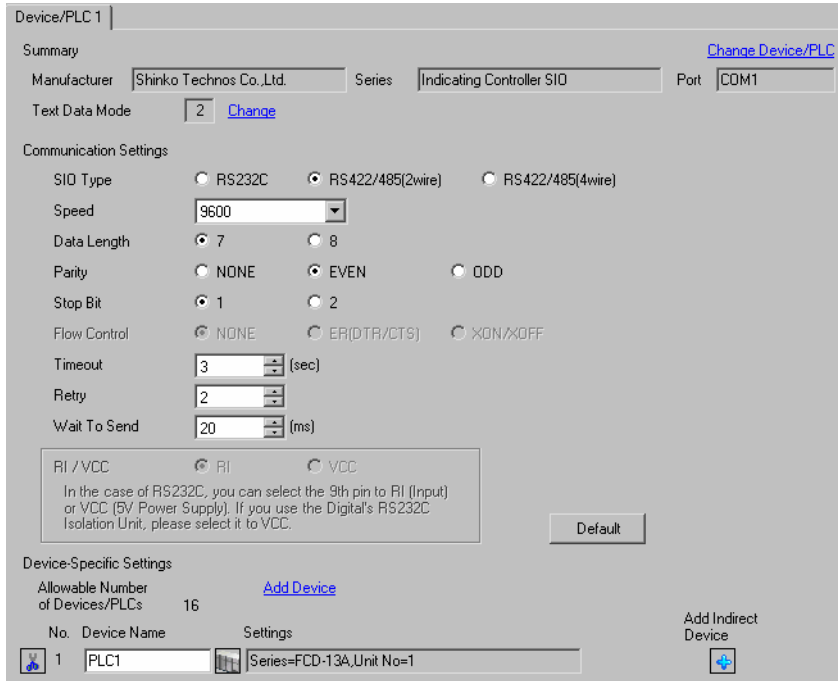- The setting value of the weight to send is different by the speed. Please set up as follows.

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

- Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.
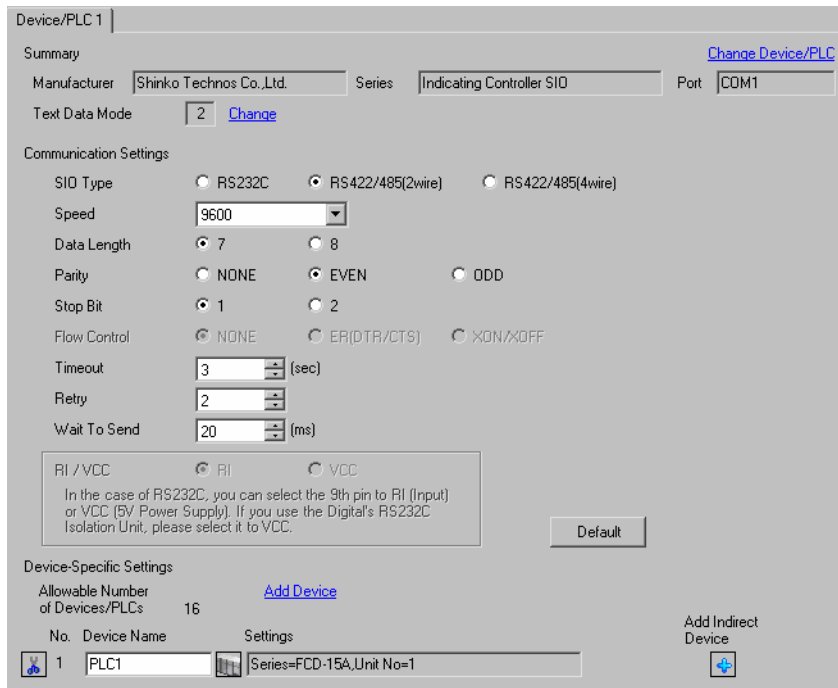
Completion of setting

3.7 Setting Example 7

■ Settings of GP-Pro EX

◆ Communication Settings

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

```
Device/PLC 1

Summary                                                              Change Device/PLC
Manufacturer   Shinko Technos Co.,Ltd.     Series   Indicating Controller SIO     Port   COM1

Text Data Mode      2   Change

Communication Settings
  SIO Type         C RS232C      ⊙ RS422/485(2wire)    C RS422/485(4wire)
  Speed            9600
  Data Length      ⊙ 7           C 8
  Parity           C NONE        ⊙ EVEN               C ODD
  Stop Bit         ⊙ 1           C 2
  Flow Control     ⊙ NONE        C ER(DTR/CTS)        C XON/XOFF
  Timeout          3    (sec)
  Retry            2
  Wait To Send     20   (ms)

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

Device-Specific Settings
Allowable Number          Add Device
of Devices/PLCs     16
                                                        Add Indirect
No.  Device Name      Settings                          Device
  1   PLC1            Series=FCD-13A,Unit No=1
```

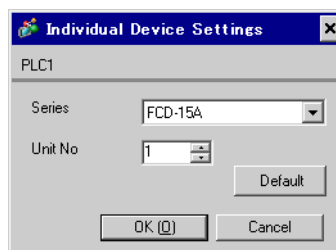|	
IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

```
Individual Device Settings           ×

PLC1

Series      FCD-13A

Unit No     1

                            Default

        OK (O)          Cancel
```

■ 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.

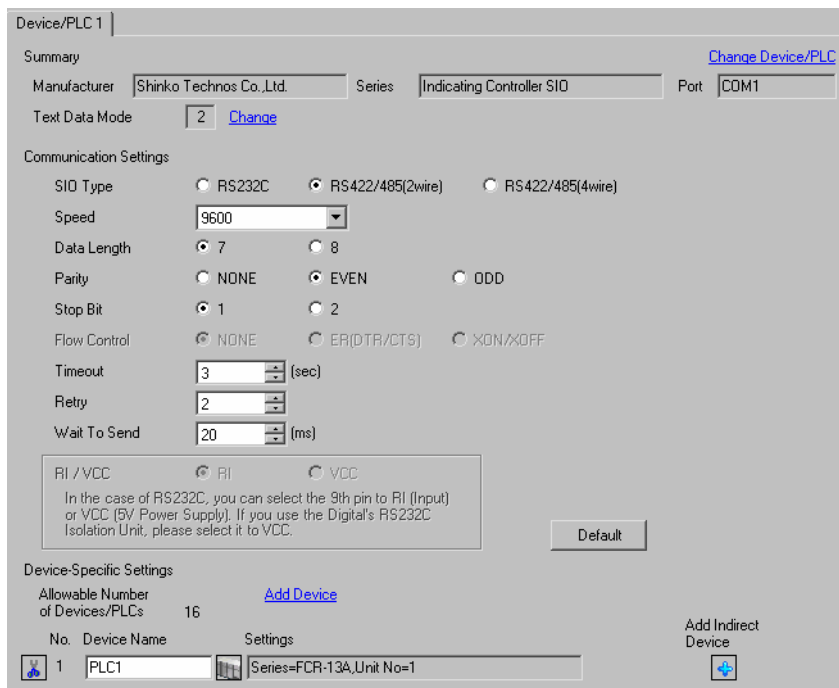   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

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

IMPORTANT
- The setting value of the weight to send is different by the speed. Please set up as follows.
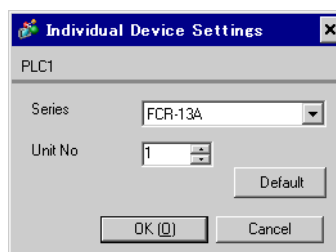
Speed	Setting value
9600bps	20ms or more
19200bps	20ms or more

- Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

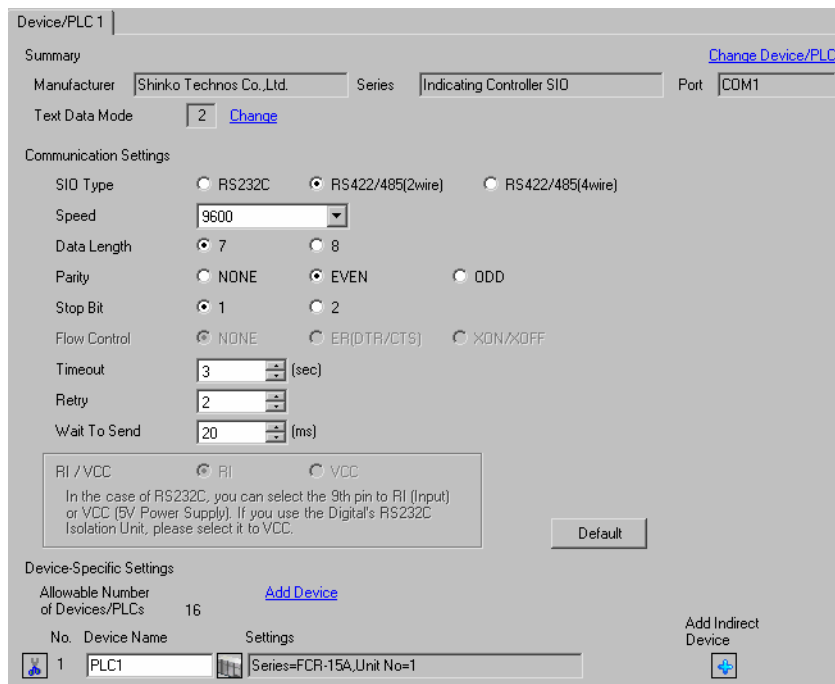   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.9 Setting Example 9

■ Settings of GP-Pro EX

◆ Communication Settings

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

Device/PLC 1

Summary   Change Device/PLC

Manufacturer | Shinko Technos Co.,Ltd. | Series | Indicating Controller SIO | Port | COM1

Text Data Mode   2   Change

Communication Settings

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

Speed   9600

Data Length   ⊙ 7   ○ 8

Parity   ○ NONE   ⊙ EVEN   ○ ODD

Stop Bit   ⊙ 1   ○ 2

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

Timeout   3   (sec)

Retry   2

Wait To Send   20   (ms)

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

Device-Specific Settings

Allowable Number   Add Device   Add Indirect
of Devices/PLCs   16   Device

No. Device Name   Settings

1   PLC1   Series=FCR-13A,Unit No=1

IMPORTANT
• The setting value of the weight to send is different by the speed.
  Please set up as follows.
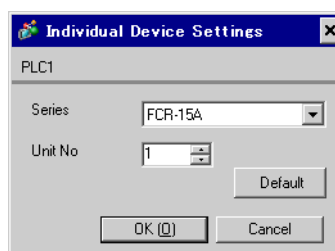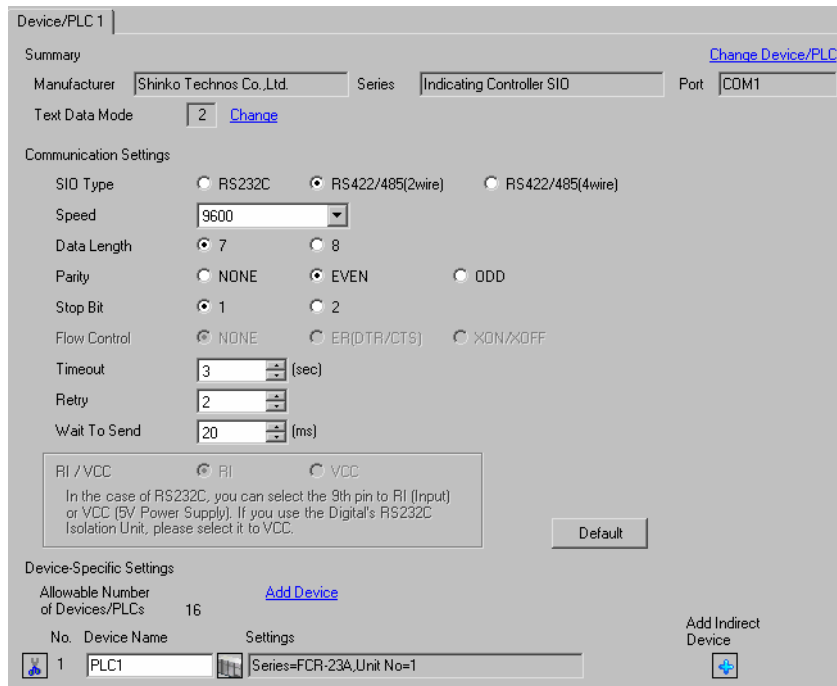
Speed	Setting value
9600bps	20ms or more
19200bps	20ms or more

• Set Retry to 2 times or more.

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC]
window, select the external device and click [Settings] 📝 .
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add
Device] to add another External Device.

Individual Device Settings   ✕

PLC1

Series   FCR-13A

Unit No   1

                                    Default

                    OK (O)   Cancel

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

IMPORTANT

• The setting value of the weight to send is different by the speed. Please set up as follows.
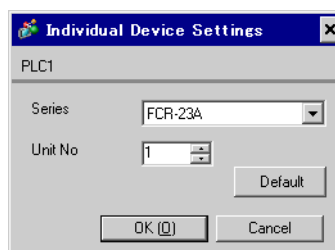
Speed	Setting value
9600bps	20ms or more
19200bps	20ms or more

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

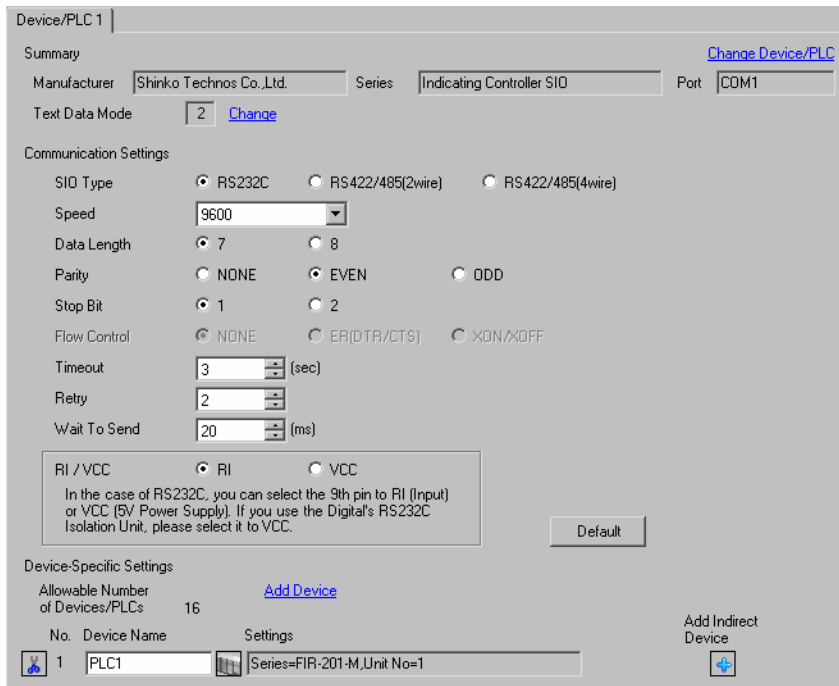   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.11   Setting Example 11

■ Settings of GP-Pro EX

◆ Communication Settings

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

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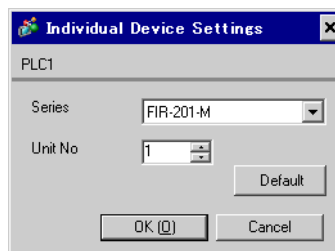- The setting value of the weight to send is different by the speed. Please set up as follows.

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

- Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

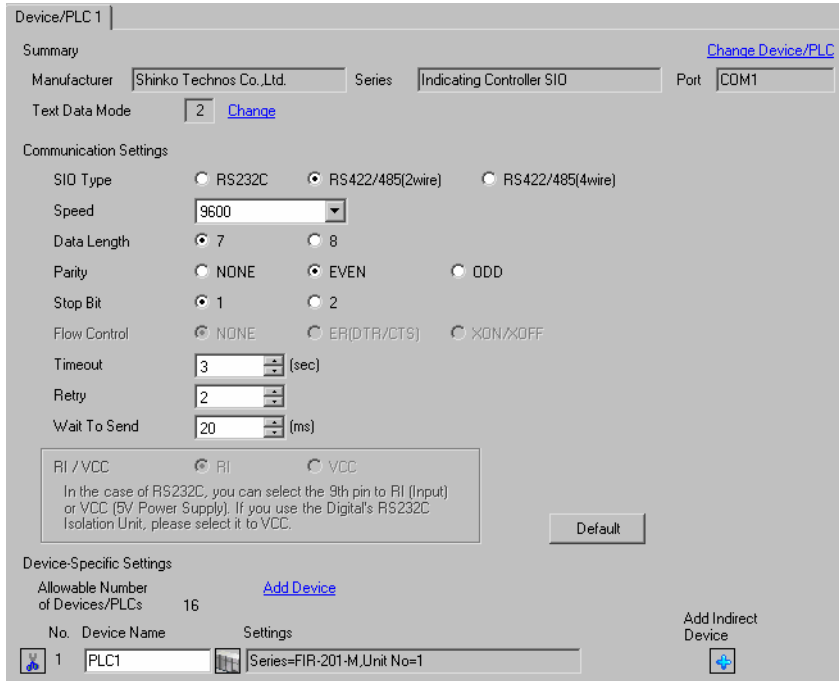   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

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


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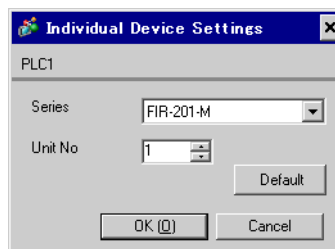- The setting value of the weight to send is different by the speed. Please set up as follows.

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

- Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

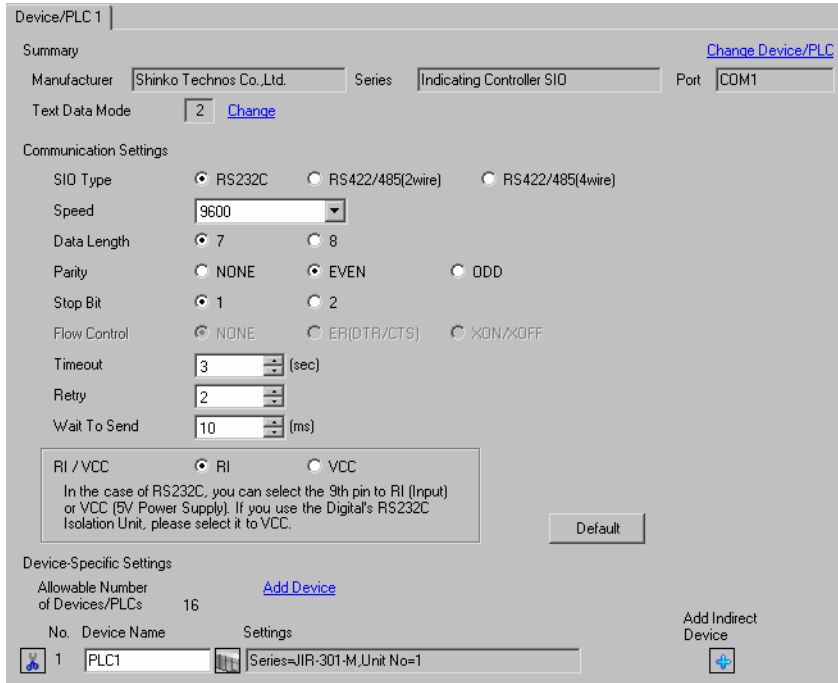   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.13 Setting Example 13

■ Settings of GP-Pro EX

◆ Communication Settings

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

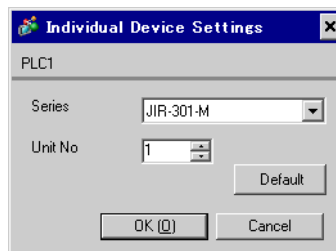| IMPORTANT | • The setting value of the weight to send is different by the speed. Please set up as follows. |

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

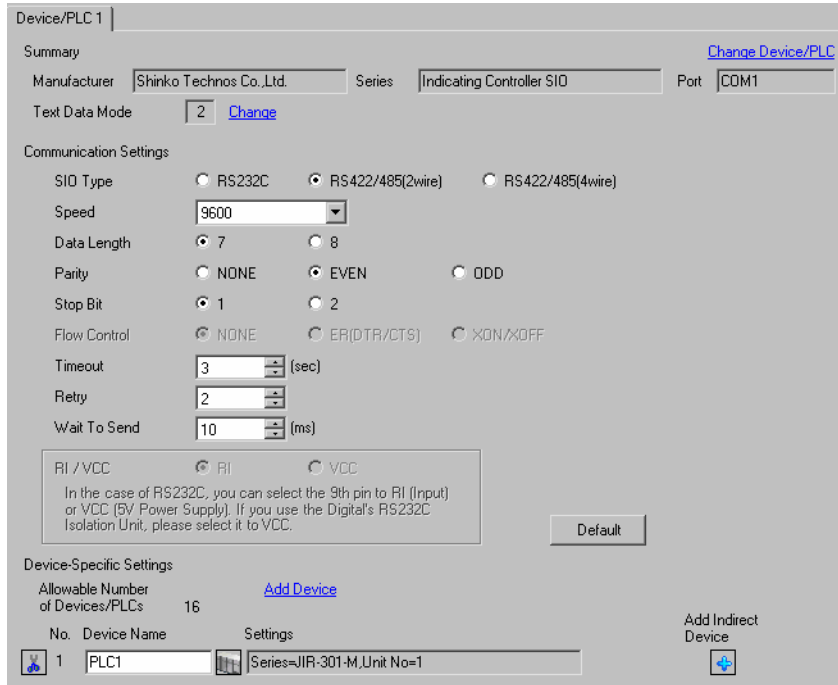Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.14 Setting Example 14

■ Settings of GP-Pro EX

◆ Communication Settings

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

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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

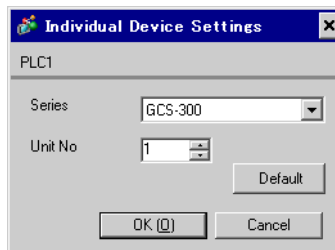To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1				

Summary   Change Device/PLC

Manufacturer Shinko Technos Co.,Ltd.   Series Indicating Controller SIO   Port COM1

Text Data Mode   2   Change

Communication Settings

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

Speed   9600

Data Length   ● 7   ○ 8

Parity   ○ NONE   ● EVEN   ○ ODD

Stop Bit   ● 1   ○ 2

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

Timeout   3   (sec)

Retry   2

Wait To Send   10   (ms)

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

Device-Specific Settings

Allowable Number   Add Device
of Devices/PLCs   16   Add Indirect
                                                                        Device
No. Device Name   Settings

1   PLC1   Series=JIR-301-M,Unit No=1

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

- Set Retry to 2 times or more.

◆ Device Setting

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

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

Individual Device Settings

PLC1

Series   JIR-301-M

Unit No   1

Default

OK (O)   Cancel

■ 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.

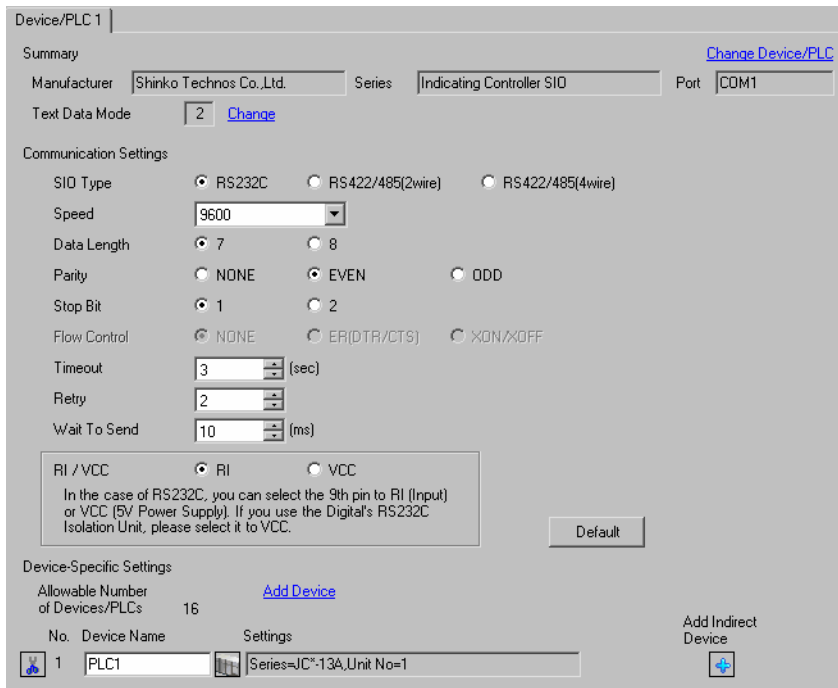   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.16　　Setting Example 16

■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].
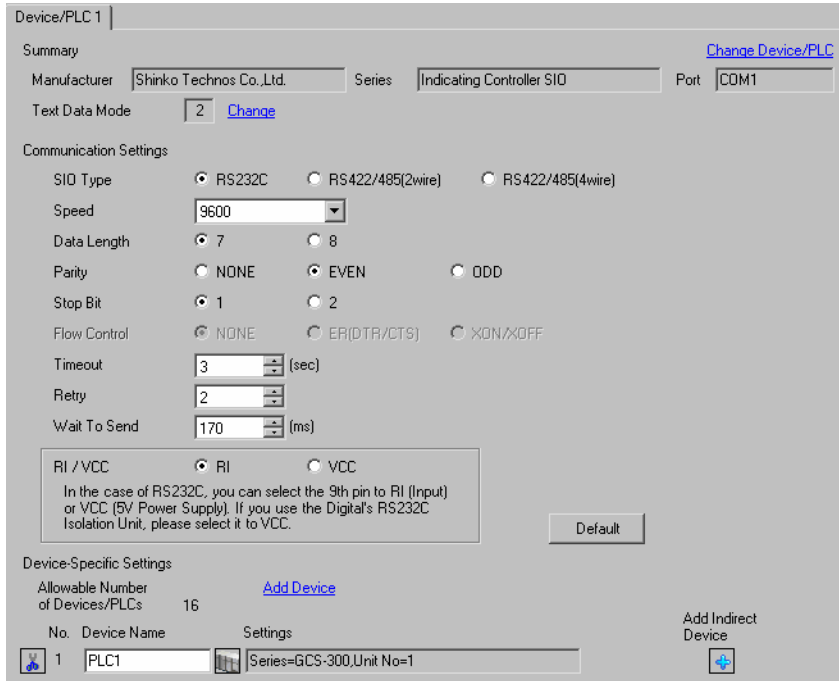
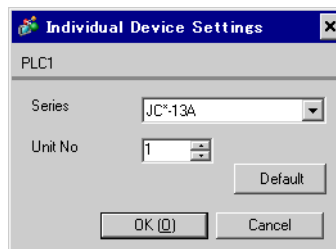| IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

　　• Set Retry to 2 times or more.

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] 　　.To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

■ Settings of External Device

Use the 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.

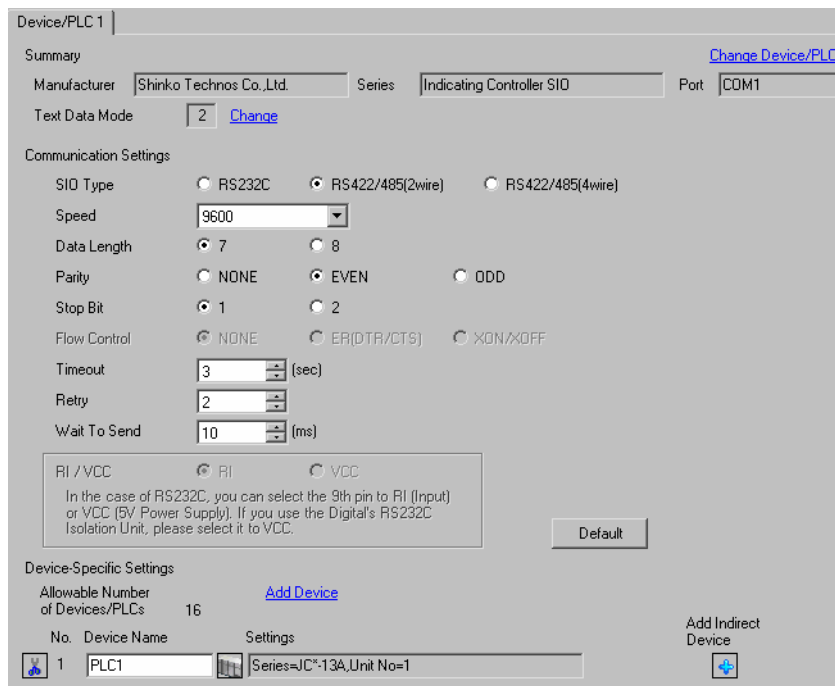   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.17   Setting Example 17

■ Settings of GP-Pro EX

◆ Communication Settings

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

<table>
<tr><td rowspan="2">IMPORTANT</td><td>• The setting value of the weight to send is different by the speed.
Please set up as follows.</td></tr>
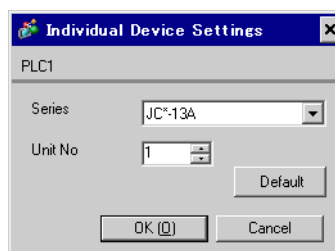<tr><td></td></tr>
</table>

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

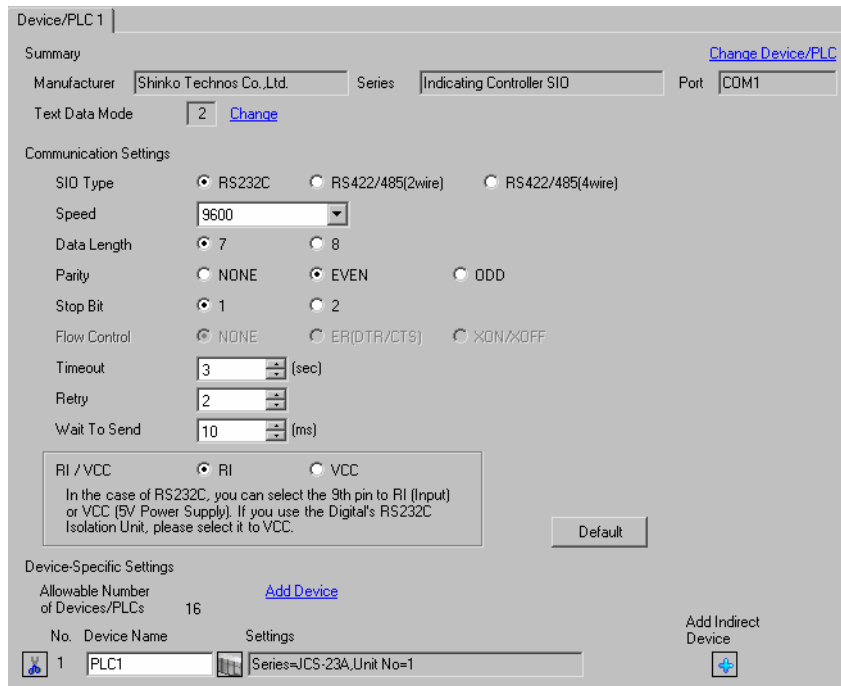   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.18   Setting Example 18

■ Settings of GP-Pro EX

◆ Communication Settings

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

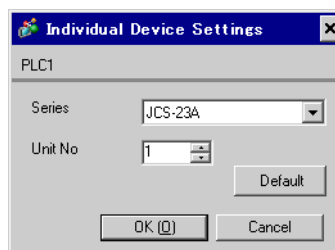| IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

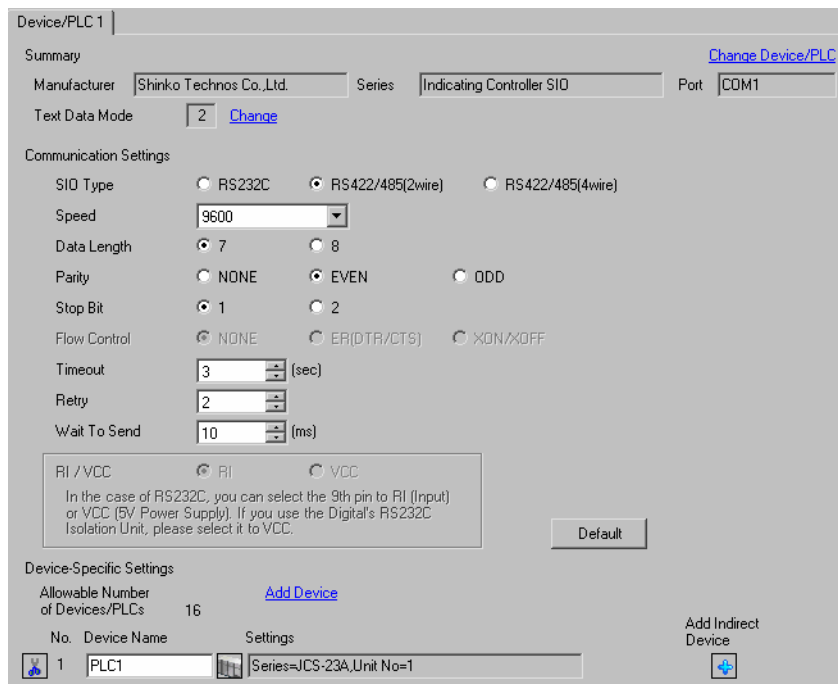   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.19　Setting Example 19

■ Settings of GP-Pro EX

◆ Communication Settings

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

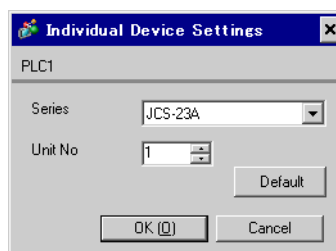| IMPORTANT | • The setting value of the weight to send is different by the speed. Please set up as follows. |

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

　　　• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

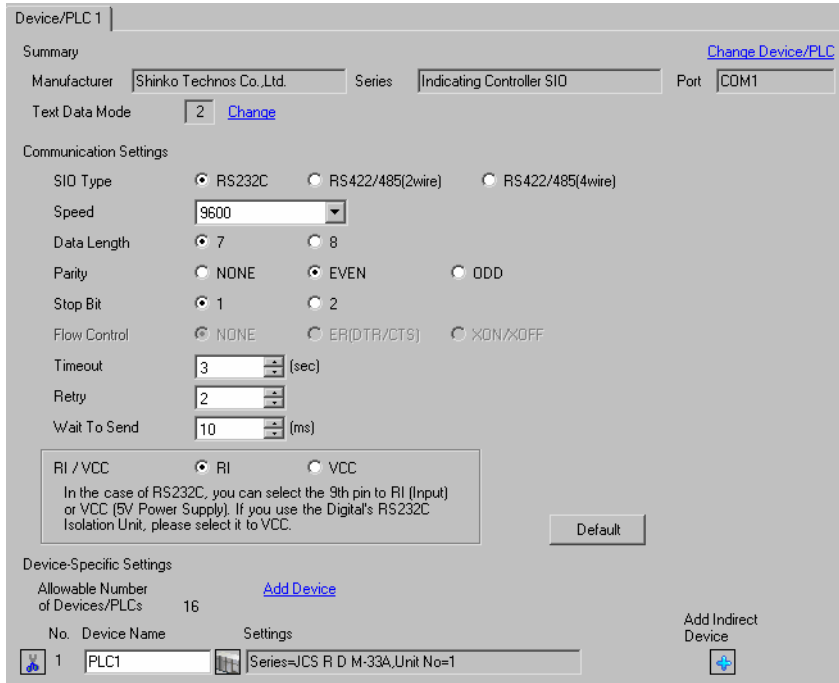Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.20 Setting Example 20

■ Settings of GP-Pro EX

◆ Communication Settings

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

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

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

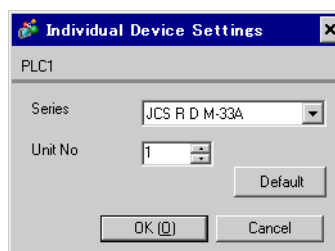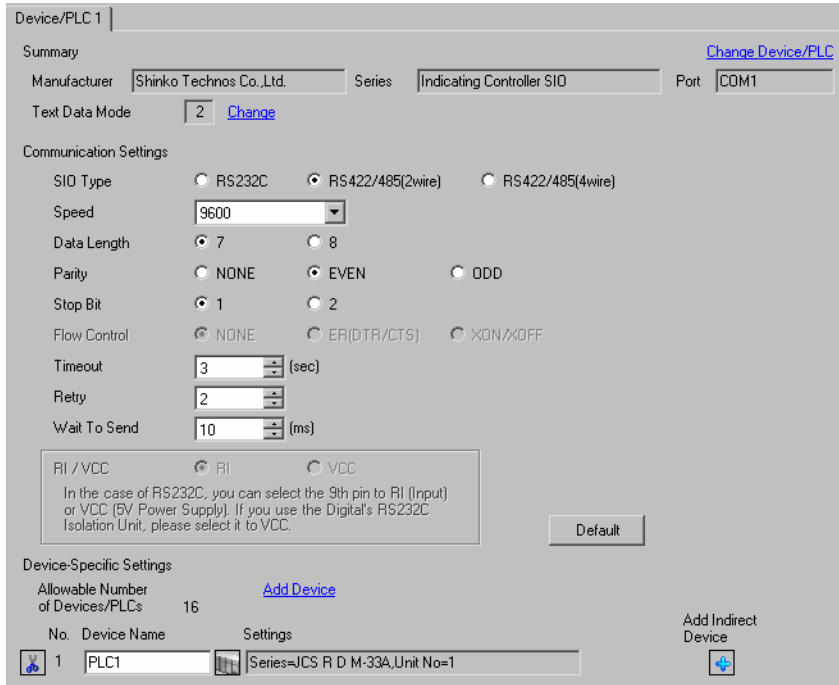| IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

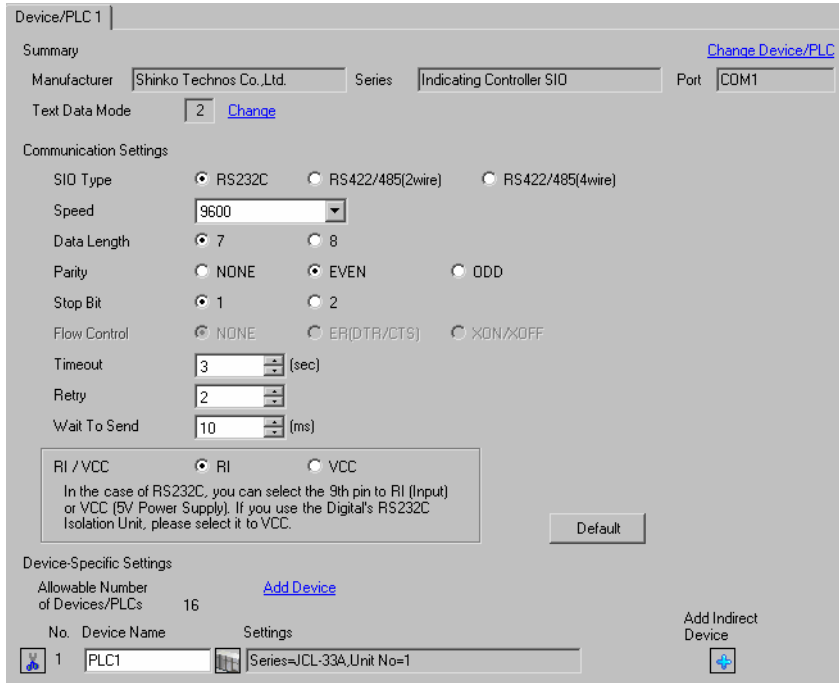   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.22 Setting Example 22

■ Settings of GP-Pro EX

◆ Communication Settings

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

Device/PLC 1			

Summary   Change Device/PLC

Manufacturer | Shinko Technos Co.,Ltd. | Series | Indicating Controller SIO | Port | COM1

Text Data Mode   2   Change

Communication Settings

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

Speed   9600

Data Length   ● 7   ○ 8

Parity   ○ NONE   ● EVEN   ○ ODD

Stop Bit   ● 1   ○ 2

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

Timeout   3 (sec)

Retry   2

Wait To Send   10 (ms)

RI / VCC   ● RI   ○ VCC

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

Default

Device-Specific Settings

Allowable Number of Devices/PLCs   16   Add Device

Add Indirect Device

No. Device Name   Settings

1   PLC1   Series=JCS R D M-33A,Unit No=1

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.) 15ms or more (In the case of JCS-33A.)

- Set Retry to 2 times or more.

◆ Device Setting

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

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

Individual Device Settings   ✕

PLC1

Series   JCS R D M-33A

Unit No   1

Default

OK (O)   Cancel

■ 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.

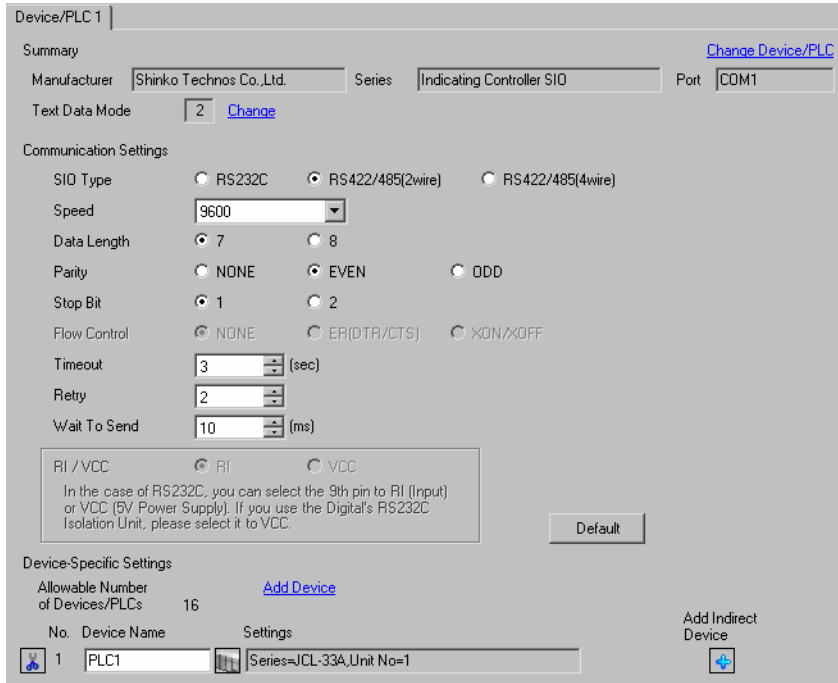   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.23　　Setting Example 23

■ Settings of GP-Pro EX

◆ Communication Settings

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

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

- Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

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

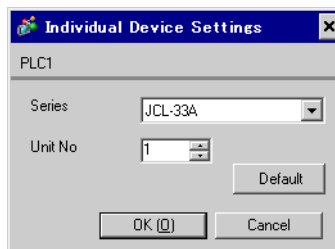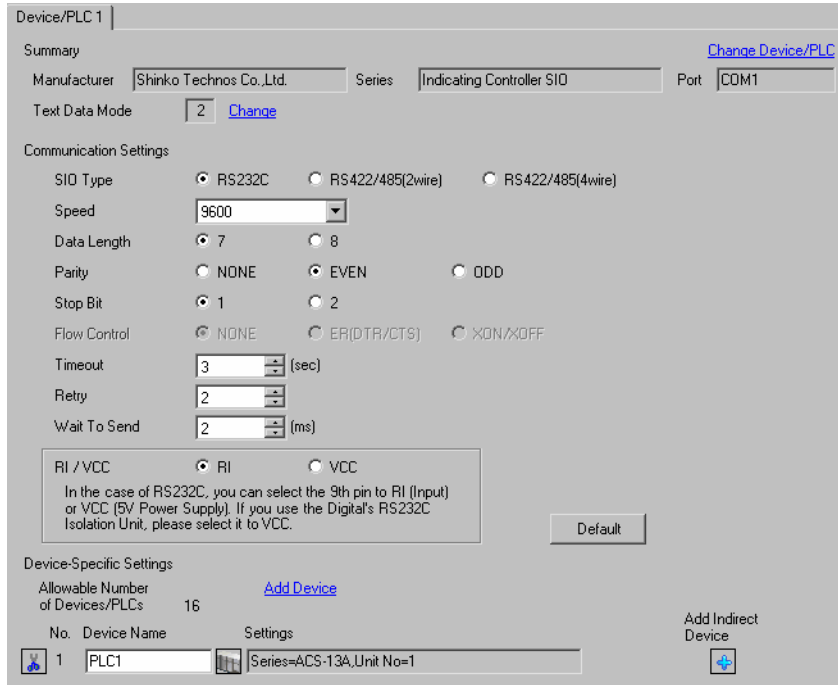|		•	The setting value of the weight to send is different by the speed. Please set up as follows.
IMPORTANT			

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

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

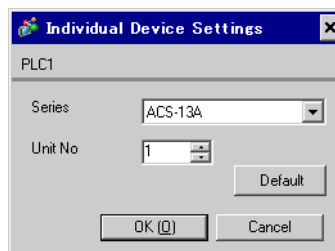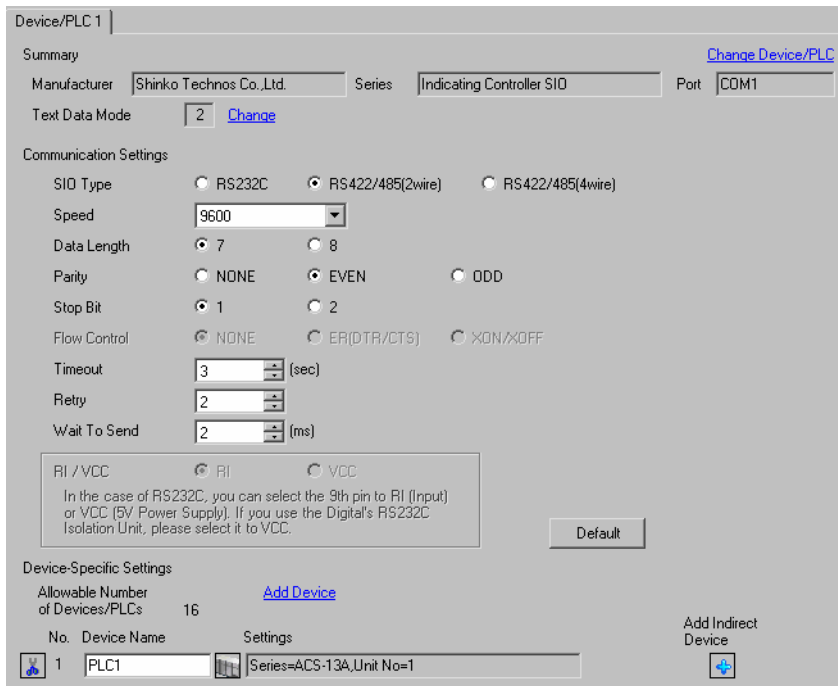| IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

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

IMPORTANT
- The setting value of the weight to send is different by the speed. Please set up as follows.
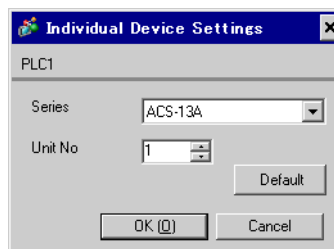
Speed	Setting value
9600bps	2ms or more
19200bps	This speed can not be used.

- Set Retry to 2 times or more.

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] 📝.
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

■ Settings of External Device

Use the 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.

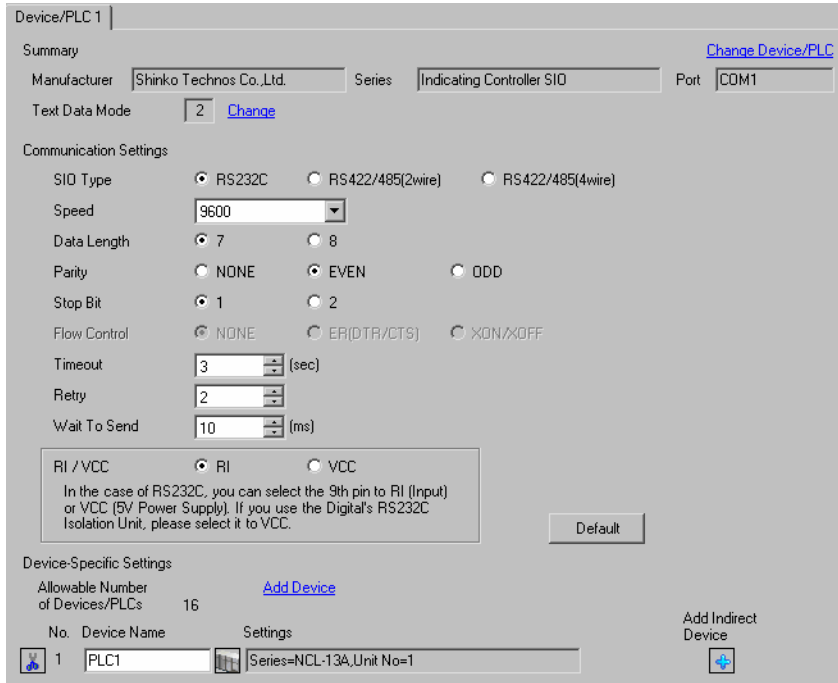   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.27   Setting Example 27

■ Settings of GP-Pro EX

◆ Communication Settings

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

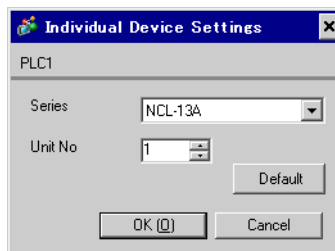|	IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the rotary switch 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
SW4	OFF	Start bit: 1, Data length: 7 Stop bit: 1, Parity bit: Even

3.28 Setting Example 28

■ Settings of GP-Pro EX

◆ Communication Settings

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

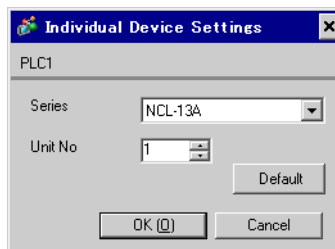| IMPORTANT | • The setting value of the weight to send is different by the speed. Please set up as follows. |

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the rotary switch 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
SW4	OFF	Start bit: 1, Data length: 7 Stop bit: 1, Parity bit: Even

3.29   Setting Example 29

■ Settings of GP-Pro EX

◆ Communication Settings

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

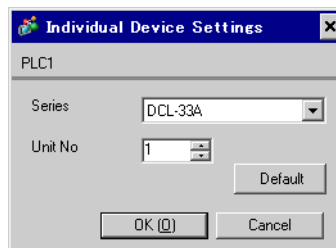| IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.
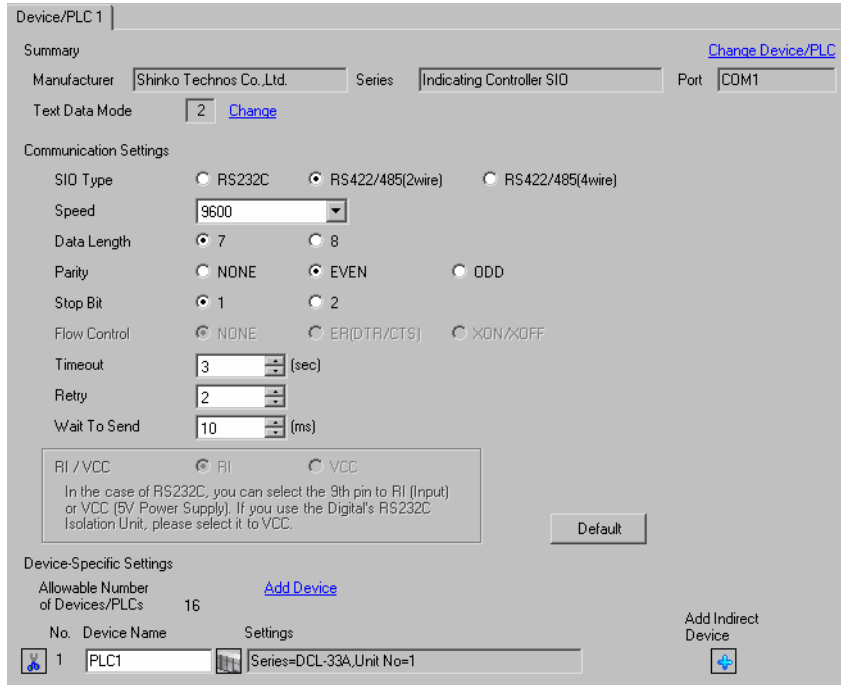
Completion of setting

3.30 Setting Example 30

■ Settings of GP-Pro EX

◆ Communication Settings

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

IMPORTANT

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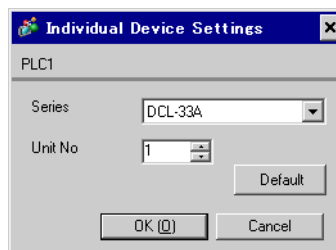 Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings] ⬚ .
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

■ Settings of External Device

Use the 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.
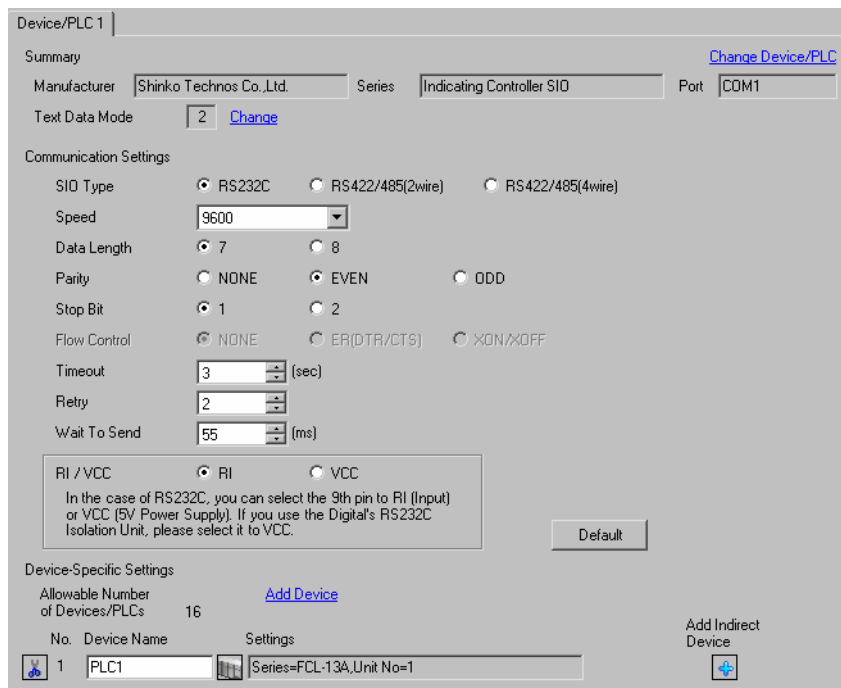
Completion of setting

3.31 Setting Example 31

■ Settings of GP-Pro EX

◆ Communication Settings

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

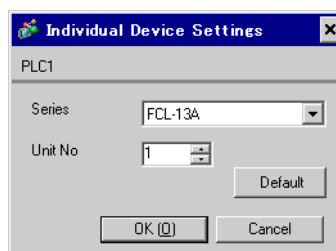|	Speed	Setting value
IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.	

Speed	Setting value
9600bps	55ms or more
19200bps	This speed can not be used.

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

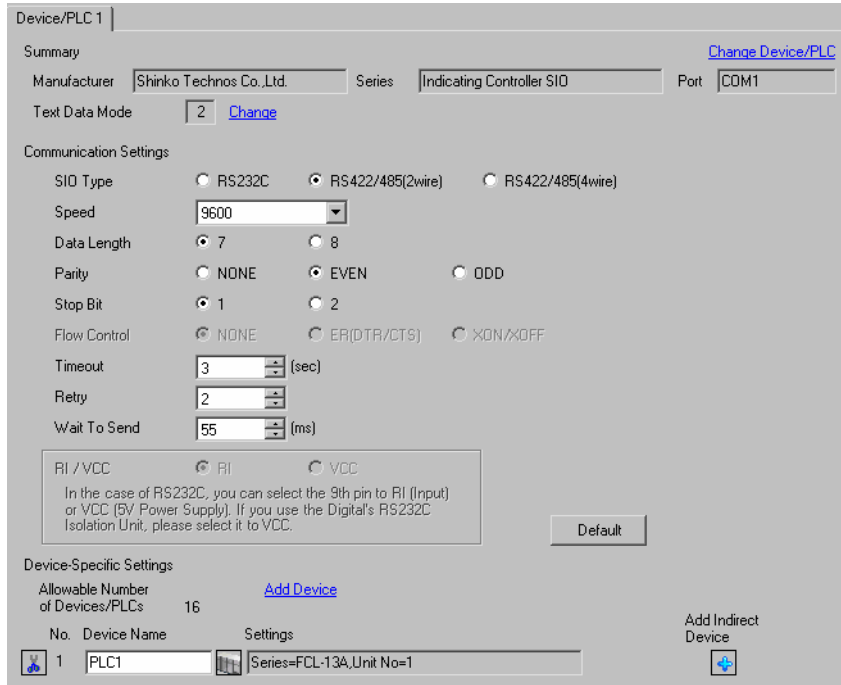   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.32   Setting Example 32

■ Settings of GP-Pro EX

◆ Communication Settings

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

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	This speed can not be used.

- Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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.

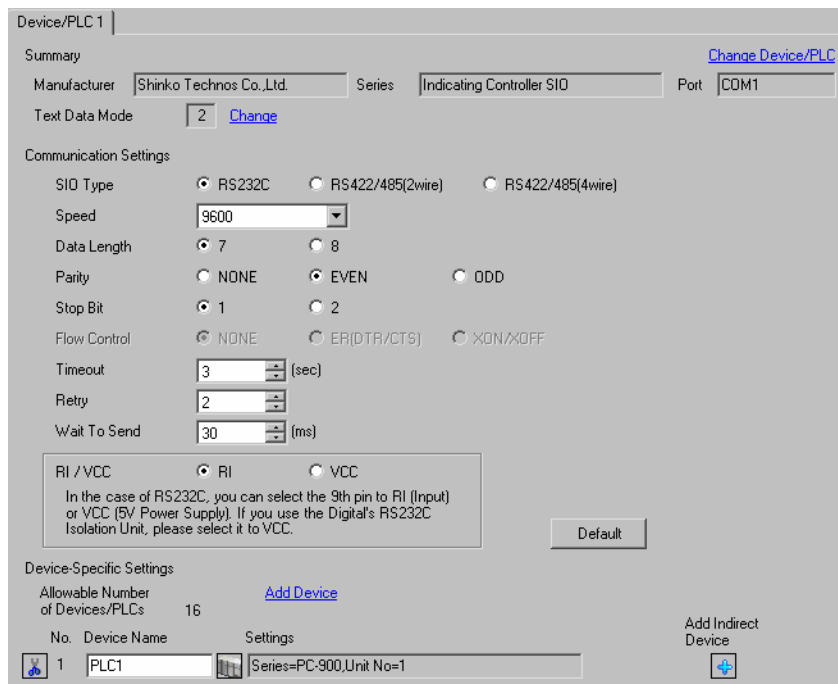   Set to "96" (9600bps) with the down key or the up key, and press the mode key.

Completion of setting

3.33 Setting Example 33

■ Settings of GP-Pro EX

◆ Communication Settings

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

Device/PLC 1

Summary   Change Device/PLC

Manufacturer   Shinko Technos Co.,Ltd.   Series   Indicating Controller SIO   Port   COM1

Text Data Mode   [2]   Change

Communication Settings

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

Speed   9600

Data Length   ● 7   ○ 8

Parity   ○ NONE   ● EVEN   ○ ODD

Stop Bit   ● 1   ○ 2

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

Timeout   3   (sec)

Retry   2

Wait To Send   30   (ms)

RI / VCC   ● RI   ○ VCC

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

Device-Specific Settings

Allowable Number   Add Device
of Devices/PLCs   16   Add Indirect
                                                                             Device
No. Device Name   Settings
 1   PLC1   Series=PC-900,Unit No=1

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

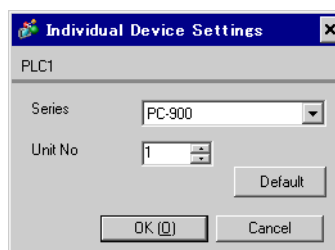| Speed	Setting value
9600bps	30ms or more
19200bps	30ms or more

- Set Retry to 2 times or more.

◆ Device Setting

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

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

Individual Device Settings

PLC1

Series   PC-900

Unit No   1

                    Default

        OK (O)   Cancel

■ 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 4 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.
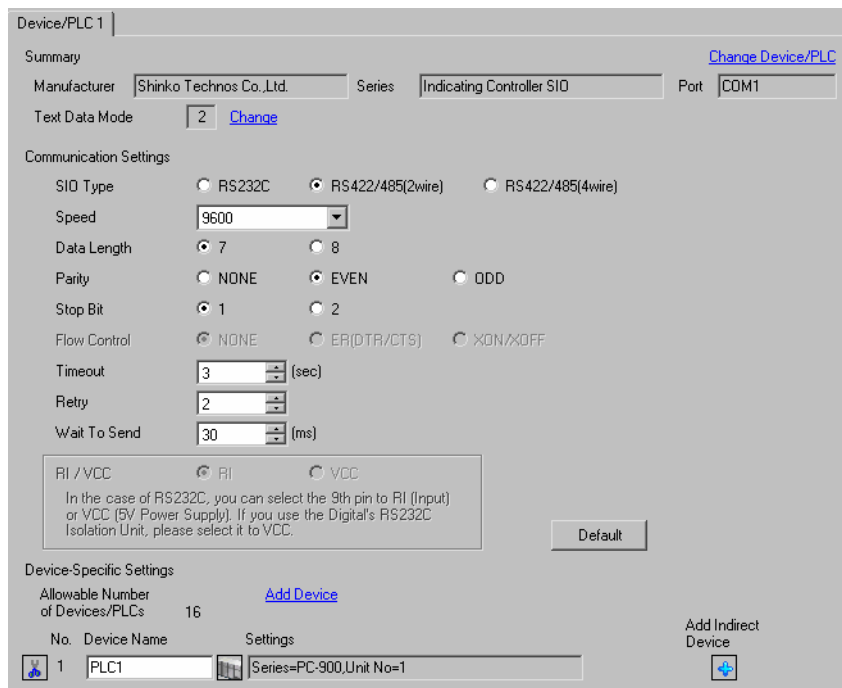
Completion of setting

3.34 Setting Example 34

■ Settings of GP-Pro EX

◆ Communication Settings

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

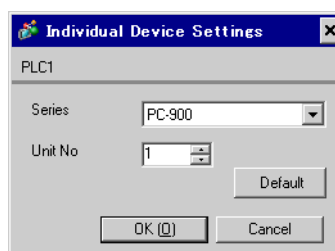| IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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 4 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
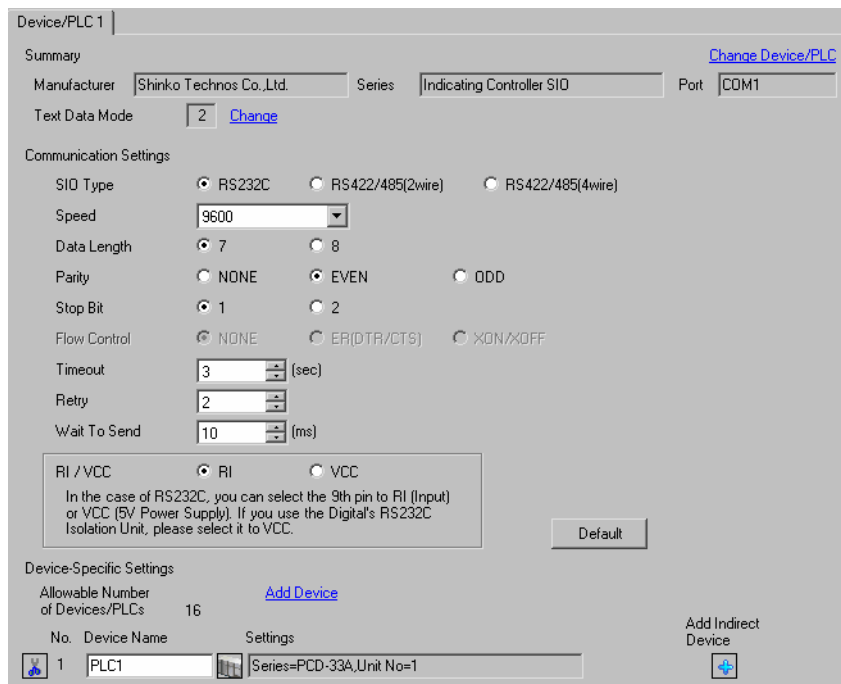   hold/entry key.

Completion of setting

3.35   Setting Example 35

■ Settings of GP-Pro EX

◆ Communication Settings

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

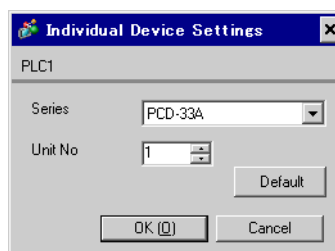| IMPORTANT	• The setting value of the weight to send is different by the speed. Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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 4 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.
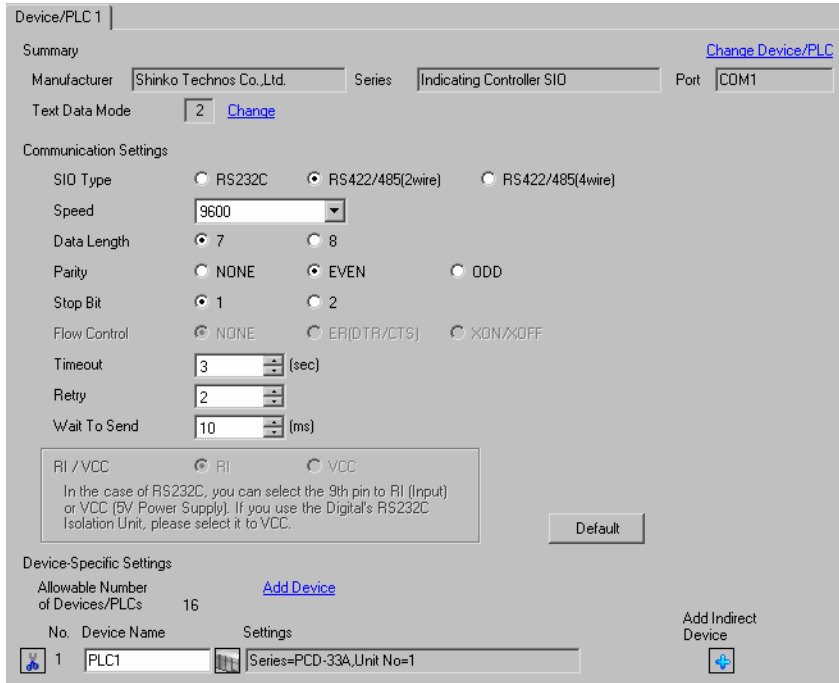
Completion of setting

3.36 Setting Example 36

■ Settings of GP-Pro EX

◆ Communication Settings

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

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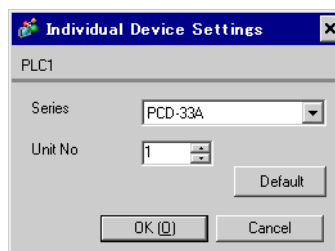Please set up as follows.

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

• Set Retry to 2 times or more.

◆ Device Setting

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

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

■ Settings of External Device

Use the 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 4 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 offline 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 setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Setup Items	Setup Description
SIO Type	Select the SIO type to communicate with the External Device.
Speed	Select speed between the External Device and the Display.
Data Length	Select data length.
Parity	Select how to check parity.
Stop Bit	Select stop bit length.
Flow Control	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.

Continues to the next page.

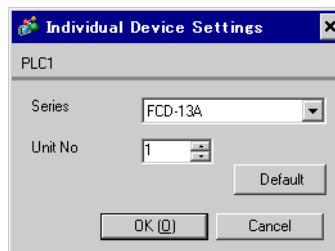| Setup Items	Setup Description
Wait To Send	Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.
RI/VCC	You can switch RI/VCC of the 9th pin when you select RS232C for SIO type. It is necessary to change RI/5V by changeover switch of IPC when connect with IPC. Please refer to the manual of the IPC for more detail.

NOTE
• Refer to the GP-Pro EX Reference Manual for Indirect Device.

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

■ Device Setting

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

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

Individual Device Settings

PLC1

Series　　FCD-13A

Unit No　　1

Default

OK (O)　　Cancel

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 Offline Mode

NOTE

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

  Cf.   Maintenance/Troubleshooting Guide "Offline Mode"

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

■ Communication Settings

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings] in offline 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       ● 7        ○ 8
        Parity            ○ NONE    ● EVEN    ○ ODD
        Stop Bit          ● 1        ○ 2
        Flow Control      NONE

        Timeout(s)                       3  ▼ ▲
        Retry                            2  ▼ ▲
        Wait To Send(ms)                 2  ▼ ▲
```

	Exit		Back	2007/02/08 00:30:10

Setup Items	Setup Description
SIO Type	Select the SIO type to communicate with the External Device. **IMPORTANT** To make the communication settings correctly, confirm the serial interface specifications of Display unit for [SIO Type]. We cannot guarantee the operation if a communication type that the serial interface does not support is specified. 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.

<div align="right">Continues to the next page.</div>

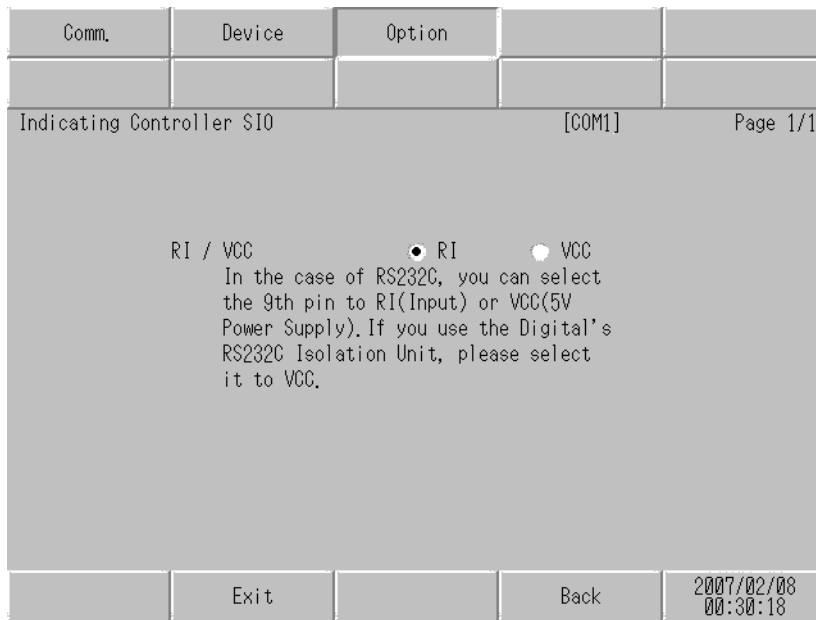| Setup Items	Setup Description
Flow Control	Display the communication control method to prevent overflow of transmission and reception data.
Timeout	Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device.
Retry	In case of no response 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.

■ 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 │ ▼ │ ▲ │       │
│                                                        │
│                                                        │
│                                                        │
│                                                        │
│                                                        │
│          ┌──────────┐          ┌──────────┐ 2007/02/08 │
│          │  Exit    │          │  Back    │  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].

Comm.	Device	Option		

Indicating Controller SIO   [COM1]   Page 1/1

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

| | Exit | | Back | 2007/02/08 00:30:18 |

Setup Items	Setup Description
RI/VCC	Switches RI/VCC of the 9th pin. 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.

| NOTE | • GP-4100 series do not have the [Option] setting in the offline mode. |

5   Cable Diagram

The cable diagram shown below may be different from the cable diagram recommended by 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 (Connection Port)	Cable		Notes
GP3000 (COM1) GP4000[*1] (COM1) ST (COM1) LT (COM1) IPC[*2] PC/AT	1A	User-created cable	The cable length must be 15m or less.
GP-4105 (COM1)	1B	User-created cable	

*1   All GP4000 models except GP-4100 Series, GP-4*01TM and GP-4203T

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

1A)

Display
D-Sub 9pin (socket)

Pin	Signal name
2	RD (RXD)
3	SD (TXD)
4	ER (DTR)
5	SG
6	DR (DSR)
7	RS (RTS)
8	CS (CTS)
Shell	FG

Display

Shield

External Device
Terminal block

Signal name
TX
RX
COM

1B)

Display side
Terminal block

Signal name
RD (RXD)
SD (TXD)
ER (DTR)
SG
DR (DSR)
RS (RTS)
CS (CTS)

Display

Shield

External Device
Terminal block

Signal name
TX
RX
COM
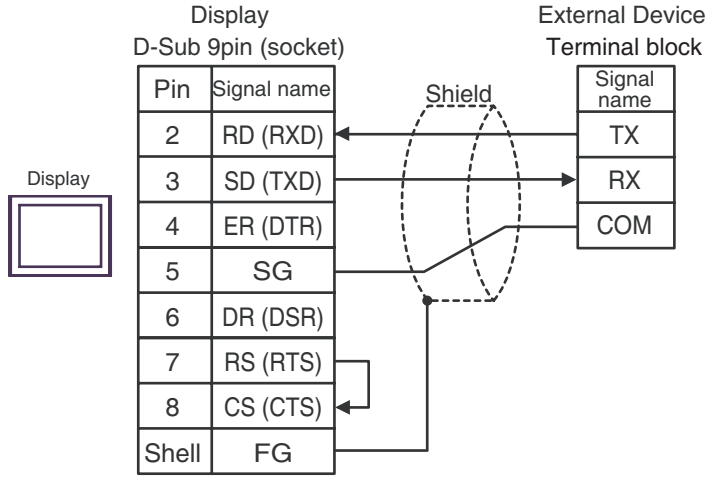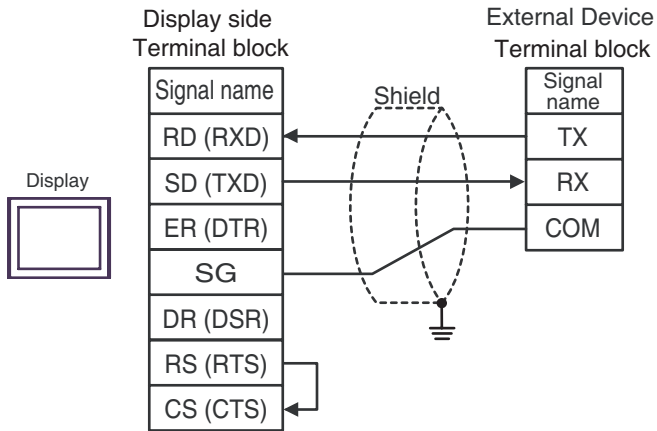
Cable Diagram 2

Display (Connection Port)		Cable	Notes
GP3000[*1] (COM1) AGP-3302B (COM2) ST[*2] (COM2) LT (COM1)	2A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	The cable length must be 500m or less.
	2B	User-created cable	
GP3000[*3] (COM2)	2C	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	
	2D	Online adapter by Pro-face CA4-ADPONL-01 + User-created cable	
IPC[*4]	2E	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	
	2F	User-created cable	
GP-4106 (COM1)	2G	User-created cable	
GP-4107 (COM1) GP-4*03T[*5] (COM2) GP-4203T (COM1)	2H	User-created cable	
GP4000[*6] (COM2) GP-4201T (COM1)	2I	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1[*7] + User-created cable	
	2B	User-created cable	

*1   All GP3000 models except AGP-3302B

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

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

*4   Only the COM port which can communicate by RS-422/485 (2 wire) can be used.

*5   Except GP-4203T

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

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

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.
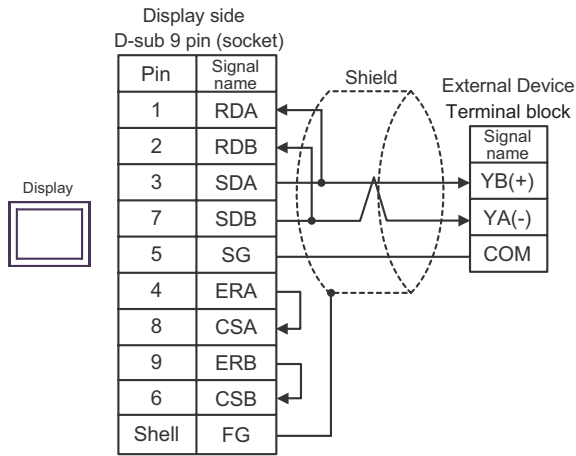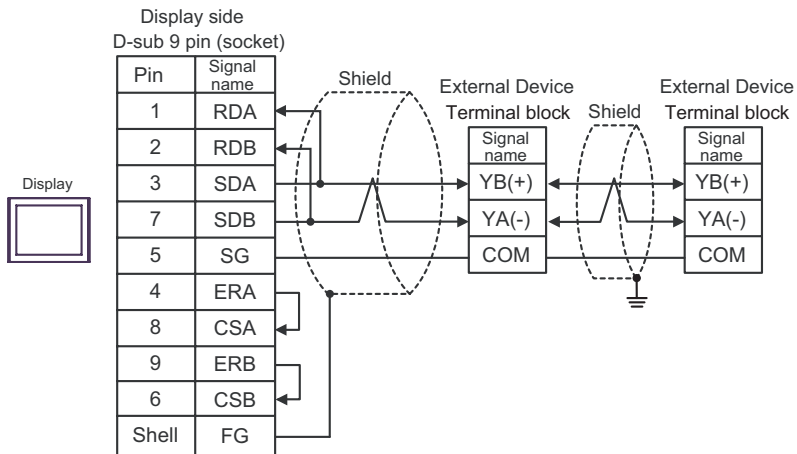
2A)

• 1:1 Connection
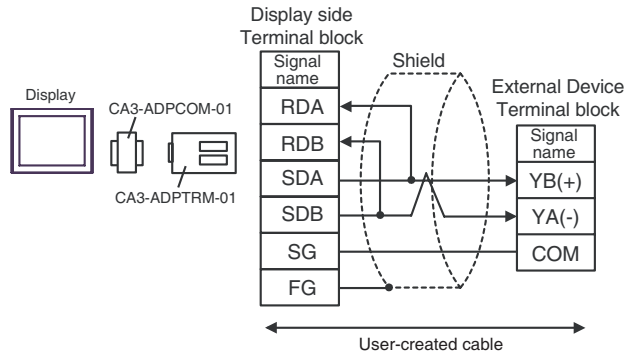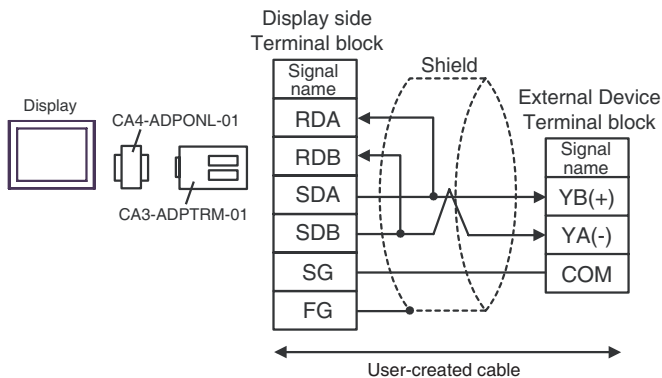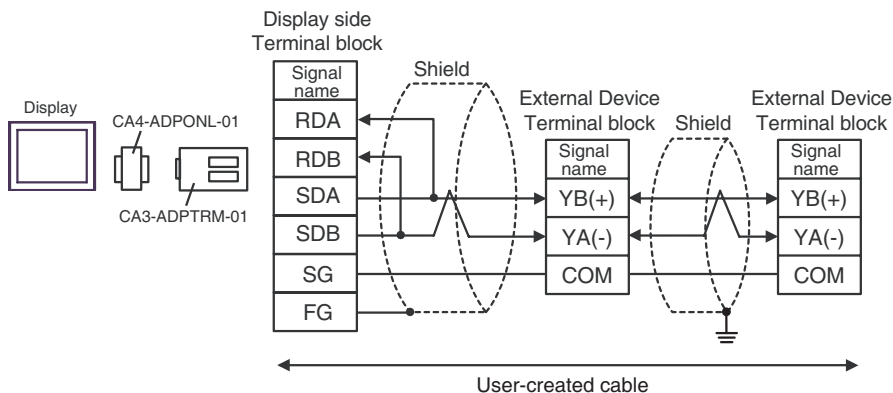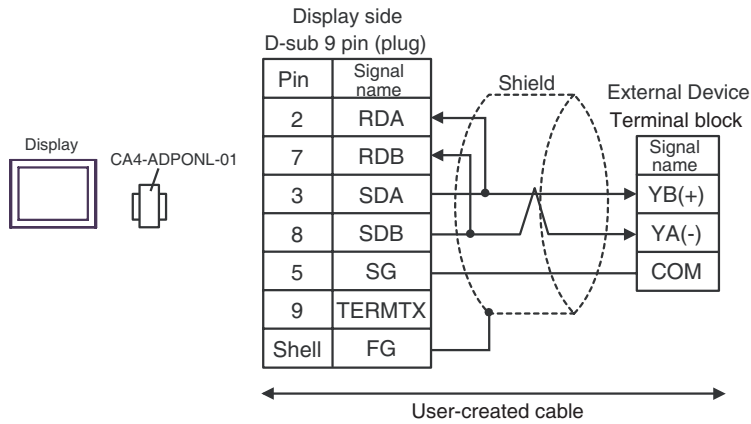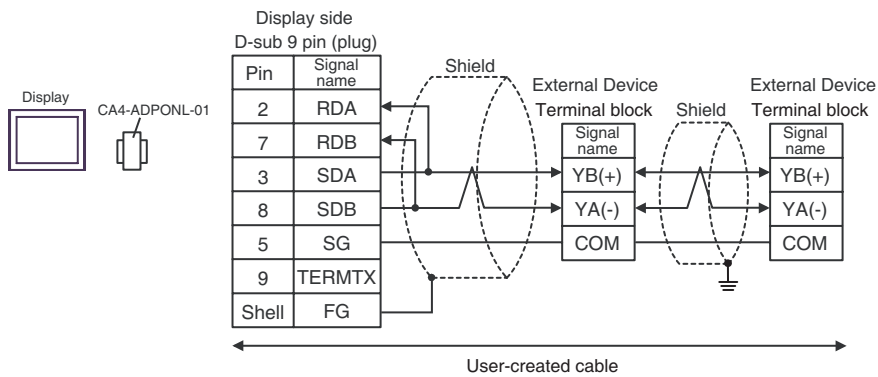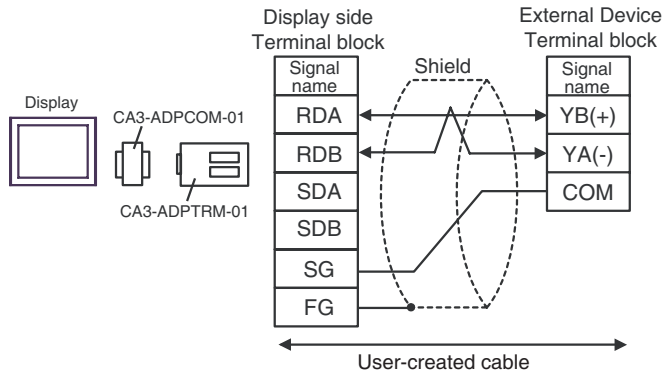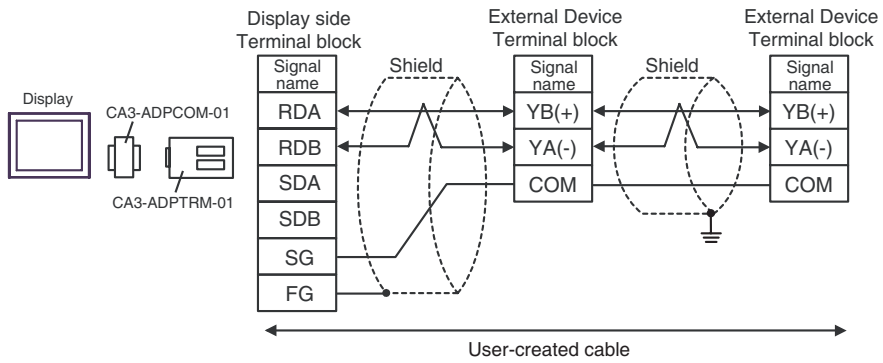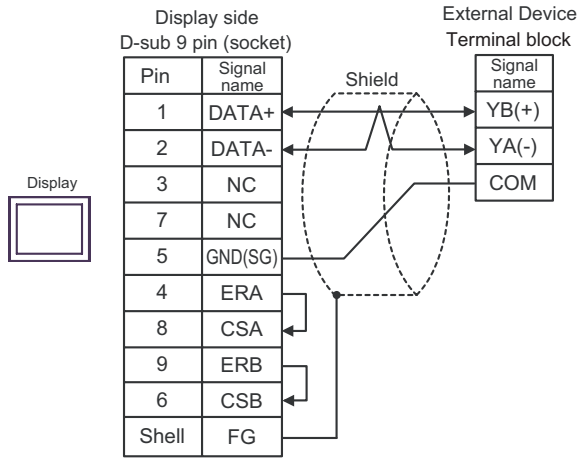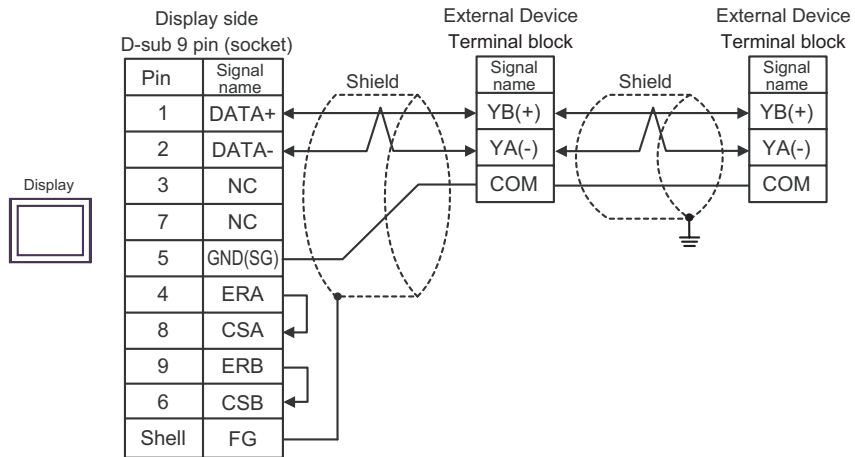

• 1:n Connection

2B)

- 1:1 Connection

Display side
D-sub 9 pin (socket)

Pin	Signal name
1	RDA
2	RDB
3	SDA
7	SDB
5	SG
4	ERA
8	CSA
9	ERB
6	CSB
Shell	FG

Shield

External Device
Terminal block

Signal name
YB(+)
YA(-)
COM

- 1:n Connection

Display side
D-sub 9 pin (socket)

Pin	Signal name
1	RDA
2	RDB
3	SDA
7	SDB
5	SG
4	ERA
8	CSA
9	ERB
6	CSB
Shell	FG

Shield

External Device
Terminal block

Signal name
YB(+)
YA(-)
COM

Shield

External Device
Terminal block

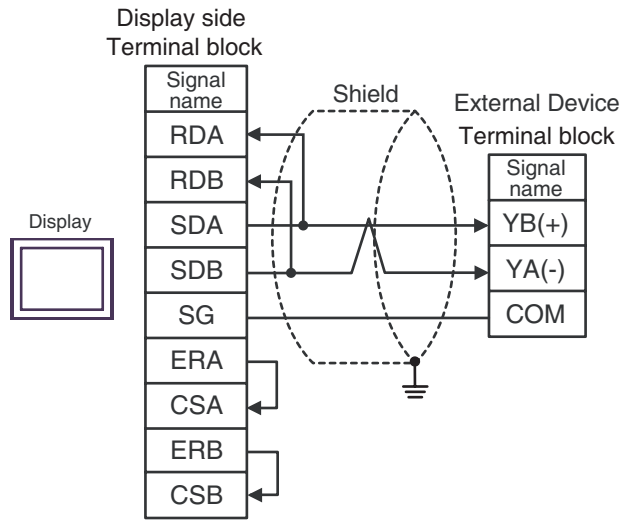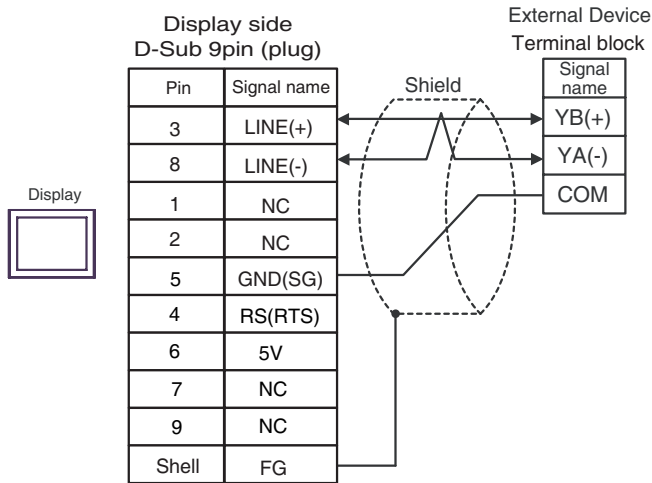| Signal name |
|-------------|
| YB(+) |
| YA(-) |
| COM |
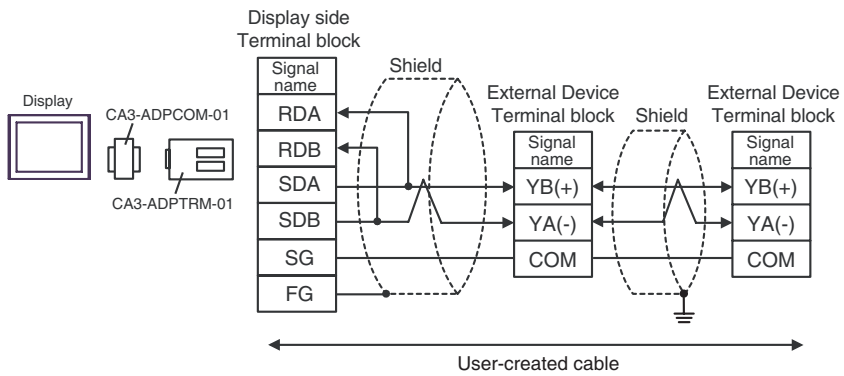
2C)

• 1:1 Connection

• 1:n Connection

2D)

• 1:1 Connection

Display side
D-sub 9 pin (plug)

Pin	Signal name
2	RDA
7	RDB
3	SDA
8	SDB
5	SG
9	TERMTX
Shell	FG

Shield

Display   CA4-ADPONL-01

External Device
Terminal block

Signal name
YB(+)
YA(-)
COM

User-created cable

• 1:n Connection

Display side
D-sub 9 pin (plug)

Pin	Signal name
2	RDA
7	RDB
3	SDA
8	SDB
5	SG
9	TERMTX
Shell	FG

Display   CA4-ADPONL-01

Shield

External Device
Terminal block

Signal name
YB(+)
YA(-)
COM

Shield

External Device
Terminal block

Signal name
YB(+)
YA(-)
COM

User-created cable

2E)

• 1:1 Connection

User-created cable

• 1:n Connection

User-created cable

2F)

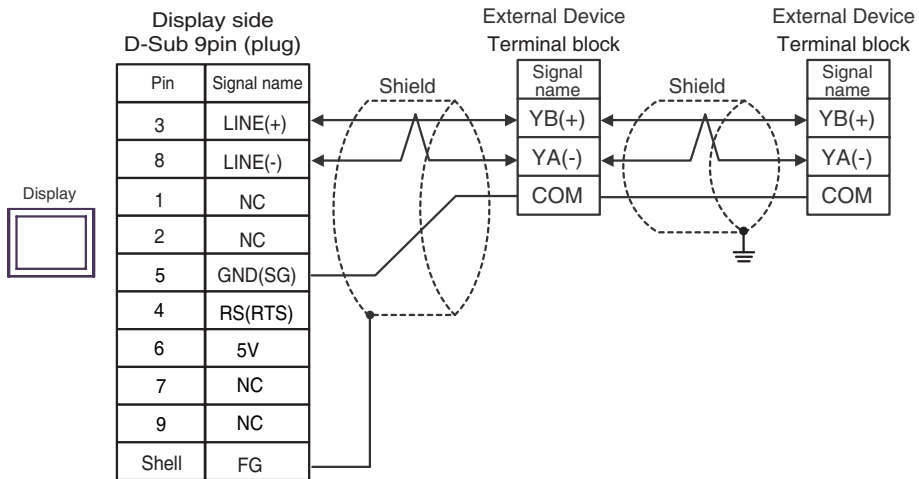- 1:1 Connection

- 1:n Connection

2G)

- 1:1 Connection

- 1:n Connection

2H)

• 1:1 Connection

Display side
D-Sub 9pin (plug)

External Device
Terminal block

Pin	Signal name
3	LINE(+)
8	LINE(-)
1	NC
2	NC
5	GND(SG)
4	RS(RTS)
6	5V
7	NC
9	NC
Shell	FG

Shield

Signal name
YB(+)
YA(-)
COM

• 1:n Connection

Display side
D-Sub 9pin (plug)

External Device
Terminal block

External Device
Terminal block

Pin	Signal name
3	LINE(+)
8	LINE(-)
1	NC
2	NC
5	GND(SG)
4	RS(RTS)
6	5V
7	NC
9	NC
Shell	FG

Shield

Signal name
YB(+)
YA(-)
COM

Shield

Signal name
YB(+)
YA(-)
COM
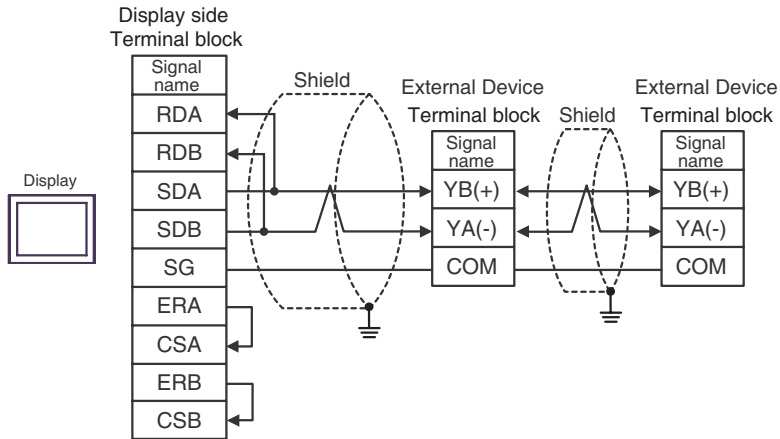
IMPORTANT
• The 5V output (Pin #6) on the Display is the power for the Siemens AG's PROFIBUS connector. Do not use it for other devices.

NOTE
• In COM on the GP-4107, the SG and FG terminals are isolated.

2I)
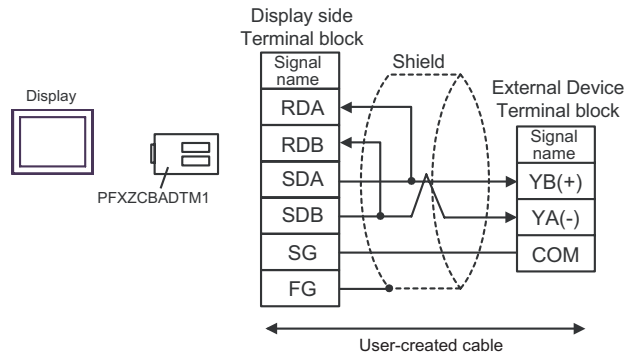
- 1:1 Connection
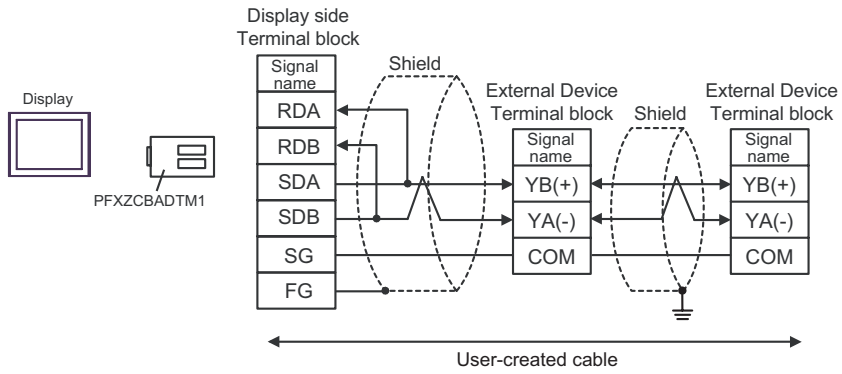
- 1:n Connection

Cable Diagram 3

Display (Connection Port)		Cable	Notes
GP3000[1] (COM1) AGP-3302B (COM2) ST[2] (COM2) LT (COM1) IPC[3]	3A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable + Terminal block + CPM cable by Shinko Technos Co., Ltd.	
GP3000[4] (COM2)	3B	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable + Terminal block + CPM cable by Shinko Technos Co., Ltd.	• The cable length must be 1000m or less. • The cable length can be extended at the 1m unit.
GP-4106 (COM1)	3C	User-created cable + Terminal block + CPM cable by Shinko Technos Co., Ltd.	
GP4000[5] (COM2) GP-4201T (COM1)	3D	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1[6] + User-created cable + Terminal block + CPM cable by Shinko Technos Co., Ltd.	

*1   All GP3000 models except AGP-3302B

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

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

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

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

*6   When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 3A.
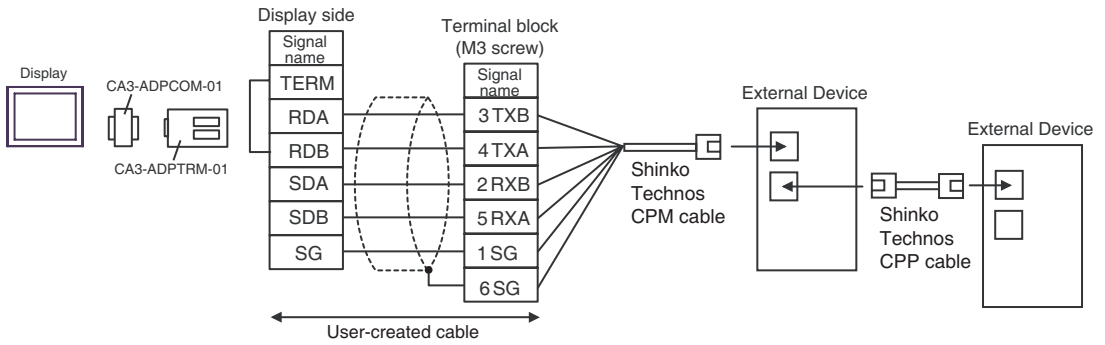
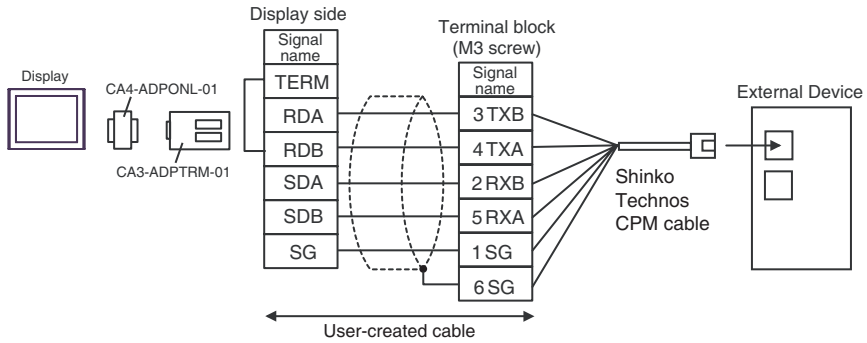| NOTE	• Turn on No.2 DIP switch to perform communication settings of the end External Device to the insert termination resistance (120Ω 1/2W). • The names of poles A and B are inverted between the Display and the External Device.

3A)

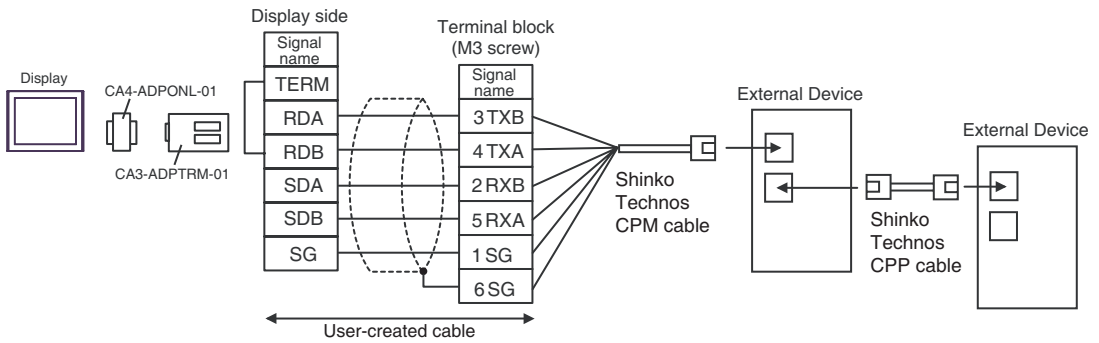- 1:1 Connection
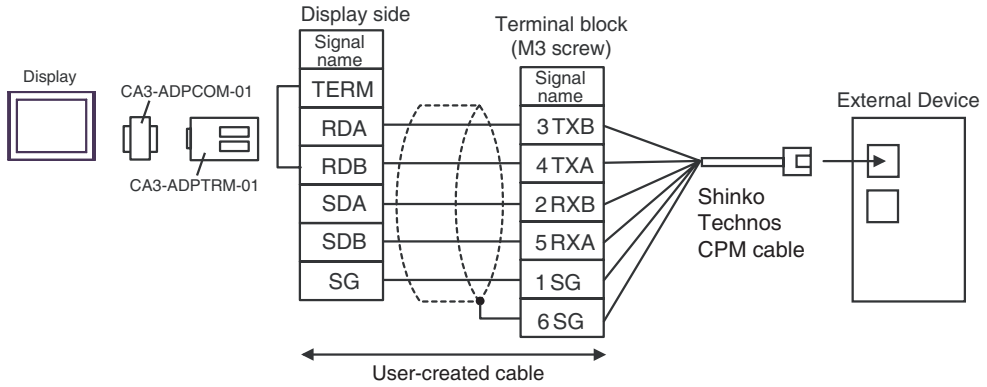
- 1:n Connection
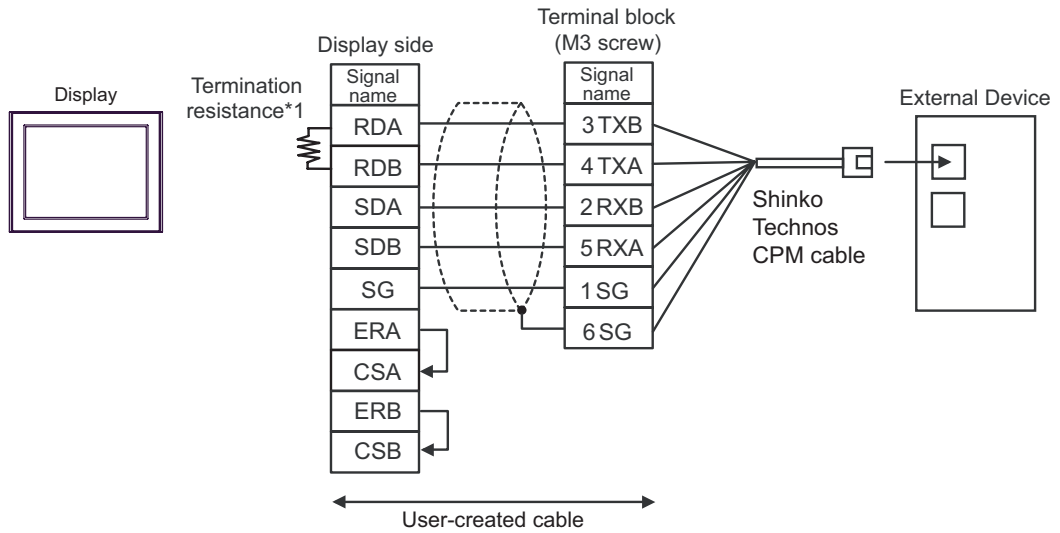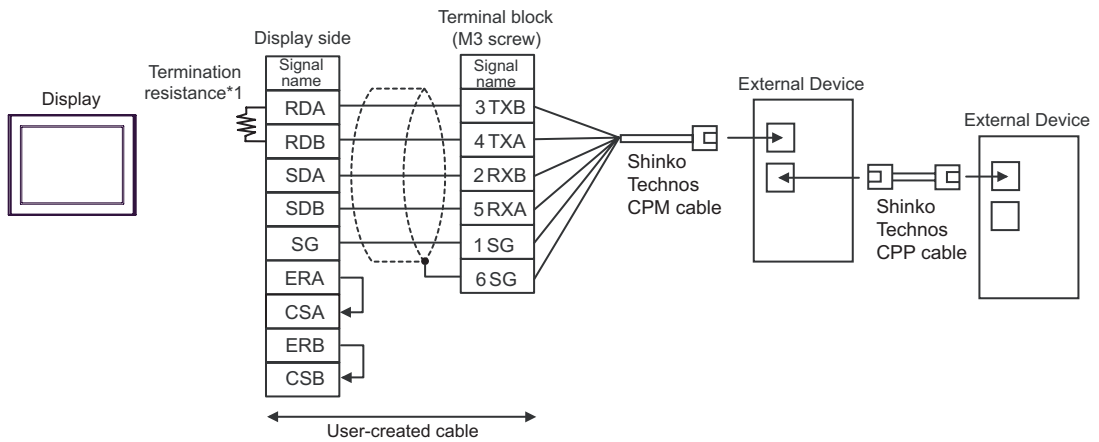
3B)

- 1:1 Connection

- 1:n Connection

3C)

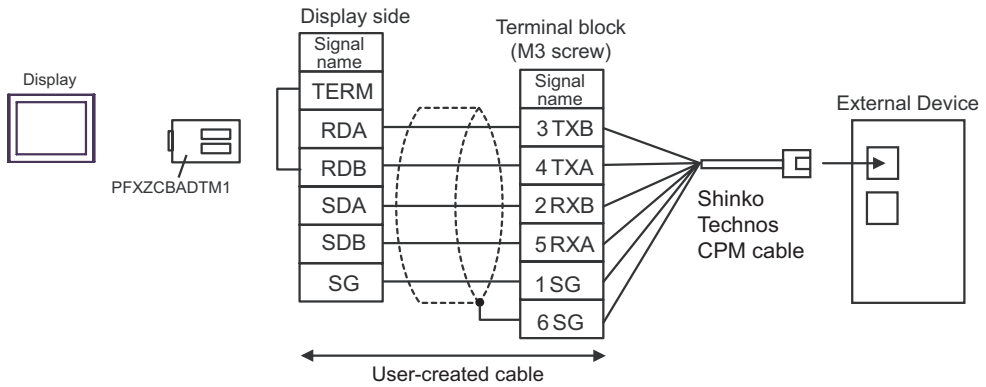- 1:1 Connection

- 1:n Connection

*1   The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.
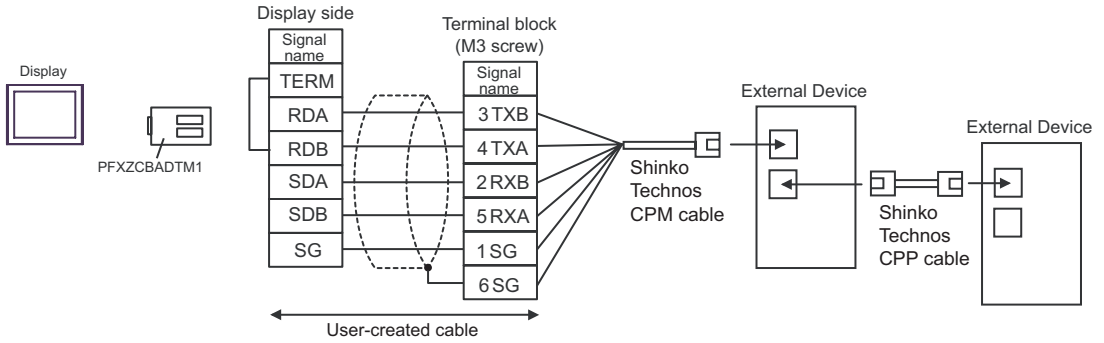
DIP Switch No.	Set Value
1	OFF
2	OFF
3	ON
4	ON

3D)

- 1:1 Connection

- 1:n Connection

Cable Diagram 4

Display (Connection Port)		Cable		Notes

GP3000 (COM1)
GP4000[*1] (COM1)
ST (COM1)
LT (COM1)
IPC[*2]
PC/AT
	4A	User-created cable
		+
		RS-232C↔ RS-485 converter (IF-300-C5)[*3]
		by Shinko Technos Co., Ltd.
				• Between Display and IF-300-C5
				  Cable length :15m max.
				• Between IF-300-C5 and Controller
				  Cable length :1200m total

GP-4105 (COM1)	4B	User-created cable + RS-232C↔RS-485 converter (IF-300-C5)[*3] by Shinko Technos Co., Ltd.		

*1   All GP4000 models except GP-4100 Series, GP-4*01TM and GP-4203T

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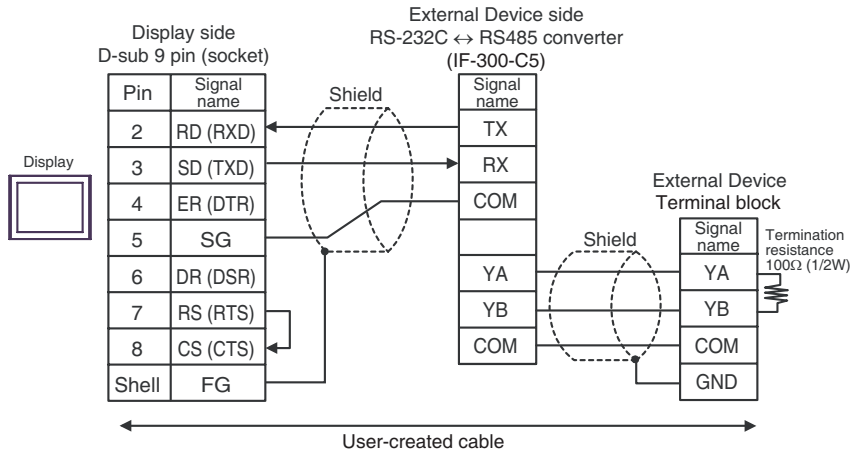☞ " ■ IPC COM Port" (page 9)

*3   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.)
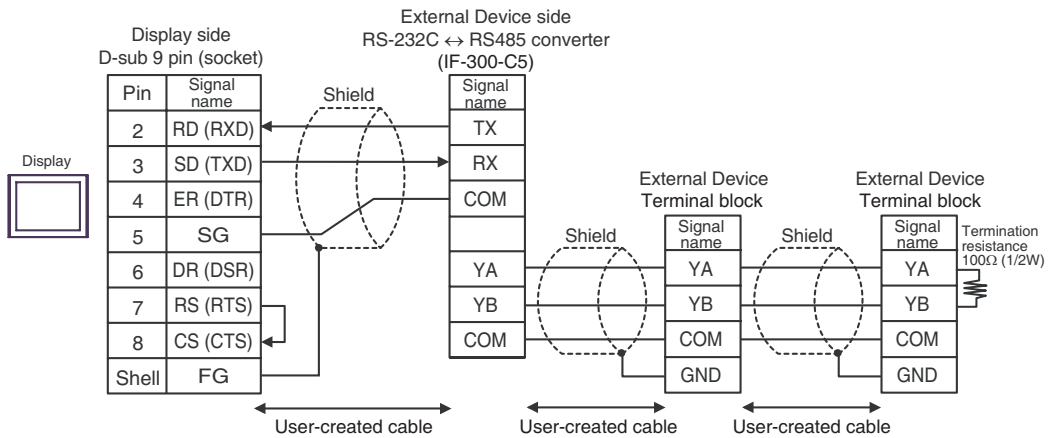
> NOTE
>
> • Termination resistance (100Ω) is built in the RS-232C ↔ RS-485 converter.
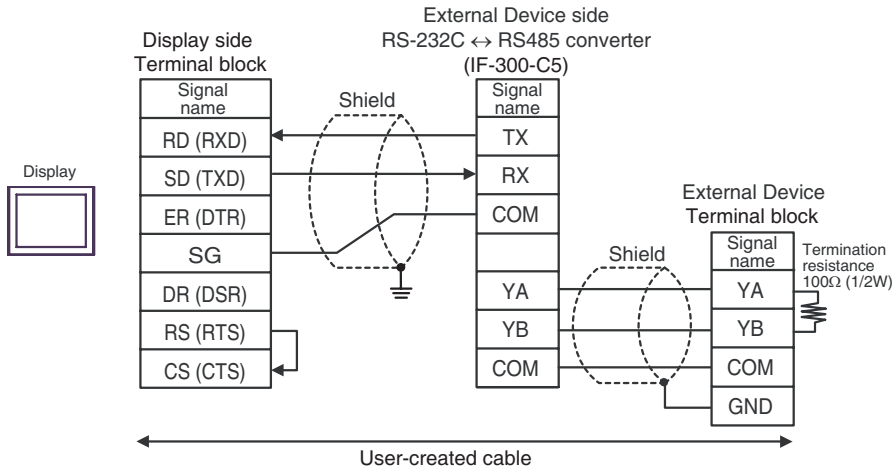
4A)
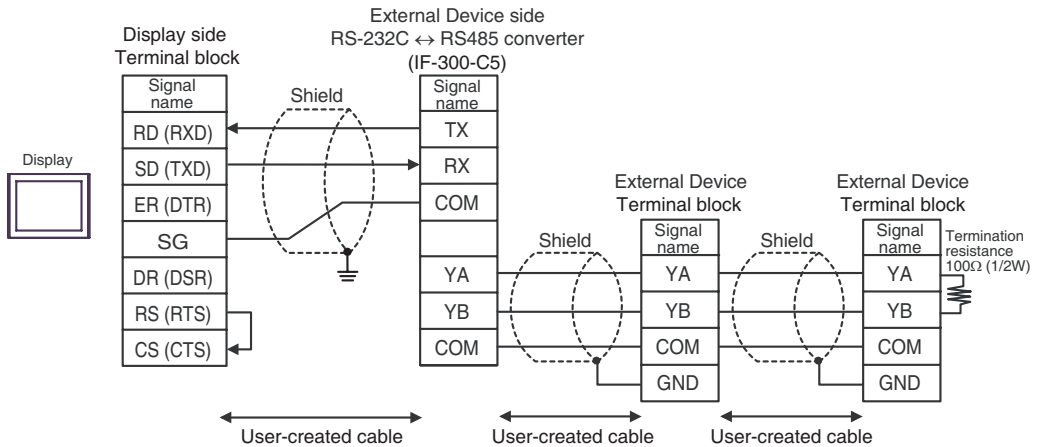
• 1:1 Connection

• 1:n Connection

4B)

• 1:1 Connection

External Device side
RS-232C ↔ RS485 converter
(IF-300-C5)

Display side
Terminal block

Signal name
RD (RXD)
SD (TXD)
ER (DTR)
SG
DR (DSR)
RS (RTS)
CS (CTS)

Display

Shield

Signal name
TX
RX
COM
YA
YB
COM

External Device
Terminal block

Shield

Signal name
YA
YB
COM
GND

Termination resistance
100Ω (1/2W)

User-created cable

• 1:n Connection

External Device side
RS-232C ↔ RS485 converter
(IF-300-C5)

Display side
Terminal block

Signal name
RD (RXD)
SD (TXD)
ER (DTR)
SG
DR (DSR)
RS (RTS)
CS (CTS)

Display

Shield

Signal name
TX
RX
COM
YA
YB
COM

External Device
Terminal block

Shield

Signal name
YA
YB
COM
GND

External Device
Terminal block

Shield

Signal name
YA
YB
COM
GND

Termination resistance
100Ω (1/2W)

User-created cable   User-created cable   User-created cable

Cable Diagram 5

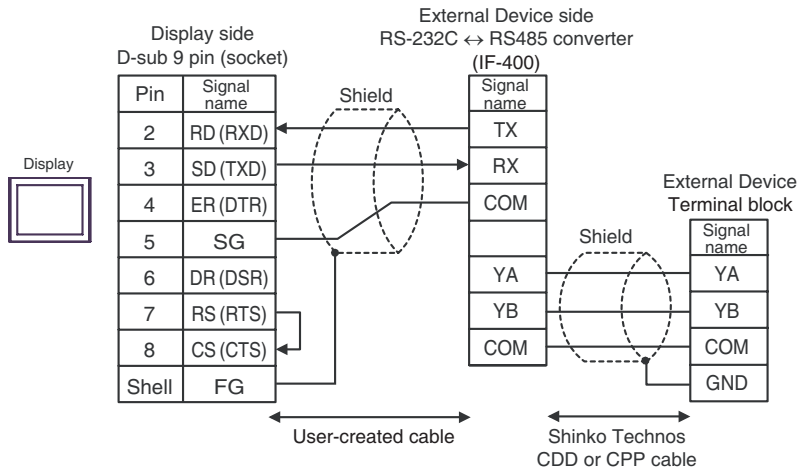| Display (Connection Port)		Cable	Notes
GP3000 (COM1) GP4000[*1] (COM1) ST (COM1) LT (COM1) IPC[*2] PC/AT	5A	User-created cable + RS-232C↔RS-485 converter IF-400 (with DCL-33A)[*3] by Shinko Technos Co., Ltd.	• Between Display and IF-400 Cable length :15m max. • Between IF-400 and Controller Cable length :1200m total
	5B	User-created cable + RS-232C↔RS-485 converter IF-400 (Controller of terminal block connection) by Shinko Technos Co., Ltd.	
	5C	User-created cable + RS-232C↔RS-485 converter IF-400 (Controller of screw plug connection) by Shinko Technos Co., Ltd.	
GP-4105 (COM1)	5D	User-created cable + RS-232C↔RS-485 converter IF-400 (with DCL-33A)[*3] by Shinko Technos Co., Ltd.	
	5E	User-created cable + RS-232C↔RS-485 converter IF-400 (Controller of terminal block connection) by Shinko Technos Co., Ltd.	
	5F	User-created cable + RS-232C↔RS-485 converter IF-400 (Controller of screw plug connection) by Shinko Technos Co., Ltd.	

*1   All GP4000 models except GP-4100 Series, GP-4*01TM and GP-4203T

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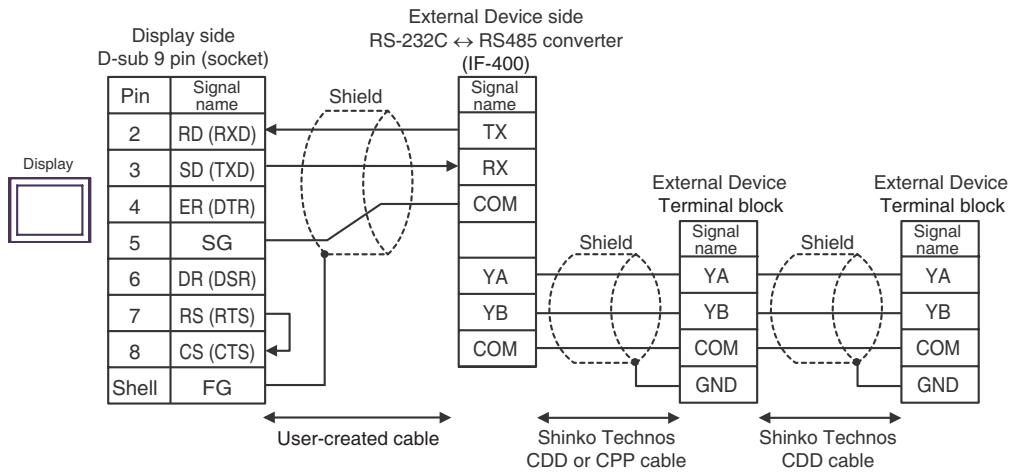   ☞ " ■ IPC COM Port" (page 9)

*3   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.)
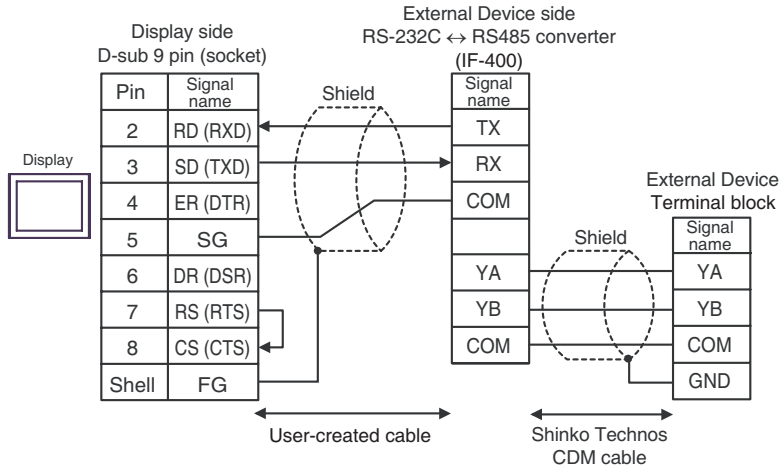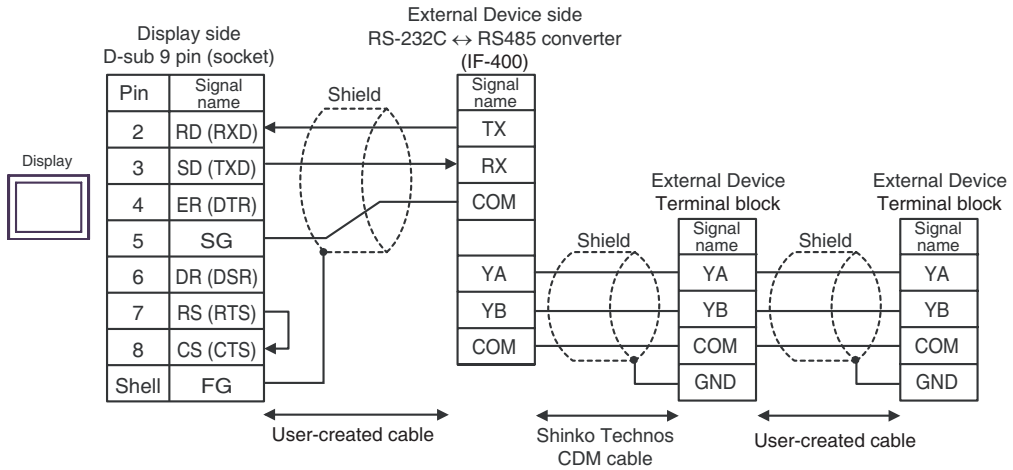
5A)

• 1:1 Connection

Display side
D-sub 9 pin (socket)

External Device side
RS-232C ↔ RS485 converter
(IF-400)

Pin	Signal name
2	RD (RXD)
3	SD (TXD)
4	ER (DTR)
5	SG
6	DR (DSR)
7	RS (RTS)
8	CS (CTS)
Shell	FG

Shield

Signal name
TX
RX
COM
YA
YB
COM

External Device
Terminal block

Shield

Signal name
YA
YB
COM
GND

Display

User-created cable

Shinko Technos
CDD or CPP cable

• 1:n Connection

Display side
D-sub 9 pin (socket)

External Device side
RS-232C ↔ RS485 converter
(IF-400)

Pin	Signal name
2	RD (RXD)
3	SD (TXD)
4	ER (DTR)
5	SG
6	DR (DSR)
7	RS (RTS)
8	CS (CTS)
Shell	FG

Shield

Signal name
TX
RX
COM
YA
YB
COM

External Device
Terminal block

Shield

Signal name
YA
YB
COM
GND

External Device
Terminal block

Shield

Signal name
YA
YB
COM
GND

Display

User-created cable

Shinko Technos
CDD or CPP cable

Shinko Technos
CDD cable

5B)

- 1:1 Connection

Display side
D-sub 9 pin (socket)

Pin	Signal name
2	RD (RXD)
3	SD (TXD)
4	ER (DTR)
5	SG
6	DR (DSR)
7	RS (RTS)
8	CS (CTS)
Shell	FG

External Device side
RS-232C ↔ RS485 converter
(IF-400)

Signal name
TX
RX
COM
YA
YB
COM

External Device
Terminal block

Signal name
YA
YB
COM
GND

Shield

User-created cable

Shinko Technos
CDM cable

- 1:n Connection

Display side
D-sub 9 pin (socket)

Pin	Signal name
2	RD (RXD)
3	SD (TXD)
4	ER (DTR)
5	SG
6	DR (DSR)
7	RS (RTS)
8	CS (CTS)
Shell	FG

External Device side
RS-232C ↔ RS485 converter
(IF-400)

Signal name
TX
RX
COM
YA
YB
COM

External Device
Terminal block

Signal name
YA
YB
COM
GND

External Device
Terminal block

Signal name
YA
YB
COM
GND

User-created cable

Shinko Technos
CDM cable

User-created cable

5C)

- 1:1 Connection

Display side
D-sub 9 pin (socket)

External Device side
RS-232C ↔ RS485 converter
(IF-400)

Pin	Signal name
2	RD (RXD)
3	SD (TXD)
4	ER (DTR)
5	SG
6	DR (DSR)
7	RS (RTS)
8	CS (CTS)
Shell	FG

User-created cable

Shinko Technos
CNS cable

- 1:n Connection

Display side
D-sub 9 pin (socket)

External Device side
RS-232C ↔ RS485 converter
(IF-400)

User-created cable

Shinko Technos
CNS cable

User-created cable

5D)

• 1:1 Connection

User-created cable	Shinko Technos CDD or CPP cable

• 1:n Connection

User-created cable	Shinko Technos CDD or CPP cable	Shinko Technos CDD cable

5E)

• 1:1 Connection

• 1:n Connection

5F)

• 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.
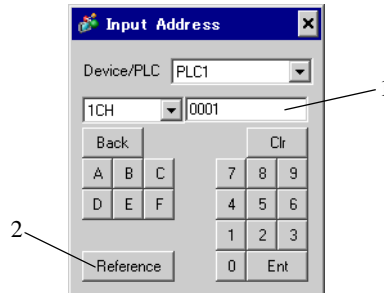
    1. Address   Enter the address.

    2. Reference   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		*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	H / L	*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 "LS Area (Direct Access Method Area)"
• Please refer to the precautions on manual notation for icons in the table.

☞ "Manual Symbols and Terminology"

6.2　　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		*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	H / L	*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.
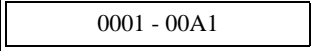
NOTE
- Please refer to the GP-Pro EX Reference Manual for system data area.
  - Cf.　GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.

  ☞ "Manual Symbols and Terminology"

6.3　　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	H / L	*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 "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.

  ☞ "Manual Symbols and Terminology"

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

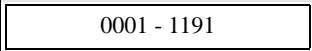 This address can be specified as system data area.

Device	Bit Address	Word Address	16 bits	Notes
Data item	0001.0 - 00A1.F	0001 - 00A1	$\boxed{\text{H / L}}$	*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 "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.

☞ "Manual Symbols and Terminology"

6.5　JCL-33A

 This address can be specified as system data area.

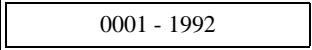| Device	Bit Address	Word Address	16 bits	Notes
Data item	0001.0 - 1191.F	0001 - 1191	$\boxed{\text{H / L}}$	*1

*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 "LS Area (Direct Access Method Area)"
- Please refer to the precautions on manual notation for icons in the table.

☞ "Manual Symbols and Terminology"

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	⌈H / L⌋	*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 "LS Area (Direct Access Method Area)"
    • Please refer to the precautions on manual notation for icons in the table.

) "Manual Symbols and Terminology"

6.7   PC-900
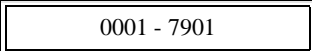
▭▭▭ This address can be specified as system data area.

Device	Bit Address	Word Address	16 bits	Notes
Data item	0001.0 - 7901.F	0001 - 7901	⌈H / L⌋	*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 "LS Area (Direct Access Method Area)"
    • Please refer to the precautions on manual notation for icons in the table.

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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	Displays IP address or device address of External Device where error occurs, or error codes received from External Device. NOTE • IP address is displayed such as "IP address (Decimal): MAC address (Hex)". • Device address is displayed such as "Address: Device address". • Received error codes are displayed such as "Decimal [Hex]".

Display Examples of Error Messages

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

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

■ 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 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