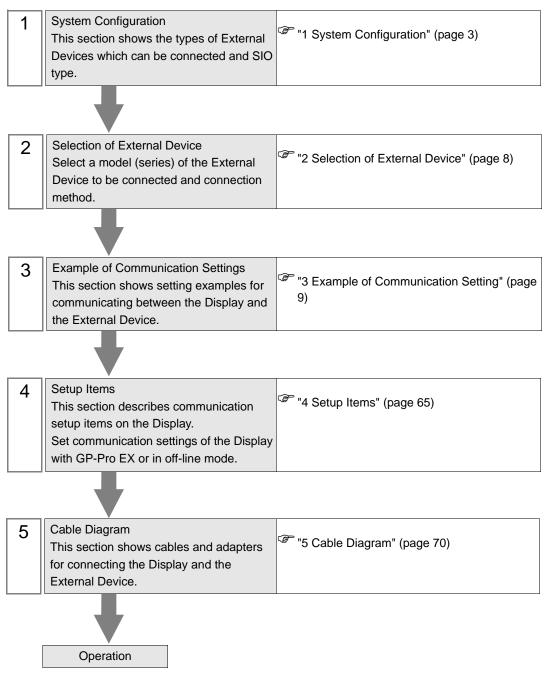
Temperature Controllers MODBUS SIO Driver

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Introduction

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

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



1 System Configuration

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

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
	DB1□□□B■□□-□□□ *1	Port on CPU unit	RS-232C	"Setting Example 1" (page 9)	"Cable Diagram 1" (page 70)
			RS-422/485 (2 wire)	"Setting Example 2" (page 11)	"Cable Diagram 3" (page 83)
DB			RS-422/485 (4 wire)	"Setting Example 3" (page 13)	"Cable Diagram 2" (page 72)
			RS-232C	"Setting Example 4" (page 15)	"Cable Diagram 1" (page 70)
	DB200000-000*2	Port on CPU unit	RS-422/485 (2 wire)	"Setting Example 5" (page 17)	"Cable Diagram 3" (page 83)
			RS-422/485 (4 wire)	"Setting Example 6" (page 19)	"Cable Diagram 2" (page 72)
	KP1□□□C■□□-□□□ *1	Port on CPU unit	RS-232C	"Setting Example 7" (page 21)	"Cable Diagram 1" (page 70)
			RS-422/485 (2 wire)	"Setting Example 8" (page 23)	"Cable Diagram 3" (page 83)
			RS-422/485 (4 wire)	"Setting Example 9" (page 25)	"Cable Diagram 2" (page 72)
			RS-232C	"Setting Example 10" (page 27)	"Cable Diagram 1" (page 70)
KP	KP2□□□□□□■-□□□ *2	Port on CPU unit	RS-422/485 (2 wire)	"Setting Example 11" (page 29)	"Cable Diagram 3" (page 83)
			RS-422/485 (4 wire)	"Setting Example 12" (page 31)	"Cable Diagram 2" (page 72)
	KP3□0C□□■-□□□ ^{*2}	Port on CPU unit	RS-232C	"Setting Example 13" (page 33)	"Cable Diagram 1" (page 70)
			RS-422/485 (2 wire)	"Setting Example 14" (page 35)	"Cable Diagram 3" (page 83)
			RS-422/485 (4 wire)	"Setting Example 15" (page 37)	"Cable Diagram 2" (page 72)

Continues to the next page.

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
	LT23	Port on CPU unit	RS-422/485 (2 wire)	"Setting Example 16" (page 39)	"Cable Diagram 3" (page 83)
		Port on CPU unit	RS-232C	"Setting Example 17" (page 41)	"Cable Diagram 1" (page 70)
	LT3□□□□■□0-□□□ *1		RS-422/485 (2 wire)	"Setting Example 18" (page 43)	"Cable Diagram 3" (page 83)
LT			RS-422/485 (4 wire)	"Setting Example 19" (page 45)	"Cable Diagram 2" (page 72)
		Port on CPU unit	RS-232C	"Setting Example 20" (page 47)	"Cable Diagram 1" (page 70)
	LT4□□□□■□□-□□□ *1 *4		RS-422/485 (2 wire)	"Setting Example 21" (page 49)	"Cable Diagram 3" (page 83)
			RS-422/485 (4 wire)	"Setting Example 22" (page 51)	"Cable Diagram 2" (page 72)
	LT830□□000-■□□ *5	Port on CPU unit	RS-422/485 (2 wire)	"Setting Example 23" (page 53)	"Cable Diagram 3" (page 83)
	JUDDDDDDD513 ^{*6} JUDDDDDDD613 ^{*7}	Port on CPU unit	RS-422/485 (2 wire)	"Setting Example 24" (page 55)	"Cable Diagram 5" (page 107)
JU	JU□□□□□□■□□ *8 *9	Setting communications unit	RS-422/485 (2 wire)	"Setting Example 25" (page 57)	"Cable Diagram 4" (page 95)
			RS-422/485 (4 wire)	"Setting Example 26" (page 59)	"Cable Diagram 2" (page 72)
JW	JW□□□□□□■□□ *8	Setting communications unit	RS-422/485 (2 wire)	"Setting Example 27" (page 61)	"Cable Diagram 4" (page 95)
			RS-422/485 (4 wire)	"Setting Example 28" (page 63)	"Cable Diagram 2" (page 72)

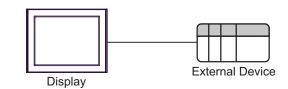
*1 Only the External Device with the ■ part of the CPU type has codes blow can be used. R (RS-232C), A (RS-422A), S (RS-485)

- *2 Only the External Device with the part of the CPU type has codes blow can be used.
 R (RS-232C), A (RS-422A), S (RS-485), B (RS-232C + RS-232C), C (RS-232C + RS-422A),
 D (RS-232C + RS-485), E (RS-485 + RS-232C), F (RS-485 + RS-422A), G (RS-485 + RS-485)
- *3 Only the External Device with the part of the CPU type has codes blow can be used. S or 2 (RS-485)
- *4 To communicate with the Display, use LT400 series with Serial Number of LT4037**** or later. If one with Serial Number of LT4036**** or earlier is used, an error will be displayed.
- *5 Only the External Device with the part of the CPU type has codes blow can be used.
 2 (RS-485)
- *6 JU series with temperature controller feature <Unit space Master>.
- *7 JU series without temperature controller feature <Unit space Slave>.
 To communicate with the Display, connect JU series with temperature controller feature <Unit space Master> (JUDDDDDDD513) to make master and slave unit communication. Please refer to the External Device manual on how to make unit communication.
- *8 Only the External Device with the part of the CPU type has codes blow can be used.
 3 or 4 (RS-422A, RS-485)
- *9 JU series Single-phase.

4

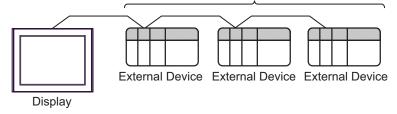
Connection Configuration

1:1 connection

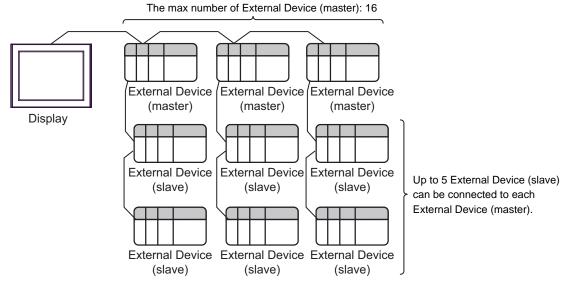


• 1:n connection

The max number of External Device: 16



• 1:n connection (For JU series with temperature controller feature)



■ 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			
Genes	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	510 type. R5-252e	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 Ω) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 Ω) 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	Description	
1	OFF	Reserved (always OFF)	
2	ON	SIO type: RS-422/485	
3	ON	510 type. K5-422/485	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 Ω) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 Ω) 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 (4 wire)

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	510 type. N5-422/405	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 Ω) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 Ω) 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.

Welcome to GP-Pro EX	Device/PLC Number of Devices/PLCs		
	Device/PLC 1		
	Manufacturer Series	CHINO Corporation	
	Port	COM1	
		Refer to the manual of this Device/PLC	
	्	Recent Device/PLC	
	Use System	Area Device Information	
		Back (B) Communication Settings New Screen Cancel	

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 "CHINO Corporation."
Series	Select the External Device model (series) and the connection method. Select "Temp. Controllers MODBUS SIO." In System configuration, make sure the External Device you are connecting is supported by "Temp. Controllers MODBUS SIO". "" "1 System Configuration" (page 3)
Port	Select the Display port to be connected to the External Device.
Use System Area	This driver cannot be used.

3 Example of Communication Setting

The following shows examples of communication settings of the Display and the External Device, which is recommended by Pro-face.

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].

Device/PLC1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SIO F	Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type	
Speed 9600 💌	
Data Length O 7 O 8	
Parity NDNE C EVEN C ODD	
Stop Bit	
Flow Control NDNE C ER(DTR/CTS) C X0N/X0FF	
Timeout 3 📩 (sec)	
Retry 2	
Wait To Send 10 📑 (ms)	
RI/VCC © RI O 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 <u>Add Device</u> of Devices/PLCs 16	
No. Device Name Settings	Add Indirect Device
1 PLC1 Imm Series=DB1000 Series_Station No.=1	4

IMPORTANT

Set Wait To Send to 5ms 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	DB1000 Series	•		
Please reconfirm all of you have changed the	address settings that you a series.	re using if		
Station No.	1			
		Default		
	OK (<u>D</u>)	Cancel		

Settings of External Device

Use the MODE key, SEL key, ENT key, shift key, down key and up key in front of the controller for communication settings of the External Device.

- **1** Press MODE key.
- 2 Press down/up key to move to "MODE7."
- **3** Press SEL key to display items to be set.
- 4 Press down/up key or shift key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	D Corporation	Series Temp. Controller:	s MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	RS422/485(2wire) ORS RS S	422/485(4wire)	
Speed	9600	•		
Data Length	C 7	© 8		
Parity	NONE	O EVEN O ODD		
Stop Bit	€ 1	C 2		
Flow Control	NONE	C ER(DTR/CTS) C XON/XO	JFF	
Timeout	3 🔹	sec)		
Retry	2 🔅			
Wait To Send	10 📫	ms)		
RI / VCC	© RI	C VCC		
or VCC (5V Powe		at the 9th pin to RI (Input) ⊧ the Digital's RS232C	Default	
Device-Specific Settings				
Allowable Number of Devices/PLCs	Add 16	Device		
No. Device Name	16 Settings			Add Indirect Device
1 PLC1		DB1000 Series,Station No.=1		- Ce

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value	
1:1	5ms or more	
1 : n	10ms 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]

💕 Individual Dev	vice Settings	×
PLC1		
Series	DB1000 Series	•
Please reconfirm you have chang	n all of address settings that you are u ged the series.	sing if
Station No.	1	
		Default
	OK (<u>0</u>)	Cancel

Use the MODE key, SEL key, ENT key, shift key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE7."
- ${\bf 3}$ Press SEL key to display items to be set.
- 4 Press down/up key or shift key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1					
Summary					Change Device/PLC
Manufacturer CHINO	Corporation	Series	Temp. Controllers MODBU	S SIO P	ort COM1
Text Data Mode	1 <u>Change</u>				
Communication Settings					
SIO Type	C RS232C	C RS422/485(2	wire) 💿 RS422/485(4	1wire)	
Speed	9600	•			
Data Length	C 7	© 8			
Parity	NONE	C 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	10 📫 (r	ms)			
RI / VCC	© RI	C VCC			
In the case of RS2	32C, you can selec	t the 9th pin to RH	[Input]		
or VCC (5V Power Isolation Unit, pleas	supply). If you use e select it to VCC.	: the Digital's H523)efault	
Device-Specific Settings					
Allowable Number		Device			
of Devices/PLCs No. Device Name	16 Settings				Add Indirect Device
1 PLC1		DB1000 Series,Sta	tion No. =1		- Contraction of the second se
	HOLE PERSON				

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value	
1:1	5ms or more	
1 : n	10ms 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]

💣 Individual Devid	e Settings	×
PLC1		
Series	DB1000 Series	1
Please reconfirm you have change	all of address settings that you are using if d the series.	
Station No.	1	
	Default	
	OK (<u>0</u>) Cancel	

Use the MODE key, SEL key, ENT key, shift key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- $2 \,$ Press down/up key to move to "MODE7."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or shift key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHINC	Corporation Series Temp. Controllers MODBUS	SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	RS232C C RS422/485(2wire) C RS422/485(4)	vire)
Speed	9600	
Data Length	C 7 C 8	
Parity	NONE C EVEN C ODD	
Stop Bit		
Flow Control	NONE C ER(DTR/CTS) C X0N/X0FF	
Timeout	3 (sec)	
Retry	2 *	
Wait To Send	10 * (ms)	
RI / VCC	RI C VCC	
	32C, you can select the 9th pin to RI (Input) Supply). If you use the Digital's RS232C se select it to VCC. De	ault
Device-Specific Settings		
Allowable Number of Devices/PLCs	Add Device 16	Add Indirect
No. Device Name	Settings	Device
👗 1 PLC1	Series=DB2000 Series,Station No.=1	+

IMPORTANT

Set Wait To Send to 5ms 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]

<i>参</i> Individual Device S	ettings	×		
PLC1				
Series	DB2000 Series	•		
Please reconfirm all of address settings that you are using if you have changed the series.				
Station No.	1 🗧			
		Default		
	OK (<u>0</u>)	Cancel		

Use the MODE key, SEL key, ENT key, shift key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE7."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or shift key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHINC) Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	RS422/485(2)	wire) C RS422/485(4wire)	
Speed	9600	-		
Data Length	0.7	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	• 1	C 2		
Flow Control	NONE	C ER(DTR/CTS) C XON/XOFF	
Timeout	3 +	(sec)		
Retry	2 📫			
Wait To Send	10 📫	(ms)		
RI / VCC	© BI	C VCC		
		ct the 9th pin to RI (
Isolation Unit, plea	ise select it to VCC.	e the Digital's RS23	2L Default	1
Device-Specific Settings				
Allowable Number		Device		
of Devices/PLCs No. Device Name	16 Settings			Add Indirect
No. Device Name		s =DB2000 Series,Stat	ion No =1	Device
. prest	Fill Jocuca	002000 00100,0100		~

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

Individual Dev	ice Settings	×
PLC1		
Series	DB2000 Series	•
Please reconfirm you have chang	all of address settings that you are us ed the series.	ing if
Station No.	1 🗄	
		Default
	OK (<u>0</u>) C	ancel

Use the MODE key, SEL key, ENT key, shift key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE7."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or shift key, select setting value, and press ENT key.

Setup Items	Setting Value	
COM BIT RATE	9600bps	
COM NUMBER	01	
COM KIND	СОМ	
COM PROTOCOL	MODBUS(RTU)	
COM CHARCTER	8BIT/NON/STOP1	

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].

Device/PLC1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type C RS232C C RS422/485(2wire) RS422/485(4wire)	
Speed 9600 🔻	
Data Length C 7 C 8	
Parity NONE	
Stop Bit	
Flow Control NONE C ER(DTR/CTS) C X0N/X0FF	
Timeout 3 📑 (sec)	
Retry 2	
Wait To Send 10 📑 (ms)	
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	E
Device-Specific Settings	
Allowable Number <u>Add Device</u>	
of Devices/PLCs 16 No. Device Name Settings	Add Indirect
No. Device Name Settings No. Device Name Settings 1 PLC1 Image: Setting	Device
	v

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

💰 Individual Device S	Settings 🛛 🔀
PLC1	
Series	DB2000 Series
Please reconfirm all o you have changed the	f address settings that you are using if e series.
Station No.	1 芸
	Default
	OK (<u>0</u>) Cancel

Use the MODE key, SEL key, ENT key, shift key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE7."
- ${\bf 3}$ Press SEL key to display items to be set.
- 4 Press down/up key or shift key, select setting value, and press ENT key.

Setup Items	Setting Value	
COM BIT RATE	9600bps	
COM NUMBER	01	
COM KIND	СОМ	
COM PROTOCOL	MODBUS(RTU)	
COM CHARCTER	8BIT/NON/STOP1	

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/PLC1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SI	0 Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type	e)
Speed 9600 V	
Data Length C 7 C 8	
Parity NONE	
Stop Bit 1 2	
Flow Control NONE C ER(DTR/CTS) C X0N/X0FF	
Timeout 3 😴 (sec)	
Retry 2	
Wait To Send 10 📫 (ms)	
In the case of RS232C, you can select the 5th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. Defa	ult
Device-Specific Settings	
Allowable Number <u>Add Device</u> of Devices/PLCs 16	
No. Device Name Settings	Add Indirect Device
1 PLC1 Iseries=KP1000 Series,Station No.=1	+

IMPORTANT

Set Wait To Send to 5ms 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]

💰 Individual Device S	ettings	×	
PLC1			
Series	KP1000 Series	•	
Please reconfirm all of address settings that you are using if you have changed the series.			
Station No.	1 📫		
		Default	
	OK (<u>0)</u>	Cancel	

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- $2 \ {\rm Press \ down/up \ key \ to \ move \ to \ "MODE8."}$
- ${\bf 3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value	
COM BIT RATE	9600bps	
COM NUMBER	01	
COM KIND	СОМ	
COM PROTOCOL	MODBUS(RTU)	
COM CHARCTER	8BIT/NON/STOP1	

3.8 Setting Example 8

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHINO	Corporation	Series 📑	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	• RS422/485(2wi	ire) C RS422/485(4wire)	
Speed	9600	-		
Data Length	0.7	© 8		
Parity	NONE	C 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	10 🕂	(ms)		
RI / VCC	© BI	C VCC		
		ct the 9th pin to RI (In		
Isolation Unit, plea	se select it to VCC.	e the Digital's RS2320	Default	
Device-Specific Settings				
Allowable Number		Device		
of Devices/PLCs No. Device Name	16 Settings			Add Indirect
1 PLC1		: =KP1000 Series,Statio	n No =1	Device
	HOL JOONGO			· · · ·

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

Individual Dev	vice Settings	×
PLC1		
Series	KP1000 Series	•
Please reconfirm you have chang	n all of address settings that you are i ied the series.	using if
Station No.	1 🗮	
		Default
	OK (<u>0</u>)	Cancel

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE8."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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 CHIN0) Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	C RS422/485(2v	wire) • RS422/485(4wire)	
Speed	9600	•		
Data Length	0.7	© 8		
Parity	NONE	C 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	10 🕂	(ms)		
RI/VCC	© BL	O VCC		
or VCC (5V Powe		ect the 9th pin to RI (I se the Digital's RS232		
Device-Specific Settings				_
Allowable Number of Devices/PLCs	16	Device		
No. Device Name	16 Setting	2		Add Indirect Device
1 PLC1		• =KP1000 Series,Stati	on No.=1	

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

💕 Individual Device S	Settings	×
PLC1		
Series	KP1000 Series	
Please reconfirm all o you have changed th	of address settings that you a e series.	re using if
Station No.	1 🗧	
		Default
	OK (<u>D</u>)	Cancel

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE8."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN0) Corporation	Series T	emp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	RS232C	RS422/485(2wire)	e) C RS422/485(4wire)	
Speed	9600	-		
Data Length	07	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	• 1	O 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 📫 (se	c)		
Retry	2 ÷			
Wait To Send	10 🕂 (ms	s)		
BL/VCC	@ BI	O VCC		
In the case of RS	232C, you can select t	the 9th pin to RI (Inp		
	: Supply). If you use this select it to VCC.	he Digital's RS232C	Default	
Device-Specific Settings				
Allowable Number	Add De	evice		
of Devices/PLCs	16			Add Indirect
No. Device Name	Settings	P2000 Series,Station	No. 1	Device
M PLUI	Series=Kr	-2000 Series, Station	NO.=1	•

IMPORTANT

Set Wait To Send to 5ms 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]

<i></i> Individual Device S	ettings	×
PLC1		
Series	KP2000 Series	•
Please reconfirm all o you have changed the	f address settings that you ar e series.	e using if
Station No.	1	
		Default
	OK (<u>0</u>)	Cancel

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE8."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 1 Change	
Communication Settings	
SIO Type C RS232C @ RS422/485(2wire) C RS422/485(4wire)	
Speed 9600 💌	
Data Length C 7 💿 8	
Parity NONE C EVEN C ODD	
Stop Bit 💿 1 💿 2	
Flow Control NONE ER(DTR/CTS) C X0N/X0FF	
Timeout 3 * (sec)	
Retry 2	
Wait To Send 10 👘 (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 <u>Add Device</u> of Devices/PLCs 16	
No. Device Name Settings	Add Indirect Device
1 PLC1 Series=KP2000 Series,Station No.=1	

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

鯵 Individual Devi	ce Settings 🔹 🔉	ĸ
PLC1		
Series	KP2000 Series	
Please reconfirm you have change	all of address settings that you are using if d the series.	
Station No.	1	
	Default	
	OK (<u>D</u>) Cancel	

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE8."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	O Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	O RS232C	C RS422/485(2w	ire) • RS422/485(4wire)	
Speed	9600	-		
Data Length	O 7	C 8		
Parity	NONE	C 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	10 📫	(ms)		
RI / VCC	© BI	O VCC		
or VCC (5V Powe		ect the 9th pin to RI (In se the Digital's RS2321		1
Device-Specific Settings	:			1
Allowable Number	Add	Device		
of Devices/PLCs No. Device Name	16 Setting			Add Indirect
No. Device Name		s =KP2000 Series,Statio	n No =1	Device
. preci	The locales	-14 2000 36163,31800		•

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

鯵 Individual Dev	vice Settings	×
PLC1		
Series	KP2000 Series	•
Please reconfirm you have chang	n all of address settings that you are usin ged the series.	ıg if
Station No.	1 🕂	
	[)efault
	OK (<u>0</u>) Ca	ncel

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE8."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHIN0	Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	RS232C RS422/485(2wire) RS422/485(4wire)	
Speed	9600	
Data Length	C7 C8	
Parity	NONE C EVEN C ODD	
Stop Bit	• 1 • C 2	
Flow Control	NONE O ER(DTR/CTS) O XON/XOFF	
Timeout	3 (sec)	
Retry	2 -	
Wait To Send	10 <u>+</u> (ms)	
RI / VCC	RI VCC	
or VCC (5V Powe	232C, you can select the 9th pin to RI (Input) Supply). If you use the Digital's RS232C se select it to VCC. Default	1
Device-Specific Settings		
Allowable Number of Devices/PLCs	Add Device 16	Add Indirect
No. Device Name	Settings	Add Indirect Device
👗 1 PLC1	Series=KP3000 Series,Station No.=1	4

IMPORTANT

Set Wait To Send to 5ms 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]

Individual Device S	ettings	×
PLC1		
Series	KP3000 Series	•
Please reconfirm all o you have changed the	f address settings that you ar e series.	e using if
Station No.	1	
		Default
	OK (<u>0)</u>	Cancel

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE8."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHINC) Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	RS422/485(2w)	rire) 🔿 RS422/485(4wire)	
Speed	9600	-		
Data Length	0.7	© 8		
Parity	NONE	C 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	10 📫	(ms)		
RI / VCC	© BL	C VCC		
		ect the 9th pin to RI (In the Digital's RS232		
	ise select it to VCC		Default	1
Device-Specific Settings				
Allowable Number		Device		
of Devices/PLCs No. Device Name	16 Setting:			Add Indirect
X 1 PLC1		» =KP3000 Series,Statio	n No =1	Device
	HILL I CONDO			

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

💕 Individual Device	Settings 🔀
PLC1	
Series	KP3000 Series
Please reconfirm all you have changed t	of address settings that you are using if he series.
Station No.	1
	Default
	OK (<u>O</u>) Cancel

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE8."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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 CHINC) Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	O RS232C	C RS422/485(2w	ire) • RS422/485(4wire)	
Speed	9600	-		
Data Length	O 7			
Parity	NONE	C EVEN	C ODD	
Stop Bit	1 1	C 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 📫	(sec)		
Retry	2 🔹			
Wait To Send	10 📫	(ms)		
RI / VCC	© BI	C VCC		
		ct the 9th pin to RI (In		
Isolation Unit, plea	r supply). In your us ase select it to VCC	e the Digital's RS232	Default	
Device-Specific Settings				
Allowable Number		Device		
of Devices/PLCs No. Device Name	16 Settings			Add Indirect Device
X 1 PLC1		» =KP3000 Series,Statio	n No.=1	
	POLL			•

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

💕 Individual Device	Settings 🔀
PLC1	
Series	KP3000 Series
Please reconfirm all you have changed t	of address settings that you are using if he series.
Station No.	1
	Default
	OK (<u>O</u>) Cancel

Use the MODE key, SEL key, ENT key, right key, down key and up key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE8."
- $\mathbf{3}$ Press SEL key to display items to be set.
- 4 Press down/up key or right key, select setting value, and press ENT key.

Setup Items	Setting Value
COM BIT RATE	9600bps
COM NUMBER	01
COM KIND	СОМ
COM PROTOCOL	MODBUS(RTU)
COM CHARCTER	8BIT/NON/STOP1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN0) Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	RS422/485(2)	wire) C RS422/485(4wire)	
Speed	9600	•		
Data Length	0.7	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	€ 1	C 2		
Flow Control	NONE	C ER(DTR/CTS) O XON/XOFF	
Timeout	3 +	(sec)		
Retry	2 +			
Wait To Send	20 📫	(ms)		
RI / VCC	© BI	C VCC		
or VCC (5V Powe		ct the 9th pin to RI (I e the Digital's RS23;		1
Device-Specific Settings				
Allowable Number of Devices/PLCs	16	Device		
No. Device Name	Setting:	5		Add Indirect Device
👗 1 PLC1		- =LT230 Series,Statio	n No.=1	•

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	20ms or more
1 : n	65ms 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]

Individual Dev	vice Settings	×
PLC1		
Series	LT230 Series	•
Please reconfirm you have chang	n all of address settings that you are ed the series.	using if
Station No.	1 📑	
		Default
	OK (<u>D</u>)	Cancel

Use the SEL/ENT key, DOWN key and UP key in front of the controller for communication settings of the External Device.

- **1** Press SEL/ENT key for 2 seconds.
- 2 Press UP key to move to "MODE7."
- $\mathbf{3}$ Press SEL/ENT key to display items to be set.
- 4 Press DOWN/UP key, select setting value, and press SEL/ENT key.

Setup Items	Setting Value
PtCL	rtU
FUnC	Com
AdrS	1
rAtE	9600
CHAr	5

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	D Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	RS232C	C RS422/485(2w	vire) C RS422/485(4wire)	
Speed	9600	-		
Data Length	0.7	© 8		
Parity	NONE	C 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		O VCC		
or VCC (5V Powe		ct the 9th pin to RI (In e the Digital's RS2321		
Device-Specific Settings				
Allowable Number of Devices/PLCs	16 <u>Add</u>	Device		
No. Device Name	Settings			Add Indirect Device
👗 1 🛛 PLC1	Series=	=LT300 Series,Station	No.=1	

IMPORTANT

Set Wait To Send to 20ms 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]

Individual Device	Settings	×
PLC1		
Series	LT300 Series	•
Please reconfirm all you have changed t	of address settings that you a he series.	re using if
Station No.	1	
		Default
	OK (<u>D</u>)	Cancel

Use the MODE key, SEL/ENT key, DOWN key and UP key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press UP key to move to "MODE7."
- $\mathbf{3}$ Press SEL/ENT key to display items to be set.
- $\label{eq:2.1} 4 \ \text{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

Setup Items	Setting Value
PtCL	rtU
FUnC	Com
AdrS	1
rAtE	9600
CHAr	5

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].

Device/PLC1	
Summary Change Device/	<u>PLC</u>
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SID Port COM1	_
Text Data Mode 1 Change	
Communication Settings	
SIO Type O RS232C O RS422/485(2wire) O RS422/485(4wire)	
Speed 9600	
Data Length C 7 C 8	
Parity NONE C EVEN C ODD	
Stop Bit	
Flow Control NONE C ER(DTR/CTS) C X0N/X0FF	
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 <u>Add Device</u> of Devices/PLCs 16	
No. Device Name Settings Device	
I PLC1 Series_LT300 Series_Station No.=1	

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	20ms or more
1 : n	65ms 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]

💕 Individual Devic	e Settings	×
PLC1		
Series	LT 300 Series	•
Please reconfirm a you have changed	II of address settings that you a I the series.	ire using if
Station No.	1	
		Default
	OK (<u>0</u>)	Cancel

Use the MODE key, SEL/ENT key, DOWN key and UP key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press UP key to move to "MODE7."
- $\mathbf{3}$ Press SEL/ENT key to display items to be set.
- 4 Press DOWN/UP key, select setting value, and press SEL/ENT key.

Setup Items	Setting Value
PtCL	rtU
FUnC	Com
AdrS	1
rAtE	9600
CHAr	5

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].

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MC	DBUS SIO Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type C RS232C C RS422/485(2wire) © RS422	/485(4wire)
Speed 9600 V	
Data Length C 7 © 8	
Parity ODD ODD	
Stop Bit 1 2	
Flow Control NONE C ER(DTR/CTS) C X0N/X0FF	
Timeout 3 🐳 (sec)	
Retry 2	
Wait To Send 20 📑 (ms)	
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	<u> </u>
Allowable Number Add Device	
of Devices/PLCs 16	Add Indirect
No. Device Name Settings	Device
1 PLC1 Series=LT300 Series,Station No.=1	

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	20ms or more
1 : n	65ms 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]

💕 Individual Devic	e Settings	×
PLC1		
Series	LT 300 Series	•
Please reconfirm a you have changed	II of address settings that you a I the series.	ire using if
Station No.	1	
		Default
	OK (<u>0</u>)	Cancel

Use the MODE key, SEL/ENT key, DOWN key and UP key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press UP key to move to "MODE7."
- $\mathbf{3}$ Press SEL/ENT key to display items to be set.
- $\label{eq:2.1} 4 \ \text{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

Setup Items	Setting Value
PtCL	rtU
FUnC	Com
AdrS	1
rAtE	9600
CHAr	5

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].

Device/PLC1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type • RS232C © RS422/485(2wire) © RS422/485(4wire)	
Speed 9600 🔻	
Data Length C 7 © 8	
Parity NONE C EVEN C ODD	
Stop Bit	
Flow Control O NONE O ER(DTR/CTS) O X0N/X0FF	
Timeout 3 📑 (sec)	
Retry 2	
Wait To Send 10 📫 (ms)	
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	1
Device-Specific Settings	
Allowable Number <u>Add Device</u>	
of Devices/PLCs 16	Add Indirect
No. Device Name Settings No. Device Name Settings 1 PLC1 Image: Setting	Device
IFLUI	*

IMPORTANT

Set Wait To Send to 5ms 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]

💰 Individual Device :	Settings	×
PLC1		
Series	LT 400 Series	•
Please reconfirm all of address settings that you are using if you have changed the series.		
Station No.	1 🗧	
		Default
	OK (<u>0</u>)	Cancel

Use the MODE key, SEL/ENT key, DOWN key and UP key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press UP key to move to "MODE7."
- $\mathbf{3}$ Press SEL/ENT key to display items to be set.
- 4 Press DOWN/UP key, select setting value, and press SEL/ENT key.

Setup Items	Setting Value
PrtCL	rtU
FUnC	Com
AdrS	1
rAtE	9600
CHArA	8n1

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].

Device/PLC1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS S	IO Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type O RS232C @ RS422/485(2wire) O RS422/485(4wi	re)
Speed 9600	
Data Length C 7 C 8	
Parity O NONE O EVEN O ODD	
Stop Bit	
Flow Control O NONE O ER(DTR/CTS) O X0N/X0FF	
Timeout 3 😴 (sec)	
Retry 2	
Wait To Send 10 💼 (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. Def.	ault
Device-Specific Settings	
Allowable Number <u>Add Device</u> of Devices/PLCs 16	
No. Device Name Settings	Add Indirect Device
1 PLC1 Series=LT 400 Series,Station No.=1	4

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

💕 Individual Devi	te Settings	×
PLC1		
Series	LT400 Series]
Please reconfirm you have change	all of address settings that you are using if d the series.	
Station No.	1 ≑	
	Default	
	OK (<u>D</u>) Cancel	1

Use the MODE key, SEL/ENT key, DOWN key and UP key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press UP key to move to "MODE7."
- $\mathbf{3}$ Press SEL/ENT key to display items to be set.
- $\label{eq:2.1} 4 \ \text{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

Setup Items	Setting Value
PrtCL	rtU
FUnC	Com
AdrS	1
rAtE	9600
CHArA	8n1

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 CHIND Corporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode 1 Char	<u>ae</u>
Communication Settings	
SIO Type 🔿 RS232	C O RS422/485(2wire) 💽 RS422/485(4wire)
Speed 9600	•
Data Length C 7	© 8
Parity NONE	O EVEN O ODD
Stop Bit 📀 1	© 2
Flow Control NONE	O ER(DTR/CTS) O XON/XOFF
Timeout 3	* (sec)
Retry 2	* *
Wait To Send 10	* (ms)
RI / VCC © RI	O VCC
In the case of RS232C, you ca or VCC (5V Power Supply). If y Isolation Unit, please select it to	ou use the Digital's RS232C
	Default
Device-Specific Settings Allowable Number	Add Device
of Devices/PLCs 16	Add Indirect
	ttings Device
👗 1 PLC1 📷 S	eries=LT400 Series,Station No.=1

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

Individual Devi	ce Settings	×
PLC1		
Series	LT400 Series	•
Please reconfirm you have change	all of address settings that you are u d the series.	ising if
Station No.	1 🔅	
		Default
	OK (<u>D</u>)	Cancel

Use the MODE key, SEL/ENT key, DOWN key and UP key in front of the controller for communication settings of the External Device.

- 1 Press MODE key.
- 2 Press UP key to move to "MODE7."
- $\mathbf{3}$ Press SEL/ENT key to display items to be set.
- 4 Press DOWN/UP key, select setting value, and press SEL/ENT key.

Setup Items	Setting Value
PrtCL	rtU
FUnC	Com
AdrS	1
rAtE	9600
CHArA	8n1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHINO	Corporation	Series Temp. C	ontrollers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	RS422/485(2wire)	C RS422/485(4wire)	
Speed	9600	•		
Data Length	C 7	© 8		
Parity	NONE	C EVEN C	ODD	
Stop Bit	@ 1	O 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		
or VCC (5V Power	Supply). If you us	st the 9th pin to RI (Input) e the Digital's RS232C		
Isolation Unit, plea	se select it to VLL.		Default	
Device-Specific Settings				
Allowable Number of Devices/PLCs	16 <u>Add</u>	<u>Device</u>		
No. Device Name	Settings			Add Indirect Device
👗 1 PLC1	Series:	LT830 Series,Station No.=1		4

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	20ms or more
1 : n	65ms 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]

<i></i> Individual Dev	vice Settings	×
PLC1		
Series	LT830 Series	•
Please reconfirm you have chang	n all of address settings that you ged the series.	are using if
Station No.	1 🗦	
		Default
	OK (<u>0</u>)	Cancel

Use the SEL/ENT key, DOWN key and UP key in front of the controller for communication settings of the External Device.

- **1** Press SEL/ENT key for 2 seconds.
- 2 Press UP key to move to "MODE6."
- $\mathbf{3}$ Press SEL/ENT key to display items to be set.
- 4 Press DOWN/UP key, select setting value, and press SEL/ENT key.

Setup Items	Setting Value
PtCL	rtU
FUnC	Com
AdrS	1
rAtE	9600
CHAr	8n1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	O Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	• RS422/485(2w)	vire) 🔿 RS422/485(4wire)	
Speed	9600	-		
Data Length	O 7			
Parity	NONE	C EVEN	O ODD	
Stop Bit	I 1	C 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 📫	(sec)		
Retry	2 +			
Wait To Send	10 📫	(ms)		
RI / VCC	© RI	O VCC		
or VCC (5V Powe		ct the 9th pin to RI (Ir e the Digital's RS232		1
Device-Specific Settings				1
Allowable Number of Devices/PLCs		Device		
No. Device Name	Setting	3		Add Indirect Device
👗 1 PLC1	Series	=JU Series,Station No	.=1	4

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

Individual Dev	ice Settings	×
PLC1		
Series	JU Series	•
Please reconfirm you have chang	all of address settings that you a ed the series.	re using if
Station No.	1 🗦	
		Default
	OK (<u>0</u>)	Cancel

Use the rotary switch and DIP switches of the External Device for communication settings of the External Device. Please refer to the manual of the External Device for more details.

• Rotary switch (SW1)

Rotary switch	Setting Value
SW1	1

• DIP switch (SW2)

DIP switches	Setting Value
SW1	OFF
SW2	OFF
SW3	OFF
SW4	OFF
SW5	OFF
SW6	OFF
SW7	OFF
SW8	OFF

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	O Corporation	Series Te	emp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	• RS422/485(2wire)	e) O RS422/485(4wire)	
Speed	9600	•		
Data Length	C 7	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	€ 1	C 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 🔹	(sec)		
Retry	2 🔹			
Wait To Send	10 📫	(ms)		
RI / VCC	© RI	C VCC		
or VCC (5V Powe		ct the 9th pin to RI (Inpu e the Digital's RS232C	ut) Default	
Device-Specific Settings				
Allowable Number of Devices/PLCs	Add 16	Device		
No. Device Name	Settings			Add Indirect Device
👗 1 PLC1		=JU Series(Single-Phase),Station No.=1	

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

Individual Devi	ce Settings	×
PLC1		
Series	JU Series(Single-Phase)	•
Please reconfirm you have change	all of address settings that you are d the series.	using if
Station No.	1 🗮	
		Default
	OK (<u>0</u>)	Cancel

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

- 1 Press MODE key.
- $2 \,$ Press up key to move to "MODE3."
- **3** Press ENT key to display items to be set.
- 4 Press down/up key, select setting value, and press ENT key.

Setup Items	Setting Value
PtCL	rtU
AdrS	1
rAtE	9600
CHAr	8n1

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].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHINO Corporation	on Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 🛛 🚺 🛄	hange	
Communication Settings		
SIO Type C RS2	232C C RS422/485(2wire) C RS422/485(4wire)	
Speed 9600		
Data Length C 7	© 8	
Parity • NOT	NE CIEVEN CIODD	
Stop Bit 📀 1	© 2	
Flow Control NOt	NE C ER(DTR/CTS) C XON/XOFF	
Timeout 3	* (sec)	
Retry 2	*	
Wait To Send 10		
BL/VCC © BL		
In the case of RS232C, you	can select the 9th pin to RI (Input)	
or VCC (5V Power Supply). I Isolation Unit, please select it	f you use the Digital's RS232C to VCC. Default	
Device-Specific Settings		
Allowable Number	Add Device	
of Devices/PLCs 16		Add Indirect
	Settings	Device
1 PLC1	Series=JU Series(Single-Phase),Station No.=1	4

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value
1:1	5ms or more
1 : n	10ms 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]

💕 Individual Device	Settings	×
PLC1		
Series	JU Series(Single-Phase)	_
Please reconfirm all you have changed th	of address settings that you a ne series.	re using if
Station No.	1 🚍	
		Default
	OK (<u>0)</u>	Cancel

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

- 1 Press MODE key.
- $2 \,$ Press up key to move to "MODE3."
- **3** Press ENT key to display items to be set.
- 4 Press down/up key, select setting value, and press ENT key.

Setup Items	Setting Value
PtCL	rtU
AdrS	1
rAtE	9600
CHAr	8n1

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	D Corporation	Series T	emp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	RS422/485(2wir	re) C RS422/485(4wire)	
Speed	9600	-		
Data Length	C 7	© 8		
Parity	NONE	C 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	10 🔅	(ms)		
RI / VCC	© RI	C VCC		
or VCC (5V Powe		ect the 9th pin to RI (Inp the Digital's RS232C		
Device-Specific Settings				
Allowable Number		Device		
of Devices/PLCs	16			Add Indirect
No. Device Name	Setting:			Device
👗 1 PLC1	Series	=JW Series,Station No.	=1	+

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value	
1:1	5ms or more	
1 : n	10ms 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]

💕 Individual De	vice Settings	×
PLC1		
Series	JW Series	•
Please reconfirm you have chang	n all of address settings that you are u ged the series.	sing if
Station No.	1 芸	
		Default
	OK (<u>0</u>) (Cancel

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

- 1 Press MODE key.
- 2 Press up key to move to "MODE3."
- **3** Press ENT key to display items to be set.
- 4 Press down/up key, select setting value, and press ENT key.

Setup Items	Setting Value	
PtCL	rtU	
AdrS	1	
rAtE	9600	
CHAr	8n1	

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].

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	D Corporation	Series 1	Femp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	C RS422/485(2wi	re) 💿 RS422/485(4wire)	
Speed	9600	-		
Data Length	C 7			
Parity	NONE	C EVEN	O ODD	
Stop Bit	€ 1	C 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 +	(sec)		
Retry	2 ÷			
Wait To Send	10 📫	(ms)		
RI / VCC	© BI	C VCC		
		ct the 9th pin to RI (In e the Digital's RS2320		
	ase select it to VCC		Default	
Device-Specific Settings				
Allowable Number of Devices/PLCs	16	Device		
No. Device Name	Setting	5		Add Indirect Device
👗 1 PLC1		=JW Series,Station No.	=1	\$

IMPORTANT

Setting value for Wait To Send differs depending on the connection configuration. Set as shown below.

Connection Configuration	Setting Value	
1:1	5ms or more	
1 : n	10ms 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]

<i>参</i> Individual Dev	ice Settings	×
PLC1		
Series	JW Series	•
Please reconfirm you have chang	all of address settings that you are ed the series.	using if
Station No.	1 🗦	
		Default
	OK (<u>0</u>)	Cancel

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

- 1 Press MODE key.
- $2 \,$ Press up key to move to "MODE3."
- **3** Press ENT key to display items to be set.
- 4 Press down/up key, select setting value, and press ENT key.

Setup Items	Setting Value	
PtCL	rtU	
AdrS	1	
rAtE	9600	
CHAr	8n1	

4 Setup Items

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

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

"3 Example of Communication Setting" (page 9)

4.1 Setup Items in GP-Pro EX

Communication Settings

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

Device/PLC1	
Summary	Change Device/PLC
Manufacturer CHIND Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type	
Speed 9600 V	
Data Length C 7 C 8	
Parity NONE C EVEN C ODD	
Stop Bit 1 2	
Flow Control O NONE O ER(DTR/CTS) O X0N/X0FF	
Timeout 3 📑 (sec)	
Retry 2	
Wait To Send 10 💼 (ms)	
RI / VCC RI C VCC	
In the case of RS232C, you can select the 9th pin to RI [Input] or VCC [VP ower Supply]. If you use the Digital's RS232C Isolation Unit, please select it to VCC. Default	I
Device-Specific Settings	l
Allowable Number Add Device	
of Devices/PLCs 16	Add Indirect
No. Device Name Settings	Device
1 PLC1 Series=DB1000 Series,Station No.=1	+

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	Display data length.	
Parity	Select how to check parity.	
Stop Bit	Select stop bit length.	
Flow Control	Select the communication control method to prevent overflow of transmission and reception data.	
Timeout	Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device.	
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.	
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.	

Continues to the next page.

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Setup Items	Setup Description	
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]

💰 Individual Device 🖇	Settings	×		
PLC1				
Series	DB1000 Series	•		
Please reconfirm all of address settings that you are using if you have changed the series.				
Station No.	1 🔅			
		Default		
	OK (<u>0</u>)	Cancel		

Setup Items	Setup Description		
Series	Select the External Device series.		
Station No.	Use an integer 1 to 99 to enter the station number of the External Device to communicate.		

4.2 Communication Settings in Off-line Mode

NOTE

• Refer to the Maintenance/Troubleshooting manual for information on how to enter off-line mode or about the operation.

- Cf. Maintenance/Troubleshooting Manual "Off-line Mode"
- The number of the setup items to be displayed for 1 page in the off-line mode depends on the Display in use. Please refer to the Reference manual for details.

Communication Settings

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

Comm,	Device	Option		
		Ì		Ì
Temp. Controllers	MODBUS SIO		[COM1]	Page 1/1
	SIO Type Speed Data Length Parity Stop Bit Flow Control Timeout(s) Retry Wait To Send(ms)	R\$422/485() 9600 8 • 1 NONE	2wire)) ODD
	Exit		Back	2007/10/30 14:53:59

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	Display data length.		
Parity	Select how to check parity.		
Stop Bit	Select stop bit length.		
Flow Control	Select the communication control method to prevent overflow of transmission and reception data.		

Continues to the next page.

Setup Items	Setup Description		
Timeout (s)	se an integer from 1 to 127 to enter the time (s) for which the Display waits for the sponse from the External Device.		
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter h many times the Display retransmits the command.		
Wait To Send (ms)	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		
Temp. Controllers 1	MODBUS SIO		[COM1]	Page 1/1
Device	/PLC Name PLC	01		•
	Series Station No.	DB1000 Seri		
			_	
	Exit		Back	2007/10/30 14:54:03

Setup Items	Setup Description	
Device/PLC Name	Select the External Device for device setting. Device name is a title of External Device set with GP-Pro EX.(Initial value [PLC1])	
Series	Display the External Device series.	
Station No.	Use an integer 1 to 99 to enter the station number of the External Device to communicate.	

Option

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

	Comm,	Device	Option		
Temp.	Controllers	10DBUS SIO		[COM1]	Page 1/1
		the 9th pin to Power Supply).	 RI f RS232C, you can seib RI(Input) or VCC(5% If you use the Digition Unit, please selo 	/ cal's	
		Exit		Back	2007/10/30 14:59:19

Setup Items	Setup Description		
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	• GP-4100 series, GP-4*01TM, LT-4*01TM and LT-Rear Module do not have the [Option]
	setting in the off-line mode.

5 Cable Diagram

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

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

Display (Connection Port)		Cable	Notes
GP3000 (COM1) GP4000 ^{*1} (COM1) SP5000 (COM1/2)	1A	RS-232C communication cable by CHINO Corporation RZ-CRS6□□ ^{*3}	
ST (COM1) LT3000 (COM1) IPC ^{*2} PC/AT	1B	User-created cable	Cable length: 15m or less
GP-4105 (COM1)	1C	User-created cable	Cable length: 15m or less
LT-4*01TM (COM1) LT-Rear Module (COM1)	1D	RJ45 RS-232C Cable (5m) by Pro-face PFXZLMCBRJR21	Cable length: 5m or less

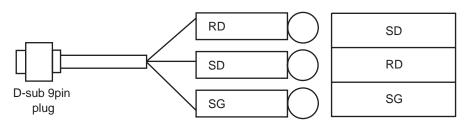
Cable Diagram 1

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

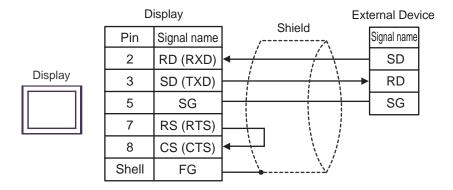
IMPORTANT

• Terminal number to be used for communication varies depending on the External Device. Terminal numbers corresponding to each series are shown below.

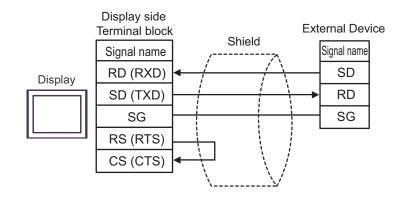
Series	SD	RD	SG
DB1000	13	12	14
DB2000 (COM1)	27	26	28
DB2000 (COM2)	30	29	31
KP1000	13	12	14
KP2000 (COM1)	27	26	28
KP2000 (COM2)	30	29	31
KP3000 (COM1)	27	26	28
KP3000 (COM2)	30	29	31
LT300/400	11	13	15



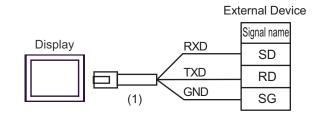
1B)



1C)



1D)



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

Cable Diagram 2

Display (Connection Port)	Cable		Notes
GP3000 ^{*1} (COM1) AGP-3302B (COM2) GP-4*01TM (COM1) ST ^{*2} (COM2) LT3000 (COM1) IPC ^{*3}	2A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less
	2B	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + RS-422 cable by Pro-face CA3-CBL422-01 + User-created cable	
	2C	RS-422 cable by Pro-face CA3-CBL422/5M-01 + User-created cable	
	2D	User-created cable	
GP3000 ^{*4} (COM2)	2E	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less
	2F	Online adapter by Pro-face CA4-ADPONL-01 + User-created cable	
	2G	Online adapter by Pro-face CA4-ADPONL-01 + RS-422 cable by Pro-face CA3-CBL422-01 + User-created cable	
GP-4106 (COM1)	2Н	User-created cable	Cable length: 600m or less

Continues to the next page.

Display (Connection Port)	Cable		Notes
GP4000 ^{*5} (COM2) GP-4201T (COM1) SP5000 (COM1/2)	21	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1 ^{*6} + User-created cable	
	2B	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + RS-422 cable by Pro-face CA3-CBL422-01 + User-created cable	Cable length: 600m or less
	2C CA3-C	RS-422 cable by Pro-face CA3-CBL422/5M-01 + User-created cable	
	2D	User-created cable	

- *1 All GP3000 models except AGP-3302B
- *2 All ST models except AST-3211A and AST-3302B
- *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 2A.

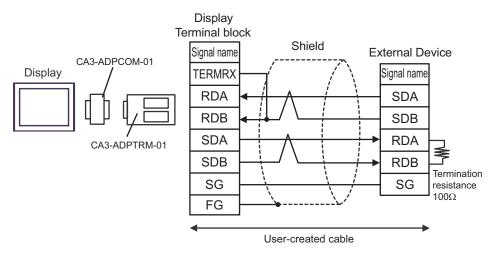
IMPORTANT

• Terminal number to be used for communication varies depending on the External Device. Terminal numbers corresponding to each series are shown below.

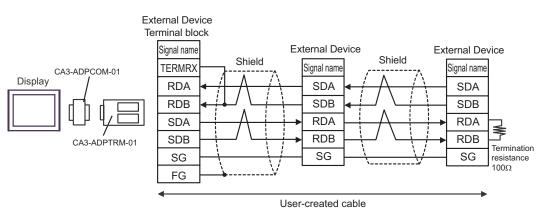
Series	SDA	SDB	RDA	RDB	SG
DB1000	14	15	12	13	16
DB2000 (COM1)	28	29	26	27	30
DB2000 (COM2)	31	32	29	30	28
KP1000	14	15	12	13	16
KP2000 (COM1)	28	29	26	27	30
KP2000 (COM2)	31	32	29	30	28
KP3000 (COM1)	28	29	26	27	30
KP3000 (COM2)	31	32	29	30	28
LT300/400	11	12	13	14	15
JU Single-phase	1	2	3	4	5
JW	1	2	3	4	5

2A)

• 1:1 connection

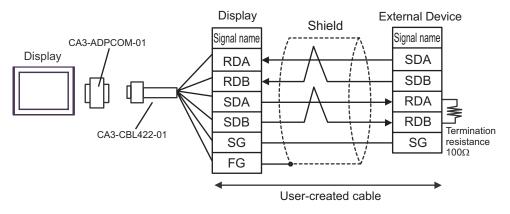


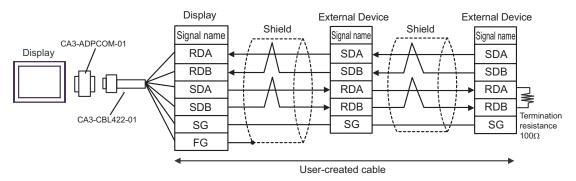
1:n connection



2B)

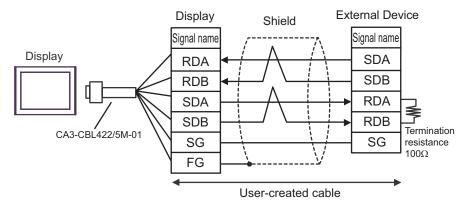
• 1:1 connection

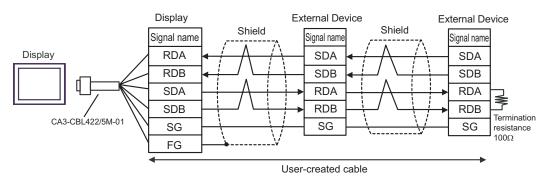




2C)

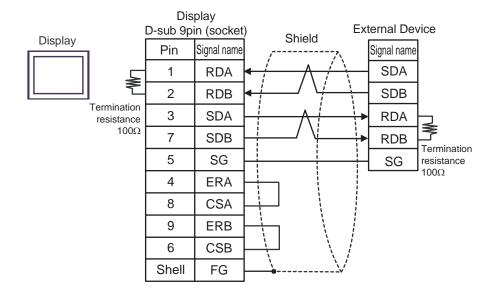
• 1:1 connection

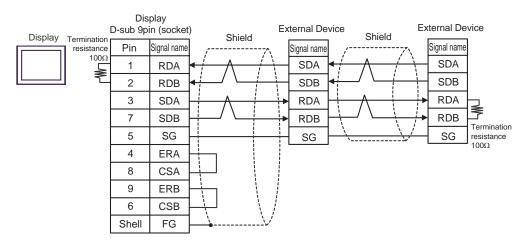




2D)

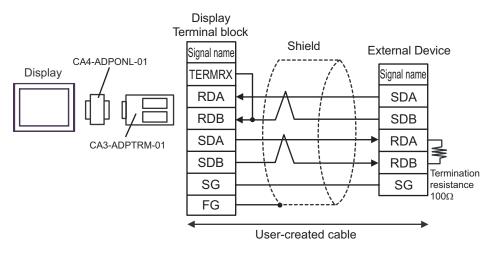
• 1:1 connection

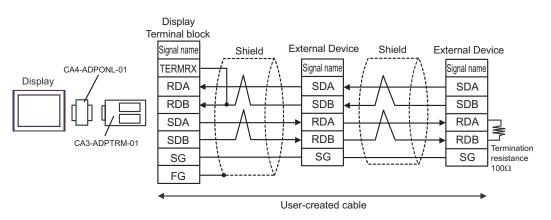




2E)

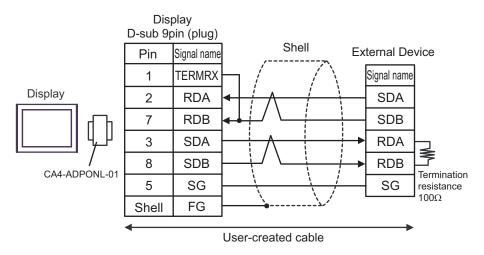
• 1:1 connection

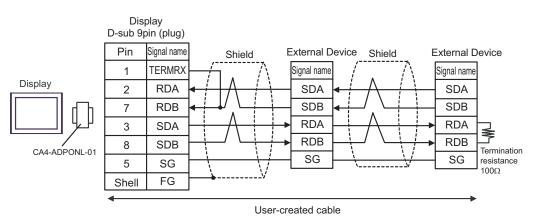




2F)

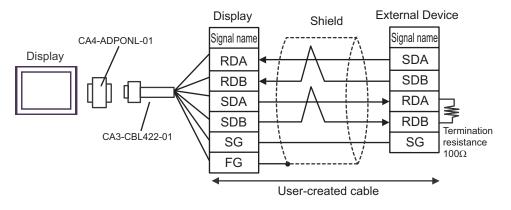
• 1:1 connection

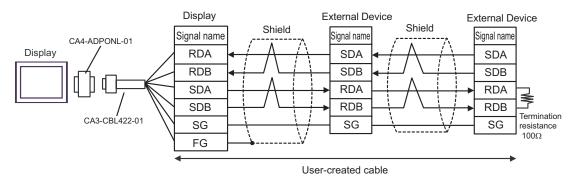




2G)

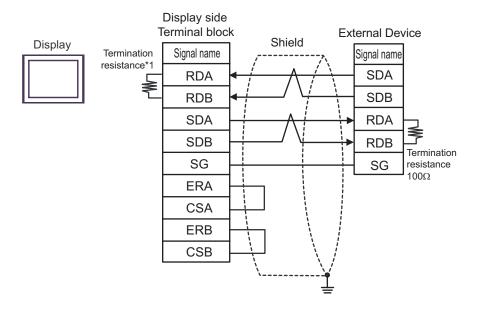
• 1:1 connection



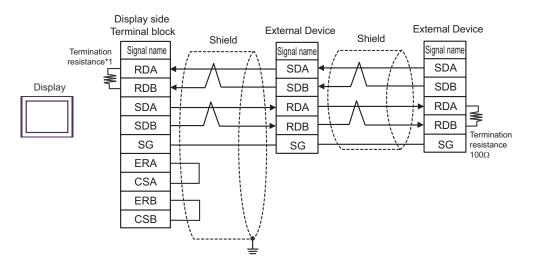


2H)

• 1:1 connection



1:n connection

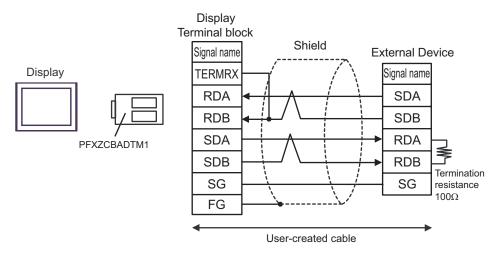


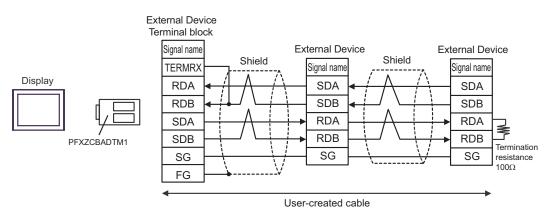
*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

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

2I)

• 1:1 connection





Cable Diagram 3

Display (Connection Port)		Cable	Notes
GP3000 ^{*1} (COM1) AGP-3302B (COM2) GP-4*01TM (COM1) ST ^{*2} (COM2) LT3000 (COM1)	3A 3B	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable User-created cable	Cable length: 600m or less
GP3000 ^{*3} (COM2)	3C	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	
	3D	Online adapter by Pro-face CA4-ADPONL-01 + User-created cable	Cable length: 600m or less
IPC*4	3E 3F	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable User-created cable	
GP-4106 (COM1)	3G	User-created cable	Cable length: 600m or less
GP-4107 (COM1) GP-4*03T ^{*5} (COM2) GP-4203T (COM1)	3H	User-created cable	Cable length: 600m or less
GP4000 ^{*6} (COM2) GP-4201T (COM1) SP5000 (COM1/2)	3I 3B	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1 ^{*7} + User-created cable User-created cable	Cable length: 600m or less
LT-4*01TM (COM1) LT-Rear Module (COM1) *1 All GP3000 models exc	3J	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	Cable length: 200m or less

*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. ⁽²⁾ "■ IPC COM Port" (page 6)
- *5 Except GP-4203T

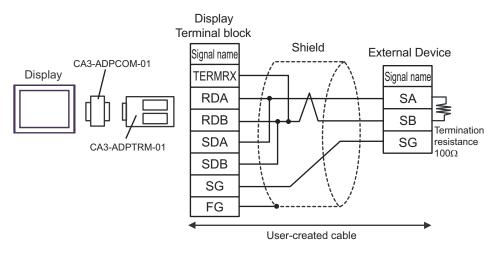
IMPORTANT

- *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 3A.

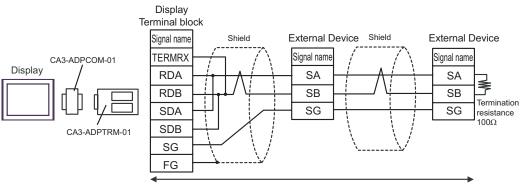
 Terminal number to be used for communication varies depending on the External Device. Terminal numbers corresponding to each series are shown below. 						
Series	SA	SB	SG			
DB1000	12	13	14			
DB2000 (COM1)	26	27	28			
DB2000 (COM2)	29	30	31			
KP1000	12	13	14			
KP2000 (COM1)	26	27	28			
KP2000 (COM2)	29	30	31			
KP3000 (COM1)	26	27	28			
KP3000 (COM2)	29	30	31			
LT230	6	7	8			
LT300/400	11	12	15			
LT830	6	7	8			

3A)

• 1:1 connection



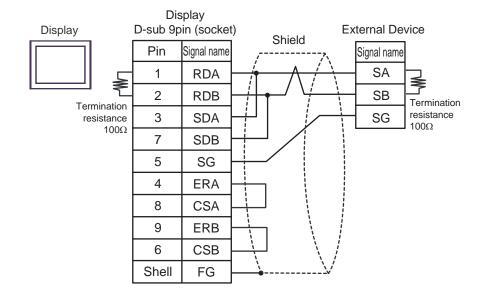
• 1:n connection



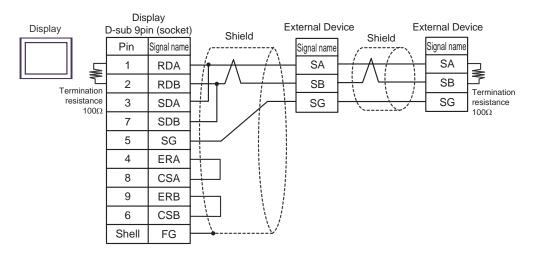
User-created cable

3B)

• 1:1 connection

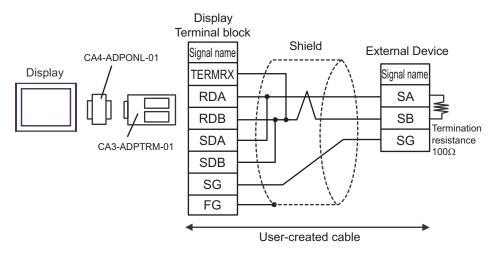


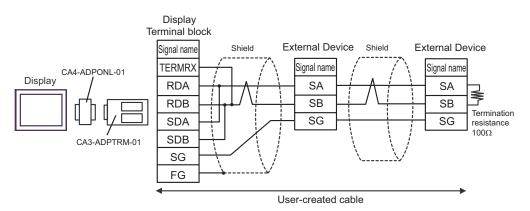
1:n connection



3C)

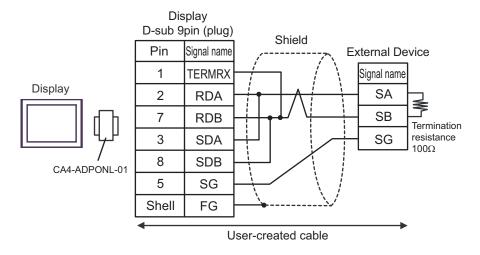
• 1:1 connection

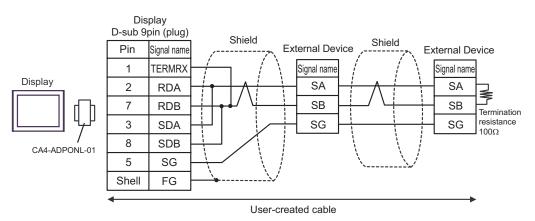




3D)

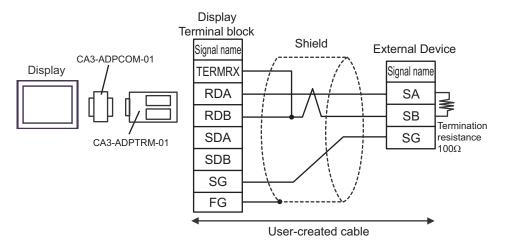
• 1:1 connection

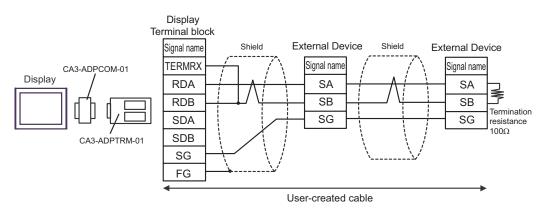




3E)

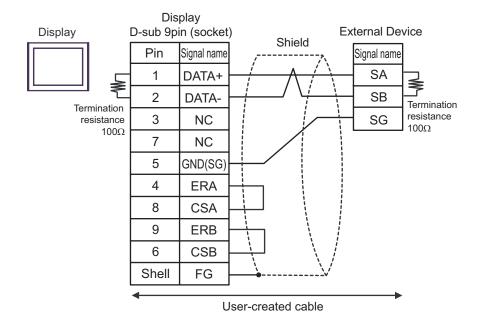
• 1:1 connection

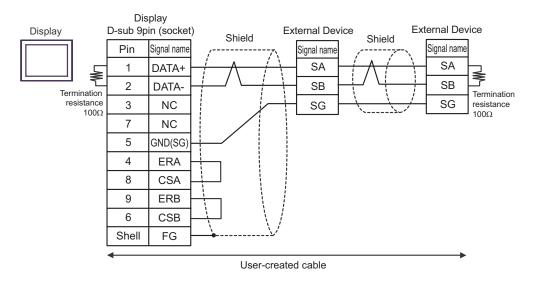




3F)

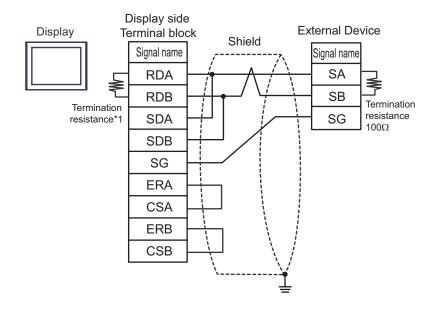
• 1:1 connection



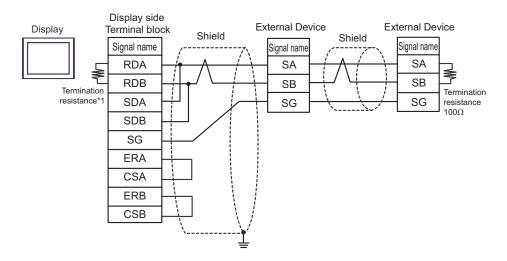


3G)

• 1:1 connection



• 1:n connection

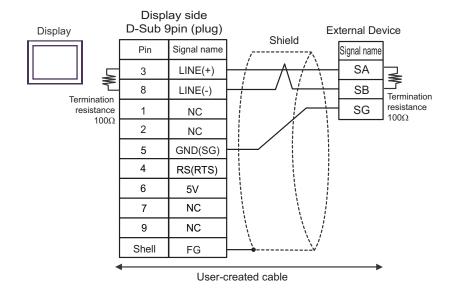


*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

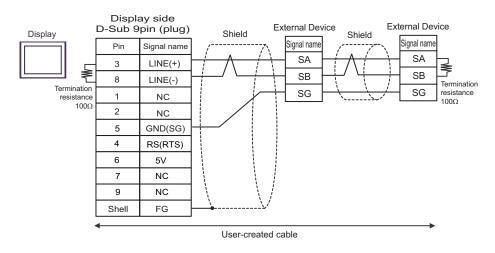
DIP Switch No.	Set Value
1	OFF
2	OFF
3	ON
4	ON

3H)

• 1:1 connection



1:n connection

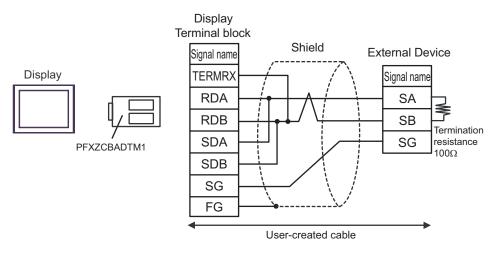


IMPORTANT	The 5V output (Pin #6) on the Display is the power for the Siemens AG's PROFIBUS
	connector. Do not use it for other devices.

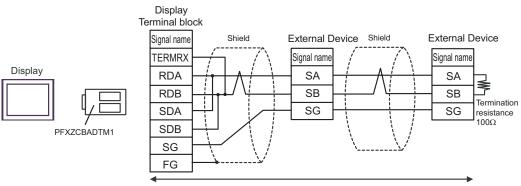
• In COM on the GP-4107, the SG and FG terminals are isolated.

3I)

• 1:1 connection



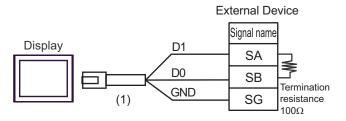
• 1:n connection

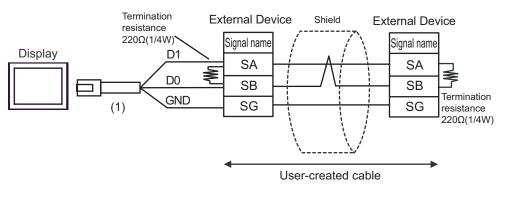


User-created cable

3J)

• 1:1 connection





Number	Name	Notes
(1)	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	

Cable Diagram 4

Display (Connection Port)		Cable	Notes
GP3000 ^{*1} (COM1) AGP-3302B (COM2) GP-4*01TM (COM1) ST ^{*2} (COM2) LT3000 (COM1)	4A 4B	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable User-created cable	Cable length: 600m or less
GP3000 ^{*3} (COM2)	4C	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less
	4D	Online adapter by Pro-face CA4-ADPONL-01 + User-created cable	
IPC*4	4E 4F	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable User-created cable	Cable length: 600m or less
GP-4106 (COM1)	4G	User-created cable	Cable length: 600m or less
GP-4107 (COM1) GP-4*03T ^{*5} (COM2) GP-4203T (COM1)	4H	User-created cable	Cable length: 600m or less
GP4000 ^{*6} (COM2) GP-4201T (COM1) SP5000 (COM1/2)	4I 4B	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1 ^{*7} + User-created cable User-created cable	Cable length: 600m or less
LT-4*01TM (COM1) LT-Rear Module (COM1) *1 All GP3000 models exc	4J	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	Cable length: 200m or less

*1 All GP3000 models except AGP-3302B

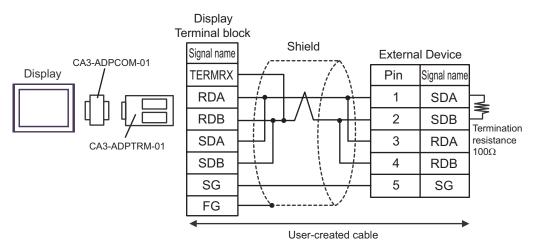
*2 All ST models except AST-3211A and AST-3302B

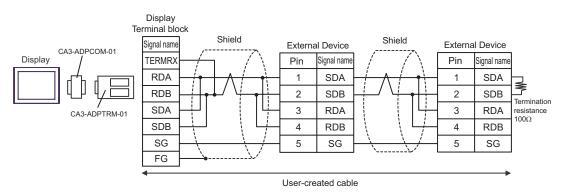
*3 All GP3000 models except GP-3200 series and AGP-3302B

- *4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. ☞ "■ IPC COM Port" (page 6)
- *5 Except GP-4203T
- *6 All GP4000 models except GP-4100 Series, GP-4*01TM, GP-4201T and GP-4*03T
- *7 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 4A.

4A)

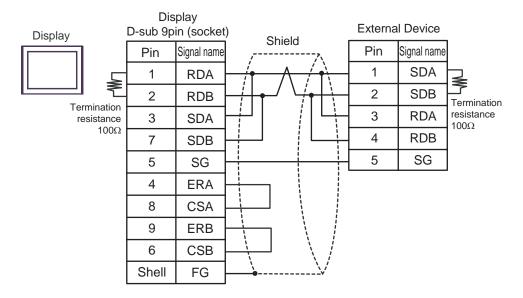
• 1:1 connection

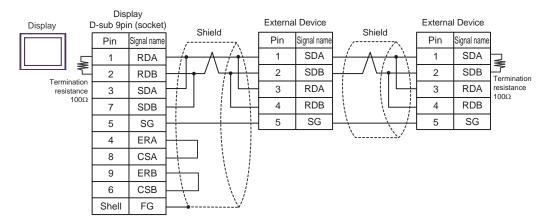




4B)

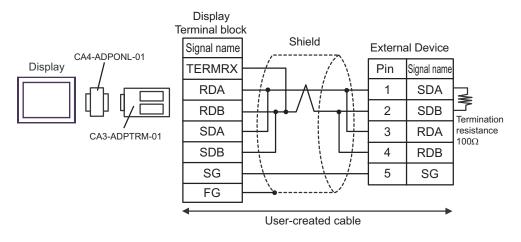
• 1:1 connection

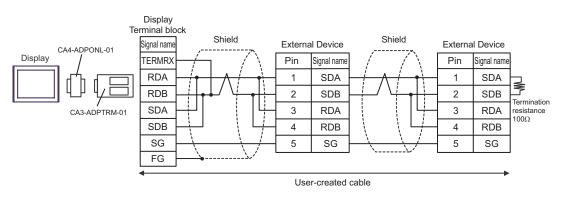




4C)

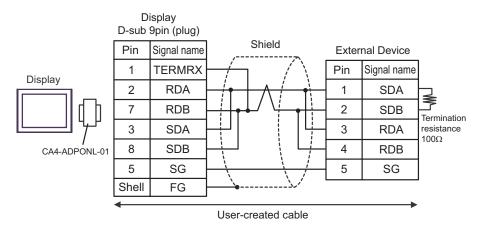
• 1:1 connection

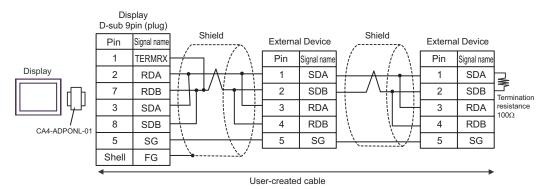




4D)

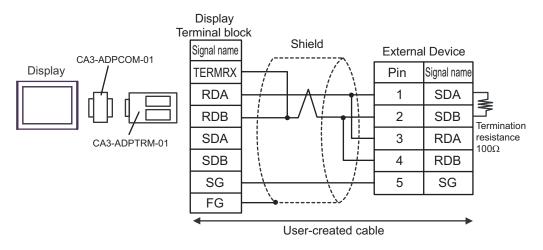
• 1:1 connection

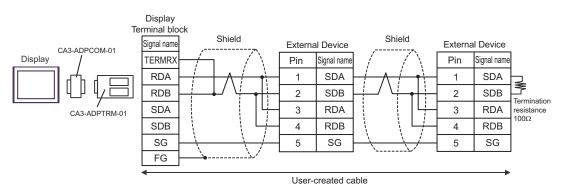




4E)

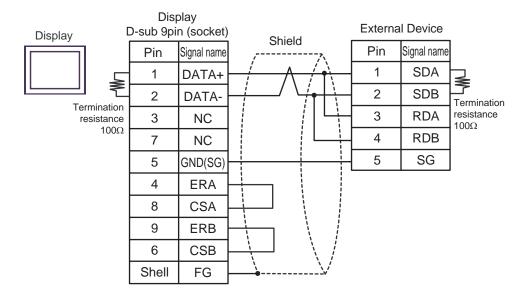
• 1:1 connection

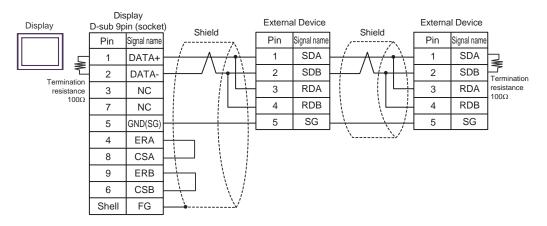




4F)

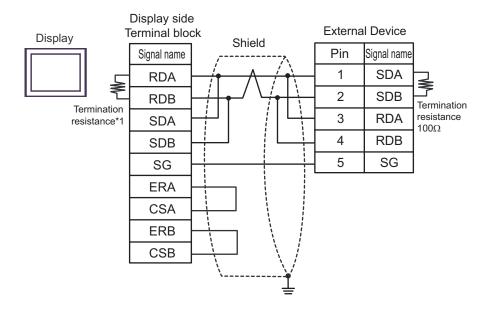
• 1:1 connection



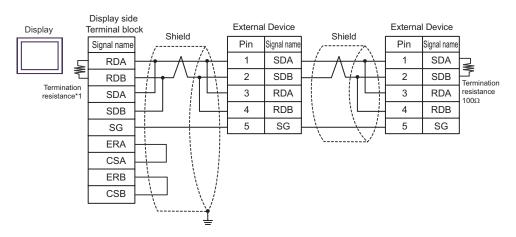


4G)

• 1:1 connection



1:n connection

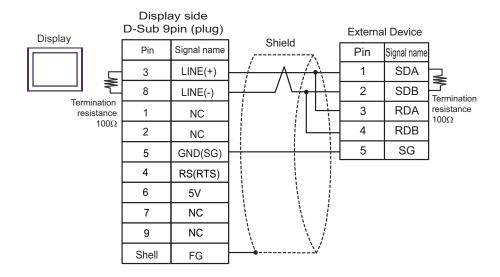


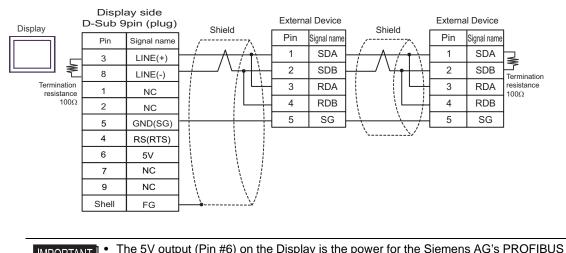
*1 The resistance in the Display is used as the termination resistance. Set the value of the DIP Switch on the rear of the Display as shown in the table below.

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

4H)

• 1:1 connection



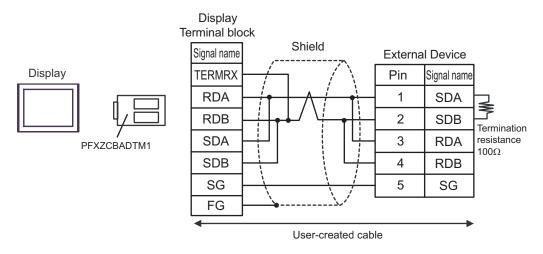


 connector. Do not use it for other devices.

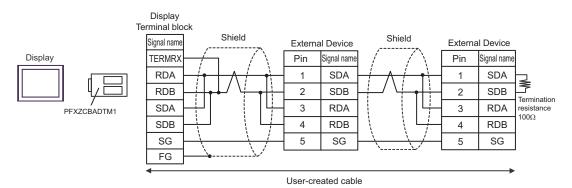
NOTE	• In COM on the GP-4107, the SG and FG terminals are isolated.	
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4I)

• 1:1 connection



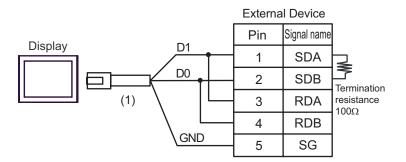
• 1:n connection

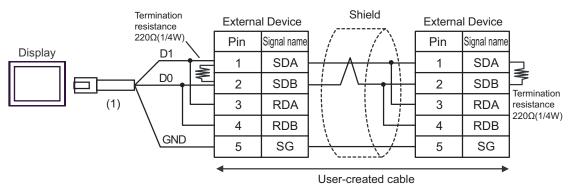


GP-Pro EX Device/PLC Connection Manual

4J)

• 1:1 connection





Number	Name	Notes
(1)	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	

Cable Diagram 5

Display (Connection Port)		Cable	Notes
GP3000 ^{*1} (COM1) AGP-3302B (COM2) GP-4*01TM (COM1) ST ^{*2} (COM2) LT3000 (COM1)	5A 5B	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less
GP3000 ^{*3} (COM2)	5C 5D	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable Online adapter by Pro-face CA4-ADPONL-01 +	Cable length: 600m or less However, between the master and the slave cable length: 10m or less
IPC*4	5E 5F	User-created cable COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less
GP-4106 (COM1)	5G	User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less
GP-4107 (COM1) GP-4*03T ^{*5} (COM2) GP-4203T (COM1)	5H	User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less
GP4000 ^{*6} (COM2) GP-4201T (COM1) SP5000 (COM1/2)	51	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1 ^{*7} + User-created cable	Cable length: 600m or less However, between the master and the
	5B	User-created cable	slave cable length: 10m or less

Display (Connection Port)		Cable	Notes
LT-4*01TM (COM1) LT-Rear Module (COM1)	5J	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	Cable length: 200m or less However, between the master and the slave cable length: 10m or less

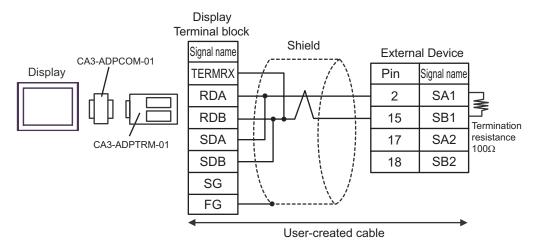
*1 All GP3000 models except AGP-3302B

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

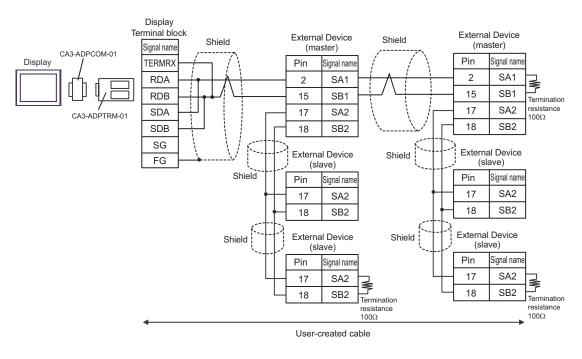
- *3 All GP3000 models except GP-3200 series and AGP-3302B
- *4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. ⁽²⁾ "■ IPC COM Port" (page 6)
- *5 Except GP-4203T
- *6 All GP4000 models except GP-4100 Series, GP-4*01TM, GP-4201T and GP-4*03T
- *7 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 5A.

5A)

• 1:1 connection



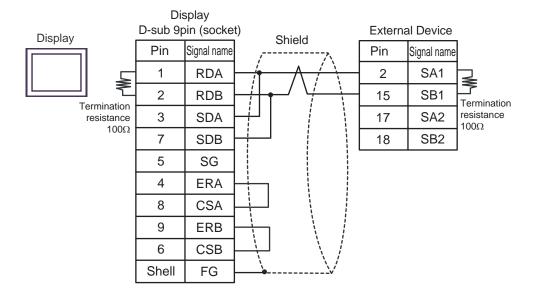
• 1:n connection



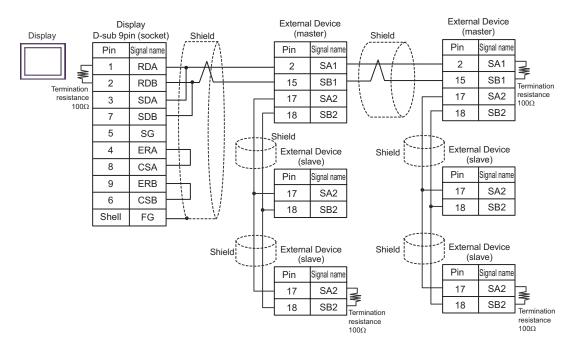
IMPORTANT

5B)

• 1:1 connection



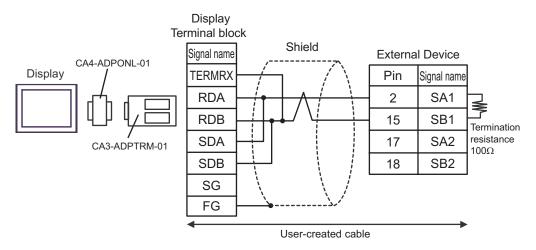
• 1:n connection



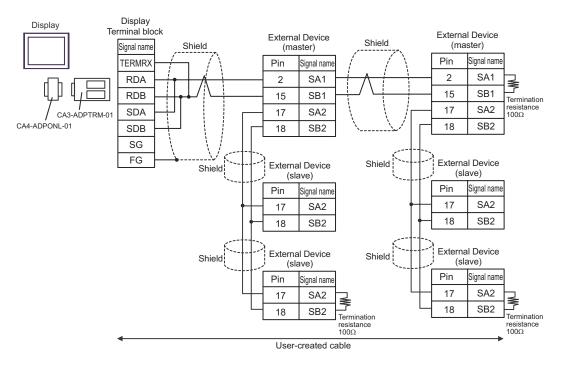
IMPORTANT

5C)

• 1:1 connection



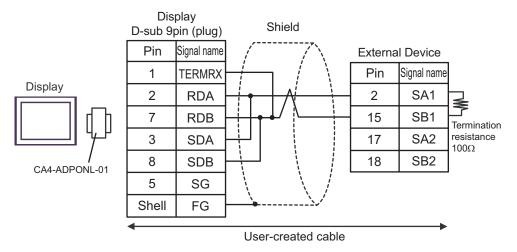
• 1:n connection



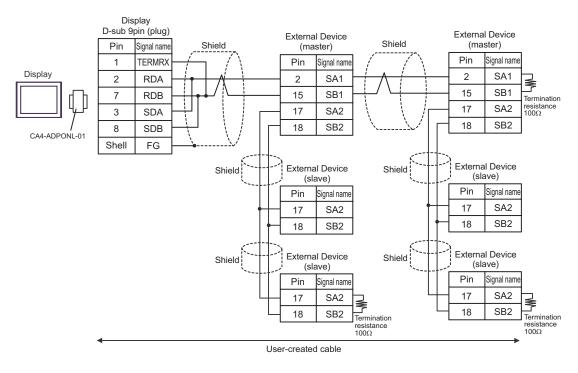
IMPORTANT

5D)

• 1:1 connection



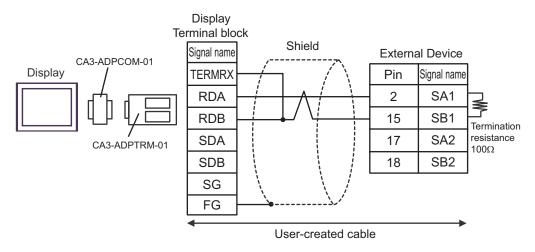
• 1:n connection



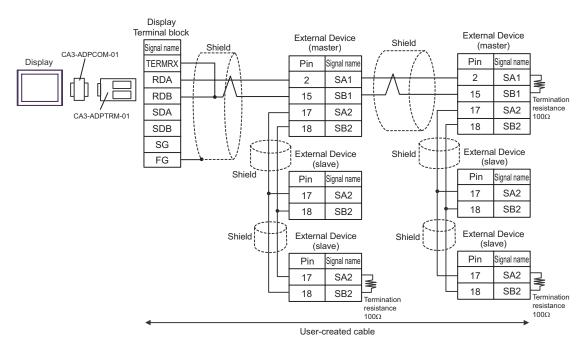
IMPORTANT

5E)

• 1:1 connection



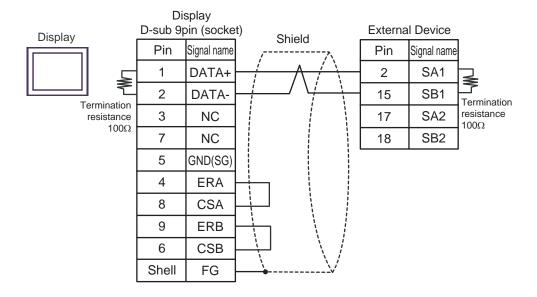
• 1:n connection



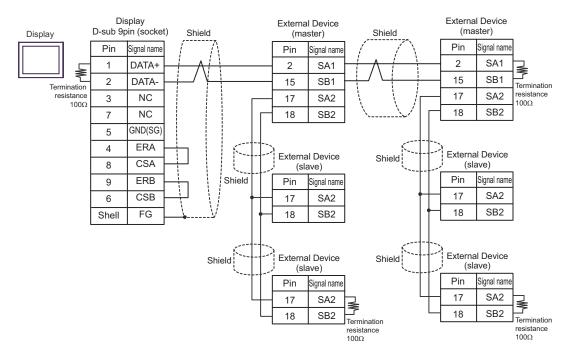
IMPORTANT

5F)

• 1:1 connection



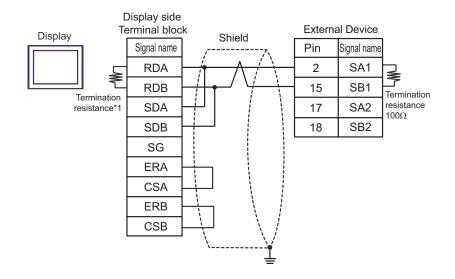
• 1:n connection



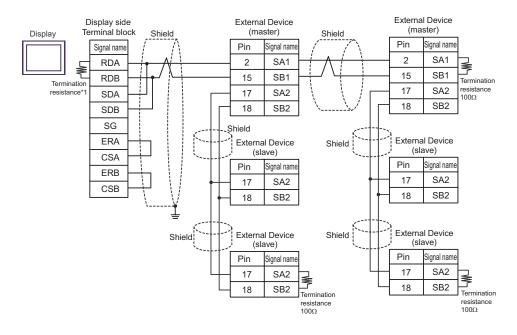
IMPORTANT

5G)

1:1 connection



1:n connection



IMPORTANT

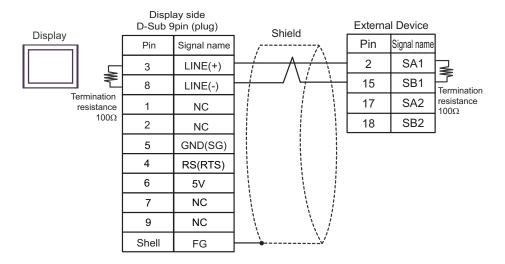
Connect No. 17 and No. 18 between slaves as shown in the figure above.

*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.

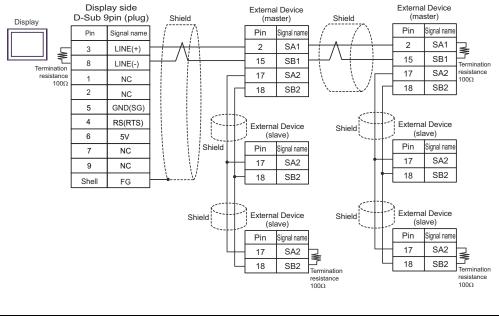
DIP Switch No.	Set Value
1	OFF
2	OFF
3	ON
4	ON

5H)

• 1:1 connection



• 1:n connection

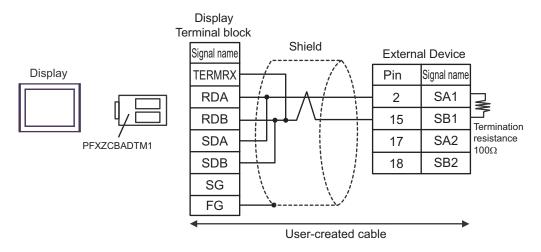


MPORTANT Connect No. 17 and No. 18 between slaves as shown in the figure above. The 5V output (Pin #6) on the Display is the power for the Siemens AG's PROFIBUS connector. Do not use it for other devices.

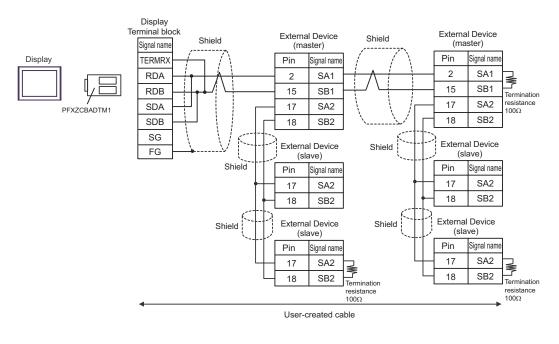
• In COM on the GP-4107, the SG and FG terminals are isolated.

5I)

• 1:1 connection



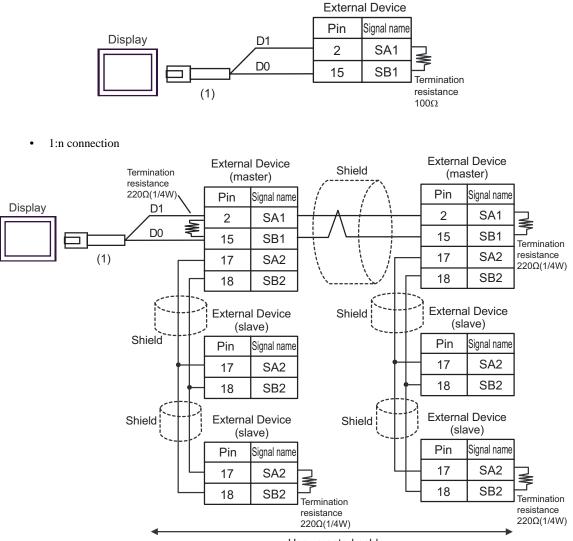
1:n connection



IMPORTANT

5J)

• 1:1 connection



User-created cable

Number	Name	Notes
(1)	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	

IMPORTANT

6 Supported Device

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

Enter the External Device address in the dialog below.

💰 Input Address 🛛 🔀								
Devi	Device/PLC PLC1]	_1	
4		•	000	1		1	1	
Ba	ick				0	lr		
Α	В	С		7	8	9		
D	Е	F		4	5	6		
				1	2	3		
Re	eferer	nce		0	E	nt		
	Devi 4 Ba A D	Device/P 4 Back A B D E	Device/PLC	Device/PLC PLC1 4	Device/PLC PLC1 4 V 0001 Back A B C 7 D E F 4 1	Device/PLC PLC1 4	Device/PLC PLC1 Image: Clip and the second	Device/PLC PLC1

- 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.

There are some temperature controller data with decimal points.

On the Display, data with decimal points are treated as follow.

<When reading>

Read data from the temperature controller is integral number without decimal points.

e.g. When a value of temperature controller is 100.0:

Value of temperature controller: 100.0

Displayed value on the Display (setting is without decimal points): 1000

To display decimal points on the Data Display, set "Decimal Places" of "Display" tab.

For example, if the specification of temperature controller data is in the first decimal position, set 1 to "Decimal Places."

e.g. When a value of temperature controller is 100.0:

Value of temperature controller: 100.0

Displayed value on the Display (setting is without decimal points): 1000

Displayed value on the Display (setting is the first position of decimal points): 100.0

<When writing>

When writing to the temperature controller, set integral number without decimal points.

6.1 DB1000 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101	_		
Digital Detting value	00111			
Digital Input Data	10002 - 10124	-		*1
Analog Input Data	-	30101 - 30143	[H/L]	віt 15 *1
Analog Setting Value		40001 - 40596 ^{*2}		<u>ві</u> 15)
Operational Status Setting	-	49056 - 49512		<u>ві t</u> 15

*1 Write disable

*2 Write disable in 40151.

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

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 DB2000 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101	_		
Digital Detting value	00111			
Digital Input Data	10002 - 10124	-		*1
Analog Input Data	-	30101 - 30143	[H/L]	<u>ві</u> т 15 *1
Analog Setting Value		40001 - 40650 ^{*2}		<u>ві</u> t15)
Operational Status Setting	-	49056 - 49536		<u>ві t</u> 15

*1 Write disable

*2 Write disable in 40151.

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

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.

⁽³⁷⁾ "Manual Symbols and Terminology"

6.3 KP1000 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101	_		
Digital Setting value	00111			
Digital Input Data	10002 - 10124	-		*1
Analog Input Data	-	30101 - 30144	[H/L]	віt 15 *1
Analog Setting Value		40001 - 40650*2		<u>ві</u> t 15]
Pattern Setting		49003 - 49534 ^{*3}		ві t 15

*1 Write disable

*2 Write disable in 40151.

*3 Write disable in 49040.

NOTE

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

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 KP2000 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101			
Digital Setting value	00111			
Digital Input Data	10002 - 10124	-		*1
Analog Input Data	-	30101 - 30144	[H/L]	<mark>віt15</mark> *1
Analog Setting Value		40001 - 40650*2		<u>ві</u> 15)
Pattern Setting	-	49003 - 49536 ^{*3}		<u>ві t</u> 15

*1 Write disable

*2 Write disable in 40151.

*3 Write disable in 49040.

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

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.

6.5 KP3000 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Input Data	10005	-		*1
Analog Input Data	-	30109 - 30144	[H/L]	<mark>віt15</mark> *1
Analog Setting Value		40008 - 40574 ^{*2}		<u>ві</u> t15)
Pattern Setting	-	49003 - 49534 ^{*3}		<u>віt</u> 15

*1 Write disable

*2 Write disable in 40151.

*3 Write disable in 49040.

NOTE

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

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 LT230 series

This address can be specified as system data area. Device Bit Address Word Address 32bits Notes *1 00101 **Digital Setting Value** *2 **Digital Input Data** 10004 - 10120 _ <u>віt**15**</u> *2 Analog Input Data 30101 - 30142 <u>ԲH / Lj</u> 40008^{*3} 40114 - 40119 ві 15 Analog Setting Value 40201 - 40251 49501 - 49512

*1 When writing, key lock of External Device needs to be set to lock 4. When writing to other than lock 4, a communication error will be displayed.

*2 Write disable

*3 Write disable in 40008.

• System area setting that can be used with controller is read area size for reading only.

Please refer to the GP-Pro EX Reference Manual for read area size.

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.

6.7 LT300 series

This address can be specified as system data area					
Device	Bit Address	Word Address	32bits	Notes	
Digital Setting Value	00101	-		*1	
Digital Input Data	10004 - 10122	-		*2	
Analog Input Data	-	30101 - 30142	[<u>H/L</u>]	ві t 15 *2	
Analog Setting Value	-	40008 ^{*3} 40114 - 40119 40201 - 40251 49501 - 49512		<u>₿i</u> , 15) *1	

*1 When writing, key lock of External Device needs to be set to lock 4. When writing to other than lock 4, a communication error will be displayed.

*2 Write disable

*3 Write disable in 40008.

NOTE

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

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"

6.8 LT400 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101 - 00109	-		*1
Digital Input Data	10002 - 10124	-		*2
Analog Input Data	-	30101 - 30142		<mark>віt15</mark> *2
		40001 - 40093		
Analog Setting Value	_	40112 - 40166		<u>віt</u> 15
Analog Setting value	-	40201 - 40388		*1
		49501 - 49512		

*1 When writing, key lock of External Device needs to be set to lock 4. When writing to other than lock 4, a communication error will be displayed.

*2 Write disable

- System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size. 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.

6.9 LT830 series

This address can be specified as system data area.						
Device	Bit Address	Word Address	32bits	Notes		
Digital Setting Value	00101	-		*1		
Digital Input Data	10004 - 10120	-		*2		
Analog Input Data	-	30101 - 30142		ві t 15 *2		
Analog Setting Value	-	40008*3 40114 - 40119 40201 - 40211 49501 - 49512	= [H/L] = = =	<u>₿;</u> , 15) *1		

*1 When writing, key lock of External Device needs to be set to lock 3. When writing to other than lock 3, a communication error will be displayed.

*2 Write disable

*3 Write disable in 40008.

NOTE

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

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.

6.10 JU series with temperature controller feature

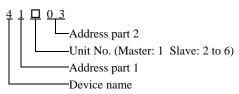
This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101 - 00106	_		*1
	01102 - 01612 ^{*2}			
Digital Input Data	10002 - 10122	-		*3
Bighai mpar Bata	11109 - 11614 ^{*2}			
		30101 - 30142		<u>⊾,</u> 15]
Analog Input Data	-	31101 - 31612 ^{*2}	ТН/Ц	Bit∎✔ *3
		39001 - 39080		
		40001 - 40384		
Analog Setting Value		41102 - 41672*2		<u>ві</u> t 15 1
	-	48111 - 48618*2		*1
		49501 - 49525		

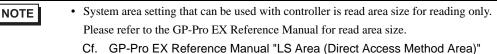
*1 When writing, key lock of External Device needs to be set to lock 4. When writing to other than lock 4, a communication error will be displayed.

*2 Specify the address in the style below for Operation terminal function (01102 - 01612), Operation terminal operation part (11109 - 11614), Operation terminal measurement data (31101 - 31612), and Operation terminal parameter (41102 - 41672/48111 - 48618).

EX. Elevation (41D03)



*3 Write disable



• Please refer to the precautions on manual notation for icons in the table.

6.11 JU series Single-phase

		This address can be	e specified as s	system data area.
Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	01001 - 01013	-		*1
Digital Input Data	11001 - 11015	-		*2
Analog Input Data	-	31101 - 31112	[Н/Ц	<u>ві</u> t 15 *2
Analog Setting Value	-	41001 - 41013 49501		<mark>ві т15)</mark> *1

*1 When writing, key lock of External Device needs to be set to locked. When writing in unlocked status, a communication error will be displayed.

*2 Write disable

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

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"

6.12 JW series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	01001 - 01014	-		*1
Digital Input Data	11001 - 11019	-		*2
Analog Input Data	-	31101 - 31182	[H/L]	<u>ві</u> т 15 *2
Analog Setting Value	-	41001 - 41018		<u>ві</u> t15
		49501		*1

*1 When writing, key lock of External Device needs to be set to locked. When writing in unlocked status, a communication error will be displayed.

*2 Write disable

NOTE

• System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.

Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"

Please refer to the precautions on manual notation for icons in the table.

"Manual Symbols and Terminology"

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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
Analog Input Data	3	0001	Word Address
Analog Setting Value	4	0000	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.
	Displays IP address or device address of External Device where error occurs, or error codes received from External Device.
Error Occurrence Area	 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 Manual" for details on the error messages common to the driver.

Error Codes Unique to External Device

Error codes unique to External Device are shown below.

Error Code	Description
18 (12H)	 Cannot be set^{*1} When key setting is not locked. When trying to set an item that cannot be selected in the type.

*1 Causes for setting error depend on the External Device. Please refer to the manual of the External Device for more details.