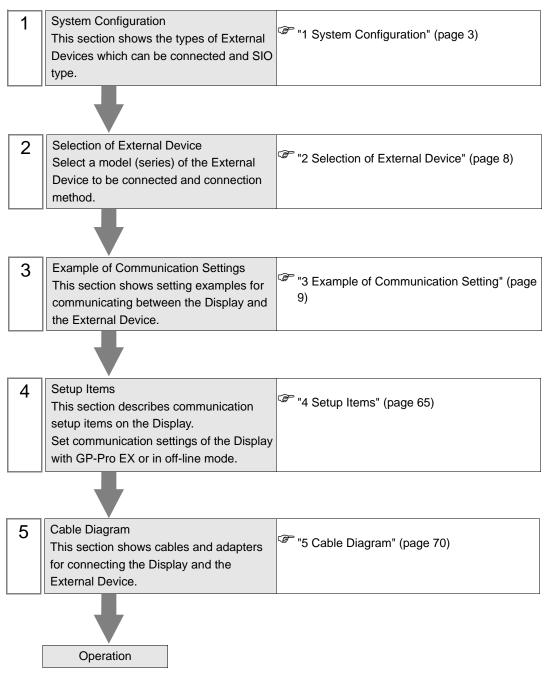
# Temperature Controllers MODBUS SIO Driver

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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 81)
DB			RS-422/485 (4 wire)	"Setting Example 3" (page 13)	"Cable Diagram 2" (page 72)
		Port on CPU unit	RS-232C	"Setting Example 4" (page 15)	"Cable Diagram 1" (page 70)
	DB200000-000*2		RS-422/485 (2 wire)	"Setting Example 5" (page 17)	"Cable Diagram 3" (page 81)
			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 81)
			RS-422/485 (4 wire)	"Setting Example 9" (page 25)	"Cable Diagram 2" (page 72)
	KP200000-000*2	Port on CPU unit	RS-232C	"Setting Example 10" (page 27)	"Cable Diagram 1" (page 70)
KP			RS-422/485 (2 wire)	"Setting Example 11" (page 29)	"Cable Diagram 3" (page 81)
			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 81)
			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 81)
	LT30000 00-000 *1	Port on CPU unit	RS-232C	"Setting Example 17" (page 41)	"Cable Diagram 1" (page 70)
			RS-422/485 (2 wire)	"Setting Example 18" (page 43)	"Cable Diagram 3" (page 81)
LT			RS-422/485 (4 wire)	"Setting Example 19" (page 45)	"Cable Diagram 2" (page 72)
	LT4□□□□■□□-□□□ *1 *4	Port on CPU unit	RS-232C	"Setting Example 20" (page 47)	"Cable Diagram 1" (page 70)
			RS-422/485 (2 wire)	"Setting Example 21" (page 49)	"Cable Diagram 3" (page 81)
			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 81)
	JUDDDDDDD513 <sup>*6</sup> JUDDDDDDD613 <sup>*7</sup>	Port on CPU unit	RS-422/485 (2 wire)	"Setting Example 24" (page 55)	"Cable Diagram 5" (page 96)
JU	JUDDDDDDD <b>D</b> <sup>*8 *9</sup>	Setting communications unit	RS-422/485 (2 wire)	"Setting Example 25" (page 57)	"Cable Diagram 4" (page 89)
			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 89)
			RS-422/485 (4 wire)	"Setting Example 28" (page 63)	"Cable Diagram 2" (page 72)

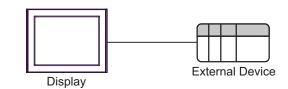
\*1 Only the External Device with the ■ part of the CPU type has codes blow can be used. R (RS-232C), A (RS-422A), S (RS-485)

- \*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

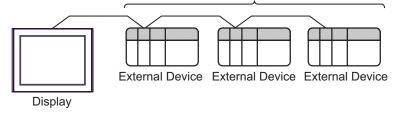
## Connection Configuration

1:1 connection

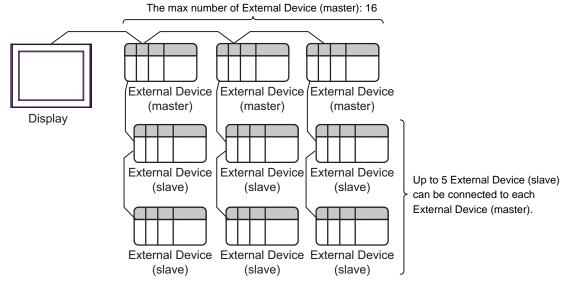


• 1:n connection

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 <sup>*1</sup> , COM2, COM3 <sup>*1</sup> , COM4	-	-	
PS-3450A, PS-3451A, PS3000-BA, PS3001-BD	COM1, COM2 <sup>*1*2</sup>	COM2 <sup>*1*2</sup>	COM2 <sup>*1*2</sup>	
PS-3650A, PS-3651A	COM1 <sup>*1</sup>	-	-	
PS-3700A (Pentium®4-M) PS-3710A	COM1 <sup>*1</sup> , COM2 <sup>*1</sup> , COM3 <sup>*2</sup> , COM4	COM3 <sup>*2</sup>	COM3 <sup>*2</sup>	
PS-3711A	COM1 <sup>*1</sup> , COM2 <sup>*2</sup>	COM2 <sup>*2</sup>	COM2 <sup>*2</sup>	
PL-3000B, PL-3600T, PL-3600K, PL-3700T, PL-3700K, PL-3900T	COM1 <sup>*1*2</sup> , COM2 <sup>*1</sup> , COM3, COM4	COM1 <sup>*1*2</sup>	COM1 <sup>*1*2</sup>	

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

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

DIP switch setting: RS-232C

DIP switch	Setting	Description	
1	OFF <sup>*1</sup>	Reserved (always OFF)	
2	OFF	SIO type: RS-232C	
3	OFF	510 type. K5-252C	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 $\Omega$ ) 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 $\Omega$ ) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 $\Omega$ ) 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. R5-422/465	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 $\Omega$ ) 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.

💰 New Project File			×
GP-Pro 🛃	Device/PLI		
	Maker	CHINO Corporation	<u> </u>
	Series	Temp. Controllers MODBUS SIO	•
	🗖 Use S		Refer to the manual of this Device/PLC
	Connection	Method	
	Port	COM1	
		·	
<u>k</u> .			Go to Device/PLC Manual
Back (	3) Con	munication Settings New Lo	igic New Screen Cancel

Setup Items	Setup Description
Maker	Select the maker of the External Device to be connected. Select "CHINO Corporation."
Series	Select a model (series) of the External Device to be connected and connection method. Select "Temp. Controllers MODBUS SIO." Check the External Device which can be connected in "Temp. Controllers MODBUS SIO" in system configuration. " "1 System Configuration" (page 3)
Use System Area	This driver cannot be used.
Port	Select the Display port to be connected to the External Device.

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

Device/PLC 1	
Summary	Change Device/PLC
Maker CHINO (	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	O 7 O 8
Parity	NONE C EVEN C ODD
Stop Bit	
Flow Control	NONE     O ER(DTR/CTS)     O XON/XOFF
Timeout	3 (sec)
Retry	2
Wait To Send	10 💼 (ms)
RI / VCC	RI     VCC
In the case of RS2 or VCC (5V Power	232C, you can select the 9th pin to RI (Input) Supply]. If you use the Digital's RS232C
Isolation Unit, plea	se select it to VCC. Default
Device-Specific Settings	
Allowable Number of	
Number Device N	lame Settings

IMPORTANT

Set Wait To Send to 5ms or more.

#### Device Setting

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

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

💰 Individual Device Settings 🛛 🛛 🔀				
PLC1				
Series	DB1000 Series	•		
Please reconfirm all of you have changed the	f address settings that you are usin e series.	ıg if		
Station No.	1 🗧			
	[	)efault		
	OK ( <u>0)</u> Ca	ncel		

## 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.
- $2 \ {\rm Press \ down/up \ key \ to \ move \ to \ "MODE7."}$
- **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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker	CHINO Corporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data	Mode 1 <u>Change</u>	
Communication	Settings	
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	<b>_</b>
Data Leng	gth O 7	© 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	© 2
Flow Cont	rol 💿 NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 🛓	(sec)
Retry	2 🔹	
Wait To S	iend 10 🛨	(ms)
RI / VCC	© BI	O Vcc
	ase of RS232C, you can sele (5V Power Supply). If you u:	
Isolation	Unit, please select it to VCC	C. Default
Device-Specifi	c Settings	
	Number of Devices/PLCs	16 📊
Number	Device Name PLC1	Settings Series=DB1000 Series,Station No.=1
<u></u>	n con	

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

💰 Individual Dev	rice Settings	×
PLC1		
Series	DB1000 Series	•
Please reconfirm you have chang	n all of address settings that you are us ed the series.	ing if
Station No.	1 🚍	
		Default
	<u>OK (D)</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."
- ${\bf 3}$  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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO Corp	poration	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	© RS422/485(2wire)  © RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	07	© 8
Parity	NONE	C EVEN C ODD
Stop Bit	● 1	C 2
Flow Control	NONE	C ER(DTR/CTS) C XON/XOFF
Timeout	3 📑 (s	ec)
Retry	2 🔅	
Wait To Send	10 🗦 (r	ns)
RI / VCC	🖸 Fil	O VCC
In the case of RS232 or VCC (5V Power Su		t the 9th pin to RI (Input)
Isolation Unit, please	select it to VCC.	Default
Device-Specific Settings		
Allowable Number of De	evices/PLCs	16 📊
Number Device Nam	ne	
1 PLC1		Series=DB1000 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💰 Individual Dev	rice Settings	×
PLC1		
Series	DB1000 Series	•
Please reconfirm you have chang	n all of address settings that you are us ed the series.	ing if
Station No.	1 🚍	
		Default
	<u>OK (D)</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

## 3.4 Setting Example 4

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO (	Corporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	RS232C	C RS422/485(2wire) C RS422/485(4wire)
Speed	9600	
Data Length	<b>O</b> 7	© 8
Parity	NONE	C EVEN C ODD
Stop Bit	● 1	© 2
Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 📫 (*	sec)
Retry	2 🔹	
Wait To Send	10 📫 (r	ns)
RI / VCC	• RI	O VCC
or VCC (5V Power		t the 9th pin to RI (Input) : the Digital's RS232C Default
Device-Specific Settings		
Allowable Number o	f Devices/PLCs	16 👧
Number Device N	lame	Settings
1 PLC1		Series=DB2000 Series,Station No.=1

**I**MPORTANT

Set Wait To Send to 5ms or more.

#### Device Setting

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

💰 Individual Device Settings 🛛 🛛 🔀		
PLC1		
Series	DB2000 Series	
Please reconfirm all of you have changed the	i address settings that you are using if e 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINI	) Corporation	Series Temp. Controllers MODBUS SID Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Setting	s	
SIO Type	C RS232C	RS422/485(2wire) O RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	0.7	• 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	O 2
Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 🗧	(sec)
Retry	2 🗧	
Wait To Send	10 📫	(ms)
RI / VCC	© BI	O VCC
		et the 9th pin to RI (Input) e the Digital's RS232C
Isolation Unit, p	ease select it to VCC	. Default
Device-Specific Settin	]\$	
Allowable Numbe	of Devices/PLCs	16 🔐
	e Name	Settings
👗 1 🛛 PLC1		Series=DB2000 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💰 Individual Dev	rice Settings	×
PLC1		
Series	DB2000 Series	•
Please reconfirm you have chang	n 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHIN	10 Corporation	Series Temp. Controllers MODBUS SID Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settin	gs	
SIO Type	C RS232C	© RS422/485(2wire) © RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	07	• 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	O 2
Flow Control	NONE	© ER(DTR/CTS) © XON/XOFF
Timeout	3 📫	(sec)
Retry	2 🔹	
Wait To Send	10 🕂	(ms)
RI / VCC	© BI	O VCC
		et the 9th pin to RI (Input) e the Digital's RS232C
Isolation Unit,	please select it to VCC	Default
Device-Specific Setti	ngs	
	er of Devices/PLCs	16 📷
Number Devi	ce Name	Settings Series=DB2000 Series,Station No.=1
		Joenes=Db2000 Senes; 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💰 Individual Dev	rice Settings	×
PLC1		
Series	DB2000 Series	•
Please reconfirm you have chang	n 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."
- ${\bf 3}$  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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINC	) Corporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 Change	
Communication Setting	3	
SIO Type	RS232C	C RS422/485(2wire) C RS422/485(4wire)
Speed	9600	
Data Length	O 7	© 8
Parity	NONE	C EVEN C ODD
Stop Bit	● 1	© 2
Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 📫 (\$	sec)
Retry	2 +	
Wait To Send	10 📫 (r	ns)
RI / VCC	I RI	O VCC
or VCC (5V Pow		t the 9th pin to RI (Input) the Digital's RS232C Default
Device-Specific Setting	IS	
Allowable Number		16
Number Device	Name	Settings Seties=KP1000 Series,Station No.=1

**I**MPORTANT

Set Wait To Send to 5ms or more.

#### Device Setting

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

💰 Individual Device S	iettings 🛛 🔀	
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>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.
- $2 \ {\rm Press \ down/up \ key \ to \ move \ to \ "MODE8."}$
- ${\bf 3}$  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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1						
Summary						Change Device/PLC
Maker	CHINO Corporation	n	Series Tem	p. Controllers MODB	US SIO	Port COM1
Text Da	ta Mode 🛛 🖸	<u>Change</u>				
Communicatio	on Settings					
SIO Typ	e ORS	232C 💿 RS4	22/485(2wire)	O RS422/48	5(4wire)	
Speed	9600	•				
Data Le	ngth O 7	© 8				
Parity	NO	INE O EVE	N	O ODD		
Stop Bit	● 1	O 2				
Flow Co	ntrol 💿 NO	NE O ER(I	DTR/CTS)	O XON/XOFF		
Timeout	3	🔹 (sec)				
Retry	2	*				
Wait To	Send 10	• (ms)				
RI / VC	C © RI	O VCC				
	case of RS232C, you C (5V Power Supply).					
Isolatio	on Unit, please select i	it to VCC.	dis 1132320		Default	
Device-Spec	ific Settings					
	le Number of Devices/		111			
Number	r Device Name PLC1	Se	ettings	00 Series,Station No	1	
<u></u>	I COT	<u></u>	Diselles=KPT0	oo benes, atation N	01	

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

Individual Dev	ice Settings	×
PLC1		
Series	KP1000 Series	•
Please reconfirm you have chang	all of address settings that you are us ed the series.	sing if
Station No.	1 📑	
		Default
	OK ( <u>0</u> ) C	ancel

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

Device/PLC1		
Summary		Change Device/PLC
Maker CHINO C	orporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	C RS232C	O RS422/485(2wire) O RS422/485(4wire)
Speed	9600	▼
Data Length	O 7	© 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	O 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
		ot the 9th pin to RI (Input) e the Digital's RS232C
Isolation Unit, pleas	e select it to VCC.	Default
Device-Specific Settings		
Allowable Number of		16 📷
Number Device Na Number Device Na Number Device Na	ame	Settings Series=KP1000 Series,Station No.=1
I FLUI		

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

Individual Dev	ice Settings	×
PLC1		
Series	KP1000 Series	•
Please reconfirm you have change	all of address settings that you are u ad the series.	sing 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

## 3.10 Setting Example 10

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1	
Summary	Change Device/PLC
Maker CHINO	orporation Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 Change
Communication Settings	
SIO Type	RS232C     RS422/485(2wire)     O RS422/485(4wire)
Speed	9600
Data Length	O 7 O 8
Parity	NONE C EVEN C DDD
Stop Bit	
Flow Control	NONE     O ER(DTR/CTS)     O XGN/XOFF
Timeout	3 :: (sec)
Retry	2 📑
Wait To Send	10 💼 (ms)
RI / VCC	RI O VCC
or VCC (5V Powe	32C, you can select the 9th pin to RI (Input) Supply). If you use the Digital's RS232C e select it to VCC. Default
Device-Specific Setting	
Allowable Number	
Number Device	ame Settings Series=KP2000 Series_Station No.=1

**I**MPORTANT

Set Wait To Send to 5ms or more.

#### Device Setting

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

💣 Individual Device S	iettings 🛛 🔀		
PLC1			
Series	KP2000 Series		
Please reconfirm all of address settings that you are using if you have changed the 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

#### 3.11 Setting Example 11

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker CHI	NO Corporation	Series Temp. Controllers MODBUS SID Port COM1
Text Data Mod	e 1 <u>Change</u>	
Communication Setti	ngs	
SIO Type	C RS232C	RS422/485(2wire)     O RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	O 7	• 8
Parity	NONE	O EVEN O ODD
Stop Bit	I	O 2
Flow Control	NONE	© ER(DTR/CTS) © XON/XOFF
Timeout	3 +	(sec)
Retry	2 +	
Wait To Send	10 🗧	(ms)
RI / VCC	© Fil	O VCC
		et the 9th pin to RI (Input) e the Digital's RS232C
Isolation Unit,	please select it to VCC	Default
Device-Specific Set	ings	
	per of Devices/PLCs	16 📷
Number Dev	ice Name	Settings Series=KP2000 Series,Station No.=1
M PLU		Joenes=N=2000 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💣 Individual Dev	ice Settings	×
PLC1		
Series	KP2000 Series	•
Please reconfirm you have chang	all of address settings that you are u ad 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

## 3.12 Setting Example 12

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO C	Corporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	C RS232C	C RS422/485(2wire) C RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	O 7	© 8
Parity	NONE	C EVEN C ODD
Stop Bit	● 1	© 2
Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 ÷ (s	ec)
Retry	2 🔹	
Wait To Send	10 📫 (n	ns)
RI / VCC	🗢 BI	O VCC
	Supply). If you use	t the 9th pin to RI (Input) the Digital's RS232C Default
Device-Specific Settings		
Allowable Number of		16
Number Device N	ame	
Text Data Mode Communication Settings SID Type Speed Data Length Parity Stop Bit Flow Control Timeout Retry Wait To Send RI / VCC In the case of RS2 or VCC (BV Power Isolation Unit, plea Device-Specific Settings Allowable Number of Number Device N	1         Change           ○         RS232C           9600         7           ○         NONE           ○         1           ○         NONE           3         •           10         •           10         •           11         •           •         NONE           •         •           •<	

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

<i></i> Individual Devi	ce Settings	×
PLC1		
Series	KP2000 Series	•
Please reconfirm you have change	all of address settings that you are us d the series.	sing if
Station No.	1 📑	
		Default
	ОК ( <u>0)</u> С	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

## 3.13 Setting Example 13

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO C	prporation Series Temp. Controllers MOD	BUS SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	RS232C O RS422/485(2wire) O RS422/4	85(4wire)
Speed	9600	
Data Length	O 7 O 8	
Parity	NONE C EVEN C ODD	
Stop Bit		
Flow Control	NONE     O ER(DTR/CTS)     O XON/XOFF	
Timeout	3 🕂 (sec)	
Retry	2 📫	
Wait To Send	10 (ms)	
RI / VCC	RI     VCC	
	I2C, you can select the 9th pin to RI (Input) Supply). If you use the Digital's RS232C e select it to VCC.	Default
Device-Specific Settings		
Allowable Number of		
Number Device N	ime Settings IIII Series=KP3000 Series,Station 1	No.=1

**I**MPORTANT

Set Wait To Send to 5ms or more.

#### Device Setting

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

🟄 Individual Device Settings 🛛 🛛 🔀		
PLC1		
Series	KP3000 Series	•
Please reconfirm all of address settings that you are using if you have changed the series.		
Station No.	Station No. 1 📑	
		Default
	OK ( <u>0)</u> C	ancel

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

Device/PLC 1		
Summary		Change Device/PLC
Maker CH	INO Corporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mod	e <u>1</u> <u>Change</u>	
Communication Sett	ings	
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	<b>T</b>
Data Length	O 7	© 3
Parity	NONE	C EVEN C ODD
Stop Bit	● 1	C 2
Flow Control	NONE	C ER(DTR/CTS) C XGN/XOFF
Timeout	3 *	(sec)
Retry	2 🔹	
Wait To Send	10 🛨	(ms)
RI / VCC	© RI	O VCC
		act the 9th pin to RI (Input) se the Digital's RS232C
	please select it to VCC	
Device-Specific Set	tings	
	ber of Devices/PLCs	16 📊
Number Dev	vice Name	Settings
M PLC	1	Series=KP3000 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

Individual Devid	te Settings	×
PLC1		
Series	KP3000 Series	•
Please reconfirm you have change	all of address settings that you are usin d the series.	ng if
Station No.	1 🗮	
	1	Default
	OK ( <u>D</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

# 3.15 Setting Example 15

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO Cor	poration	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	© RS422/485(2wire)  © RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	07	© 8
Parity	NONE	C EVEN C ODD
Stop Bit	● 1	C 2
Flow Control	NONE	C ER(DTR/CTS) C XON/XOFF
Timeout	3 📑 (s	ec)
Retry	2 🔅	
Wait To Send	10 🕂 (r	ns)
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 of Devices/PLCs 16		
Number Device Nam	ne	Settings
1 PLC1		Series=KP3000 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

<i>参</i> Individual Devic	e Settings 🛛 🔀
PLC1	
Series	KP3000 Series
Please reconfirm a you have changed	II of address settings that you are using if the 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO C	orporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	▼
Data Length	O 7	© 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	O 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 can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. Default		
Device-Specific Settings		
Allowable Number of		16 🛄
Number Device N	ame	Settings
SID Type Speed Data Length Parity Stop Bit Flow Control Timeout Retry Wait To Send RI / VCC In the case of R92 or VCC (5V Power Isolation Unit, pleas Device-Specific Settings Allowable Number of Number Device N	9600 7 NONE 1 NONE 3 2 10 8 H 32C, you can sele Sopply. If you us se select it to VCC Devices/PLCs	Settings Default

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

💣 Individual Devi	ce Settings	×
PLC1		
Series	LT230 Series	<b>-</b>
Please reconfirm you have change	all of address settings that you are using if a	
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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1			
Summary	Change Device/PLC		
Maker CHINO Co	poration Series Temp. Controllers MODBUS SIO Port COM1		
Text Data Mode	1 Change		
Communication Settings			
SIO Type	RS232C O RS422/485(2wire) O RS422/485(4wire)		
Speed	9600		
Data Length	07 08		
Parity	NONE O EVEN O ODD		
Stop Bit	© 1 O 2		
Flow Control	NONE O ER(DTR/CTS) O XON/XOFF		
Timeout	3		
Retry	2 🚊		
Wait To Send	20 • (ms)		
RI / VCC	RI      VCC		
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C			
Isolation Unit, please select it to VCC. Default			
Device-Specific Settings			
Allowable Number of Devices/PLCs 16			
Number Device Na	ne Settings Series=LT300 Series,Station No.=1		
	CAM I		

**I**MPORTANT

Set Wait To Send to 20ms or more.

## Device Setting

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

💣 Individual Device S	ettings 🛛 🔀	
PLC1		
Series	LT300 Series	
Please reconfirm all of address settings that you are using if you have changed the series.		
Station No.	1	
	Default	
	OK ( <u>O)</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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHI	NO Corporation	Series Temp. Controllers MODBUS SID Port COM1
Text Data Mode	e 1 <u>Change</u>	
Communication Setti	ngs	
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	0.7	© 8
Parity	NONE	O EVEN O ODD
Stop Bit	1	O 2
Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 🕂	(sec)
Retry	2 🔅	
Wait To Send	10 🔅	(ms)
RI / VCC	© Fil	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 of Devices/PLCs 16		
	ice Name	
👗 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💰 Individual Dev	rice Settings	×
PLC1		
Series	LT 300 Series	•
Please reconfirm you have chang	n all of address settings that you are u ed the series.	ising 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO Co	rporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode 🛛 🛛	1 <u>Change</u>	
Communication Settings		
SIO Type	C RS232C	O RS422/485(2wire) O RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	07	© 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	O 2
Flow Control	NONE	ER(DTR/CTS)     O XON/XOFF
Timeout	3 📑 (	sec)
Retry	2 🔹	
Wait To Send	10 🔅 (	ms)
RI / VCC	© RI	O VCC
		st the 9th pin to RI (Input) e the Digital's RS232C
Isolation Unit, please		Default
Device-Specific Settings		
Allowable Number of D	evices/PLCs	16 📷
Number Device Nar	me	Settings
👗 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💰 Individual Dev	rice Settings	×
PLC1		
Series	LT 300 Series	•
Please reconfirm you have chang	n all of address settings that you are u ed the series.	ising 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary	Change Device/PLC	
Maker CHINO	rporation 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	O 7 O 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      VCC	
	2C, you can select the 9th pin to RI (Input) Supply). If you use the Digital's RS232C	
Isolation Unit, plea	a select it to VCC. Default	
Device-Specific Settings		
Allowable Number o		
Number Device Number Device Number	me Settings Series=LT400 Series,Station No.=1	-

**I**MPORTANT

Set Wait To Send to 5ms or more.

## Device Setting

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

💣 Individual Device !	Gettings 🛛 🔀	
PLC1		
Series	LT400 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHIN	IO Corporation	Series Temp. Controllers MODBUS SID Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settin	gs	
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	07	• 8
Parity	NONE	O EVEN O ODD
Stop Bit	I	O 2
Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 📫	(sec)
Retry	2 📫	
Wait To Send	10 🕂	(ms)
RL/VCC	© FI	O VCC
		et the 9th pin to RI (Input) e the Digital's RS232C
Isolation Unit, p	please select it to VCC	. Default
Device-Specific Settir	igs	
Allowable Numbe	er of Devices/PLCs	16 🔐
	e Name	
👗 1 PLC1		Series=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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💣 Individual Devi	ce 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>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
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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1	
Summary	Change Device/PLC
Maker CHIND Corporation Series Temp. Controllers MODBUS SID	Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type O RS232C O RS422/485(2wire) O RS422/485(4wire)	
Speed 9600	
Data Length O 7 O 8	
Parity  © NONE  © EVEN  © ODD	
Stop Bit 💿 1 💿 2	
Flow Control   NONE  C ER(DTR/CTS)  C X01/X0FF	
Timeout 3 🚔 (sec)	
Retry 2	
Wait To Send 10 👘 (ms)	
RI / VCC O RI O VCC	
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (3V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. Default	
Device-Specific Settings	
Allowable Number of Devices/PLCs 16	
Number Device Name Settings	
1 PLC1 III Series=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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💣 Individual Devi	ce 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>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

# 3.23 Setting Example 23

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1	· ]		
Summary			Change Device/PLC
Maker	CHINO Co	orporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Da	ata Mode	1 <u>Change</u>	
Communicati	ion Settings		
SIO Typ	pe	C RS232C	RS422/485(2wire)     C RS422/485(4wire)
Speed		9600	
Data Le	ength	0.7	© 8
Parity		NONE	O EVEN O ODD
Stop Bit	t .	● 1	© 2
Flow Co	ontrol	NONE	O ER(DTR/CTS) O XON/XOFF
Timeou	t .	3 📑 (	sec)
Retry		2 🔹	
Wait To	Send	10 🕂 (	ms)
RI / VC	:C	© BI	O VCC
			st the 9th pin to RI (Input) e the Digital's RS232C
Isolati	on Unit, please	e select it to VCC.	Default
Device-Spec	cific Settings		
	ole Number of [		16 📑
Numbe	er Device Na PLC1	ame	Settings The Series=LT830 Series,Station No.=1
<u></u>	ILCI		

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

💰 Individual Dev	vice Settings	×
PLC1		
Series	LT830 Series	•
Please reconfirm you have chang	n all of address settings that you are u red the series.	ising 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO C	orporation	Series Temp. Controllers MODBUS SID Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	T
Data Length	O 7	© 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	O 2
Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 🗧	(sec)
Retry	2 🔹	
Wait To Send	10 📫	(ms)
RI / VCC	© BI	O VCC
	Supply). If you us	ct the 9th pin to RI (Input) e the Digital's RS232C - Default
Device-Specific Settings		
Allowable Number of		16
Number Device N	ame	Settings Setties=JU 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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

Individual Devid	e Settings	×
PLC1		
Series	JU Series	·]
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	1

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

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO (	Corporation	Series Temp. Controllers MODBUS SID Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	RS422/485(2wire)     O RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	0.7	© 8
Parity	NONE	C EVEN C ODD
Stop Bit	● 1	© 2
Flow Control	NONE	© ER(DTR/CTS) © XON/XOFF
Timeout	3 🔹	(sec)
Retry	2 🔹	
Wait To Send	10 🔅	(ms)
RI / VCC	© RI	O VCC
		et the 9th pin to RI (Input) e the Digital's RS232C
Isolation Unit, plea		
Device-Specific Settings		
Allowable Number of		16 🔐
Number Device N	lame	
👗 1 🛛 PLC1		Series=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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💣 Individual Devi	ce Settings	×
PLC1		
Series	JU Series(Single-Phase)	•
Please reconfirm you have change	all of address settings that you are u ad the series.	sing 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC1	
Summary	Change Device/PLC
Maker CHIND Corporation Series Temp. Controllers MODBUS SIO	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 O 7 O 8	
Parity  © NONE  © EVEN  © 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 O 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 of Devices/PLCs 16	
Number Device Name Settings	
↓ 1 PLC1 Interest Series=JU Series(Single-Phase),Station No.	i.=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 setting screen, click I ([Setting]) of External Device you want to set from [Device-Specific Settings] of [Device/PLC Settings].

💣 Individual Devi	ce Settings	×
PLC1		
Series	JU Series(Single-Phase)	•
Please reconfirm you have change	all of address settings that you are u ad the series.	sing 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINC	Corporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings	3	
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	T
Data Length	O 7	© 3
Parity	NONE	C EVEN C 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 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 Setting	s	
Allowable Number		16 _ 🛄
Number Device	Name	Settings

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

<i></i> Individual Devid	e Settings	×
PLC1		
Series	JW Series	
Please reconfirm a you have changed	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, 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Device/PLC 1		
Summary		Change Device/PLC
Maker CHINO C	Corporation	Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	C RS232C	O RS422/485(2wire)  O RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	O 7	© 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	O 2
Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
Timeout	3 🕂	(sec)
Retry	2 📫	
Wait To Send	10 🔅	(ms)
RI / VCC	© BI	O VCC
	Supply). If you us	ct the 9th pin to RI (Input) e the Digital's RS232C Default
Device-Specific Settings		
Allowable Number of		16 🦉
Number Device N	ame	Settings
Isolation <sup>1</sup> Unit, plea Device-Specific Settings Allowable Number of <u>Nu</u> mber <u>Device N</u>	se select it to VCC. Devices/PLCs	Default 16 Settings

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

<i></i> Individual Devid	e Settings	×
PLC1		
Series	JW Series	
Please reconfirm a you have changed	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, 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 setting screen, select [Device/PLC Settings] from [System setting window] in workspace.

Devi	ce/PLC 1		
Sun	mary		Change Device/PLC
	Maker CHINO C	orporation	Series Temp. Controllers MODBUS SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Con	munication Settings		
	SIO Type	RS232C	C RS422/485(2wire) C RS422/485(4wire)
	Speed	9600	<b>•</b>
	Data Length	<b>O</b> 7	© 8
	Parity	NONE	O EVEN O ODD
	Stop Bit	• 1	© 2
	Flow Control	NONE	O ER(DTR/CTS) O XON/XOFF
	Timeout	3 🕂 (s	sec)
	Retry	2 +	
	Wait To Send	10 📫 (r	ns)
	RI / VCC	🖲 BI	O VCC
		Supply). If you use	t the 9th pin to RI (Input) the Digital's RS232C Default
Dev	ice-Specific Settings		
	Allowable Number of		16
	Number Device Na	ime	Settings The Series=DB1000 Series,Station No.=1
	<u> </u>		

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.		
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.		

65

# Device Setting

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

Individual Device 🕄	Settings	×
PLC1		
Series	DB1000 Series	•
Please reconfirm all o you have changed th	of address settings that you ar e series.	e using if
Station No.	1 📑	
		Default
	OK ( <u>D</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 "2.2 Off-line Mode"

#### Communication Settings

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

Comm.	Device	Option		
Temp. Controllers M	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.
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 (s)	Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device.

Continues to the next page.

Setup Items	Setup Description	
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.	
Wait To Send (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 N	10DBUS SIO		[COM1]	Page 1/1
Device	/PLC Name PLC	1		
	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	MODBUS SIO		[COM1]	Page 1/1
		the 9th pin to Power Supply).	<ul> <li>RI</li> <li>f RS232C, you can sei</li> <li>b RI(Input) or VCC(5%</li> <li>If you use the Digition Unit, please selo</li> </ul>	/ tal'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.	

# 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.

## Cable Diagram 1

Display (Connection Port)		Cable	Notes
GP (COM1) ST (COM1) LT (COM1) IPC <sup>*1</sup>	А	RS-232C communication cable by CHINO Corporation RZ-CRS6□□ <sup>*2</sup>	Cable length: 15m or less
PC/AT	В	Your own cable	

\*1 Only the COM port which can communicate by RS-232C can be used. ☞ "■ IPC COM Port" (page 6)

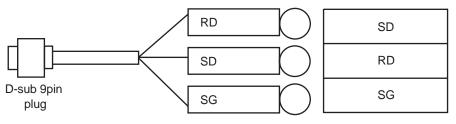
#### \*2 $\square$ shows cable length.

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

A) When using the RS-232C Communication Cable by CHINO Corporation



B) When using your own cable

	D	isplay		External Device
	Pin	Signal name	Shield	Signal name
Display	2	RD (RXD)	$\leftarrow$	SD
	3	SD (TXD)		→ RD
	5	SG		SG
	7	RS (RTS)		
	8	CS (CTS)	<b>← \</b>	
	Shell	FG	V	

# Cable Diagram 2

Display (Connection Port)	Cable		Notes
	А	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) ST <sup>*2</sup> (COM2) LT (COM1) IPC <sup>*3</sup>	В	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + RS-422 cable by Pro-face CA3-CBL422-01 + Your own cable	
	С	RS-422 cable by Pro-face CA3-CBL422/5M-01 + Your own cable	
	D	Your own cable	Cable length: 600m or less
	Е	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
GP <sup>*4</sup> (COM2)	F	Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	
	G	Online adapter by Pro-face CA4-ADPONL-01 + RS-422 cable by Pro-face CA3-CBL422-01 + Your own cable	

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A

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

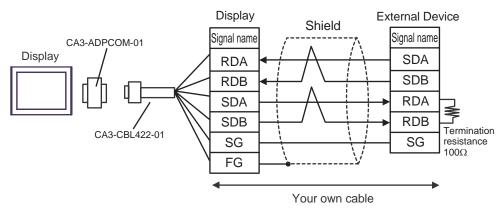
## **I**MPORTANT

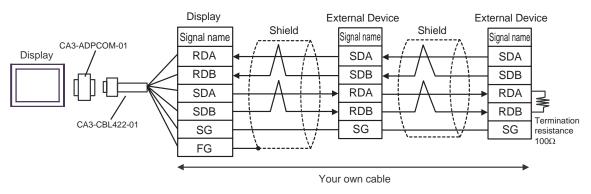
• Terminal number to be used for communication varies depending on the External Device. Terminal numbers corresponding to each series are shown below.

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

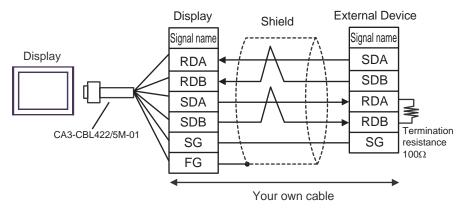
- A) When using the COM port conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- Display Terminal block Shield Signal name **External Device** CA3-ADPCOM-01 Display Signal name TERMRX RDA SDA RDB SDB SDA RDA CA3-ADPTRM-01 SDB RDB Termination SG SG resistance 100Ω FG Your own cable 1:n connection External Device Terminal block Signal name **External Device External Device** Shield Shield Signal name TERMRX Signal name CA3-ADPCOM-01 Display RDA SDA SDA RDB SDB SDB RDA SDA RDA RDB RDB SDB CA3-ADPTRM-01 Termination SG SG SG resistance 100Ω FG Your own cable
- 1:1 connection

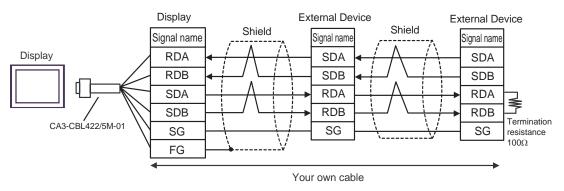
- B) When using the COM port conversion adapter (CA3-ADPCOM-01), the RS-422 cable (CA3-CBL422-01) by Pro-face and your own cable
- 1:1 connection



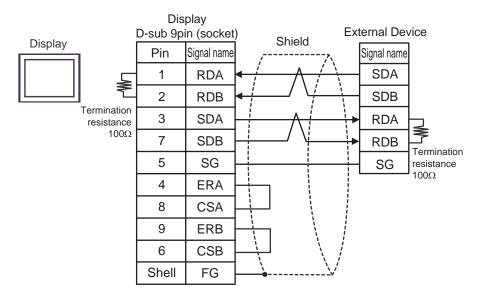


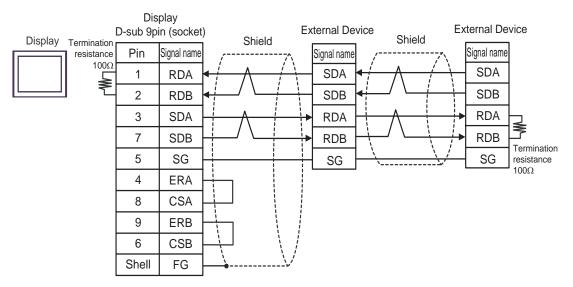
- C) When using the RS-422 cable (CA3-CBL422/5M-01) by Pro-face and your own cable
- 1:1 connection



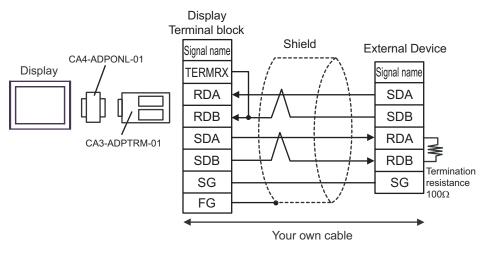


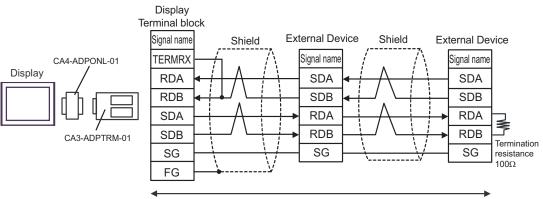
- D) When using your own cable
- 1:1 connection





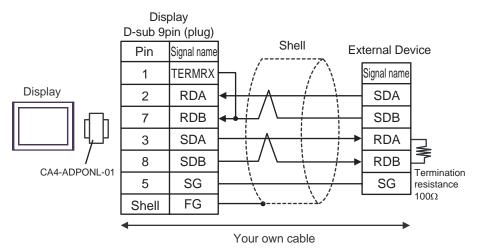
- E) When using the online adapter (CA4-ADPONL-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection

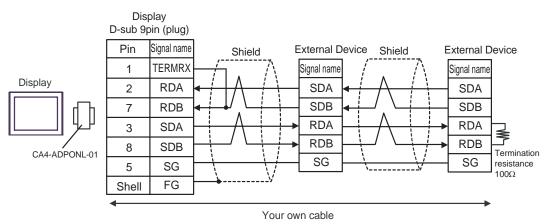




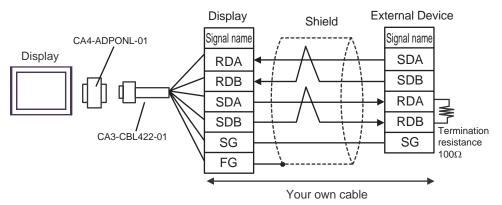
Your own cable

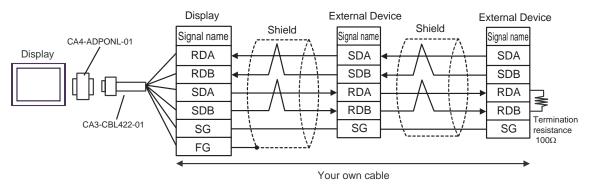
- F) When using the online adapter (CA4-ADPONL-01) by Pro-face and your own cable
- 1:1 connection





- G) When using the online adapter (CA4-ADPONL-01), the RS-422 cable (CA3-CBL422-01) by Pro-face and your own cable
- 1:1 connection





# Cable Diagram 3

Display (Connection Port)		Cable	Notes
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) ST <sup>*2</sup> (COM2) LT (COM1)	А	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
GP*3 (COM2)	С	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	Cable length: 600m or less
	D	Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	
IPC <sup>*4</sup>		COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	F	Your own cable	

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A

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

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

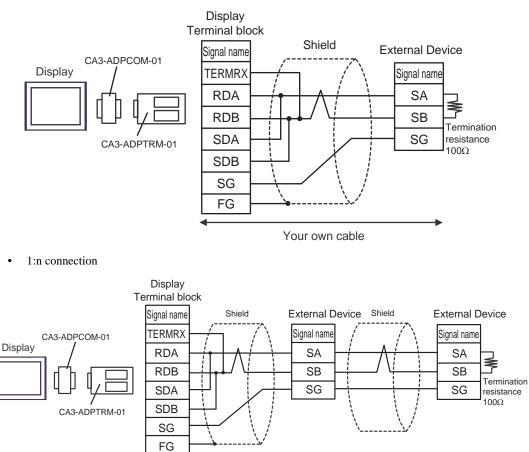
## IMPORTANT

٠

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

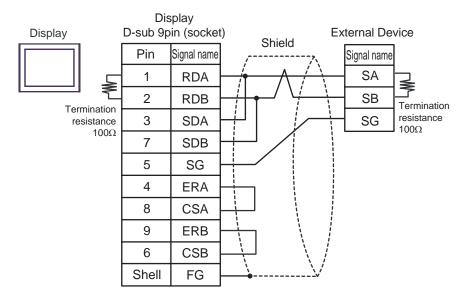
Series	SA	SB	SG
DB1000	12	13	14
DB2000 (COM1)	26	27	28
DB2000 (COM2)	29	30	31
KP1000	12	13	14
KP2000 (COM1)	26	27	28
KP2000 (COM2)	29	30	31
KP3000 (COM1)	26	27	28
KP3000 (COM2)	29	30	31
LT230	6	7	8
LT300/400	11	12	15
LT830	6	7	8

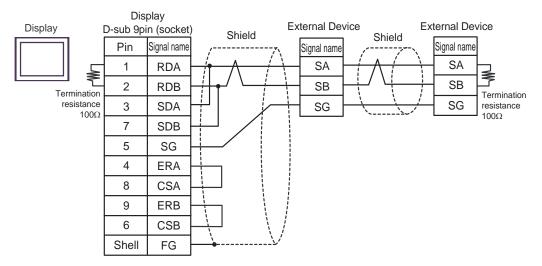
- A) When using the comport conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection



Your own cable

- B) When using your own cable
- 1:1 connection





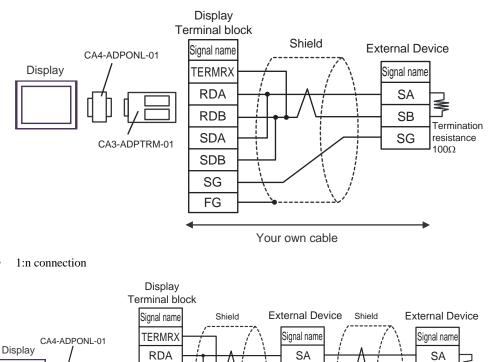
SB

SG

Termination

resistance 100Ω

- C) When using the online adapter (CA4-ADPONL-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection



SB

SG

Your own cable

RDB

SDA

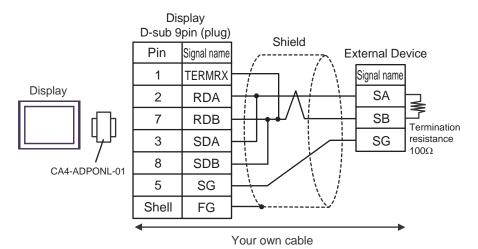
SDB

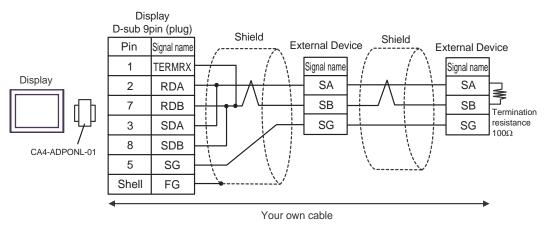
SG FG

CA3-ADPTRM-01

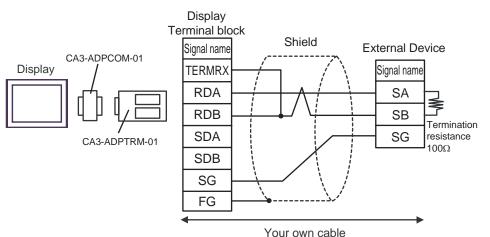
ł

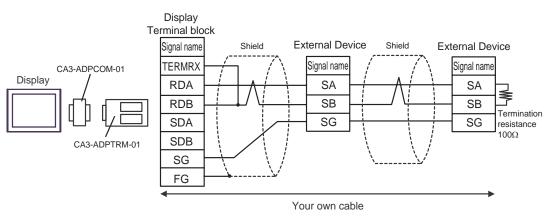
- D) When using the online adapter (CA4-ADPONL-01) by Pro-face and your own cable
- 1:1 connection



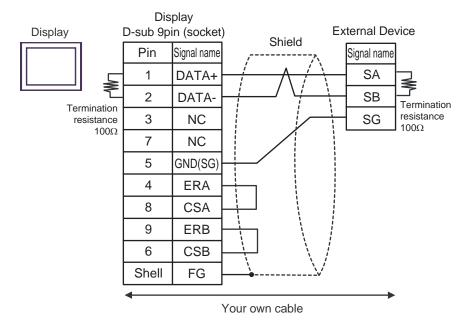


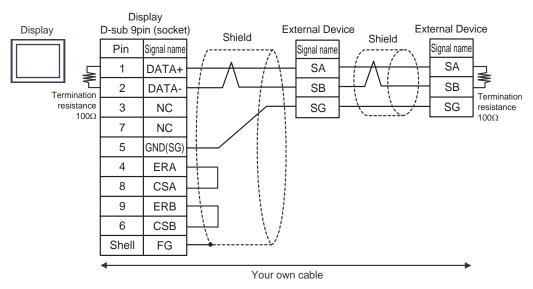
- E) When using the comport conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection





- F) When using your own cable
- 1:1 connection





# Cable Diagram 4

Display (Connection Port)		Cable	Notes
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) ST <sup>*2</sup> (COM2) LT (COM1)	А	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
GP*3 (COM2)	С	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	Cable length: 600m or less
	D	Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	
IPC*4	Е	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	F	Your own cable	

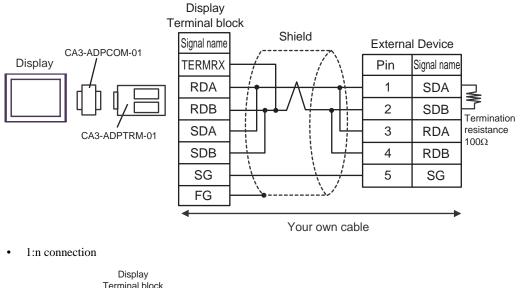
\*1 All GP models except AGP-3302B

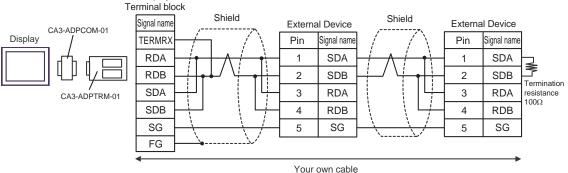
\*2 All ST models except AST-3211A

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

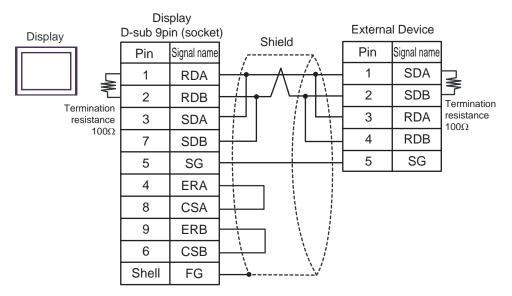
\*4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. ☞ "■ IPC COM Port" (page 6)

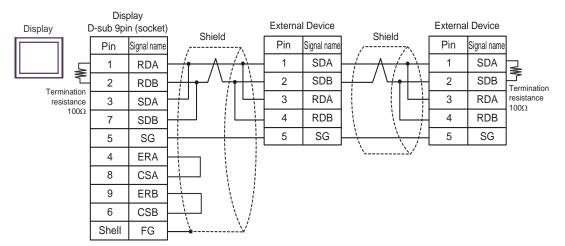
- A) When using the comport conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection



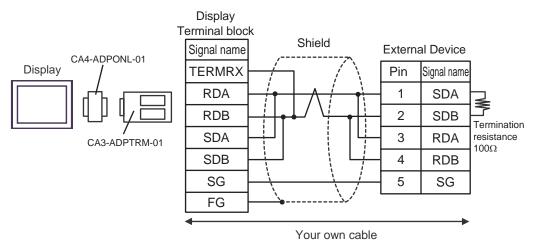


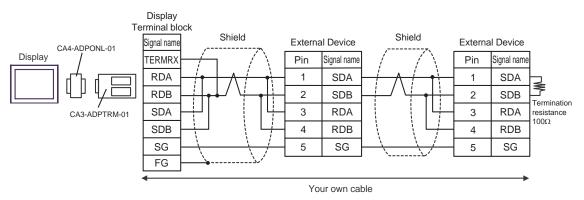
- B) When using your own cable
- 1:1 connection



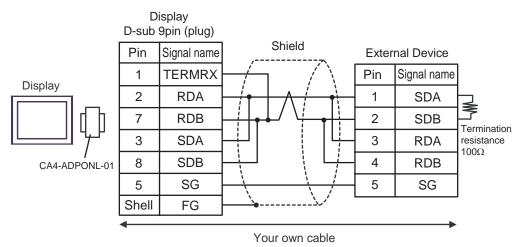


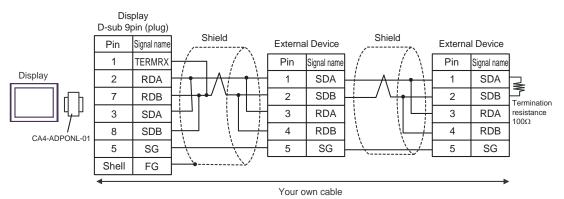
- C) When using the online adapter (CA4-ADPONL-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection



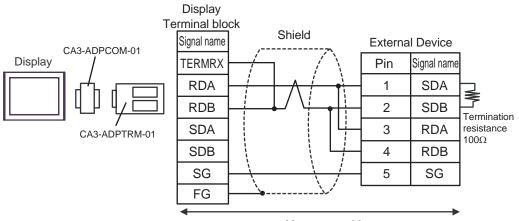


- D) When using the online adapter (CA4-ADPONL-01) by Pro-face and your own cable
- 1:1 connection

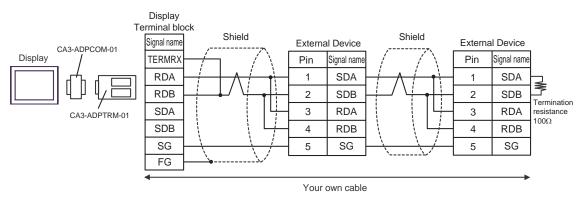




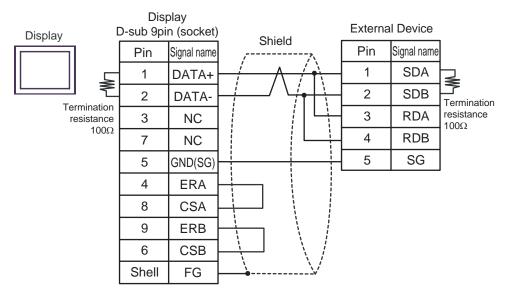
- E) When using the comport conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection

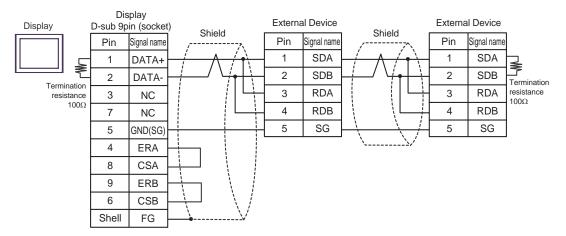


Your own cable



- F) When using your own cable
- 1:1 connection





# Cable Diagram 5

Display (Connection Port)		Cable	Notes
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) ST <sup>*2</sup> (COM2) LT (COM1)	А	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
GP*3 (COM2)	С	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less
	D	Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	lengui. Toin of less
IPC*4	E	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	F	Your own cable	]

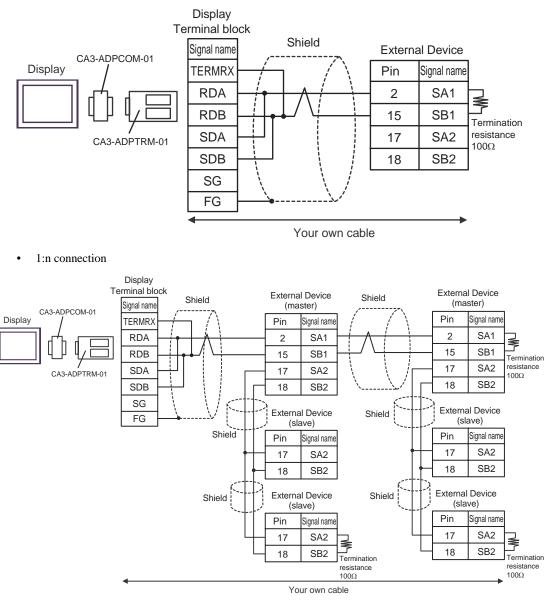
\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A

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

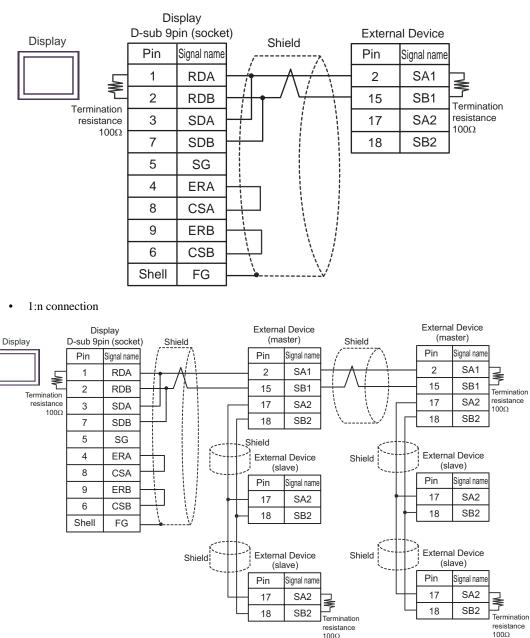
\*4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. ☞ "■ IPC COM Port" (page 6)

- A) When using the comport conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection



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

- B) When using your own cable
- 1:1 connection



#### IMPORTANT

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

External Device

(slave)

Signal name

SA2

SB2

Termination

resistance

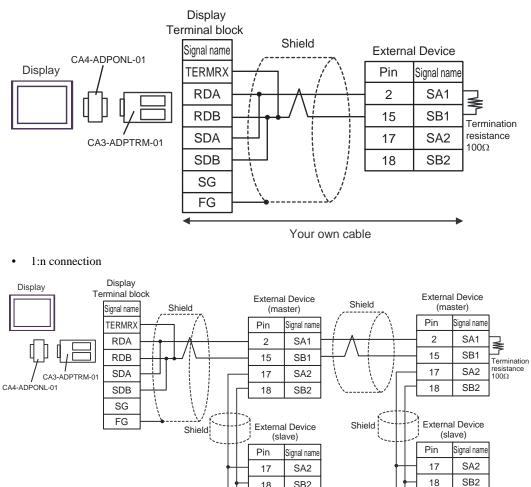
100Ω

Pin

17

18

- C) When using the online adapter (CA4-ADPONL-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection



**IMPORTANT** 

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

SB2

Signal name

SA2

SB2

Your own cable

E

Termination

resistance

100Ω

Shield

External Device

(slave)

18

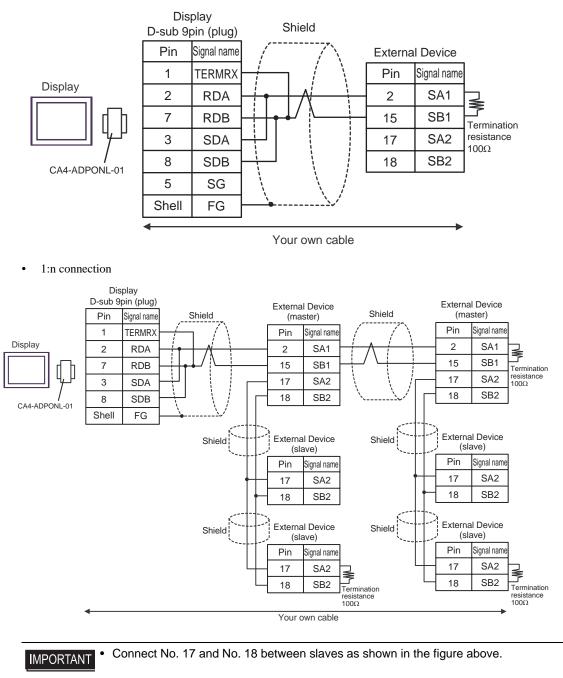
Pin

17

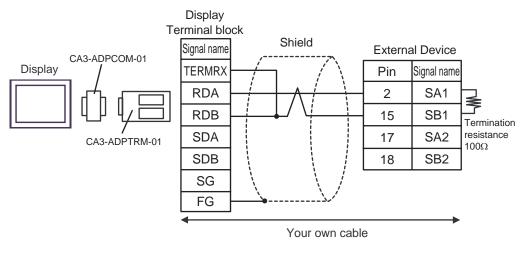
18

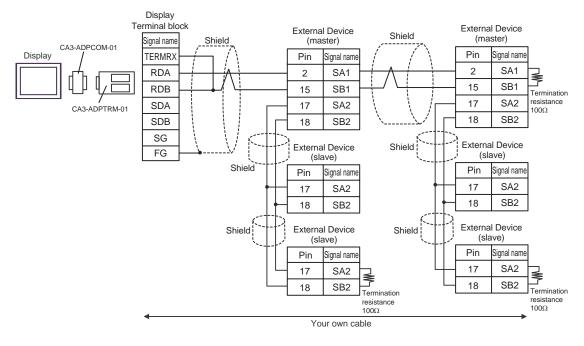
Shield

- D) When using the online adapter (CA4-ADPONL-01) by Pro-face and your own cable
- 1:1 connection



- E) When using the comport conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable
- 1:1 connection

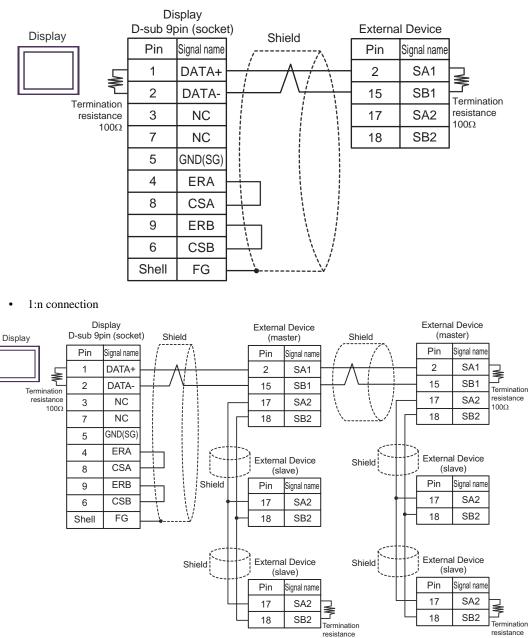




IMPORTANT • Connect No. 17 and No. 18 between slaves as shown in the figure above.

100Ω

- F) When using your own cable
- 1:1 connection



IMPORTANT

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

1000

# 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 🛛 🔀								
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	4 000 Back A B C D E F	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 <b>15</b> *1
Analog Setting Value		40001 - 40596 <sup>*2</sup>		<u>ві</u> 15)
Operational Status Setting	-	49056 - 49512		<u>віt</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 "Appendix 1.4 LS Area (Direct Access Method)" • 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]	віт <b>15</b> *1
Analog Setting Value		40001 - 40650*2		<u>ві</u> t15)
Operational Status Setting	-	49056 - 49536		<u>ві</u> t15

\*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 "Appendix 1.4 LS Area (Direct Access Method)"Please refer to the precautions on manual notation for icons in the table.

# 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 <b>15</b> *1
Analog Setting Value		40001 - 40650*2		<u>ві</u> t <b>15</b> ]
Pattern Setting		49003 - 49534 <sup>*3</sup>		<u>ві</u> т <b>15</b>

\*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 "Appendix 1.4 LS Area (Direct Access Method)"
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			
	00111			
Digital Input Data	10002 - 10124	-		*1
Analog Input Data	-	30101 - 30144	[H/L]	<mark>віt<b>15</b></mark> *1
Analog Setting Value		40001 - 40650*2		<u>ві</u> 15]
Pattern Setting	-	49003 - 49536 <sup>*3</sup>		<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 "Appendix 1.4 LS Area (Direct Access Method)"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>віt<b>15</b></mark> *1
Analog Setting Value		40008 - 40574 <sup>*2</sup>		<u>ві</u> t15)
Pattern Setting	-	49003 - 49534 <sup>*3</sup>		<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 "Appendix 1.4 LS Area (Direct Access Method)"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 "Appendix 1.4 LS Area (Direct Access Method)"

• 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 are					
Device	Bit Address	Word Address	32bits	Notes	
Digital Setting Value	00101	-		*1	
Digital Input Data	10004 - 10122	-		*2	
Analog Input Data	-	30101 - 30142	] , [H/L]	ві t <b>15</b> *2	
Analog Setting Value	-	40008 <sup>*3</sup> 40114 - 40119 40201 - 40251 49501 - 49512		<u>εi</u> , <b>15</b> ) ∗ı	

\*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 "Appendix 1.4 LS Area (Direct Access Method)"

• 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	, [H/L]	<mark>віt<b>15</b></mark> *2
		40001 - 40093		
Analog Setting Value	_	40112 - 40166		<u>віt</u> 15
Analog Cetting 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 "Appendix 1.4 LS Area (Direct Access Method)"
  - Please refer to the precautions on manual notation for icons in the table.

# 6.9 LT830 series

		This address can be	e specified as s	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	- <b>FH</b> ( 1)	ві t <b>15</b> *2
Analog Setting Value	-	40008*3           40114 - 40119           40201 - 40211           49501 - 49512		<u>₿;</u> , <b>15</b> ) *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 "Appendix 1.4 LS Area (Direct Access Method)"

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

#### 6.10 JU series with temperature controller feature

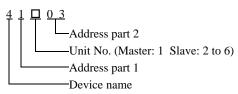
This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101 - 00106	_		*1
Digital Getting value	01102 - 01612*2	-		
Digital Input Data	10002 - 10122	_		*3
Digital input Data	11109 - 11614 <sup>*2</sup>	-		
		30101 - 30142		
Analog Input Data	-	31101 - 31612 <sup>*2</sup>	[H/L]	<u>віt<b>15</b></u> *3
		39001 - 39080		
		40001 - 40384		
Analog Setting Value		41102 - 41672*2		<u>ві</u> 15
	-	48111 - 48618*2		*1
		49501 - 49525		

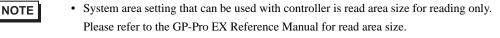
\*1 When writing, key lock of External Device needs to be set to lock 4. When writing to other than lock 4, a communication error will be displayed.

\*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



Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (Direct Access Method)"Please refer to the precautions on manual notation for icons in the table.

This address can be specified as system data area

#### 6.11 JU series Single-phase

		This address can be	speeniee us s	jotein 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	[H/L]	<u>■ i t</u> 15 *2
Analog Setting Value		41001 - 41013		<u>ві</u> t15
Analog Setting Value	-	49501		*1

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

#### \*2 Write disable

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

> Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (Direct Access Method)" • Please refer to the precautions on manual notation for icons in the table.

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#### 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]	ві т <b>15</b> *2
Analog Setting Value		41001 - 41018		<u>ві</u> t15
Analog Setting Value	-	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 "Appendix 1.4 LS Area (Direct Access Method)" ٠

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

# 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	<ul> <li>NOTE</li> <li>IP address is displayed such as "IP address (Decimal): MAC address (Hex)."</li> <li>Device address is displayed such as "Address: Device address."</li> <li>Received error codes are displayed such as "Decimal [Hex]."</li> </ul>

#### Display Examples of Error Messages

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

NOTE
Refer to your External Device manual for details on received error codes.
Refer to "When an error is displayed (Error Code List)" 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)	<ul> <li>Cannot be set<sup>*1</sup></li> <li>When key setting is not locked.</li> <li>When trying to set an item that cannot be selected in the type.</li> </ul>

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