CHINO Corporation CNO_MODS_21 3/2025

Temperature Controllers MODBUS SIO Driver

1	System Configuration	
2	Selection of External Device	9
3	Example of Communication Setting	
4	Setup Items	66
5	Cable Diagram	71
6	Supported Device	
7	Device Code and Address Code	
8	Error Messages	

IMPORTANT	The below Displays are no longer sold nor maintained by Pro-face. To reduce
	unplanned downtime due to aged hardware and to maximize your cyber security
	environment we recommend replacing your devices with a new, successor model.
	For details, please visit our homepage for "Recommended Substitution".
	Discontinued from GP-Pro EX 5.00 onwards: GP3000 Series, LT3000 Series,
	ST3000 Series, GP-4100 Series (Monochrome model), PL Series, PS3000/4000
	Series, PE4000 Series.
	• For details on the Displays supported by the driver, please check the "Connectable
	Devices" on our website

http://www.pro-face.com/trans/en/manual/1064.html

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	^{CC} "1 System Configuration" (page 3)
	Devices which can be connected and SIO	· -)
	type.	
2	Selection of External Device	" "2 Selection of External Device" (page 0)
	Select a model (series) of the External	2 Selection of External Device (page 9)
	Device to be connected and connection	
3	Example of Communication Settings	9 "2 Example of Communication Sotting" (page
	This section shows setting examples for	10)
	communicating between the Display and	,
4	Setup Items	P "1 Satur Itoms" (page 66)
	This section describes communication	4 Setup items (page 00)
	setup items on the Display.	
	with GP-Pro EX or in off-line mode.	
E		
J	This section shows cables and adapters	🐨 "5 Cable Diagram" (page 71)
	for connecting the Display and the	
	External Device.	
		•
	Operation	

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 10)	"Cable Diagram 1" (page 71)
			RS-422/485 (2 wire)	"Setting Example 2" (page 12)	"Cable Diagram 3" (page 87)
			RS-422/485 (4 wire)	"Setting Example 3" (page 14)	"Cable Diagram 2" (page 74)
00	DB200000 - 000 *2	Port on CPU unit	RS-232C	"Setting Example 4" (page 16)	"Cable Diagram 1" (page 71)
			RS-422/485 (2 wire)	"Setting Example 5" (page 18)	"Cable Diagram 3" (page 87)
			RS-422/485 (4 wire)	"Setting Example 6" (page 20)	"Cable Diagram 2" (page 74)
	KP1□□□C■□□-□□□ *1	Port on CPU unit	RS-232C	"Setting Example 7" (page 22)	"Cable Diagram 1" (page 71)
			RS-422/485 (2 wire)	"Setting Example 8" (page 24)	"Cable Diagram 3" (page 87)
			RS-422/485 (4 wire)	"Setting Example 9" (page 26)	"Cable Diagram 2" (page 74)
	KP200000 - -000 *2	Port on CPU unit	RS-232C	"Setting Example 10" (page 28)	"Cable Diagram 1" (page 71)
KP			RS-422/485 (2 wire)	"Setting Example 11" (page 30)	"Cable Diagram 3" (page 87)
			RS-422/485 (4 wire)	"Setting Example 12" (page 32)	"Cable Diagram 2" (page 74)
	KP3□0C□□■-□□□ *2	Port on CPU unit	RS-232C	"Setting Example 13" (page 34)	"Cable Diagram 1" (page 71)
			RS-422/485 (2 wire)	"Setting Example 14" (page 36)	"Cable Diagram 3" (page 87)
			RS-422/485 (4 wire)	"Setting Example 15" (page 38)	"Cable Diagram 2" (page 74)

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 40)	"Cable Diagram 3" (page 87)
	LT3□□□□■□0-□□□ *1	Port on CPU unit	RS-232C	"Setting Example 17" (page 42)	"Cable Diagram 1" (page 71)
			RS-422/485 (2 wire)	"Setting Example 18" (page 44)	"Cable Diagram 3" (page 87)
IТ			RS-422/485 (4 wire)	"Setting Example 19" (page 46)	Example"Cable Diagram 2" (page 74)46)"Cable Diagram 1" (page 71)48)"Cable Diagram 1" (page 71)
	LT4□□□□■□□-□□□ *1 *4	Port on CPU unit	RS-232C	"Setting Example 20" (page 48)	"Cable Diagram 1" (page 71)
			RS-422/485 (2 wire)	"Setting Example 21" (page 50)	"Cable Diagram 3" (page 87)
			RS-422/485 (4 wire)	"Setting Example 22" (page 52)	"Cable Diagram 2" (page 74)
	LT830000-	Port on CPU unit	RS-422/485 (2 wire)	"Setting Example 23" (page 54)	"Cable Diagram 3" (page 87)
	JUDDDDDDDD513 *6 JUDDDDDDDD613*7	Port on CPU unit	RS-422/485 (2 wire)	"Setting Example 24" (page 56)	"Cable Diagram 5" (page 113)
JU	JU□□□□□□■□□ ^{*8 *9}	Setting communications unit	RS-422/485 (2 wire)	"Setting Example 25" (page 58)	"Cable Diagram 4" (page 100)
			RS-422/485 (4 wire)	"Setting Example 26" (page 60)	"Cable Diagram 2" (page 74)
.IW	JW□□□□□□■□□ *8	Setting communications unit	RS-422/485 (2 wire)	"Setting Example 27" (page 62)	"Cable Diagram 4" (page 100)
JVV			RS-422/485 (4 wire)	"Setting Example 28" (page 64)	"Cable Diagram 2" (page 74)

*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>
 (JU□□□□□□□□1513) 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

Sorios	Usable Port			
Genes	RS-232C	RS-422/485(4 wire)	RS-422/485(2 wire)	
PS-2000B	COM1 ^{*1} , COM2, COM3 ^{*1} , COM4	-	-	
PS-3450A, PS-3451A, PS3000-BA, PS3001-BD	COM1, COM2 ^{*1*2}	COM2 ^{*1*2}	COM2 ^{*1*2}	
PS-3650A (T41 model), PS-3651A (T41 model)	COM1 ^{*1}	-	-	
PS-3650A (T42 model), PS-3651A (T42 model)	COM1 ^{*1*2} , COM2	COM1 ^{*1*2}	COM1 ^{*1*2}	
PS-3700A (Pentium®4-M) PS-3710A	COM1 ^{*1} , COM2 ^{*1} , COM3 ^{*2} , COM4	COM3 ^{*2}	COM3 ^{*2}	
PS-3711A	COM1 ^{*1} , COM2 ^{*2}	COM2 ^{*2}	COM2 ^{*2}	
PS4000 ^{*3}	COM1, COM2	-	-	
PL3000	COM1 ^{*1*2} , COM2 ^{*1} , COM3, COM4	COM1 ^{*1*2}	COM1*1*2	
PE-4000B Atom N270	COM1, COM2	-	-	
PE-4000B Atom N2600	COM1, COM2	COM3 ^{*4} , COM4 ^{*4} , COM5 ^{*4} , COM6 ^{*4}	COM3 ^{*4} , COM4 ^{*4} , COM5 ^{*4} , COM6 ^{*4}	
PS5000 (Slim Panel Type Core i3 Model) *5*6	COM1, COM2 ^{*4}	COM2 ^{*4}	COM2 ^{*4}	
PS5000 (Slim Panel Type Atom Model) *5 *6	COM1, COM2 ^{*7}	COM2 ^{*7}	COM2 ^{*7}	
PS5000 (Enclosed Panel Type) ^{*8}	COM1	-	-	
PS5000 (Modular Type PFXPU/PFXPP) ^{*5 *6} PS5000 (Modular Type PFXPL2B5-6)	COM1 ^{*7}	COM1 ^{*7}	COM1 ^{*7}	
PS5000 (Modular Type PFXPL2B1-4)	COM1, COM2 ^{*7}	COM2 ^{*7}	COM2 ^{*7}	
PS6000 (Advanced Box) PS6000 (Standard Box)	COM1 ^{*9}	*10	*10	
PS6000 (Basic Box)	COM1 ^{*9}	COM1 ^{*9}	COM1 ^{*9}	

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

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

- *3 When making communication between an External Device and COM port on the Expansion slot, only RS-232C is supported. However, ER (DTR/CTS) control cannot be executed because of the specification of COM port. For connection with External Device, use user-created cables and disable Pin Nos. 1, 4, 6 and 9. Please refer to the IPC manual for details of pin layout.
- *4 Set up the SIO type with the BIOS. Please refer to the IPC manual for details of BIOS.
- *5 When setting up communication between an External Device and the RS-232C/422/485 interface module, use the IPC (RS-232C) or PS5000 (RS-422/485) cable diagrams. However, when using PFXZPBMPR42P2 in a RS-422/485 (4-wire) configuration with no flow control, connect 7.RTS+ and 8.CTS+, and connect 6.RTS- and 9.CTS-. When using RS-422/485 communication with External Devices, you may need to reduce the

when using RS-422/485 communication with External Devices, you may need to reduce the transmission speed and increase the TX Wait time.

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

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

- *7 Set up the SIO type with the DIP Switch. Please refer to the IPC manual for details of DIP Switch. The BOX Atom has not a switch to set the RS-232C, RS-422/485 mode. Use the BIOS for the setting.
- *8 For the connection with the External Device, on the user-created cable read as if the connector on the Display-side is a M12 A-coding 8 pin socket. The pin assignment is the same as described in the cable diagram. For the M12 A-coding connector, use PFXZPSCNM122.
- *9 In addition to COM1, you can also use the COM port on the optional interface.
- *10 Install the optional interface in the expansion slot.

DIP Switch settings (PL3000 / PS3000 Series)

RS-232C

DIP Switch	Setting	Description	
1	OFF ^{*1}	Reserved (always OFF)	
2	OFF	SIQ type: RS-232C	
3	OFF	510 type. R5-2520	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 Ω) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 Ω) insertion to RD (RXD): None	
7	OFF	Short-circuit of SDA (TXA) and RDA (RXA): Not available	
8	OFF	Short-circuit of SDB (TXB) and RDB (RXB): Not available	
9	OFF	PS (PTS) Auto control mode: Dissblad	
10	OFF	- KS (K15) Auto control mode. Disabled	
*1 When using PS-3450A_PS-3451A_PS3000-BA and PS3001-BD_turn ON the set value			

7

RS-422/485 (4 wire)

DIP Switch	Setting	Description	
1	OFF	Reserved (always OFF)	
2	ON	SIQ type: DS 422/485	
3	ON	510 type. K5-422/465	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 Ω) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 Ω) insertion to RD (RXD): None	
7	OFF	Short-circuit of SDA (TXA) and RDA (RXA): Not available	
8	OFF	Short-circuit of SDB (TXB) and RDB (RXB): Not available	
9	OFF	- RS (RTS) Auto control mode: Disabled	
10	OFF		

RS-422/485 (2 wire)

DIP Switch	Setting	Description	
1	OFF	Reserved (always OFF)	
2	ON	SIO time: BS 422/405	
3	ON	510 type. 115-422/405	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 Ω) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 Ω) insertion to RD (RXD): None	
7	ON	Short-circuit of SDA (TXA) and RDA (RXA): Available	
8	ON	Short-circuit of SDB (TXB) and RDB (RXB): Available	
9	ON	- RS (RTS) Auto control mode: Enabled	
10	ON		

2 Selection of External Device

Select the External Device to be connected to the Display.

Welcome to GP-Pro EX	Device/PLC	ices/PLCs
		Device/PLC 1
	Manufacturer	CHINO Corporation
	Port	
		Refer to the manual of this Device/PLC
		Recent Device/PLC
	4	×
	Use System	Area Device Information

Setup Items	Setup Description
Number of Devices/ PLCs	Enter an integer from 1 to 4 to define the number of Devices/PLCs to connect to the display.
Manufacturer	Select the manufacturer of the External Device to connect. Select "CHINO Corporation."
Series	Select the External Device model (series) and the connection method. Select "Temp. Controllers MODBUS SIO." In System configuration, make sure the External Device you are connecting is supported by "Temp. Controllers MODBUS SIO". "" "1 System Configuration" (page 3)
Port	Select the Display port to be connected to the External Device.
Use System Area	This driver cannot be used.

3 Example of Communication Setting

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

3.1 Setting Example 1

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1
Summary Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode 1 Change
Communication Settings
SID Type • RS232C • RS422/485(2wire) • RS422/485(4wire)
Speed 9600 💌
Data Length C 7 C 8
Parity C NONE C EVEN C ODD
Stop Bit C 2
Flow Control O ER(DTR/CTS) C X0N/X0FF
Timeout 3 📩 (sec)
Retry 2
Wait To Send 10 👘 (ms)
In the case of RS232C, you can select the 9th pin to RI (Input)
or VCL (ov Power Supply). If you use the Digital's HS232L Isolation Unit, please select it to VCC. Default
Device-Specific Settings
Allowable Number Add Device
of Devices/PLLs 16 Add Indirect
NU. Device Name Settings Device

IMPORTANT

Set Wait To Send to 5ms or more.

Device Setting

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

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

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

Settings of External Device

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

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

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

3.2 Setting Example 2

Settings of GP-Pro EX

Communication Settings

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

Device/PLC1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODB	JS SIO Port COM1
Text Data Mode 1 Change	
Communication Settings	
SID Type C RS232C RS422/485(2wire) C RS422/485	(4wire)
Speed 9600 💌	
Data Length C 7 C 8	
Parity	
Stop Bit 1 2	
Flow Control O NONE O ER(DTR/CTS) O X0N/X0FF	
Timeout 3 芸 (sec)	
Retry 2	
Wait To Send 10 📑 (ms)	
RI/VCC © RI C VCC	
In the case of RS232C, you can select the 9th pin to RI (Input)	
or VLC (5V Power Supply). If you use the Digital's HS232C Isolation Unit, please select it to VCC.	Default
Device-Specific Settings	
Allowable Number <u>Add Device</u>	
of Devices/PLUs 16	Add Indirect
V 1 PLC1 In Series-DR1000 Series Station No =1	Device
	V

IMPORTANT

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

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

Device Setting

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

\delta Individual Devi	ce Settings	×
PLC1		
Series	DB1000 Series	•
Please reconfirm you have change	all of address settings that you are us ad 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

3.3 Setting Example 3

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHINO C	orporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	C RS422/485(2)	wire) 💿 RS422/485(4wire)	
Speed	9600	-		
Data Length	07	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	© 1 (0 2		
Flow Control	NONE	ER(DTR/CTS) C XON/XOFF	
Timeout	3 🕂 (se	c)		
Retry	2 🔅			
Wait To Send	10 ÷ (ms	;]		
BL/VCC	© BL (C VCC		
In the case of RS232	C, you can select t?	he 9th pin to RI (I	nput)	
or VCC (5V Power S Isolation Unit, please	upply). If you use th select it to VCC.	he Digital's RS23	2C Default	1
Douioo Spooifio Sottingo				1
Allowable Number	Add De	vice		
of Devices/PLCs 1	6			Add Indirect
No. Device Name	Settings			Device
I PLC1	Series=DE	31000 Series,Stati	on No.=1	*

IMPORTANT

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

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

Device Setting

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

\delta Individual Devi	ce Settings	×
PLC1		
Series	DB1000 Series	•
Please reconfirm you have change	all of address settings that you are us ad 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

3.4 Setting Example 4

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHINC	Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	 RS232C RS422/485(2wire) RS422/485(4wire) 	
Speed	9600 🔻	
Data Length	07 08	
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)	
BL/VCC		
In the case of RS2	232C, you can select the 9th pin to RI (Input)	
or VCC (5V Power Isolation Unit, plea	sepply). If you use the Digital's RS232C se select it to VCC. Default	
Device-Specific Settings		
Allowable Number	Add Device	
of Devices/PLCs	16	Add Indirect
No. Device Name	Settings Excises DR2000 Series Station Marc1	Device
	Interest of the series of a constraints of the series of a constraints of the series o	*

IMPORTANT

Set Wait To Send to 5ms or more.

Device Setting

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

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

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

- 1 Press MODE key.
- 2 Press down/up key to move to "MODE7."
- ${\bf 3}$ 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

3.5 Setting Example 5

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	D Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	• RS422/485(2)	wire) C RS422/485(4wire)	
Speed	9600	•		
Data Length	O 7	© 8		
Parity	NONE	O EVEN	O ODD	
Stop Bit	I 1	O 2		
Flow Control	NONE	C ER(DTR/CTS) C XON/XOFF	
Timeout	3 📫	(sec)		
Retry	2 ÷			
Wait To Send	10 📫	(ms)		
RI / VCC	© BI	O VCC		
In the case of RS	232C, you can sele	ot the 9th pin to RI (I	Input)	
Isolation Unit, ple	r Supply). Ir you us ase select it to VCC.	e the Digitals H523.	Default	1
Device-Specific Settings				1
Allowable Number	Add	Device		
or Devices/PLLs	lb Settings			Add Indirect
	Series:	DB2000 Series Stat	ion No =1	
	HOLE I FRANK			•

IMPORTANT

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

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

Device Setting

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

💣 Individual Dev	ice Settings	×
PLC1		
Series	DB2000 Series	•
Please reconfirm you have change	all of address settings that you are using ad the series.	g if
Station No.	1 🗮	
	D	efault
	OK (<u>0</u>) Can	cel

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.
- ${\rm 4} \ {\rm Press \ down/up \ key \ or \ shift \ key, \ select \ setting \ value, \ and \ press \ ENT \ key.}$

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

3.6 Setting Example 6

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1					
Summary					Change Device/PLC
Manufacturer CHINO Co	orporation	Series	Temp. Controllers MOD	BUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>				
Communication Settings					
SIO Type	C RS232C	C RS422/485(2	wire) 💿 RS422/4	85(4wire)	
Speed	9600	-			
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 📫 (m	15)			
BL/VCC	© BL	C VCC			
In the case of RS232	C, you can select	the 9th pin to RI ([input]		
or VCC (5V Power Su Isolation Unit, please	upply). If you use select it to VCC.	the Digital's RS23	20	Default	
Device-Specific Settings					
Allowable Number	Add D	evice			
of Devices/PLCs 16	6				Add Indirect
No. Device Name	Settings		·	_	Device
	Interies=D	BZ000 Series,Stal	tion Nó.=1		*

IMPORTANT

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

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

Device Setting

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

Individual Dev	rice Settings	×
PLC1		
Series	DB2000 Series	•
Please reconfirm you have chang	all of address settings that you are usined the series.	ig if
Station No.	1 🗦	
	[)efault
	OK (<u>0</u>) Ca	ncel

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.
- ${\rm 4} \ {\rm Press \ down/up \ key \ or \ shift \ key, \ select \ setting \ value, \ and \ press \ ENT \ key.}$

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

3.7 Setting Example 7

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHIN	O Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	RS232C RS422/485(2wire) RS422/485(4wire)	
Speed	9600	
Data Length	C7 C8	
Parity	NONE 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		
In the case of RS	232C, you can select the 9th pin to RI (Input)	
Isolation Unit, ple	ase select it to VCC. Default	1
Device-Specific Settings		
Allowable Number of Devices/PLCs	Add Device 16	
No. Device Name	Settings	Add Indirect Device
👗 1 🛛 PLC1	Iseries=KP1000 Series,Station No.=1	4

IMPORTANT

Set Wait To Send to 5ms or more.

Device Setting

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

💰 Individual Device Se	ettings	×
PLC1		
Series Please reconfirm all of you have changed the	KP1000 Series address settings that you ar series.	▼ e using if
338001140.	OK (0)	Default 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.
- ${\rm 4} \ {\rm Press \ down/up \ key \ or \ right \ key, \ select \ setting \ value, \ and \ press \ ENT \ key.}$

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

3.8 Setting Example 8

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHINC	Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	
Speed	9600	
Data Length	O7 O8	
Parity	NONE C EVEN C ODD	
Stop Bit		
Flow Control	NONE C ER(DTR/CTS) C XON/XOFF	
Timeout	3 * (sec)	
Retry	2 *	
Wait To Send	10 • (ms)	
RI / VCC	© RI C VCC	
In the case of RS or VCC (5V Powe Isolation Unit, plea	232C, you can select the 9th pin to RI [Input] r Supply]. If you use the Digital's RS232C ise select it to VCC. Default	
Device-Specific Settings		
Allowable Number	Add Device	
No. Device Name	Settings	Add Indirect Device
👗 1 PLC1	Series=KP1000 Series,Station No.=1	•

IMPORTANT

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

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

Device Setting

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

💣 Individual Devic	e Settings	×
PLC1		
Series	KP1000 Series	•
Please reconfirm a you have changed	all of address settings that you are using d the series.	if
Station No.	1 🗮	
	De	efault
	0K (<u>0)</u> Cano	cel

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

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

3.9 Setting Example 9

Settings of GP-Pro EX

Communication Settings

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

Device/PLC 1					
Summary					Change Device/PLC
Manufacturer CHINO	Corporation	Series	Temp. Controllers MODB	US SIO	Port COM1
Text Data Mode	1 Change				
Communication Settings					
SIO Type	C RS232C	C RS422/485(2)	wire) 💿 RS422/485	5(4wire)	
Speed	9600	T			
Data Length	0.7	© 8			
Parity	NONE	C EVEN	O ODD		
Stop Bit	• 1	C 2			
Flow Control	NONE	C ER(DTR/CTS) C XON/XOFF		
Timeout	3 🕂 (*	sec)			
Retry	2 ÷				
Wait To Send	10 📫 🕅	ms)			
BL/VCC	© BI	C VCC			
In the case of RS2	.32C, you can selec	t the 9th pin to RI (nput)		
or VCC (5V Power Isolation Unit, plea:	Supply). If you use se select it to VCC.	e the Digital's RS23	20	Default	
Device-Specific Settings					
Allowable Number	Add [Device			
of Devices/PLCs	16				Add Indirect
No. Device Name	Settings	KD40000 - 01 - 01		_	Device
I PLUT	Series=	KM1000 Series,Stati	on No.=1		~

IMPORTANT

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

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

Device Setting

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

💕 Individual De	vice Settings			×
PLC1				
Series	KP1000) Series		·
Please reconfir you have chan	m all of address ged the series.	settings that yo	u are using if	
Station No.	1	÷		
			Default	
		OK (<u>D)</u>	Cancel	

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

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

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

3.10 Setting Example 10

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHIN	Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	RS232C C RS422/485(2wire) C RS422/485(4wire)	
Speed	9600 💌	
Data Length	C7 C8	
Parity	NONE C EVEN C ODD	
Stop Bit	• 1 • 2	
Flow Control	NONE O ER(DTR/CTS) C XON/XOFF	
Timeout	3 (sec)	
Retry	2	
Wait To Send	10 🕂 (ms)	
BL/VCC		
In the case of RS	232C, you can select the 9th pin to RI (Input)	
or VCC (5V Powe Isolation Unit, plea	r Supply). If you use the Digital's RS232C ase select it to VCC. Default	1
Device-Specific Settings		
Allowable Number	Add Device	
of Devices/PLCs	16	Add Indirect
No. Device Name		Device
	Uteries=KM2000 Series,Station No.=1	4

IMPORTANT

Set Wait To Send to 5ms or more.

Device Setting

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

💰 Individual Device	Settings	×
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>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."
- ${\bf 3}$ Press SEL key to display items to be set.
- ${\rm 4} \ {\rm Press \ down/up \ key \ or \ right \ key, \ select \ setting \ value, \ and \ press \ ENT \ key.}$

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

3.11 Setting Example 11

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC1		
Summary		Change Device/PLC
Manufacturer CHINO Corporation	Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 1 <u>Change</u>		
Communication Settings		
SIO Type C RS232C 📀 R	S422/485(2wire) C RS422/485(4wire)	
Speed 9600]	
Data Length C 7 C 8		
Parity NONE C E	VEN C ODD	
Stop Bit 💿 1 💿 2		
Flow Control NONE E	R(DTR/CTS) C XON/XOFF	
Timeout 3 📩 (sec)		
Retry 2		
Wait To Send 10 📩 (ms)		
RI/VCC © RI C V		
In the case of RS232C, you can select the 9 or VCC (5V Power Supply). If you use the Di	h pin to RI (Input) gital's RS232C	
Isolation Unit, please select it to VLC.	Default	
Device-Specific Settings		
of Devices/PLCs 16		A dal to dive at
No. Device Name Settings		Device
1 PLC1 Its Series=KP2000) Series,Station No.=1	*

IMPORTANT

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

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

Device Setting

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

<i>参</i> Individual Dev	ice Settings	×
PLC1		
Series	KP2000 Series	•
Please reconfirm you have chang	all of address settings that you are us ed the series.	ing if
Station No.	1 🗮	
		Default
	OK (<u>0</u>) C	ancel

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

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

3.12 Setting Example 12

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SID	Port COM1
Text Data Mode 1 Change	
Communication Settings	
SIO Type C RS232C C RS422/485(2wire) @ RS422/485(4wire)	
Speed 9600 💌	
Data Length O 7 💿 8	
Parity	
Stop Bit	
Flow Control O NONE O ER(DTR/CTS) O X0N/X0FF	
Timeout 3 📫 (sec)	
Retry 2	
Wait To Send 10 👘 (ms)	
RI / VCC © RI C VCC	
In the case of RS232C, you can select the 9th pin to RI (Input)	
Isolation Unit, please select it to VCC. Default	
Device-Specific Settings	
Allowable Number <u>Add Device</u>	
No. Device Name Settings	Add Indirect
1 PLC1 Series=KP2000 Series,Station No.=1	4
	V

IMPORTANT

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

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

Device Setting

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

😫 tradiciale cel 15 e		
🔊 Inumuual De	vice securigs	
PLC1		
Series	KP2000 Series	•
Please reconfirr you have chang	m all of address settings that you are usin ged the series.	g if
Station No.	1	
	D	efault
	OK (<u>0)</u> Car	icel

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

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

3.13 Setting Example 13

- Settings of GP-Pro EX
- Communication Settings

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

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

IMPORTANT

Set Wait To Send to 5ms or more.

Device Setting

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

💰 Individual Device	Settings	×
PLC1		
Series	KP3000 Series	• •
Please reconfirm all you have changed the	of address settings that you ai ne series.	e using it
Station No.	1 🛨	
		Default
	OK (<u>D</u>)	Cancel

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

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

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

3.14 Setting Example 14

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	D Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	• RS422/485(2)	wire) 🔿 RS422/485(4wire)	
Speed	9600	.		
Data Length	0.7	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	€ 1	C 2		
Flow Control	NONE	C ER(DTR/CTS) O XON/XOFF	
Timeout	3 🕂	(sec)		
Retry	2 ÷			
Wait To Send	10 🕂	(ms)		
RLAVCC	6 PI	C VCC		
In the case of RS	232C, you can sele	ct the 9th pin to RI (I	(nput)	
or VCC (5V Powe Isolation Unit, ple	r Supply). If you us ase select it to VCC	e the Digital's RS23.	2Ċ Default	1
Device Constra Continue]
Allowable Number	Add	Device		
of Devices/PLCs	16			Add Indirect
No. Device Name	Settings	3		Device
1 (PLC1	Series	=KP3000 Series,Stati	ion No.=1	4

IMPORTANT

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

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

Device Setting

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

💒 Individual De	vice Settings	1
		-
PLC1		
Series	KP3000 Series	
Please reconfiri you have chang	n all of address settings that you are using if red the series.	
Station No.	1 🚔	
	Default	
	OK (Q) 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."
- ${\bf 3}$ Press SEL key to display items to be set.
- ${\rm 4} \ {\rm Press \ down/up \ key \ or \ right \ key, \ select \ setting \ value, \ and \ press \ ENT \ key.}$

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

3.15 Setting Example 15

- Settings of GP-Pro EX
- Communication Settings

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

Summary Change Device/	PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SIO Port COM1	_
Text Data Mode 1 Change	
Communication Settings	
SID Type C RS232C C RS422/485(2wire) 📀 RS422/485(4wire)	
Speed 9600 💌	
Data Length C 7 © 8	
Parity NONE C EVEN C ODD	
Stop Bit 📀 1 📀 2	
Flow Control NONE C ER(DTR/CTS) C X0N/X0FF	
Timeout 3 🔆 (sec)	
Retry 2	
Wait To Send 10 📫 (ms)	
RI/VCC © RI O VCC	
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (BV Reverse Supplie) If you use the Diction R RS232C	
Isolation Unit, please select it to VCC. Default	
Device-Specific Settings	
Allowable Number Add Device	
No. Device Name Settings Add Indirect	
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 [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings]

💒 Individual De	vice Settings	đ
		-
PLC1		
Series	KP3000 Series	
Please reconfiri you have chang	n all of address settings that you are using if red the series.	
Station No.	1 🔅	
	Default	
	OK (Q) 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."
- ${\bf 3}$ 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

3.16 Setting Example 16

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer CHINO Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 1 Change	
Communication Settings	
SIO Type C RS232C RS422/485(2wire) C RS422/485(4wire)	
Speed 9600 💌	
Data Length C 7 C 8	
Parity NONE CEVEN CODD	
Stop Bit 1 2	
Flow Control O NONE O ER(DTR/CTS) O XON/XOFF	
Timeout 3 芸 (sec)	
Retry 2	
Wait To Send 20 📫 (ms)	
RI / VCC © RI C VCC	
In the case of RS232C, you can select the 9th pin to RI (Input)	
Isolation Unit, please select it to VCC. Default	
Device-Specific Settings	
Allowable Number <u>Add Device</u>	
No. Device Name Settings	Add Indirect
1 PLC1 Series_LT230 Series,Station No.=1	4

IMPORTANT

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

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

Device Setting

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

💣 Individual Devid	e Settings	×
PLC1		
Series	LT230 Series	•
Please reconfirm you have change	all of address settings that you are usi d the series.	ng if
Station No.	1 🗮	
		Default
	OK (<u>0)</u> Ca	ancel

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.
- $\label{eq:2.1} 4 \ \mbox{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

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

3.17 Setting Example 17

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHIN	Corporation Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	RS232C C RS422/485(2wire) C RS422/485(4wire)	
Speed	9600	
Data Length	C7 C8	
Parity	NONE C EVEN C ODD	
Stop Bit	• 1 C 2	
Flow Control	NONE C ER(DTR/CTS) C XON/XOFF	
Timeout	3 🗧 (sec)	
Retry	2 *	
Wait To Send	20 • (ms)	
RI / VCC	RI VCC	
In the case of RS or VCC (5V Powe Isolation Unit, plea	232C, you can select the 9th pin to RI (Input) r Supply). If you use the Digital's RS232C se select it to VCC. Default	1
Device-Specific Settings		-
Allowable Number of Devices/PLCs	Add Device 16	A del la Franci
No. Device Name	Settings	Device
👗 1 PLC1	Series=LT300 Series,Station No.=1	+

IMPORTANT

Set Wait To Send to 20ms or more.

Device Setting

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

💰 Individual Device 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>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.
- $\label{eq:2.1} 4 \ \mbox{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

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

3.18 Setting Example 18

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer CHINO Corporation	Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 1 Change	2	
Communication Settings		
SIO Type C RS232C	RS422/485(2wire) RS422/485(4wire)	
Speed 9600	•	
Data Length O 7	© 8	
Parity NONE	C EVEN C ODD	
Stop Bit 💿 1	C 2	
Flow Control NONE	C ER(DTR/CTS) C XON/XOFF	
Timeout 3	- (sec)	
Retry 2		
Wait To Send 20	- (ms)	
RI / VCC © RI	O VCC	
In the case of RS232C, you can s	elect the 9th pin to RI (Input)	
Isolation Unit, please select it to V	CC. Default	
Device-Specific Settings		
Allowable Number Allowable Number	dd Device	
or Devices/PLUS 16 No Device Name Setti	nas	Add Indirect
X 1 PLC1 Series	ies=LT300 Series.Station No.=1	- Cevice

IMPORTANT

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

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

Device Setting

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

💕 Individual Devi	ce Settings	×
PLC1		
Series	LT300 Series	•
Please reconfirm you have change	all of address settings that you are ad the series.	using if
Station No.	1 🗦	
		Default
	OK (<u>0</u>)	Cancel

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

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

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

3.19 Setting Example 19

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN0) Corporation	Series Temp	o. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	C RS422/485(2wire)	RS422/485(4wire)	
Speed	9600			
Data Length	0.7	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	⊙ 1	C 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 📫	(sec)		
Retry	2 📫			
Wait To Send	20 🕂	(ms)		
BL/VCC	© BL			
In the case of RS	232C, you can sele	ct the 9th pin to RI (Input)		
or VCC (5V Powe Isolation Unit, plea	r Supply). If you us ase select it to VCC	e the Digital's RS232C	Default	
Device Secsific Settings				
Allowable Number	Add	Device		
of Devices/PLCs	16			Add Indirect
No. Device Name	Settings			Device
I IPLC1	Series:	LT300 Series,Station No.=	1	*

IMPORTANT

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

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

Device Setting

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

Individual Dev	vice Settings	×
PLC1		
Series	LT300 Series	•
Please reconfirm you have chang	n all of address settings that you are usi red the series.	ng if
Station No.	1 芸	
		Default
	OK (<u>0</u>) Ca	incel

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.
- $\label{eq:2.1} 4 \ \mbox{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

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

3.20 Setting Example 20

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC1		
Summary		Change Device/PLC
Manufacturer CHINO Corporation	Series Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode 1 Change		
Communication Settings		
SIO Type	S422/485(2wire) C RS422/485(4wire)	
Speed 9600 🔻	1	
Data Length C 7 💿 8	•	
Parity NONE	/EN ODD	
Stop Bit © 1 C 2		
Flow Control NONE EF	R(DTR/CTS) C XON/XOFF	
Timeout 3 📑 (sec)		
Retry 2		
Wait To Send 🛛 🚺 🕂 (ms)		
In the case of RS232C, you can select the 9t	h pin to RI (Input)	
or VEC (5V Power Supply). If you use the Dig Isolation Unit, please select it to VEC.	gital's HS232C Default	
Device-Specific Settings		
Allowable Number Add Device		
of Devices/PLCs 16		Add Indirect
No. Device Name Settings	Carias Station No -1	Device
I I I I I I I I I I I I I I I I I I I	Jenes, Station 140.=1	*

IMPORTANT

Set Wait To Send to 5ms or more.

Device Setting

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

💰 Individual Device 🖇	Settings	×		
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.
- $\label{eq:2.1} 4 \ \mbox{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

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

3.21 Setting Example 21

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHINC	Corporation	Series	Temp. Controllers MODBUS SIC	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	RS422/485(2v	vire) C RS422/485(4wire	I
Speed	9600	-		
Data Length	0.7	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	● 1	C 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 🔹	(sec)		
Retry	2 📫			
Wait To Send	10 📫	(ms)		
RI / VCC	© RI	C VCC		
In the case of RS2	232C, you can sele	ct the 9th pin to RI (I	nput)	
Isolation Unit, plea	se select it to VCC	e the Digital's H5232	2L Defau	lt
Device-Specific Settings				
Allowable Number	Add	Device		
of Devices/PLUs	16 Colling	,		Add Indirect
	Series:	• =LT400 Series Station	No =1	
[0 0] . 201	Hall Josuar			v

IMPORTANT

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

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

Device Setting

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

💣 Individual Devic	e Settings	×
PLC1		
Series	LT400 Series	•
Please reconfirm a you have changed	Il of address settings that you are us the series.	ing if
Station No.	1 🗮	
		Default
	OK (<u>0</u>) C	ancel

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.
- $\label{eq:2.1} 4 \ \mbox{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

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

3.22 Setting Example 22

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHINO	Corporation	Series Temp. Co	ntrollers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	C RS422/485(2wire)	RS422/485(4wire)	
Speed	9600	_		
Data Length	0.7	© 8		
Parity	NONE	C EVEN C C	IDD	
Stop Bit	● 1	O 2		
Flow Control	NONE	C ER(DTR/CTS) C ×	ON/XOFF	
Timeout	3 🕂	sec)		
Retry	2 +			
Wait To Send	10 🕂	ms)		
RI / VCC	© BI	O VCC		
In the case of RS2 or VCC (5V Power Isolation Unit, pleas	32C, you can sele Supply). If you us se select it to VCC,	at the 9th pin to RI (Input) a the Digital's RS232C	Default	
Device-Specific Settings				
Allowable Number	10 Add	Device		
No Device Name	Settings			Add Indirect
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 [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the external device and click [Settings]

<i>参</i> Individual Dev	ice Settings	×
PLC1		
Series	LT400 Series	-
Please reconfirm you have chang	all of address settings that you are using if ed 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.
- $\label{eq:2.1} 4 \ \mbox{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

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

3.23 Setting Example 23

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1			
Summary			Change Device/PLC
Manufacturer CHIN) Corporation	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	0.7	© 8	
Parity	NONE	C EVEN C ODD	
Stop Bit	● 1	C 2	
Flow Control	NONE	C ER(DTR/CTS) C XON/XOFF	
Timeout	3 ÷	(sec)	
Retry	2 ÷		
Wait To Send	20 🕂	(ms)	
RUVCC	6 RI	C VCC	
In the case of RS	232C, you can sele	st the 9th pin to RI (Input)	
or VCC (5V Powe Isolation Unit, plea	r Supply). If you us ase select it to VCC	e the Digital's RS232C	1
Device Constitution			
Allowable Number	Add	Device	
of Devices/PLCs	16		Add Indirect
No. Device Name	Settings		Device
1 (PLC1	Series:	LT830 Series,Station No.=1	4

IMPORTANT

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

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

Device Setting

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

💣 Individual Devi	te Settings	×
PLC1		
Series	LT830 Series	•
Please reconfirm you have change	all of address settings that you are us d the series.	ing if
Station No.	1 🗦	
		Default
	OK (<u>0</u>) C	ancel

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."
- ${f 3}$ Press SEL/ENT key to display items to be set.
- $\label{eq:2.1} 4 \ \mbox{Press DOWN/UP key, select setting value, and press SEL/ENT key.}$

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

3.24 Setting Example 24

- Settings of GP-Pro EX
- Communication Settings

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

Summary Change Device/FLC Manufacturer CHIND Corporation Series Temp. Controllers MDDBUS SID Pot COM1 Text Data Mode 1 Change Communication Settings SID Type RS232C RS422/485(2wire) RS422/485(4wire) Speed 9600 • Data Length 7 © 8 Parity • NONE EVEN ODD Stop Bit 0 1 2 Flow Control • NONE ER[DTR/CTS] C XON/X0FF Timeout 3 (sec) Retry 2 • Wait To Send 10 (ms) Bl / VCC © Bl C VCC
Manufacturer CHIND Corporation Series Temp. Controllers MDDBUS SIO Port COM1 Text Data Mode 1 Change Communication Settings SiO Type RS232C RS422/485(2wire) RS422/485(4wire) Speed 9600 •
Text Data Mode 1 Change Communication Settings SIO Type RS232C RS422/485(2wire) Speed 9600 Image: Communication Settings Data Length 7 Image: Setting Sett
Communication Settings SIO Type CRS232C RS422/485(2wire) RS422/485(4wire) Speed 9600 Data Length C 7 C 8 Parity NONE EVEN ODD Stop Bit C 1 C 2 Flow Control NONE ER[DTR/CTS] CXON/XOFF Timeout 3 (sec) Retry 2 Wait To Send 10 (ms) RI / VCC C RI C VCC
SIO Type C RS232C C RS422/485(2wire) Speed 9600 Image: Control Contrel Contrel Control Control Contrel Control Control Co
Speed 9600 Data Length C Parity INDNE Parity Index
Data Length C 7 6 8 Parity NONE EVEN CODD Stop Bit C 1 C 2 Flow Control © NONE C ER(DTR/CTS) C X0N/X0FF Timeout 3 (sec) Retry 2 (ms) Bit / VCC © Bit C VCC
Parity NONE EVEN ODD Stop Bit 1 2 Flow Control NONE ER(DTR/CTS) XON/X0FF Timeout 3 (sec) Retry 2 (sec) Wait To Send 10 (ms)
Stop Bit I I Flow Control NDNE ER(DTR/CTS) XON/XOFF Timeout 3 Isoc Retry 2 Isoc Wait To Send 10 Ims) Bit /VCC Bit VCC
Flow Control • NONE • ER(DTR/CTS) ×ON/X0FF Timeout 3 • (sec) Retry 2 • Wait To Send 10 • (ms) RI /VCC • BI • VCC
Timeout 3 4 Retry 2 4 Wait To Send 10 4 RI / VCC RI VCC
Retry 2 4 Wait To Send 10 (ms) RI / VCC RI VCC
Wait To Send 10 (ms) BI / VCC If BI If VCC
RI/VCC © RI C VCC
In the case of RS232C, you can select the 9th pin to RI (Input)
Isolation Unit, please select it to VCC. Default
Device-Specific Settings
Allowable Number Add Device
No. Device Name Settings Add Indirect
I PLC1 III Series_Station No.=1

IMPORTANT

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

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

Device Setting

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

💣 Individual Devid	e Settings	×
PLC1		
Series	JU Series	_
Please reconfirm a you have changed	Il of address settings that you are the series.	using if
Station No.	1 🗮	
		Default
	OK (<u>0</u>)	Cancel

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

• Rotary switch (SW1)

Rotary switch	Setting Value
SW1	1

• DIP switch (SW2)

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

3.25 Setting Example 25

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	O Corporation	Series	Temp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	• RS422/485(2w	ire) 🔿 RS422/485(4wire)	
Speed	9600	-		
Data Length	C 7			
Parity	NONE	C EVEN	O ODD	
Stop Bit	€ 1	C 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 🔹	(sec)		
Retry	2 🔹			
Wait To Send	10 📫	(ms)		
RI / VCC	© RI	C VCC		
In the case of RS or VCC (5V Powe	232C, you can sele ar Supply). If you us	ct the 9th pin to RI (In e the Digital's BS232(put)	
Isolation Unit, ple	ase select it to VCC		Default	
Device-Specific Settings	:			
Allowable Number of Devices/PLCs	16	Device		
No. Device Name	Settings	;		Add Indirect Device
👗 1 PLC1	Series:	=JU Series(Single-Pha	se),Station No.=1	e

IMPORTANT

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

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

Device Setting

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

💰 Individual Device	e Settings	×
PLC1		
Series	JU Series(Single-Phas	se) 💌
Please reconfirm a you have changed	l of address settings that y the series.	you are using if
Station No.	1 🗧	
		Default
	OK (<u>O</u>)	Cancel

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

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

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

3.26 Setting Example 26

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHIN	D Corporation	Series Temp. Cont	rollers MODBUS SIO	Port COM1
Text Data Mode	1 <u>Change</u>			
Communication Settings				
SIO Type	C RS232C	O RS422/485(2wire)	RS422/485(4wire)	
Speed	9600	•		
Data Length	O 7	© 8		
Parity	NONE	O EVEN O OD	D .	
Stop Bit	• 1	O 2		
Flow Control	NONE	O ER(DTR/CTS) O X0	N/XOFF	
Timeout	3 🔅	(sec)		
Retry	2 🔹			
Wait To Send	10 📫	(ms)		
RI / VCC	© BI	C VCC		
In the case of RS	232C, you can sele	ot the 9th pin to RI (Input)		
Isolation Unit, ple	ase select it to VCC	e (ne bigitais 1152526	Default	
Device-Specific Settings				
Allowable Number	16 <u>Add</u>	<u>Device</u>		
No. Device Name	Settina	s		Add Indirect
1 PLC1	Series	=JU Series(Single-Phase),Station N	No.=1	4
No. Device Name	Setting	s =JU Series(Single-Phase),Station N	No.=1	Add Indirect Device

IMPORTANT

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

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

Device Setting

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

		_
💣 Individual Device :	Settings 🛛 🗙	1
PLC1		
Series	JU Series(Single-Phase)	
Please reconfirm all (you have changed th	of address settings that you are using if ne series.	
Station No.	1 🕂	
	Default	
	OK (<u>D</u>) Cancel	

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

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

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

3.27 Setting Example 27

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1				
Summary				Change Device/PLC
Manufacturer CHINO	Corporation	Series Te	emp. Controllers MODBUS SIO	Port COM1
Text Data Mode	1 Change			
Communication Settings				
SIO Type	C RS232C	RS422/485(2wire)) C RS422/485(4wire)	
Speed	9600	-		
Data Length	0.7	© 8		
Parity	NONE	C EVEN	O ODD	
Stop Bit	€ 1	C 2		
Flow Control	NONE	C ER(DTR/CTS)	C XON/XOFF	
Timeout	3 🛟	(sec)		
Retry	2 🔹			
Wait To Send	10 📫	(ms)		
RI / VCC	© BI	C VCC		
In the case of RS2	32C, you can sele Supplu). If you us	ot the 9th pin to RI (Inpu	ıt]	
Isolation Unit, plea	se select it to VCC		Default	
Device-Specific Settings				
Allowable Number	10 Add	Device		
No. Device Name	Setting			Add Indirect
👗 1 🛛 PLC1	Series	=JW Series,Station No.=	1	

IMPORTANT

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

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

Device Setting

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

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

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

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

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

3.28 Setting Example 28

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1			
Summary			Change Device/PLC
Manufacturer CHIN	D Corporation	Series Temp. Controllers MODE	US SIO Port COM1
Text Data Mode	1 <u>Change</u>		
Communication Settings			
SIO Type	C RS232C	C RS422/485(2wire) © RS422/48	5(4wire)
Speed	9600	•	
Data Length	C 7	© 8	
Parity	NONE	O EVEN O ODD	
Stop Bit	● 1	0 2	
Flow Control	NONE	C ER(DTR/CTS) C XON/XOFF	
Timeout	3 📫	sec)	
Retry	2 🔹		
Wait To Send	10 📫	ims)	
RI / VCC	© RI	C VCC	
In the case of RS or VCC (5V Powe	232C, you can sele r Supply). If you us	st the 9th pin to RI (Input) e the Digital's RS232C	
Isolation Unit, ple	ase select it to VCC		Default
Device-Specific Settings			
Allowable Number of Devices/PLCs	16 <u>Add</u>	Device	
No. Device Name	Setting		Add Indirect Device
👗 1 PLC1	Series	JW Series,Station No.=1	\$

IMPORTANT

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

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

Device Setting

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

Individual Dev	ice Settings	×
PLC1		
Series	JW Series	•
Please reconfirm you have change	all of address settings that you are u ed the series.	ising if
Station No.	1 🗦	
		Default
	OK (<u>D</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 10)

4.1 Setup Items in GP-Pro EX

Communication Settings

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

Device/PLC 1
Summary Change Device/PLI
Manufacturer CHIND Corporation Series Temp. Controllers MODBUS SIO Port COM1
Text Data Mode 1 Change
Communication Settings
SID Type 📀 RS232C 🗢 RS422/485(2wire) 🗢 RS422/485(4wire)
Speed 9600 💌
Data Length C 7 C 8
Parity O NONE O EVEN O ODD
Stop Bit
Flow Control O NONE O ER(DTR/CTS) O X0N/X0FF
Timeout 3 🔆 (sec)
Retry 2
Wait To Send 10 💼 (ms)
RI / VCC RI VCC
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. Default
Device-Specific Settings
Allowable Number Add Device of Devices/PLCs 16
No. Device Name Settings Device
1 PLC1 Im Series=DB1000 Series,Station No.=1

Setup Items	Setup Description
SIO Type	Select the SIO type to communicate with the External Device.
Speed	Select speed between the External Device and the Display.
Data Length	Display data length.
Parity	Select how to check parity.
Stop Bit	Select stop bit length.
Flow Control	Select the communication control method to prevent overflow of transmission and reception data.
Timeout	Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device.
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.
Wait To Send	Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.

Continues to the next page.

66

Setup Items	Setup Description	
RI/VCC	You can switch RI/VCC of the 9th pin when you select RS232C for SIO type. It is necessary to change RI/5V by changeover switch of IPC when connect with IPC. Please refer to the manual of the IPC for more detail.	

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

Device Setting

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

💰 Individual Device S	Gettings	×
PLC1		
Series	DB1000 Series	•
Please reconfirm all o you have changed th	if address settings that you ar e series.	e using if
Station No.	1 📫	
		Default
	OK (<u>0</u>)	Cancel

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

4.2 Communication Settings in Off-line Mode

NOTE

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

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

Communication Settings

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

Comm.	Device	Option		
				Ì
Temp. Controllers N	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 • NONE 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. MPORTANT To make the communication settings correctly, confirm the serial interface specifications of Display unit for [SIO Type]. We cannot guarantee the operation if a communication type that the serial interface does not support is specified. For details concerning the serial interface specifications, refer to the manual for Display unit.		
Speed	Select speed between the External Device and the Display.		
Data Length	Display data length.		
Parity	Select how to check parity.		
Stop Bit	Select stop bit length.		
Flow Control	Select the communication control method to prevent overflow of transmission and reception data.		

Continues to the next page.

Setup Items	Setup Description		
Timeout (s)	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 (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 I	MODBUS SIO		[COM1]	Page 1/1
Device	/PLC Name PLC	01		
	Series Station No.	DB1000 Seri	es 1 💌	
	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		
		Ì			
Temp.	Controllers	MODBUS SIO		[COM1]	Page 1/1
		RI / VCC In the case of the 9th pin to Power Supply). RS232C Isolati it to VCC.	• RI f RS232C, you can sel b RI(Input) or VCC(5V If you use the Digi ion Unit, please sele	● VCC ect / .al's .ct	
		Exit		Back	2007/10/30 14:59:19

Setup Items	Setup Description
RI/VCC	You can switch RI/VCC of the 9th pin when you select RS232C for SIO type. It is necessary to change RI/5V by changeover switch of IPC when connect with IPC. Please refer to the manual of the IPC for more detail.

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

5 Cable Diagram

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

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

Display (Connection Port)	Cable		Notes
GP3000 (COM1) GP4000 ^{*1} (COM1) GP6000 (COM1) SP5000 ^{*2} (COM1/2) SP-5B00 (COM1) ST3000 (COM1) STM6000 (COM1) STC6000 (COM1) LT3000 (COM1) IPC ^{*3} PC/AT	1A	RS-232C communication cable by CHINO Corporation RZ-CRS6□□ ^{*4}	
	1B	User-created cable	Cable length: 15m or less
GP-4105 (COM1) GP-4115T (COM1) GP-4115T3 (COM1)	1C	User-created cable	Cable length: 15m or less
LT-4*01TM (COM1) LT-Rear Module (COM1)	1D	RJ45 RS-232C Cable (5m) by Pro-face PFXZLMCBRJR21	Cable length: 5m or less

Cable Diagram 1

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

*2 Except SP-5B00

*4 $\Box \Box$ shows cable length.

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


1B)

1A)



1C)



1D)



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

73

Cable Diagram 2

Display (Connection Port)	Cable		Notes
*1	2A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	
GP3000 ^{*1} (COM1) AGP-3302B (COM2) GP-4*01TM (COM1) GP-Rear Module (COM1) ST3000 ^{*2} (COM2) LT3000 (COM1) IPC ^{*3}	2B	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + RS-422 cable by Pro-face CA3-CBL422-01 + User-created cable	Cable length: 600m or less
	2C	RS-422 cable by Pro-face CA3-CBL422/5M-01 + User-created cable	
	2E	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	
GP3000 ^{*4} (COM2)	2F	Online adapter by Pro-face CA4-ADPONL-01 + User-created cable	Cable length: 600m or less
	2G	Online adapter by Pro-face CA4-ADPONL-01 + RS-422 cable by Pro-face CA3-CBL422-01 + User-created cable	
GP-4106 (COM1) GP-4116T (COM1)	2Н	User-created cable	Cable length: 600m or less

Continues to the next page.

Display (Connection Port)		Cable	Notes
GP4000 ^{*5} (COM2)	21	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1 ^{*8} + User-created cable	
GP-4201T (COM1) GP6000 (COM2) SP5000* ⁶ (COM1/2) SP-5B00 (COM2) ST6000* ⁷ (COM2) ST-6200 (COM1) STM6000 (COM1)	2B	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + RS-422 cable by Pro-face CA3-CBL422-01 + User-created cable	Cable length: 600m or less
STC6000 (COM1) PS6000 (Basic Box) (COM1/2)	2C	RS-422 cable by Pro-face CA3-CBL422/5M-01 + User-created cable	
	2D	User-created cable	
PE-4000B ^{*9} PS5000 ^{*9} PS6000 (Optional Interface) ^{*9}	2J	User-created cable	Cable length: 600m or less

*1 All GP3000 models except AGP-3302B

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

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

[©] "■ IPC COM Port" (page 6)

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

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

*6 Except SP-5B00

*7 Except ST-6200

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

IMPORTANT

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

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

2A)

• 1:1 connection



• 1:n connection



GP-Pro EX Device/PLC Connection Manual

2B)

• 1:1 connection





2C)

• 1:1 connection





2D)

• 1:1 connection





2E)

• 1:1 connection





2F)

• 1:1 connection





2G)

• 1:1 connection





2H)

• 1:1 connection



• 1:n connection



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

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

2I)

• 1:1 connection





2J)

• 1:1 connection





Cable Diagram 3

Display (Connection Port)	Cable		Notes
GP3000 ^{*1} (COM1) AGP-3302B (COM2) GP-4*01TM (COM1) GP-Rear Module (COM1) ST3000 ^{*2} (COM2) LT3000 (COM1)	3A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less
	3B	User-created cable	
GP3000 ^{*3} (COM2)	3C	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	
	3D	Online adapter by Pro-face CA4-ADPONL-01 + User-created cable	Cable length: 600m or less
IPC ^{*4}	3E 3F	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable User-created cable	
GP-4106 (COM1) GP-4116T (COM1)	3G	User-created cable	Cable length: 600m or less
GP-4107 (COM1) GP-4*03T ^{*5} (COM2) GP-4203T (COM1)	3Н	User-created cable	Cable length: 600m or less
GP4000 ^{*6} (COM2) GP-4201T (COM1) GP6000 (COM2) SP5000 ^{*7} (COM1/2)	31	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1 ^{*9} + User-created cable	
SF-5B00 (COM2) ST6000 ^{*8} (COM2) ST-6200 (COM1) STM6000 (COM1) STC6000 (COM1) PS6000 (Basic Box) (COM1/2)	3В	User-created cable	Cable length: 600m or less
LT-4*01TM (COM1) LT-Rear Module (COM1)	3J	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	Cable length: 200m or less

Display (Connection Port)	Cable		Notes
PE-4000B ^{*10} PS5000 ^{*10} PS6000 (Optional Interface) ^{*10}	3K	User-created cable	Cable length: 600m or less

*1 All GP3000 models except AGP-3302B

- *2 Except AST-3211A and AST-3302B
- *3 All GP3000 models except GP-3200 series and AGP-3302B
- *4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

"■ IPC COM Port" (page 6)

- *5 Except GP-4203T
- *6 All GP4000 models except GP-4100 Series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T
- *7 Except SP-5B00
- *8 Except ST-6200
- *9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 3A.
- *10 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. "■ IPC COM Port" (page 6)

IMPORTANT	1
	L

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

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

3A)

• 1:1 connection



• 1:n connection



User-created cable

3B)

• 1:1 connection





3C)

• 1:1 connection





3D)

• 1:1 connection





3E)

• 1:1 connection





3F)

• 1:1 connection





3G)

• 1:1 connection



1:n connection



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

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

3H)

• 1:1 connection



• 1:n connection



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

NOTE

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

3I)

• 1:1 connection



• 1:n connection



User-created cable

3J)

• 1:1 connection





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

3K)

• 1:1 connection



• 1:n connection



User-created cable

Cable Diagram 4

Display (Connection Port)		Cable	Notes
GP3000 ^{*1} (COM1) AGP-3302B (COM2) GP-4*01TM (COM1) GP-Rear Module (COM1) ST3000 ^{*2} (COM2) LT3000 (COM1)	4A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 +	Cable length: 600m or less
		Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 +	
		User-created cable	
	4B	User-created cable	
GP3000 ^{*3} (COM2)	4C	Online adapter by Pro-face CA4-ADPONL-01 +	Cable length: 600m or less
		Terminal block conversion adapter by Pro-face CA3-ADPTRM-01	
		+ User-created cable	
	4D	Online adapter by Pro-face CA4-ADPONL-01 + User-created cable	
IPC ^{*4}	4E	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 +	Cable length: 600m or less
		User-created cable	
	4F	User-created cable	
GP-4106 (COM1) GP-4116T (COM1)	4G	User-created cable	Cable length: 600m or less
GP-4107 (COM1) GP-4*03T ^{*5} (COM2) GP-4203T (COM1)	4H	User-created cable	Cable length: 600m or less
GP4000 ^{*6} (COM2) GP-4201T (COM1) GP6000 (COM2) SP5000 ^{*7} (COM1/2) SP-5B00 (COM2) ST6000 ^{*8} (COM2) ST-6200 (COM1) STM6000 (COM1) STC6000 (COM1) PS6000 (Basic Box) (COM1/2)	4I	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1 ^{*9}	
		User-created cable	
	4B	User-created cable	Cable length: 600m or less
LT-4*01TM (COM1) LT-Rear Module (COM1)	4J	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	Cable length: 200m or less

Display (Connection Port)	Cable		Notes
PE-4000B ^{*10} PS5000 ^{*10} PS6000 (Optional Interface) ^{*10}	4K	User-created cable	Cable length: 600m or less

- *1 All GP3000 models except AGP-3302B
- *2 Except AST-3211A and AST-3302B
- *3 All GP3000 models except GP-3200 series and AGP-3302B
- *4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

⁽ ■ IPC COM Port" (page 6)

- *5 Except GP-4203T
- *6 All GP4000 models except GP-4100 Series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T
- *7 Except SP-5B00
- *8 Except ST-6200
- *9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 4A.

4A)

• 1:1 connection





4B)

• 1:1 connection





4C)

• 1:1 connection





4D)

• 1:1 connection





4E)

• 1:1 connection





4F)

• 1:1 connection





4G)

• 1:1 connection



1:n connection



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

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

• 1:1 connection



• 1:n connection



IMPORTANT	• The 5V output (Pin #6) on the Display is the power for the Siemens AG's PROFIBUS connector. Do not use it for other devices.
NOTE	• In COM on the GP-4107, the SG and FG terminals are isolated.

4I)

• 1:1 connection



• 1:n connection



GP-Pro EX Device/PLC Connection Manual

4J)

• 1:1 connection



• 1:n connection



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

4K)

• 1:1 connection



• 1:n connection



Cable Diagram 5

Display (Connection Port)		Cable	Notes		
GP3000 ^{*1} (COM1) AGP-3302B (COM2) GP-4*01TM (COM1) GP-Rear Module (COM1) ST3000 ^{*2} (COM2) LT3000 (COM1)	5A 5B	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less		
GP3000 ^{*3} (COM2)	5C	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less		
	5D	Online adapter by Pro-face CA4-ADPONL-01 + User-created cable			
IPC ^{*4}	5E	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less		
GP-4106 (COM1) GP-4116T (COM1)	5FUser-created cable6P-4106 (COM1) 6P-4116T (COM1)5GUser-created cable				
GP-4107 (COM1) GP-4*03T ^{*5} (COM2) GP-4203T (COM1)	5H	User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less		

Display (Connection Port)		Cable	Notes		
GP4000 ^{*6} (COM2) GP-4201T (COM1) GP6000 (COM2) SP5000 ^{*7} (COM1/2)	51	RS-422 Terminal Block Conversion Adapter by Pro-face PFXZCBADTM1 ^{*9} + User-created cable	Cable length: 600m		
SP-5B00 (COM2) ST6000 ^{*8} (COM2) ST-6200 (COM1) STM6000 (COM1) STC6000 (COM1) PS6000 (Basic Box) (COM1/2)	5B	User-created cable	However, between the master and the slave cable length: 10m or less		
LT-4*01TM (COM1) LT-Rear Module (COM1)	5J	RJ45 RS-485 Cable (5m) by Pro-face PFXZLMCBRJR81	Cable length: 200m or less However, between the master and the slave cable length: 10m or less		
PE-4000B ^{*10} PS5000 ^{*10} PS6000 (Optional Interface) ^{*10}	5K	User-created cable	Cable length: 600m or less However, between the master and the slave cable length: 10m or less		

*1 All GP3000 models except AGP-3302B

- *2 Except AST-3211A and AST-3302B
- *3 All GP3000 models except GP-3200 series and AGP-3302B
- *4 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. (Except PE-4000B, PS5000, and PS6000)

"■ IPC COM Port" (page 6)

- *5 Except GP-4203T
- *6 All GP4000 models except GP-4100 Series, GP-4*01TM, GP-Rear Module, GP-4201T and GP-4*03T
- *7 Except SP-5B00
- *8 Except ST-6200
- *9 When using a Terminal Block Conversion Adapter (CA3-ADPTRM-01) instead of the RS-422 Terminal Block Conversion Adapter, refer to Cable Diagram 5A.

5A)

• 1:1 connection



• 1:n connection



IMPORTANT

5B)

• 1:1 connection



• 1:n connection



IMPORTANT

5C)

• 1:1 connection



• 1:n connection



IMPORTANT

5D)

• 1:1 connection



• 1:n connection



IMPORTANT

5E)

• 1:1 connection



• 1:n connection



IMPORTANT

5F)

• 1:1 connection



• 1:n connection



IMPORTANT

5G)

• 1:1 connection



1:n connection



IMPORTANT

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

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

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

5H)

• 1:1 connection



• 1:n connection



IMPORTANT

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

```
NOTE
```

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

5I)

• 1:1 connection



1:n connection



IMPORTANT

5J)

• 1:1 connection



User-created cable

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

IMPORTANT

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

٠

5K)

• 1:1 connection



• 1:n connection



IMPORTANT

6 Supported Device

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

Enter the External Device address in the dialog below.

	💰 Input Address 🛛 🗵									
	Devi	Device/PLC PLC1								_1
	4		•	000	1		1	-		
	Ba	ick				C	lr			
	Α	В	С		7	8	9			
2、	D	Е	F		4	5	6			
					1	2	3			
	Re	eferer	nce		0	E	nt			

- 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	_		
	00111	-		
Digital Input Data	10002 - 10124	-		*1
Analog Input Data	-	30101 - 30143	[<u>H/L</u>]	<u>ві</u> т 15 *1
Analog Setting Value		40001 - 40596*2		<u>ві</u> t15
Operational Status Setting	-	49056 - 49512		<u>ві</u> t 15]

*1 Write disable

*2 Write disable in 40151.

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

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

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

"Manual Symbols and Terminology"

6.2 DB2000 series

This address can be specified as system data area.

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

*1 Write disable

*2 Write disable in 40151.

NOTE	•	Syst	em area	a se	tting	th	at can b	e used v	vith	cc	ontroll	er is r	ea	d area si	ize f	for r	ea	ding	only.
		Plea	se refei	r to	the (GΡ	-Pro EX	Refere	nce	М	anual	for re	ad	area siz	ze.				
		~ ~	~ ~ ~							~		(- ·							

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

6.3 KP1000 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]	<u>ві</u> т 15 *1
Analog Setting Value	_	40001 - 40650*2		<u>ві</u> t 15]
Pattern Setting	-	49003 - 49534 ^{*3}		<u>ві</u> t 15]

*1 Write disable

*2 Write disable in 40151.

*3 Write disable in 49040.

NOTE

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

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

"Manual Symbols and Terminology"

6.4 KP2000 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101	_		
	00111			
Digital Input Data	10002 - 10124	-		*1
Analog Input Data	-	30101 - 30144	[H/L]	<u>ві</u> т 15 *1
Analog Setting Value	_	40001 - 40650*2		<u>ві</u> t15
Pattern Setting	-	49003 - 49536 ^{*3}		<u>ві</u> t15

*1 Write disable

*2 Write disable in 40151.

*3 Write disable in 49040.

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

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

6.5 KP3000 series

This address can be specified as system data area.

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

*1 Write disable

*2 Write disable in 40151.

*3 Write disable in 49040.

NOTE

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

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

"Manual Symbols and Terminology"

6.6 LT230 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101	-		*1
Digital Input Data	10004 - 10120	-		*2
Analog Input Data	-	30101 - 30142		ві t 15 *2
Analog Setting Value	-	40008 ^{*3} 40114 - 40119 40201 - 40251 49501 - 49512		<u>₿ i t</u> 15) *1

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

*2 Write disable

*3 Write disable in 40008.

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

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

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

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

6.7 LT300 series

		I his address can be	e specified as s	ystem data area.
Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101	-		*1
Digital Input Data	10004 - 10122	-		*2
Analog Input Data	-	30101 - 30142	TH (L)	<u>ві t15</u> *2
Analog Setting Value	-	40008 ^{*3} 40114 - 40119 40201 - 40251 49501 - 49512		≝:1 5] *1

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

*2 Write disable

*3 Write disable in 40008.

NOTE

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

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

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

"Manual Symbols and Terminology"

6.8 LT400 series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Digital Setting Value	00101 - 00109	-		*1
Digital Input Data	10002 - 10124	-		*2
Analog Input Data	-	30101 - 30142	- FH / D	ві t 15 *2
Analog Setting Value	-	40001 - 40093 40112 - 40166 40201 - 40388 49501 - 49512		⊪₁ *1

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

*2 Write disable

 NOTE
 System area setting that can be used with controller is read area size for reading only. Please refer to the GP-Pro EX Reference Manual for read area size.
 Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
 Please refer to the precautions on manual notation for icons in the table.

6.9 LT830 series

		This address can be	e specified as s	ystem 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		<u>■ i t</u> 15 *2
Analog Setting Value	-	40008 ^{*3} 40114 - 40119 40201 - 40211 49501 - 49512		<u>⊾;</u> ,15) *1

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

*2 Write disable

*3 Write disable in 40008.

NOTE

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

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

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

^(G) "Manual Symbols and Terminology"

6.10 JU series with temperature controller feature

This address can be specified as system data area.

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

Г

*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



6.11 JU series Single-phase

		This address can be	e specified as s	ystem 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>ві t15</u> *2
Analog Setting Value	-	41001 - 41013 49501		<mark>ві t15)</mark> *1

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

*2 Write disable

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

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

"Manual Symbols and Terminology"

6.12 JW series

This address can be specified as system data area.

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

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

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

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

"Manual Symbols and Terminology"

٠

7 Device Code and Address Code

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

Device	Device Name	Device Code (HEX)	Address Code
Analog Input Data	3	0001	Word Address
Analog Setting Value	4	0000	Word Address

8 Error Messages

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

Item	Description
No.	Error No.
Device Name	Name of External Device where error occurs. Device name is a title of External Device set with GP-Pro EX. (Initial value [PLC1])
Error Message	Displays messages related to the error which occurs.
	Displays IP address or device address of External Device where error occurs, or error codes received from External Device.
Error Occurrence Area	 NOTE IP address is displayed such as "IP address (Decimal): MAC address (Hex)." Device address is displayed such as "Address: Device address." Received error codes are displayed such as "Decimal [Hex]."

Display Examples of Error Messages

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

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

Error Codes Unique to External Device

Error codes unique to External Device are shown below.

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

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