YOKOGAWA Electric Corporation

# Personal Computer Link SIO Driver

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#### Introduction

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

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

1	System Configuration This section shows the types of External Devices which can be connected and SIO type.	"1 System Configuration" (page 3)
2	Selection of External Device Select a model (series) of the External Device to be connected and connection method.	"2 Selection of External Device" (page 8)
3	Example of Communication Settings This section shows setting examples for communicating between the Display and the External Device.	"3 Example of Communication Setting" (page 9)
4	Communication Settings This section describes communication setup items on the Display. Set communication settings of the Display with GP-Pro EX or in off-line mode.	<sup>ভেল</sup> "4 Setup Items" (page 47)
	•	
5	Cable Diagram This section shows cables and adapters for connecting the Display and the External Device.	<sup>ক্টে</sup> "5 Cable Diagram" (page 52)
	Operation	

# 1 System Configuration

The system configuration in the case when the External Device of YOKOGAWA Electric Corp. and the Display are connected is shown.

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IMPORTANT • You cannot connect more than 2 Display units simultaneously by using CPU Direct and Personal Computer Link Module.
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## 1.1 CPU Direct

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
FA-M3	F3SP21-0N F3SP25-2N F3SP28-3N F3SP35-5N F3SP38-6N F3SP53-4H F3SP58-6H F3SP28-3S F3SP38-6S F3SP53-4S F3SP58-6S F3SP58-6S F3SP59-7S	PROGRAMMER port on CPU	RS232C	Setting Example 1 (page 9)	Cable Diagram1 (page 52)

## 1.2 Personal Computer Link Module

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
	F3SP20-0N         F3LC           F3SP21-0N         RS232           F3SP25-2N         RS422           F3SP28-3N         RS422           F3SP30-0N         F3LC	F3LC11-1N, F3LC11-1F, RS232C port on F3LC12-1F	RS232C	Setting Example 4 (page 15)	Cable Diagram 3 (page 58)
		RS422/485 (4Wire) port on F3LC11-2N	RS422/485	Setting Example 3 (page 13)	Cable Diagram 2 (page 53)
FA-M3	F3SP35-5N F3SP36-3N F3SP38-6N F3SP53-4H F3SP28-3S F3SP38-6S F3SP53-4S F3SP53-4S F3SP58-6S F3SP59-7S F3SP66-4S F3SP67-6S	RS422/485 (2Wire) port on F3LC11-2N	RS422/485	Setting Example 2 (page 11)	Cable Diagram 4 (page 59)

Series	CPU <sup>*1</sup>	Link I/F	SIO Type	Setting Example	Cable Diagram
	UT130-□□/RS	Terminal Block on the controller	RS422/485 (2wire)	Setting Example 5 (page 17)	Cable Diagram 5 (page 66)
	UT150-□□/RS	Terminal Block on the controller	RS422/485 (2wire)	Setting Example 6 (page 19)	Cable Diagram 5 (page 66)
Temperature Controllers (UT100 Series)	UT152-□□/RS	Terminal Block on the controller	RS422/485 (2wire)	Setting Example 7 (page 21)	Cable Diagram 5 (page 66)
	UT155-□□/RS	Terminal Block on the controller	RS422/485 (2wire)	Setting Example 8 (page 23)	Cable Diagram 5 (page 66)
	UP150-□□/RS	Terminal Block on the controller	RS422/485 (2wire)	Setting Example 9 (page 25)	Cable Diagram 5 (page 66)
	UT320-□1	Terminal Block on the controller	RS422/485 (4wire)	Setting Example 10 (page 27)	Cable Diagram 6 (page 73)
			RS422/485 (2wire)	Setting Example 11 (page 29)	Cable Diagram 7 (page 78)
	UT350-□1	Terminal Block on the controller	RS422/485 (4wire)	Setting Example 12 (page 31)	Cable Diagram 6 (page 73)
Digital Indicating			RS422/485 (2wire)	Setting Example 13 (page 33)	Cable Diagram 7 (page 78)
Controllers	UT420-□7	Terminal Block on the controller	RS422/485 (4wire)	Setting Example 14 (page 35)	Cable Diagram 6 (page 73)
			RS422/485 (2wire)	Setting Example 15 (page 37)	Cable Diagram 7 (page 78)
	UT450-□1 UT450-□2	Terminal Block on the controller	RS422/485 (4wire)	Setting Example 16 (page 39)	Cable Diagram 6 (page 73)
			RS422/485 (2wire)	Setting Example 17 (page 41)	Cable Diagram 7 (page 78)
UT2000	UT2400-□	Terminal Block on the controller	RS422/485 (4wire)	Setting Example 18 (page 43)	Cable Diagram 8 (page 85)
0.2000	UT2800-□	Terminal Block on the controller	RS422/485 (4wire)	Setting Example 19 (page 45)	Cable Diagram 8 (page 85)

## 1.3 M&C Controllers

\*1 Model number of external device, "□" differs depending on the specification of external device.

## Connection Configuration

• 1:1 Connection



- FA-M3 or M&C controller (PA device) supported by this driver can be connected up to 16 at 1:n connection.
  - When Sequence Control is not required, the system can be composed only of M&C controller.

## COM Port of IPC

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

#### Usable port

Series	Usable port			
Conco	RS-232C	RS-422/485(4 wire)	RS-422/485(2 wire)	
PS-2000B	COM1 <sup>*1</sup> , COM2, COM3 <sup>*1</sup> , COM4	-	-	
PS-3450A, PS-3451A	COM1, COM2 <sup>*1*2</sup>	COM2 <sup>*1*2</sup>	COM2 <sup>*1*2</sup>	
PS-3650A, PS-3651A	COM1 <sup>*1</sup>	-	-	
PS-3700A (Pentium®4-M) PS-3710A	COM1 <sup>*1</sup> , COM2 <sup>*1</sup> , COM3 <sup>*2</sup> , COM4	COM3 <sup>*2</sup>	COM3 <sup>*2</sup>	
PS-3711A	COM1 <sup>*1</sup> , COM2 <sup>*2</sup>	COM2 <sup>*2</sup>	COM2 <sup>*2</sup>	
PL-3000B	COM1 <sup>*1*2</sup> , COM2 <sup>*1</sup> , COM3, COM4	COM1*1*2	COM1*1*2	

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

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

#### Dip switch setting: RS-232C

Dip switch	Setting	Description	
1	OFF <sup>*1</sup>	Reserve (always OFF)	
2	OFF	SIO type: RS-232C	
3	OFF	510 type. R5-252e	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 $\Omega$ ) insertion to RD (RXD): None	
7	OFF	Short-circuit of SDA (TXA) and RDA (RXA): Does not Exist	
8	OFF	Short-circuit of SDB (TXB) and RDB (RXB): Does not Exist	
9	OFF	- RS (RTS) Auto control mode: Disable	
10	OFF		

\*1 It is necessary to turn ON the set value, only when using PS-3450A and PS-3451A.

Dip switch setting:	RS-422/485 (4 wire)
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Dip switch	Setting	Description	
1	OFF	Reserve (always OFF)	
2	ON	SIO type: RS-422/485	
3	ON	510 type. NS-422/403	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220 $\Omega$ ) insertion to RD (RXD): None	
7	OFF	Short-circuit of SDA (TXA) and RDA (RXA): Does not Exist	
8	OFF	Short-circuit of SDB (TXB) and RDB (RXB): Does not Exist	
9	OFF	– RS (RTS) Auto control mode: Disable	
10	OFF		

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

Dip switch	Setting	Description	
1	OFF	Reserve (always OFF)	
2	ON	SIO type: PS 422/485	
3	ON	510 type. N5-422/405	
4	OFF	Output mode of SD (TXD) data: Always output	
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None	
6	OFF	Terminal resistance (220Ω) insertion to RD (RXD): None	
7	ON	Short-circuit of SDA (TXA) and RDA (RXA): Exist	
8	ON	Short-circuit of SDB (TXB) and RDB (RXB): Exist	
9	ON	- RS (RTS) Auto control mode: Enable	
10	ON		

## 2 Selection of External Device

Select the External Device to be connected to the Display.

💰 New Project File		×
GP-Pro 🛃	Device/PLC Maker YOKOGAWA Electric Corporation Series Personal Computer Link SIO	T T
	🗖 Use System Area 🛛 📕	Refer to the manual of this Device/PLC
	Connection Method Port CDM1	
		Go to Device/PLC Manual
Back (J	Communication Settings     New Logic	New Screen Cancel

Setup Items	Setup Description	
Maker	Select the maker of the External Device to be connected. Select "YOKOGAWA Electric Corporation".	
Driver	Select a model (series) of the External Device to be connected and connection method. Select "Personal Computer Link SIO". Check the External Device which can be connected in "Personal Computer Link SIO" in system configuration. "" "1 System Configuration" (page 3)	
Use System Area	<ul> <li>Check this option when you synchronize the system data area of Display and the device (memory) of External Device. When synchronized, you can use the ladder program of External Device to switch the display or display the window on the display.</li> <li>Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"</li> <li>This can be also set with GP-Pro EX or in off-line mode of Display.</li> <li>Cf. GP-Pro EX Reference Manual " 5.14.6 Setting Guide of [System Setting Window]■[Main Unit Settings] Settings Guide System Area Setting"</li> <li>Cf. Maintenance/Troubleshooting "2.14.1 Settings common to all Display models System Area Settings"</li> </ul>	
Port	Select the Display port to be connected to the External Device.	

# 3 Example of Communication Setting

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

## 3.1 Setting Example 1

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOGA	WA Electric Corpo	oration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	• RS232C	C RS422/485(2wire) C RS422/485(4wire)
Speed	19200	<b>T</b>
Data Length	0.7	• 8
Parity	NONE	O EVEN O ODD
Stop Bit	● 1	© 2
Flow Control	C NONE	ER(DTR/CTS) C XON/XOFF
Timeout	3 ÷	(sec)
Retry	2 ÷	
Wait To Send	0 ÷	(ms)
ExtentionMode		
🔲 Exist Sum Check		
Exist Terminator		
BL/VCC	⊙ BI	C VCC
In the case of RS2	32C, you can sele	ect the 9th pin to RI (Input)
or VLL (5V Power Isolation Unit, pleas	supply). If you us se select it to VCC	- Default
Device-Specific Settings		
Allowable Number of	Devices/PLCs	16
Number Device N	ame	Settings
👗 1 🛛 PLC1		Series=FACTORY ACE Series, Station No.=1

#### Device Setting

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

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

\delta Individual Devi	ce Settings	×
PLC1		
Series	• FACTORY ACE	E Series
	O M&C Controller	s
Please reconfirm all are using if you have	of address settings e changed the serie:	that you s.
Controller Type	Digital Indicating	Controllers 🔽
Controller Model	UT320	7
Station No.	1	
		Default
	OK ( <u>0</u> )	Cancel

## Setting of External Device

Execute [Configuration] from the [Project] menu in the ladder tool and set as below. Please refer to each maker's manual of the External Device for more detail on ladder tool.

Setup Items	Settings
Speed	19200
Data Length	8
Parity	None
Stop Bit	1
Exist Sum Check	None
Exist Terminator	Exists
Protect	None

## 3.2 Setting Example 2

Setting of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOK	)GAWA Electric Corp	oration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Setting	js	
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	19200	<b>T</b>
Data Length	0.7	• 8
Parity	NONE	C EVEN C ODD
Stop Bit	I	© 2
Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF
Timeout	3 ÷	(sec)
Retry	2 🔹	
Wait To Send	0 📫	(ms)
ExtentionMode		
Exist Sum Che	eck.	
I✓ Exist Terminal	or	
RI / VCC	© BI	O VCC
In the case of F or VCC (5V Po	(\$232C, you can sele wer Supply). If you u	ect the 9th pin to RI (Input) se the Digital's RS232C
Isolation Unit, p	lease select it to VCC	Default
Device-Specific Settin	gs	
Allowable Number	r of Devices/PLCs	
1 PLC1	o maile	Series=FACTORY ACE Series,Station No.=1

♦ Device Setting

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

💰 Individual Device Settings 🛛 🛛 🗙		
PLC1		
Series	• FACTORY AC	E Series
	O M&C Controlle	rs
Please reconfirm a are using if you hav	II of address setting: /e changed the serie	s that you es.
Controller Type	Digital Indicating	Controllers 💌
Controller Model	UT320	~
Station No.	1	
		Default
	OK ( <u>D</u> )	Cancel

Set the computer link module as below. Please refer to each maker's manual of the External Device for more detail.

#### Transmission Speed Setting Switch

Setup Items	Settings
Speed	19200

#### ◆ Data Code Setting Switch

DIP Switch	Settings	Setup Description
SW1	ON	Data Length
SW2	OFF	Parity Bit
SW3	OFF	-
SW4	OFF	Stop Bit
SW5	OFF	Exist Sum Check
SW6	ON	Exist Terminator
SW7	OFF	Protect
SW8	OFF	Always OFF

#### Station No. Setting Switch

Setup Items	Settings
Station No.	No.1 station

NOTE

• Set the termination resistance switch of only the module which terminates the connection to 2-WIRE. Set other switches to OFF.

## 3.3 Setting Example 3

Setting of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOG	AWA Electric Corporatio	on Series Personal Computer Link SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	BS422/485(2wire)  © RS422/485(4wire)
Speed	19200	<b>T</b>
Data Length	07 0	8
Parity	• NONE C	EVEN O ODD
Stop Bit	© 1 (	2
Flow Control	O NONE	ER(DTR/CTS) C XON/XOFF
Timeout	3 ÷ (sec	3)
Retry	2 +	
Wait To Send	0 ÷ (ms)	
ExtentionMode		
Exist Sum Check	:	
🔽 Exist Terminator		
BL/ VCC	© BL C	) vec
In the case of RS	232C, you can select th	he 9th pin to RI (Input)
or VCC (5V Powe Isolation Unit, plea	: Supply). If you use the use select it to VCC.	e Digital's RS232C Default
Device-Specific Settings		
Allowable Number of	f Devices/PLCs	16
Number Device I	lame	Settings
👗 1 🛛 PLC1		Series=FACTORY ACE Series,Station No.=1

#### Device Setting

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

Individual Device Settings 🛛 🛛 🗙		
PLC1		
Series	FACTORY A	CE Series
	C M&C Controll	ers
Please reconfirm a are using if you ha	all of address setting ve changed the seri	js that you jes.
Controller Type	Digital Indicating	g Controllers 💌
Controller Model	UT320	~
Station No.	1	-
		Default
	OK ( <u>O</u> )	Cancel

Set the computer link module as below. Please refer to each maker's manual of the External Device for more detail.

#### Transmission Speed Setting Switch

Setup Items	Settings
Speed	19200

#### ◆ Data Code Setting Switch

DIP Switch	Settings	Setup Description
SW1	ON	Data Length
SW2	OFF	Parity Bit
SW3	OFF	-
SW4	OFF	Stop Bit
SW5	OFF	Exist Sum Check
SW6	ON	Exist Terminator
SW7	OFF	Protect
SW8	OFF	Always OFF

#### Station No. Setting Switch

Setup Items	Settings
Station No.	No.1 station

NOTE

• Set the termination resistance switch of only the module which terminates the connection to 4-WIRE. Set other switches to OFF.

## 3.4 Setting Example 4

Setting of GP-Pro EX

Communication Settings

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

Device/PLC 1	
Summary Change Device/PLC	
Maker VOKOGAWA Electric Corporation Series Personal Computer Link SIO Port COM1	
Text Data Mode 1 Change	
Communication Settings	
SID Type	
Speed 19200	
Data Length C 7 © 8	
Parity  © NONE  © EVEN  © ODD	
Stop Bit 💿 1 💿 2	
Flow Control C NDNE C ER(DTR/CTS) C XDN/XDFF	
Timeout 3 🚉 (sec)	
Retry 2	
Wait To Send 🛛 📑 (ms)	
ExtentionMode	
Exist Sum Check	
Exist Terminator	
RI / VCC   RI   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 of Devices/PLCs 16	
Number Device Name Settings	
👗 1 PLC1 Interest Series_Station No.=1	

♦ Device Setting

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

💣 Individual Devi	ice Settings	×
PLC1		
Series	• FACTORY A	ACE Series
	O M&C Contro	llers
Please reconfirm all are using if you hav	l of address settin e changed the se	igs that you ries.
Controller Type	Digital Indicatir	ng Controllers 💌
Controller Model	UT320	<b>~</b>
Station No.	1	•
		Default
	OK ( <u>0)</u>	Cancel

Set the computer link module as below. Please refer to each maker's manual of the External Device for more detail.

#### Transmission Speed Setting Switch

Setup Items	Settings
Speed	19200

#### ◆ Data Code Setting Switch

DIP Switch	Settings	Setup Description
SW1	ON	Data Length
SW2	OFF	Parity Bit
SW3	OFF	-
SW4	OFF	Stop Bit
SW5	OFF	Exist Sum Check
SW6	ON	Exist Terminator
SW7	OFF	Protect
SW8	OFF	Always OFF

## 3.5 Setting Example 5

Setting of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOG/	AWA Electric Corpo	ration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	O R\$232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	0.7	• 8
Parity	O NONE	
Stop Bit	● 1	0 2
Flow Control	O NONE	ER(DTR/CTS) C XON/XOFF
Timeout	3 -	(sec)
Retry	2 📫	
Wait To Send		(ms)
ExtentionMode		
Exist Sum Check	:	
Exist Terminator		
RI / VCC	• BI	C VCC
In the case of RS2	232C, you can sele	ct the 9th pin to RI (Input)
or VCC (5V Power Isolation Unit, plea	: Supply). If you use use select it to VCC.	e the Digital's HS232C Default
Device-Specific Settings		
Allowable Number of	f Devices/PLCs	16
Number Device N	lame .	Settings
👗 1 PLC1		Series=M&C Controllers,Controller Type=Temperature Controllers,Controller Mode

#### Device Setting

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

💰 Individual Devid	ce Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	M&C Controllers
Please reconfirm all are using if you have	of address settings that you changed the series.
Controller Type	Temperature Controllers
Controller Model	UT130 💌
Station No.	1 *
	OK ( <u>O</u> ) Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

- 1 Turn ON the power supply.
  - Change to [Operating Display].
- **2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.

Change to [Operating Parameter Setting Display].

- **3** Press SET/ENT key several times to display [LOC].
- 4 Set "-1" to [LOC] and press SET/ENT key.

Display changes to [Setup Parameter Setting Display].

- **5** Press EST/ENT key several times to display communication setup items.
- 6 Enter set value using UP or DOWN key and press SET/ENT key.
- 7 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
PSL	0: PC-link communication
Adr	1
bPS	9.6: 9600bps
PrI	Evn
StP	1
dLn	8

## 3.6 Setting Example 6

Setting of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOGA	WA Electric Corp	oration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	<b>_</b>
Data Length	0.7	• 8
Parity	O NONE	EVEN C ODD
Stop Bit	⊙ 1	© 2
Flow Control	○ NONE	ER(DTR/CTS) C XON/XOFF
Timeout	3 ÷	(sec)
Retry	2 +	
Wait To Send	0 📫	(ms)
ExtentionMode		
Exist Sum Check		
Exist Terminator		
RI / VCC	• BI	© VCC
In the case of RS2	32C, you can sele	ect the 9th pin to RI (Input)
Isolation Unit, plea	se select it to VCC	Default
Device-Specific Settinas		
Allowable Number of	Devices/PLCs	16 📊
Number Device N	lame	Settings
👗   PLC1		Series=M&U Controllers,Controller Type=Temperature Controllers,Controller Mode

#### Device Setting

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

🚰 Individual Device Settings 🛛 🛛 🗙		
PLC1		
Series	C FACTORY ACE Series	
	• M&C Controllers	
Please reconfirm all o are using if you have	of address settings that you changed the series.	
Controller Type	Temperature Controllers	
Controller Model	UT150 💌	
Station No.	1	
	OK ( <u>O)</u> Cancel	

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

- 1 Turn ON the power supply.
  - Change to [Operating Display].
- **2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.

Change to [Operating Parameter Setting Display].

- **3** Press SET/ENT key several times to display [LOC].
- 4 Set "-1" to [LOC] and press SET/ENT key.

Display changes to [Setup Parameter Setting Display].

- **5** Press EST/ENT key several times to display communication setup items.
- 6 Enter set value using UP or DOWN key and press SET/ENT key.
- 7 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
PSL	0: PC-link communication
Adr	1
bPS	9.6: 9600bps
PrI	Evn
StP	1
dLn	8

## 3.7 Setting Example 7

Setting of GP-Pro EX

Communication Settings

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

Device/PLC1
Summary Change Device/PLC
Maker YOKOGAWA Electric Corporation Series Personal Computer Link 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 O 7 📀 8
Parity O NONE O EVEN O ODD
Stop Bit 💿 1 🔿 2
Flow Control C NONE C ER(DTR/CTS) C XON/XOFF
Timeout 3 📻 (sec)
Retry 2
Wait To Send 0 📑 (ms)
ExtentionMode
Exist Sum Check
✓ Exist Terminator
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 HS232C Isolation Unit, please select it to VCC. Default
Allowable Number of Devices/PLCs 16
Number Device Name Settings
1 PLC1 Series=M&C Controllers,Controller Type=Temperature Controllers,Controller Mode

#### Device Setting

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

💕 Individual Devic	e Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	M&C Controllers
Please reconfirm all o are using if you have	of address settings that you changed the series.
Controller Type	Temperature Controllers
Controller Model	UT152 💌
Station No.	1 Tefault
	OK ( <u>D)</u> Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

- 1 Turn ON the power supply.
  - Change to [Operating Display].
- **2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.
  - Change to [Operating Parameter Setting Display].
- **3** Press SET/ENT key several times to display [LOC].
- 4 Set "-1" to [LOC] and press SET/ENT key.
  - Display changes to [Setup Parameter Setting Display].
- 5 Press EST/ENT key several times to display communication setup items.
- 6 Enter set value using UP or DOWN key and press SET/ENT key.
- 7 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
PSL	0: PC-link communication
Adr	1
bPS	9.6: 9600bps
PrI	Evn
StP	1
dLn	8

## 3.8 Setting Example 8

Setting of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOGA	WA Electric Corp	oration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	9600	
Data Length	07	• 8
Parity	O NONE	
Stop Bit	● 1	© 2
Flow Control	O NONE	ER(DTR/CTS) C XON/XOFF
Timeout	3 📫	(sec)
Retry	2 🔹	
Wait To Send	0 ÷	(ms)
ExtentionMode		
Exist Sum Check		
Exist Terminator		
RI / VCC	• RI	© VCC
In the case of RS2	32C, you can sele	ect the 9th pin to RI (Input)
Isolation Unit, plea	supply). If you us se select it to VCC	Default
Device-Specific Settings		
Allowable Number of	Devices/PLCs	16 🔢
Number Device N	ame	Settings
👗 1 PLC1		Series=M&C Controllers,Controller Type=Temperature Controllers,Controller Mode

#### Device Setting

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

💕 Individual Devic	e Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	• M&C Controllers
Please reconfirm all o are using if you have	of address settings that you changed the series.
Controller Type	Temperature Controllers
Controller Model	UT155 💌
Station No.	1 Default
	OK ( <u>O</u> ) Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

- 1 Turn ON the power supply.
  - Change to [Operating Display].
- **2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.
  - Change to [Operating Parameter Setting Display].
- **3** Press SET/ENT key several times to display [LOC].
- 4 Set "-1" to [LOC] and press SET/ENT key.
  - Display changes to [Setup Parameter Setting Display].
- **5** Press EST/ENT key several times to display communication setup items.
- 6 Enter set value using UP or DOWN key and press SET/ENT key.
- 7 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
PSL	0: PC-link communication
Adr	1
bPS	9.6: 9600bps
PrI	Evn
StP	1
dLn	8

## 3.9 Setting Example 9

Setting of GP-Pro EX

Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOGA	WA Electric Corp	oration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	C RS232C	© RS422/485(2wire) C RS422/485(4wire)
Speed	9600	
Data Length	C 7	• 8
Parity	O NONE	• EVEN C ODD
Stop Bit	⊙ 1	© 2
Flow Control	C NONE	ER(DTR/CTS)     C XON/XOFF
Timeout	3 ÷	(sec)
Retry	2	
Wait To Send	0 🗧	(ms)
ExtentionMode		
Exist Sum Check		
Exist Terminator		
RI / VCC	• BI	© VCC
In the case of RS2	32C, you can sel	ect the 9th pin to RI (Input)
or VEC (5V Power Isolation Unit, pleas	Supply). If you use select it to VCC	se the Digital's HS232C C. Default
Device-Specific Settings		
Allowable Number of	Devices/PLCs	16
Number Device N	ame	Settings
👗 1 PLC1		Series=M&C Controllers,Controller Type=Temperature Controllers,Controller Mode

#### Device Setting

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

💰 Individual Devi	ce Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	M&C Controllers
Please reconfirm all are using if you have	of address settings that you e changed the series.
Controller Type	Temperature Controllers
Controller Model	UP150 💌
Station No.	1 Default
	OK ( <u>O)</u> Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

- 1 Turn ON the power supply.
  - Change to [Operating Display].
- **2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.

Change to [Operating Parameter Setting Display].

- **3** Press SET/ENT key several times to display [LOC].
- 4 Set "-1" to [LOC] and press SET/ENT key.

Display changes to [Setup Parameter Setting Display].

- 5 Press EST/ENT key several times to display communication setup items.
- 6 Enter set value using UP or DOWN key and press SET/ENT key.
- 7 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
PSL	0: PC-link communication
Adr	1
bPS	9.6: 9600bps
PrI	Evn
StP	1
dLn	8

## 3.10 Setting Example 10

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1
Summary Change Device/PLC
Maker YOKOGAWA Electric Corporation Series Personal Computer Link SID Port COM1
Text Data Mode 1 Change
Communication Settings
SID Type C RS232C C RS422/485(2wire) C RS422/485(4wire)
Speed 9600
Data Length 🔿 7 📀 8
Parity C NONE C EVEN C ODD
Stop Bit 💿 1 🔿 2
Flow Control C NDNE C ER(DTR/CTS) C XON/XOFF
Timeout 3 (sec)
Retry 2
Wait To Send 0 📻 (ms)
ExtentionMode
Exist Sum Check
Exist Terminator
RI / VCC © RI O 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 of Devices/PLCs 16
Number Device Name Settings           V         1         PLC1         Excise MRC Controllers Controllers Turne Digital Indication Controllers Controllers

#### Device Setting

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

💰 Individual Devi	ce Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	M&C Controllers
Please reconfirm all are using if you have	of address settings that you e changed the series.
Controller Type	Digital Indicating Controllers 💌
Controller Model	UT320 💌
Station No.	1 *
	OK ( <u>O)</u> Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

**1** Turn ON the power supply.

Change to [Operating Display].

- 2 Depress SET/ENT key on the [Operating Display] for 3 seconds or longer. Change to [Operating Parameter Setting Display].
- **3** Press EST/ENT key several times to display communication setup items.
- 4 Enter set value using UP or DOWN key and press SET/ENT key.
- 5 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
P.SL	0: PC link communication
bPS	4: 9600 (bps)
PrI	1: Even
StP	1
dLn	8
Adr	1

## 3.11 Setting Example 11

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC1
Summary Change Device/PLC
Maker YOKOGAWA Electric Corporation Series Personal Computer Link SIO Port COM1
Text Data Mode 1 Change
Communication Settings
SID Type C RS232C   RS422/485(2wire)   RS422/485(4wire)
Speed 9600
Data Length C 7 🕞 8
Parity C NONE · EVEN C ODD
Stop Bit 💿 1 🔿 2
Flow Control C NDNE C ER(DTR/CTS) C XDN/XDFF
Timeout 3 (sec)
Retry 2
Wait To Send 0 📑 (ms)
RI/VCC @ BI C VCC
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC 15V Power Supply). If you use the Digital's RS232C
Isolation Unit, please select it to VCC. Default
Device-Specific Settings
Allowable Number of Devices/PLCs 16
Number Device Name Setungs     Seties=M&C Controllers,Controller Type=Digital Indicating Controllers,Controller M

Device Setting

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

💕 Individual Devic	e Settings	×
PLC1		
Series	C FACTORY ACE Series	
	M&C Controllers	
Please reconfirm all o are using if you have	of address settings that you changed the series.	
Controller Type	Digital Indicating Controllers	•
Controller Model	UT320	•
Station No.	1 Default	÷
	OK ( <u>O)</u> Cancel	

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

1 Turn ON the power supply.

Change to [Operating Display].

- 2 Depress SET/ENT key on the [Operating Display] for 3 seconds or longer. Change to [Operating Parameter Setting Display].
- **3** Press EST/ENT key several times to display communication setup items.
- 4 Enter set value using UP or DOWN key and press SET/ENT key.
- 5 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
P.SL	0: PC link communication
bPS	4: 9600 (bps)
PrI	1: Even
StP	1
dLn	8
Adr	1

## 3.12 Setting Example 12

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1
Summary Change Device/PLC
Maker YOKOGAWA Electric Corporation Series Personal Computer Link SID Port COM1
Text Data Mode 1 Change
Communication Settings
SID Type C RS232C C RS422/485(2wire) C RS422/485(4wire)
Speed 9600
Data Length 🔿 7 📀 8
Parity C NONE C EVEN C ODD
Stop Bit 💿 1 🔿 2
Flow Control C NONE C ER(DTR/CTS) C XON/XOFF
Timeout 3 (sec)
Retry 2
Wait To Send 0 📻 (ms)
ExtentionMode
Exist Sum Check
Exist Terminator
RI / VCC © RI O 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 of Devices/PLCs 16
Number Device Name Settings           V         1         PLC1         Excise_MRC Controllers Controllers Turne_Digital Units time Controllers Controllers

#### Device Setting

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

💰 Individual Devi	ce Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	M&C Controllers
Please reconfirm all are using if you have	of address settings that you e changed the series.
Controller Type	Digital Indicating Controllers 💌
Controller Model	UT350 💌
Station No.	1 Default
	OK ( <u>D</u> ) Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

**1** Turn ON the power supply.

Change to [Operating Display].

- 2 Depress SET/ENT key on the [Operating Display] for 3 seconds or longer. Change to [Operating Parameter Setting Display].
- **3** Press EST/ENT key several times to display communication setup items.
- 4 Enter set value using UP or DOWN key and press SET/ENT key.
- 5 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
P.SL	0: PC link communication
bPS	4: 9600 (bps)
PrI	1: Even
StP	1
dLn	8
Adr	1

## 3.13 Setting Example 13

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1
Summary Change Device/PLC
Maker YDKOGAWA Electric Corporation Series Personal Computer Link 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 🔿 7 💿 8
Parity C NONE C EVEN C ODD
Stop Bit <ul> <li>1</li> <li>O</li> </ul>
Flow Control C NDNE C ER(DTR/CTS) C XDN/X0FF
Timeout 3
Retry 2
Wait To Send 🛛 🚔 (ms)
ExtentionMode
Exist Terminator
RI/VCC © BI O VCC
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supplet) If you use the Digital's RS232C
Isolation Unit, please select it to VCC. Default
Device-Specific Settings
Allowable Number of Devices/PLCs 16
Number Device Name Settings           Number         Device Name         Settings           Image: Settings         Image: Settings         Settings

Device Setting

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

💕 Individual Devic	e Settings	×
PLC1		
Series	C FACTORY ACE Series	
	• M&C Controllers	
Please reconfirm all o are using if you have	of address settings that you changed the series.	
Controller Type	Digital Indicating Controllers	•
Controller Model	UT350	•
Station No.	1 Default	11
	OK ( <u>O)</u> Cancel	

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

**1** Turn ON the power supply.

Change to [Operating Display].

- 2 Depress SET/ENT key on the [Operating Display] for 3 seconds or longer. Change to [Operating Parameter Setting Display].
- **3** Press EST/ENT key several times to display communication setup items.
- 4 Enter set value using UP or DOWN key and press SET/ENT key.
- 5 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
P.SL	0: PC link communication
bPS	4: 9600 (bps)
PrI	1: Even
StP	1
dLn	8
Adr	1

## 3.14 Setting Example 14

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOG	iAWA Electric Corp	oration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	O RS232C	C RS422/485(2wire) C RS422/485(4wire)
Speed	9600	<b>_</b>
Data Length	07	• 8
Parity	O NONE	• EVEN C ODD
Stop Bit	● 1	© 2
Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF
Timeout	3 📫	(sec)
Retry	2 📫	
Wait To Send	0 📫	(ms)
ExtentionMode -		
Exist Sum Chec	x	
Exist Terminator		
RI / VCC	© BI	O VCC
In the case of RS or VCC (5V Powe	232C, you can sele er Supply). If you us	ect the 9th pin to RI (Input) se the Digital's RS232C
Isolation Unit, ple	ase select it to VCC	Default
Device-Specific Settings		
Allowable Number (	of Devices/PLCs	16 <b>1</b>
1 PLC1	Name	Series=M&C Controllers,Controller Type=Digital Indicating Controllers,Controller M

Device Setting

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

💕 Individual Devic	e Settings	×
PLC1		
Series	C FACTORY ACE Series	
	• M&C Controllers	
Please reconfirm all o are using if you have	of address settings that you changed the series.	
Controller Type	Digital Indicating Controllers	•
Controller Model	UT420	•
Station No.	1 Default	••
	OK ( <u>O)</u> Cancel	

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

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

Please refer to the manual of the controller for more details.

#### Procedure

1 Turn ON the power supply.

Change to [Operating Display].

**2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.

Change to [Operating Parameter Setting Display].

- **3** Press UP or DOWN key several times to display [r485].
- 4 Press EST/ENT key several times to display communication setup items.
- 5 Enter set value using UP or DOWN key and press SET/ENT key.
- 6 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

Setup Items	Settings
PSL	0: PC link communication
bPS	9600
PrI	EVEN
StP	1
dLn	8
Adr	1
rP.t	0: 0 × 10ms
# 3.15 Setting Example 15

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1
Summary Change Device/PLC
Maker YOKOGAWA Electric Corporation Series Personal Computer Link SIO Port COM1
Text Data Mode 1 Change
Communication Settings
SIO Type C RS232C C RS422/485(2wire) C RS422/485(4wire)
Speed 9600
Data Length O 7 📀 8
Parity C NONE C EVEN C ODD
Stop Bit 💿 1 🔿 2
Flow Control C NONE  © ER(DTR/CTS) C XON/XOFF
Timeout 3 📑 (sec)
Retry 2
Wait To Send 🛛 🚊 (ms)
Exist Terminator
RI / VCC © RI C VCC
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C
Isolation Unit, please select it to VCC. Default
Device-Specific Settings
Allowable Number of Devices/PLCs 16
Number Device Name Settings           Number         Device Name         Settings           Image: Provide Name         Image: Provide Name         Image: Provide Name         Image: Provide Name           Image: Provide Name

Device Setting

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

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

💕 Individual Devic	e Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	• M&C Controllers
Please reconfirm all o are using if you have	of address settings that you changed the series.
Controller Type	Digital Indicating Controllers 💌
Controller Model	UT420 💌
Station No.	1 Default
	OK ( <u>O)</u> Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

# Setting of External Device

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

Please refer to the manual of the controller for more details.

#### Procedure

1 Turn ON the power supply.

Change to [Operating Display].

**2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.

Change to [Operating Parameter Setting Display].

- **3** Press UP or DOWN key several times to display [r485].
- 4 Press EST/ENT key several times to display communication setup items.
- 5 Enter set value using UP or DOWN key and press SET/ENT key.
- 6 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

#### Setting Value

Setup Items	Settings
PSL	0: PC link communication
bps	9600
Pri	EVEN
StP	1
dLn	8
Adr	1
rP.t	0: 0 × 10ms

# 3.16 Setting Example 16

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1
Summary Change Device/PLC
Maker VOKOGAWA Electric Corporation Series Personal Computer Link 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 C 7 💿 8
Parity C NONE O EVEN C ODD
Stop Bit
Flow Control C NONE  © ER(DTR/CTS) C XON/XOFF
Timeout 3 😐 (sec)
Retry 2
Wait To Send 0 📑 (ms)
Karaka
RI/VCC © RI O VCC
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Dinital's RS232C
Isolation Unit, please select it to VCC. Default
Device-Specific Settings
Allowable Number of Devices/PLCs 16
Number Device Name Settings           Number         Device Name         Settings           1         PLC1         Impl Series=M&C Controllers Cont

Device Setting

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

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

💰 Individual Devi	ce Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	• M&C Controllers
Please reconfirm all are using if you have	of address settings that you e changed the series.
Controller Type	Digital Indicating Controllers 💌
Controller Model	UT450 💌
Station No.	1 *
	OK ( <u>D)</u> Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

# Setting of External Device

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

Please refer to the manual of the controller for more details.

#### Procedure

1 Turn ON the power supply.

Change to [Operating Display].

**2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.

Change to [Operating Parameter Setting Display].

- **3** Press UP or DOWN key several times to display [r485].
- 4 Press EST/ENT key several times to display communication setup items.
- 5 Enter set value using UP or DOWN key and press SET/ENT key.
- 6 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

#### Setting Value

Setup Items	Settings
PSL	0: PC link communication
bPS	9600
PrI	EVEN
StP	1
dLn	8
Adr	1
rP.t	0: 0 × 10ms

# 3.17 Setting Example 17

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOG	AWA Electric Corp	oration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	O R\$232C	RS422/485(2wire)     C RS422/485(4wire)
Speed	9600	<b>•</b>
Data Length	07	• 8
Parity	O NONE	EVEN     C ODD
Stop Bit	● 1	O 2
Flow Control	O NONE	ER(DTR/CTS) C XON/XOFF
Timeout	3 ÷	(sec)
Retry	2 ÷	
Wait To Send	0 +	(ms)
ExtentionMode		
	¢.	
Exist Terminator		
RI / VCC	© RI	O VCC
In the case of RS or VCC (5V Powe	232C, you can sel er Supply). If you u	ect the 9th pin to RI (Input) se the Digital's RS232C
Isolation Unit, ple	ase select it to VCC	Default
Device-Specific Settings		
Allowable Number of	of Devices/PLCs	16 <b>1</b>
1 PLC1	Name	Series=M&C Controllers,Controller Type=Digital Indicating Controllers,Controller M

#### Device Setting

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

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

💰 Individual Devi	ce Settings 🛛 🗙
PLC1	
Series	C FACTORY ACE Series
	• M&C Controllers
Please reconfirm all are using if you have	of address settings that you e changed the series.
Controller Type	Digital Indicating Controllers 💌
Controller Model	UT450 💌
Station No.	1 *
	OK ( <u>D)</u> Cancel

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.

# Setting of External Device

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

Please refer to the manual of the controller for more details.

#### Procedure

1 Turn ON the power supply.

Change to [Operating Display].

**2** Depress SET/ENT key on the [Operating Display] for 3 seconds or longer.

Change to [Operating Parameter Setting Display].

- **3** Press UP or DOWN key several times to display [r485].
- 4 Press EST/ENT key several times to display communication setup items.
- 5 Enter set value using UP or DOWN key and press SET/ENT key.
- 6 Depress SET/ENT key for 3 seconds or longer to return to [Operating Display]. Then the communication setting is finished.

#### Setting Value

Setup Items	Settings
PSL	0: PC link communication
bps	9600
Pri	EVEN
StP	1
dLn	8
Adr	1
rP.t	0: 0 × 10ms

# 3.18 Setting Example 18

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1
Summary Change Device/PLC
Maker YOKOGAWA Electric Corporation Series Personal Computer Link SIO Port COM1
Text Data Mode 1 Change
Communication Settings
SIO Type O RS232C O RS422/485(2wire) O RS422/485(4wire)
Speed 9600 💌
Data Length C 7 💽 8
Parity C NONE C EVEN C ODD
Stop Bit 💿 1 💿 2
Flow Control C NONE C ER(DTR/CTS) C XON/XOFF
Timeout 3 📑 (sec)
Retry 2
Wait To Send 0 📑 (ms)
ExtentionMode
I✓ Exist Terminator
RI/VCC © RI O VCC
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply) If you use the Digital's RS232C
Isolation Unit, please select it to VDC. Default
Device-Specific Settings
Allowable Number of Devices/PLCs 16
Number Device Name Settings           V         1         PLC1         Image: Settings

#### Device Setting

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

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

💰 Individual Devid	ce Settings	×
PLC1		
Series	O FACTORY ACE Series	
	• M&C Controllers	
Please reconfirm all are using if you have	of address settings that you changed the series.	
Controller Type	UT2000	┓
Controller Model	UT2400	•
Station No.	1 Default	•
	OK ( <u>D)</u> Cancel	

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.
  - Remove the check from the [Extension Mode]-[Exist Sum Check] of the communication setting.

# Setting of External Device

Use the DIP switch for protocol selection, rotary switch for communication setting and rotary switch for station number selection in front of the controller for communication settings of the External Device. Please refer to the manual of the controller for more details.

### ◆ Procedure

- 1 Turn DIP switch for protocol selection "ON (PC-link communication)."
- **2** Set "2" to rotary switch for communication setting.
- **3** Set "0" to rotary switch for station number selection.

# 3.19 Setting Example 19

- Setting of GP-Pro EX
- Communication Settings

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

Device/PLC 1
Summary Change Device/PLC
Maker YOKOGAWA Electric Corporation Series Personal Computer Link SIO Port COM1
Text Data Mode 1 Change
Communication Settings
SID Type 🔿 RS232C 🔿 RS422/485(2wire) 💿 RS422/485(4wire)
Speed 9600 💌
Data Length C 7 🕞 8
Parity C NONE C EVEN C ODD
Stop Bit
Flow Control C NONE C ER(DTR/CTS) C XON/XOFF
Timeout 3 🔄
Retry 2
Wait To Send 🛛 📑 (ms)
RI / VCC © RI O VCC
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C
Isolation Unit, please select it to VCC. Default
Device-Specific Settings
Allowable Number of Devices/PLCs 16
Number Device Name Settings           Number         Device Name         Settings           1         PLC1         Image: Settings         Settings

Device Setting

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

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

💰 Individual Devid	ce Settings	×	
PLC1			
Series	C FACTORY ACE Series		
	• M&C Controllers		
Please reconfirm all of address settings that you are using if you have changed the series.			
Controller Type	UT2000	•	
Controller Model	UT2800	•	
Station No.	1	÷	
	Default		
	OK ( <u>O</u> ) Cancel		

- Caution
  - Always put a check on the [Extension Mode]-[Exist Terminator] of the communication setting.
  - Remove the check from the [Extension Mode]-[Exist Sum Check] of the communication setting.

# Setting of External Device

Use the DIP switch for protocol selection, rotary switch for communication setting and rotary switch for station number selection in front of the controller for communication settings of the External Device. Please refer to the manual of the controller for more details.

### ◆ Procedure

- 1 Turn DIP switch for protocol selection "ON (PC-link communication)."
- **2** Set "2" to rotary switch for communication setting.
- **3** Set "0" to rotary switch for station number selection.

# 4 Setup Items

Set communication settings of the Display with GP-Pro EX or in off-line mode of the Display. The setting of each parameter must be identical to that of External Device.

"3 Example of Communication Setting" (page 9)

# 4.1 Communication Setting with GP-Pro EX

# Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker YOKOGA	WA Electric Corp	oration Series Personal Computer Link SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	• R\$232C	C RS422/485(2wire) C RS422/485(4wire)
Speed	19200	
Data Length	0.7	• 8
Parity	NONE	C EVEN C ODD
Stop Bit	€ 1	C 2
Flow Control	O NONE	ER(DTR/CTS) C XON/XOFF
Timeout	3 ÷	(sec)
Retry	2 +	
Wait To Send	0 =	(ms)
ExtentionMode		
🔲 Exist Sum Check		
Exist Terminator		
RI / VCC	BI	C VCC
In the case of RS2	32C, you can sele	et the 9th pin to RI (Input)
or VCC (5V Power Isolation Unit, plea:	Supply). If you us se select it to VCC	e the Digital's RS232C Default
Device-Specific Settings		
Allowable Number of	Devices/PLCs	16 10
Number Device N	ame	Settings
👗 1  PLC1		Series=FACTORY ACE 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	Select 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 a 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.	

continued to next page

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

# Device Setting

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

When [Allowable No. of Device/PLCs] is multiple, click if from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.

💰 Individual Devid	e Settings		х	
PLC1				
Series	O FACTORY	ACE Series		
	M&C Control	ollers		
Please reconfirm all of address settings that you are using if you have changed the series.				
Controller Type	Digital Indicating Controllers 💌			
Controller Model	UT320 💌			
Station No.	1		÷	
		Default		
	OK ( <u>0)</u>	Cancel		

Setup Items	Setup Description		
Series	Select the External Device series.		
Controller Type	Select the controller type. This can be set only by selecting "M & C Controllers" of [Series].		
Controller Model	Select the controller model. This can be set only by selecting "M & C Controllers" of [Series].		
Station No.	Use an integer 0 to 32 to enter the station number of the External Device to communicate.		

# 4.2 Communication Settings in Off-line Mode

NOTE

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

Cf. Maintenance/Troubleshooting "2.2 Offline Mode"

## Communication Settings

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

Comm.	Device	Option		
Personal Comput	er Link SIO		[COM1]	Page 1/1
	SIO Type Speed Data Length Parity Stop Bit Flow Control	RS232C 19200 7 NONE 1 JER(DTR/C	• 8 • EVEN • 2 TS)	DODD
	Timeout(s) Retry Wait To Send(ms)		3 ▼ ▲ 2 ▼ ▲ 0 ▼ ▲	
	Exist Check Sum Exist Terminator	OFF     OFF	● ON ● ON	
	Exit		Back	2007/04/01 22:02:12

Setup Items	Setup Description		
SIO Type	Select the SIO type to communicate with the External Device.		
	unit.		
Speed	Select speed between the External Device and the Display.		
Data Length	Select data length.		
Parity	Select how to check parity.		
Stop Bit	Select stop bit length.		
Flow Control	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 (sec) for which the Display waits for the response from the External Device.		

continued to next page

Setup Items	Setup Description		
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.		
Wait To Send	Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.		
Exist Check Sum	Set whether you perform the check sum.		
Exist Terminator	Set whether you specify the data terminator.		

# Device Setting

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 [Device].

Comm.	Device	Option		
Personal Comput	er Link SIO		[COM1]	Page 1/1
Devic	e/PLC Name 🛛 🦷	PLC1		-
	Series Station No.	FACTORY A	ICE Series 1 ▼ ▲	1
	Exit		Back	2007/04/01 22:02:17

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 0 to 32 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		
Personal Comput	er Link SIO RI / VCC In the case the 9th pin Power Suppl RS232C Isol	• RI of RS232C, you to RI(Input) or y).If you use th ation Unit, plea	[COM1] VCC can select VCC(5V e Digital's se select	Page 1/1
	Exit		Back	2007/04/01 22:02:22

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

# 5 Cable Diagram

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

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

## Cable Diagram1

Display (Connection Port)	Cable	Notes
GP (COM1) IPC <sup>*1</sup> PC/AT	9-pin-to-25-pin RS-232C Conversion Cable by Pro-face CA3-CBLCBT232-01 + Programming tool cable by YOKOGAWA Electric Corporation KM11-2N*A	The cable length must be 15m or less.

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



### Cable Diagram 2

Display (Connection Port)	Cable	Notes
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) IPC <sup>*2</sup>	A Terminal block conversion adapter by Pro-face CA3-ADPCOM-01 + A Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	B Your own cable	
GP <sup>*3</sup> (COM2)	C Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	_
	D Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	

\*1 All GP models except AGP-3302B

\*2 Only the COM port which can communicate by RS-422/485 (4 wire) can be used. <sup>(37)</sup> ■ COM Port of IPC (page 6)

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

**NOTE** • Attach the termination resistance to the devices on both ends.

- Note that pole A and pole B are reversely named for the Display and the External Device.
- When the PA device has SG, connect it.
- Set the last resistance switch of the personal computer link module for the External Device which terminates the connection to 4-WIRE.
- We recommend CO-SPEU-SB(A)3P x 0.5SQ by Hitachi Cable, Ltd. for the connection cable.
- Total cable length is 1000m.
- Set the station No. for the personal computer link module to 2 to 32.
- You must set the different station No. of all PA devices connected to the Display. If there are more than 2 PA devices with the same station No., error occurs.
- Perform the identical communication settings for both the Display (m units) and the PA device (n units).

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

[1:1 Connection]





• Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

• When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

B) When using your own cable

## [1:1 Connection]



# [1:n Connection]



**NOTE** • When the PA device has SG, connect it.

- Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.
- When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

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

[1:1 Connection]





necessary.

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

## [1:1 Connection]



## [1:n Connection]



• Even if the PA device has no SG, SG connection between the Display and the External Device is necessary.

# Cable Diagram 3

Display (Connection Port)	Cable	Notes
GP (COM1) IPC <sup>*1</sup> PC/AT	Your own cable	The cable length must be 15m or less.

Only the COM port which can communicate by RS-232C can be used. <sup>CF</sup> ■ COM Port of IPC (page 6) \*1

	D-sub 9 pin (socket)			External	Device
	Pin	Signal name	Shield	Pin	Signal name
Display	1	CD		1	CD
	2	RD(RXD)		2	RD
	3	SD(TXD)		3	SD
	6	DR(DSR)		4	ER
	5	SG		5	SG
	4	ER(DTR)		6	DR
	7	RS(RTS)		7	RS
	8	CS(CTS)	<b>╺</b> ┛∖ \/└ <b>&gt;</b>	8	CS
	9	RI/VCC		9	FG

### Cable Diagram 4

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

\*1 All GP models except AGP-3302B

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

\*3 Only the COM port which can communicate by RS-422/485 (2 wire) can be used.

<sup>C</sup> ■ COM Port of IPC (page 6)

NOTE

- Note that pole A and pole B are reversely named for the Display and the External Device.
- When the PA device has SG, connect it.
- Set the last resistance switch of the personal computer link module for the External Device which terminates the connection to 2-WIRE.
- We recommend CO-SPEU-SB(A)3P x 0.5SQ by Hitachi Cable, Ltd. for the connection cable.
- Total cable length is 1000m.

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

## [1:1 Connection]





#### B) When using your own cable



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

## [1:1 Connection]





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



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

## [1:1 Connection]



## [1:n Connection]



resistance.

#### F) When using your own cable

#### [1:1 Connection]



resistance.

# Cable Diagram 5

Display (Connection Port)	Cable		Notes
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) LT (COM1)	A	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
GP <sup>*2</sup> (COM2)	С	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	The cable length must be 1000m or less.
	D	Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	
IPC <sup>*3</sup>	E	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable Your own cable	

\*1 All GP models except AGP-3302B

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

\*3 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. ☞ ■ COM Port of IPC (page 6) A) When using the COM port conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable







#### B) When using your own cable



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







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

## [1:1 Connection]



Your own cable

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

## [1:1 Connection]



• When the display unit you use is an IPC, turn ON the DIP switch 6 to insert the termination resistance.

#### F) When using your own cable

#### [1:1 Connection]



• When the display unit you use is an IPC, turn ON the DIP switch 6 to insert the termination resistance.
# Cable Diagram 6

Display (Connection Port)	Cable	Notes
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) LT (COM1) IPC <sup>*2</sup>	A COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	B Your own cable	
GP <sup>*3</sup> (COM2)	C Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	The cable length must be 1000m or less.
	D Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	

\*1 All GP models except AGP-3302B

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

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

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



B) When using your own cable

### [1:1 Connection]



# • When the display unit you use is an IPC, turn ON the DIP switches 5 and 6 to insert the termination resistance.

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



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



## Cable Diagram 7

Display (Connection Port)		Cable	Notes
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) LT (COM1)	А	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
GP*2 (COM2)	С	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	The cable length must be 1000m or less.
	D	Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	
IPC*3	Е	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	F	Your own cable	

\*1 All GP models except AGP-3302B

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

\*3 Only the COM port which can communicate by RS-422/485 (2 wire) can be used. <sup>CP</sup> ■ COM Port of IPC (page 6) A) When using the COM port conversion adapter (CA3-ADPCOM-01), the terminal block conversion adapter (CA3-ADPTRM-01) by Pro-face and your own cable

### [1:1 Connection]





#### B) When using your own cable



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

[1:1 Connection]





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



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



#### F) When using your own cable

### [1:1 Connection]



resistance.

### Cable Diagram 8

Display (Connection Port)		Cable	Notes
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) LT (COM1) IPC <sup>*2</sup>	А	COM port conversion adapter by Pro-face CA3-ADPCOM-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
GP*3 (COM2)	С	Online adapter by Pro-face CA4-ADPONL-01 + Terminal block conversion adapter by Pro-face CA3-ADPTRM-01 + Your own cable	The cable length must be 1000m or less.
	D	Online adapter by Pro-face CA4-ADPONL-01 + Your own cable	

\*1 All GP models except AGP-3302B

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

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

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







B) When using your own cable



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







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



# 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.



Address
 Reference

Enter the address.

Available parameter list is displayed. Click the parameter to use and press "Select", then the address is entered.

[Reference] is displayed when "M & C Controllers" of the series of the external device is selected.

# 6.1 FACTRY ACE series

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
Input Relay	X00201 - X71664	X00201 - X71649		+1B+ <b>1</b> ] *1*2
Output Relay	Y00201 - Y71664	Y00201 - Y71649		(+1B+ <b>1</b> ) *1
Internal Relay	I00001 - I65535	I00001 - I65521		(+1B+ <b>1</b> )
Common Relay	E0001 - E4096	E0001 - E4081		(+1B+ <b>1</b> )
Special Relay	M0001 - M9984	M0001 - M9969		(+1B+ <b>1</b> )
Link Relay	L00001 - L78192	L00001 - L78177		+1B+ <b>1</b> *4
Timer (Contact)	TU0001 - TU3072			
Counter (Contact)	CU0001 - CU3072			
Timer (Current Value)		TP0001 - TP3072		
Timer (Setting Value)		TS0001 - TS3072		*2
Counter (Current Value)		CP0001 - CP3072		
Counter (Setting Value)		CS0001 - CS3072		*2
Data Register		D00001 - D65535	- (L)	B i t <b>15</b> ]
File Register		B000001 - B262144		ві t <b>15</b> ] *3
General Register		R0001 - R4096		B i t <b>15</b> ]
Special Register		Z0001 - Z1024		B i t <b>15</b> ]
Link Register		W00001 - W78192		ві t <b>15</b> ] *4
Special Module		SW0010000 - SW7169999		*2 *5
		INF100 - INF101		*2 *6
		INF200 - INF214		*2 *6
Information		INF30010 - INF37163		*2 *6
		INF4100 - INF4215		ві t <b>15</b> ] *2 *6
		INF500		*2*6
Program Information		PRI00000 - PRI99913		*2*7
User Log Read		ULR000000 - ULR064128		*2*8
Error History Read		ERH000000 - ERH128000		*2*9

\*1 Address input area for input relay (X) and output relay (Y) is shown below.
 When you specify the word address, specify the terminal number with the value of (a multiple of 16) + 1.

Example: X002001



- \*2 Write disable
- \*3 When using the personal computer link module for connection, you can use up to B99999.
- \*4 In link relay (L) and link register (W), the upper 1st digit on address input area shows the link number, and lower 4th digit shows the address. Specify the word address for link relay (L) and link register (W) with the value of (a multiple of 16) + 1.

Example: When specifying L71024 of link relay



\*5 Information of Special Module Read/Write

SW<u>0 01 0003</u>



#### \*6 Information Read

1. Read the status of CPU module and program



2. Read the information of system ID, CPU type and area size



3. Read the mounting module name



4. Read the ERR LED of CPU module or the ALM LED lighting factor



5. Delete the current alarm information of CPU module (write only)

INF <u>5</u>00

Parameter No. (5)



*7	Program In	formation Read
	When 000	D is written in Read information
	PRI <u>000</u>	<u>    00                               </u>
		ASCII mode:
		Creation date: 7 to 13 (7 words)
		Size step No.: 4 to 6 (3 words)
		Program name: 0 to 3 (4 words)
		Binary mode:
		Creation date: 6 to 10 (5 words)
		Size step No.: 4 to 5 (2 words)
		Program name: 0 to 3 (4 words)
		Read information (000: Program name, Creation date)
	When one	e of the numbers from 001 to 999 is written in Read information
	PRI <u>000</u>	<u>00</u>
		ASCII mode:
		Size step No.: 4 to 6 (3 words)
		Program name: 0 to 3 (4 words)
		L Binary mode:
		Size step No.: 4 to 5 (2 words)
		Program name: 0 to 3 (4 words)
		Read information (001 to 999: Reading such as the block names of No.n)
*8	User Log R	Pead
0		0.000
	ULK <u>UU</u>	
		User log: 0 to 128 (word)
		User log reading point
		000: Latest user log
		001 to 064: No.n user log from new data
*9	Error Histo	rv Read
ERH		
		-
		ASCII mode:
		U: Error Information (00: System error 01: BASIC error 02: Sequence error 03: I/O error)
		1. 2: Error code (Charactor string)
		3 to 6: Date (YY/MM/DD) charactor string
		7 to 10: Time (HH:MM:SS) charactor string
		11 to 22: Added information (Charactor string)
		-Binary mode:
		0: Error information
		(0000: System error, 0001: BASIC error, 0002: Sequence error, 0003: I/O error)
		1: Error code
		s to 7: Time (HHHH:MWM/SSSS) 8 to 18: Added information
	L	Error history reading point
		UUU. Latest user log

### NOTE

• Please refer to the GP-Pro EX Reference Manual for system data area.

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

# 6.2 Temperature Controllers (UT100 Series)

# UT130/UT150/UT152/UT155

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
I Relay	I0001 - I0048	I0001 - I0033	п ин	÷16+ 1 *1
D Register		D0001 - D0420		Bit <b>15</b> *1,*2

\*1 There are write-protected areas and usage- disabled areas within the displayed addresses. Please check the controllers' manuals to get the description of function and usage of the registers for detail.

\*2 Only D401 to D420 may be allocated as system area memory for the controller. Be careful of this point when the system area is set in GP-Pro EX or OFFLINE mode.

- **NOTE** Please refer to the GP-Pro EX Reference Manual for system data area.
  - Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"

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

"Manual Symbols and Terminology"

UP150

NOTE

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
I Relay	I0001 - I0054	I0001 - I0049		( <u>+16+</u> )*1
D Register		D0001 - D0420		B i t <b>15</b> *1,*2

Г

\*1 There are write-protected areas and usage- disabled areas within the displayed addresses. Please check the controllers' manuals to get the description of function and usage of the registers for detail.

\*2 Only D401 to D420 may be allocated as system area memory for the controller. Be careful of this point when the system area is set in GP-Pro EX or OFFLINE mode.

• Please refer to the GP-Pro EX Reference Manual for system data area.

Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"

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

"Manual Symbols and Terminology"

# 6.3 Digital Indicating Controllers

UT320/UT350

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
I Relay	I0001 - I0784	I0001 - I0769		÷16+ 1 *1
D Register		D0001 - D1300		Bit <b>15</b> *1,*2

E

\*1 There are write-protected areas and usage- disabled areas within the displayed addresses. Please check the controllers' manuals to get the description of function and usage of the registers for detail.

- \*2 Only D50 to D100 may be allocated as system area memory for the controller. Be careful of this point when the system area is set in GP-Pro EX or OFFLINE mode.
  - **NOTE** Please refer to the GP-Pro EX Reference Manual for system data area.
    - Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (only for direct access method)"
    - Please refer to the precautions on manual notation for icons in the table.

"Manual Symbols and Terminology"

### UT420/UT450

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
I Relay	I0001 - I2048	I0001 - I2033	п ин	÷16+ 1 *1
D Register		D0001 - D1300		<u>ві</u> t <b>15</b> *1,*2

<sup>\*1</sup> There are write-protected areas and usage- disabled areas within the displayed addresses. Please check the controllers' manuals to get the description of function and usage of the registers for detail.

\*2 Only D50 to D100 may be allocated as system area memory for the controller. Be careful of this point when the system area is set in GP-Pro EX or OFFLINE mode.

**NOTE** • Please refer to the GP-Pro EX Reference Manual for system data area.

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

"Manual Symbols and Terminology"

### 6.4 UT2000

This address can be specified as system data area.

Device	Bit Address	Word Address	32bits	Notes
I Relay	I0001 - I1024	I0001 - I1009		÷16+ 1 *1
D Register		D0001 - D1024		Bit <b>15</b> ] *1

\*1 There are write-protected areas and usage- disabled areas within the displayed addresses. Please check the controllers' manuals to get the description of function and usage of the registers for detail.

NOTE	•	Of the system area settings, only reading area size can be used by the controller.
		Please refer to the GP-Pro EX Reference Manual for reading area size.

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

# 7 Device Code and Address Code

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

# 7.1 FACTORY ACE Series

Device	Device Name	Device Code (HEX)	Address Code	
	1X	0080		
Input Relay	2X	0180	(Module unit No. x $0x40$ ) + ((Module slot No. 1) x $0x4$ ) + ((Terminal No. 1)	
	3X	0280	divided by $16)^{*1}$	
	4X	0380		
	1Y	0081		
Output Polov	2Y	0181	(Module unit No. x $0x40$ ) + ((Module slot No. 1) x $0x4$ ) + ((Terminel No. 1)	
Output Relay	3Y	0281	divided by $16)^{*1}$	
	4Y	0381		
	11	0082		
Internal Rolay	21	0182	Value of (word address 1) divided by 16	
Internal Relay	31	0282	value of (word address - 1) divided by 16	
	4I	0382		
	1E	0084		
Common Bolov	2E	0184	Value of (word address 1) divided by 16	
Common Relay	3E	0284	value of (word address - 1) divided by 16	
	4E	0384		
	1M	0083		
Special Bolov	2M	0183	Volue of (more address 1) divided by 16	
Special Relay	3M	0283	value of (word address - 1) divided by 16	
	4M	0383		
	1L	0088		
Link Dolov	2L	0188	(Link No. x 0x10000) + ((Word Address -	
LINK Relay	3L	0288	1) divided by 16) *2	
	4L	0388		
	1TP	0060		
Timer (Current	2TP	0160	Word Address 1	
Value)	3TP	0260	word Address - 1	
	4TP	0360		

Device	Device Name	Device Code (HEX)	Address Code
Timer (Setting Value)	ITS	0063	
	2TS	0163	Word Address - 1
	3TS	0263	
	4TS	0363	
	1CP	0061	
Counter (Current	2CP	0161	Word Address 1
Value)	3CP	0261	
	4CP	0361	
	1CS	0064	
Counter (Setting	2CS	0164	Word Address - 1
Value)	3CS	0264	Word Address - 1
	4CS	0364	
	1D	0000	
Data Register	2D	0100	Word Address - 1
	3D	0200	
	4D	0300	
	1B	0004	Word Address - 1
Common Register	2B	0104	
Common Register	3B	0204	
	4B	0304	
	1R	0003	
General Register	2R	0103	Word Address - 1
General Register	3R	0203	Wold Address - 1
	4R	0303	
	1Z	0001	
Special Register	2Z	0101	Word Address - 1
	3Z	0201	
	4Z	0301	
Link Register	1W	0002	
	2W	0102	(Link No. x $0x10000$ ) + ((Word Address -
	3W	0202	1) divided by 16) <sup>*2</sup>
	4W	0302	

Device	Device Name	Device Code (HEX)	Address Code
Special Module	1SW	0065	
	2SW	0165	Word address
	3SW	0265	word address
	4SW	0365	
	1INF1	0066	
	2INF1	0166	Word address
	3INF1	0266	(Read only)
	4INF1	0366	
	1INF2	006a	
	2INF2	016a	Word address
	3INF2	026a	(Read only)
	4INF2	036a	
	1INF3	006b	
Information	2INF3	016b	Word address
mormation	3INF3	026b	(Read only)
	4INF3	036b	
	1INF4	0005	
	2INF4	0105	Word address (Read only)
	3INF4	0205	
	4INF4	0305	
	1INF5	006c	
	2INF5	016c	Word address (Write only)
	3INF5	026c	
	4INF5	036c	
	1PRI	0067	
Program Information	2PRI	0167	Word address (Read only)
	3PRI	0267	
	4PRI	0367	
User Log Read	1ULR	0068	
	2ULR	0168	Word address
	3ULR	0268	(Read only)
	4ULR	0368	

Device	Device Name	Device Code (HEX)	Address Code
Error History Read	1ERH	0069	
	2ERH	0169	Word address
	3ERH	0269	(Read only)
	4ERH	0369	

\*1 Please refer to "6 Supported Device \*1" for each name.

\*2 Please refer to "6 Supported Device \*4" for each name.

# 7.2 Temperature Controllers (UT100 Series)

Device	Device Name	Device Code (HEX)	Address Code
I Relay	Ι	0082	Value of (word address - 1) divided by 16
D Register	D	0000	Value of word Address - 1

## 7.3 Digital Indicating Controllers

Device	Device Name	Device Code (HEX)	Address Code
I Relay	Ι	0082	Value of (word address - 1) divided by 16
D Register	D	0000	Value of word Address - 1

### 7.4 UT2000

Device	Device Name	Device Code (HEX)	Address Code
I Relay	Ι	0082	Value of (word address - 1) divided by 16
D Register	D	0000	Value of word Address - 1

# 8 Error Messages

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

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

Display Examples of Error Messages

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

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