KOYO ELECTRONICS CO., LTD.

# KOSTAC/DL Series CCM SIO Driver

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#### Introduction

This manual describes how to connect the Display and the External Device.

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

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 the model (series) of the External Device to be connected and its connection method.	"2 Selection of External Device" (page 10)
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 11)
4	Setup Items This section describes communication setup items on the Display. Set the communication settings of the Display with GP-Pro EX or in off-line mode.	"4 Setup Items" (page 62)
5	Cable Diagram This section shows cables and adapters for connecting the Display and the External Device.	"5 Cable Diagram" (page 67)
	Operation	

# 1 System Configuration

The following shows the system configuration where the External Device of KOYO ELECTRONICS CO., LTD. and the Display are connected.

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
		CN1 on G-01DM	RS232C	Setting Example 1 (page 11)	Cable Diagram 1 (page 67)
		CN2 on G-01DM	RS232C	Setting Example 2 (page 13)	Cable Diagram 1 (page 67)
KOSTAC SG	SG-8	CN2 01 0-01DM	RS422/485 (4wire)	Setting Example 3 (page 15)	Cable Diagram 2 (page 68)
		General-purpose communication	RS232C	Setting Example 4 (page 17)	Cable Diagram 1 (page 67)
		port on CPU <sup>*1</sup>	RS422/485 (4wire)	Setting Example 5 (page 19)	Cable Diagram 3 (page 73)

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
	SU-5	U-01DM	RS232C	Setting Example 6 (page 21)	Cable Diagram 1 (page 67)
	30-3	0-01DM	RS422/485 (4wire)	Setting Example 7 (page 23)	Cable Diagram 2 (page 68)
		U-01DM	RS232C	Setting Example 6 (page 21)	Cable Diagram 1 (page 67)
	SU-5E SU-6	0-01DM	RS422/485 (4wire)	Setting Example 7 (page 23)	Cable Diagram 2 (page 68)
	SU-6B SU-6B-C	General-purpose	RS232C	Setting Example 8 (page 25)	Cable Diagram 1 (page 67)
KOSTAC		communication port on CPU	RS422/485 (4wire)	Setting Example 9 (page 27)	Cable Diagram 3 (page 73)
SU		U-01DM	RS232C	Setting Example 6 (page 21)	Cable Diagram 1 (page 67)
			RS422/485 (4wire)	Setting Example 7 (page 23)	Cable Diagram 2 (page 68)
	SU-5M	General-purpose	RS232C	Setting Example 10 (page 29)	Cable Diagram 1 (page 67)
	SU-5M-C	communication port 1 on CPU General-purpose communication port 2 on CPU	RS422/485 (4wire)	Setting Example 11 (page 31)	Cable Diagram 3 (page 73)
			RS232C	Setting Example 12 (page 33)	Cable Diagram 4 (page 76)
		General-purpose communication port 3 on CPU <sup>*2</sup>	RS422/485 (4wire)	Setting Example 13 (page 35)	Cable Diagram 6 (page 77)

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
		U-01DM	RS232C	Setting Example 6 (page 21)	Cable Diagram 1 (page 67)
		0-01DM	RS422/485 (4wire)	Setting Example 7 (page 23)	Cable Diagram 2 (page 68)
		General-purpose communication	RS232C	Setting Example 10 (page 29)	Cable Diagram 1 (page 67)
NORTHO		port 1 on CPU	RS422/485 (4wire)	Setting Example 11 (page 31)	Cable Diagram 3 (page 73)
KOSTAC SU	SU-6M SU-6M-C	General-purpose communication port 2 on CPU	RS232C	Setting Example 12 (page 33)	Cable Diagram 4 (page 76)
		General-purpose communication port 3 on CPU (when using D- sub 25 pin) <sup>*2</sup>	RS422/485 (4wire)	Setting Example 13 (page 35)	Cable Diagram 6 (page 77)
		General-purpose communication port 3 on CPU (when using 6-pin terminal block) <sup>*2</sup>	RS422/485 (4wire)	Setting Example 13 (page 35)	Cable Diagram 7 (page 79)
KOSTAC SZ	SZ-4	General-purpose communication port on CPU	RS232C	Setting Example 14 (page 37)	Cable Diagram 4 (page 76)
KOSTAC	PZ3-16ND1-16TD1 PZ3-T	General-purpose	RS232C	Setting Example 25 (page 58)	Cable Diagram 8 (page 81)
PZ3	PZ3-1 PZ3M	communication port 2 on CPU	RS422/485 (4wire)	Setting Example 26 (page 60)	Cable Diagram 9 (page 82)
KOSTAC SR	SR-21 SR-22	E-02DM-R1	RS422/485 (4wire)	Setting Example 15 (page 39)	Cable Diagram 2 (page 68)

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
	D2-240	General-purpose communication port 2 on CPU	RS232C	Setting Example 16 (page 41)	Cable Diagram 4 (page 76)
DL-205	D2-250-1	General-purpose communication port 2 on CPU	RS232C	Setting Example 16 (page 41)	Cable Diagram 8 (page 81)
	D2-260	General-purpose communication	RS232C	Setting Example 16 (page 41)	Cable Diagram 8 (page 81)
	D2-200	port 2 on CPU	RS422/485 (4wire)	Setting Example 17 (page 43)	Cable Diagram 9 (page 82)
	D4430	D4-DCM	RS232C	Setting Example 18 (page 45)	Cable Diagram 1 (page 67)
	D++30	D4-DCIVI	RS422/485 (4wire)	Setting Example 19 (page 47)	Cable Diagram 2 (page 68)
DL-405		D4-DCM	RS232C	Setting Example 18 (page 45)	Cable Diagram 1 (page 67)
DL-403	D4-440	D4-DCIVI	RS422/485 (4wire)	Setting Example 19 (page 47)	Cable Diagram 2 (page 68)
	D4-440	General-purpose communication	RS232C	Setting Example 20 (page 49)	Cable Diagram 1 (page 67)
		port on CPU	RS422/485 (4wire)	Setting Example 21 (page 51)	Cable Diagram 3 (page 73)
DL-305	D3-330	D3-DCM	RS422/485 (4wire)	Setting Example 22 (page 53)	Cable Diagram 2 (page 68)
DirectLogic 05	D0-05AA D0-05AD D0-05AR D0-05DA D0-05DD D0-05DD-D D0-05DR D0-05DR-D	General-purpose communication port on CPU	RS232C	Setting Example 23 (page 55)	Cable Diagram 5 (page 76)

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
DirectLogic 06	D0-06DD1 D0-06DD1-D D0-06DD2 D0-06DD2-D D0-06DR D0-06DR-D D0-06DA D0-06AR D0-06AA	General-purpose communication port on CPU	RS232C	Setting Example 24 (page 57)	Cable Diagram 5 (page 76)

\*1 Remove the instruction word programmer from the programmer communication port during communication.

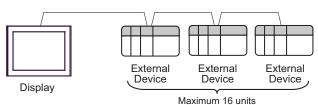
\*2 Use a CPU whose sub CPU version is V1.439 or later.

# Connection Configuration

• 1:1 Connection



• 1:n Connection



# 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				
Ochos	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 <sup>*1*2</sup>	COM1 <sup>*1*2</sup>		

\*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. K5-252C
4	OFF	Output mode of SD (TXD) data: Always output
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None
6	OFF	Terminal resistance (220 $\Omega$ ) insertion to RD (RXD): None
7	OFF	Short-circuit of SDA (TXA) and RDA (RXA): 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	KS (KIS) Auto control mode. Disable

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

Dip switch	Setting	Description
1	OFF	Reserve (always OFF)
2	ON	SIO type: RS-422/485
3	ON	510 type. K5-422/465
4	OFF	Output mode of SD (TXD) data: Always output
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None
6	OFF	Terminal resistance (220 $\Omega$ ) insertion to RD (RXD): None
7	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	KS (KIS) Auto control mode. Disable

# Dip switch setting: RS-422/485 (4 wire)

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

Dip switch	Setting	Description
1	OFF	Reserve (always OFF)
2	ON	SIO type: RS-422/485
3	ON	- 510 type. K5-422/465
4	OFF	Output mode of SD (TXD) data: Always output
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None
6	OFF	Terminal resistance (220 $\Omega$ ) insertion to RD (RXD): None
7	ON	Short-circuit of SDA (TXA) and RDA (RXA): Exist
8	ON	Short-circuit of SDB (TXB) and RDB (RXB): Exist
9	ON	- RS (RTS) Auto control mode: Enable
10	ON	KS (K15) Auto control mode. Enable

# 2 Selection of External Device

Select the External Device to be connected to the Display.

💰 New Project File		×
67-7ro <b>E</b> X	Device/PLC Maker KOYO ELECTRONICS CO., LTD.	
	Use System Area Refer to the manual of this Device/PLC	
	Connection Method Port COM1	
	Go to Device/PLC Manue	ļ
Back	t) Communication Settings New Logic New Screen Cancel	

Setup Items	Setup Description		
Maker	Select the maker of the External Device to be connected. Select "KOYO ELECTRONICS CO., LTD."		
Series	Select the model (series) of the External Device to be connected and its connection method. Select "KOSTAC/DL Series CCM SIO". Check the External Device which can be connected in "KOSTAC/DL Series CCM SIO" in system configuration.		
Use System Area	<ul> <li>Check this option when you synchronize the system data area of the Display and the device (memory) of the External Device. When they are synchronized, you can use the ladder program of the External Device to switch the display or to display the window on the Display.</li> <li>Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (Direct Access Method)"</li> <li>This can also be set with GP-Pro EX or in off-line mode of the Display.</li> </ul>		
	<ul> <li>Cf. GP-Pro EX Reference Manual "5.17.6 Setting Guide of [System Setting Window], Setting Guide of [Main Unit Settings], System Area Setting"</li> <li>Cf. Maintenance/Troubleshooting Manual "2.15.1 Common to the Display", Setting Guide of [Main Unit Settings], System Area Setting</li> </ul>		
Port	Select the port of the Display to be connected to the External Device.		

# 3 Example of Communication Setting

The following shows examples of communication settings of the Display and the External Device, which are recommended by Digital Electronics Corp.

## 3.1 Setting Example 1

### Settings of GP-Pro EX

Communication Settings

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

Summary         Change Device/PLC           Maker         KOYO ELECTRONICS CO., LTD.         Series         KOSTAC/DL Series CCM SIO         Port         COM1
Text Data Mode 1 1 Change
Communication Settings
SIO Type 💽 RS232C 🔿 RS422/485(2wire) 🔿 RS422/485(4wire)
Speed 19200 💌
Data Length C 7 C 8
Parity C NONE C EVEN 💿 ODD
Stop Bit 💿 1 💿 2
Flow Control C NONE C ER(DTR/CTS) C X0N/X0FF
Timeout 3 (sec)
Retry 2
Wait To Send 0 👘 (ms)
RI/VCC I 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           1         PLC1         Image: Series + KOSTAC SG/SU/SZ Series, Station No=1

#### Device Setting

💰 Individual Dev	ice Settings 🛛 🗙
PLC1	
Series	KOSTAC SG/SU/SZ Series
Please reconfirm all ( you have changed th	of address settings that you are using if ne series.
Station No	1 📑
	Default
	OK (Q) Cancel

For communication settings, use the DIP switches on the side of the link I/F unit. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

```
• If you do not use the connector CN2, make sure to switch the short plug (2) to 232C DISABLE.
```

#### ◆ Configuration DIP Switch SW1

DIP Switch	Settings	Setup Description	
1	ON		
2	OFF		
3	OFF		
4	OFF	Child station No.: 1	
5	OFF		
6	OFF		
7	OFF	1	
8	OFF	Peer to Peer setting: 1:n mode	
9	OFF	Master/Slave setting: Slave	

#### Configuration DIP Switch

DIP Switch	Settings	Setup Description	
1	ON		
2	ON	Baud rate transmission speed: 19,200bps	
3	ON		
4	ON	Parity enable/disable: Enabled (odd)	
5	OFF	Self-diagnosis mode: OFF	
6	OFF	Turnaround delay: None	
7	OFF	Response delay time: 0 ms	
8	OFF	- Response delay unic. O ms	
9	OFF	Transmission mode: HEX mode	

# 3.2 Setting Example 2

- Settings of GP-Pro EX
- Communication Settings

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

Summary Change Dev	
	DEVELL
Maker KOYO ELECTRONICS CO., LTD. Series KOSTAC/DL Series CCM SID Port COM1	
Text Data Mode 1 Change	
Communication Settings	
SID Type	
Speed 19200 💌	
Data Length C 7 C 8	
Parity CINDNE CIEVEN ODD	
Stop Bit 💿 1 💿 2	
Flow Control C NONE C ER(DTR/CTS) C X0N/X0FF	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 👘 (ms)	
RI/VCC   RI   VCC	
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. Default	
Device-Specific Settings	
Allowable Number of Devices/PLCs 16	
Number         Device Name         Settings           Image: PLC1         Image: Series = KOSTAC SG/SU/SZ Series , Station No=1	

#### Device Setting

💣 Individual De	vice Settings	×
PLC1		
Series Please reconfirm all you have changed t Station No	KOSTAC SG/SU/SZ Serie of address settings that you a he series.	
		Default
	OK ( <u>0</u> )	Cancel

For communication settings, use the DIP switches or the short plug on the side of the link I/F unit. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description	
1	ON		
2	OFF		
3	OFF		
4	OFF	Child station No.: 1	
5	OFF		
6	OFF		
7	OFF		
8	OFF	Peer to Peer setting: 1:n mode	
9	OFF	Master/Slave setting: Slave	

#### Configuration DIP Switch SW1

#### Configuration DIP Switch

DIP Switch	Settings	Setup Description	
1	ON		
2	ON	Baud rate transmission speed: 19,200bps	
3	ON		
4	ON	Parity enable/disable: Enabled (odd)	
5	OFF	Self-diagnosis mode: OFF	
6	OFF	Turnaround delay: None	
7	OFF	Response delay time: 0 ms	
8	OFF	- Response delay time. O his	
9	OFF	Transmission mode: HEX mode	

#### Short plug (2)

Short plug		Setup Description
232C ENABLE	SIO Type: RS232C	

# 3.3 Setting Example 3

- Settings of GP-Pro EX
- Communication Settings

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

Devi	ce/PLC 1		
Sun	nmary		Change Device/PLC
	Maker KOYO EL	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Con	nmunication Settings		
	SIO Type	C RS232C	RS422/485(2wire)  RS422/485(4wire)
	Speed	19200	•
	Data Length	0.7	© 8
	Parity	C NONE	O EVEN O ODD
	Stop Bit	€ 1	O 2
	Flow Control	C NONE	ER(DTR/CTS)     C XON/XOFF
	Timeout	3 📑 (	(sec)
	Retry	2 📫	
	Wait To Send	0 🕂 (	(ms)
Γ	RI / VCC	© BI	O VCC
		Supply). If you use	ct the 9th pin to RI (Input) e the Digital's RS232C Default
Dev	vice-Specific Settings		
	Allowable Number of I	Devices/PLCs	16 📷
	Number Device Na	ame	
	👗 1 🛛 PLC1		Series=KOSTAC SG/SU/SZ Series,Station No=1

#### Device Setting

💰 Individual Dev	ice Settings	×		
PLC1				
Series	KOSTAC SG/SU/SZ 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		

For communication settings, use the DIP switches or the short plug on the side of the link I/F unit. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description
1	ON	
2	OFF	
3	OFF	
4	OFF	Child station No.: 1
5	OFF	
6	OFF	
7	OFF	
8	OFF	Peer to Peer setting: 1:n mode
9	OFF	Master/Slave setting: Slave

#### Configuration DIP Switch SW1

#### Configuration DIP Switch

DIP Switch	Settings	Setup Description				
1	ON					
2	ON	Baud rate transmission speed: 19,200bps				
3	ON					
4	ON	Parity enable/disable: Enabled (odd)				
5	OFF	Self-diagnosis mode: OFF				
6	OFF	Turnaround delay: None				
7	OFF	Response delay time: 0 ms				
8	OFF					
9	OFF	Transmission mode: HEX mode				

#### Short plug (2)

Short plug		Setup Description
232C DISABLE	SIO Type: RS422	

# 3.4 Setting Example 4

- Settings of GP-Pro EX
- Communication Settings

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

Devic	e/PLC 1		
Sum	mary		Change Device/PLC
	Maker KOYO ELI	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Com	munication Settings		
	SIO Type	• RS232C	O RS422/485(2wire) O RS422/485(4wire)
	Speed	19200	v
	Data Length	O 7	© 8
	Parity	O NONE	O EVEN   O ODD
	Stop Bit	● 1	0 2
	Flow Control	O NONE	ER(DTR/CTS)     O XON/XOFF
	Timeout	3 📑 (;	sec)
	Retry	2 📫	
	Wait To Send	0 📫 (	ms)
	RI / VCC	• RI	O VCC
		Supply). If you use	st the 9th pin to RI (Input) e the Digital's RS232C Default
Devi	ce-Specific Settings		
	Allowable Number of [		16 📷
	Number Device Na	ime	Settings
	👗 1 🛛 PLC1		Series=KOSTAC SG/SU/SZ Series,Station No=1

#### Device Setting

💰 Individual De	evice Settings	×
PLC1		
Series	KOSTAC SG/SU/SZ Series	•
Please reconfirm a you have changed	II of address settings that you are using if the series.	
Station No	1	
	Defau	lt
	OK ( <u>D</u> ) Cancel	

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

SW1     ON     SIO Type: RS232C       SW2     OFF     CCM station No. setting: Enabled       SW3     ON	
SW3 ON	
Baud rate transmission speed: 19.200bps	
SW4 ON Badd Tate transmission speed. 19,2000ps	

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

NOTE	• Enter the station No. set on the Display.
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3 Set the transmission mode to "HEX", and then press the Enter key.

# 3.5 Setting Example 5

- Settings of GP-Pro EX
- Communication Settings

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

Change Device/PLC         Maker       KOYO ELECTRONICS CO., LTD.       Series       KOSTAC/DL Series CCM SIO       Port       COM1         Text Data Mode       1       Change       Fort       COM1       COM1       COM1         Text Data Mode       1       Change       Fort       COM1       COM1       COM1         Communication Settings       Silo Type       RS232C       RS422/485(2wire)       RS422/485(4wire)       Series	Device/PLC 1		
Text Data Mode       1       Change         Communication Settings       SID Type       RS232C       RS422/485(2wire)       RS422/485(4wire)         Speed       19200       Image: Communication Settings       Image: Communication Settings       Image: Communication Settings         Data Length       7       6       8         Parity       NONE       EVEN       0 DD         Stop Bit       1       2         Flow Control       NONE       ER(DTR/CTS)       XON/X0FF         Timeout       3       (sec)         Retry       2       (ms)         RI / VCC       RI       VCC         In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (BV Power Supply). If you use the Digital's RS232C	Summary		Change Device/PLC
Site Sections         Site Site Sections         Speed       19200         Data Length       7       6         Parity       NONE       EVEN       0 DDD         Stop Bit       1       2         Flow Control       NONE       ER(DTR/CTS)       X0N/X0FF         Timeout       3       (sec)         Retry       2       (ms)         RI / VCC       RI       VCC         In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (BV Power Supply). If you use the Digital's RS232C	Maker KOYO EL	ECTRONICS CO., LTD.	D. Series KOSTAC/DL Series CCM SIO Port COM1
SID Type       C RS232C       C RS422/485(2wire)       C RS422/485(4wire)         Speed       19200       Image: Constraint of the symbol	Text Data Mode	1 Change	
Speed       19200         Data Length       7       6         Parity       NONE       EVEN         Stop Bit       1       2         Flow Control       NONE       ER[DTR/CTS]       X0N/X0FF         Timeout       3       (sec)         Retry       2       (ms)         RI / VCC       RI       VCC         In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (BV Power Supply). If you use the Digital's RS232C       In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (BV Power Supply). If you use the Digital's RS232C	Communication Settings		
Data Length       7       6       8         Parity       NONE       EVEN       0 DDD         Stop Bit       1       2         Flow Control       NONE       ER(DTR/CTS)       XON/X0FF         Timeout       3       (sec)         Retry       2	SIO Type	O R\$232C O F	RS422/485(2wire)  © RS422/485(4wire)
Parity       NONE       EVEN       ODD         Stop Bit       1       2         Flow Control       NONE       ER(DTR/CTS)       XON/XOFF         Timeout       3       (sec)         Retry       2	Speed	19200	<b>•</b>
Stop Bit     I     2       Flow Control     NONE     ER(DTR/CTS)     XON/XOFF       Timeout     3     (sec)       Retry     2     (ms)       Wait To Send     0     (ms)       RI / VCC     FII     VCC       In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (BV Power Supply). If you use the Digital's RS232C	Data Length	O7 ©8	8
Flow Control     NONE     ER(DTR/CTS)     XON/XOFF       Timeout     3     (sec)       Retry     2     (ms)       Wait To Send     0     (ms)       RI / VCC     RI     VCC       In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (BV Power Supply). If you use the Digital's RS232C	Parity	O NONE O E	EVEN
Timeout     3     (sec)       Retry     2     1       Wait To Send     0     1       RI / VCC     RI     VCC       In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C	Stop Bit	⊙ 1	2
Retry     2       Wait To Send     0       Bit / VCC     Bit     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	Flow Control	○ NONE · ● E	ER(DTR/CTS) C XON/XOFF
Wait To Send     Image: Constraint of the sense of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C	Timeout	3 📫 (sec)	
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	Retry	2	
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	Wait To Send	0 <u>*</u> (ms)	
or VCC (5V Power Supply). If you use the Digital's RS232C	RI / VCC	© RI — O V	VCC
	or VCC (5V Power 1	Supply). If you use the D	Digital's RS232C
Device-Specific Settings	Device-Specific Settings		
Allowable Number of Devices/PLCs 16			P48
Number         Device Name         Settings           I         PLC1         Image: Series=KOSTAC SG/SU/SZ Series,Station No=1			

#### Device Setting

💣 Individual D	evice Settings	×
PLC1		
Series	KOSTAC SG/SU/SZ Series	
Please reconfirm you have change	all of address settings that you are u d the series.	ising if
Station No	1 🕂	
		Default
	OK ( <u>0</u> )	Cancel

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description				
SW1	OFF	SIO Type: RS422				
SW2	OFF	CM station No. setting: Enabled				
SW3	ON	Baud rate transmission speed: 19,200bps				
SW4	ON	Baud rate transmission speed: 19,2006ps				

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

NOTE	• Enter the station No. set on the Display.
------	---

 $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.

# 3.6 Setting Example 6

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC	1							
Summary							1	Change Device/PLC
Maker	KOYO ELE	ECTRONICS CO.,	LTD. Series	KOSTA	C/DL Series CCM	I SIO	Port	COM1
Text D	ata Mode 🛛	1 <u>Change</u>						
Communica	tion Settings							
SIO Ty	/pe	• RS232C	O RS422/485(2	(wire)	C RS422/485	i(4wire)		
Speed		19200	•					
Data L	.ength	O 7						
Parity		C NONE	O EVEN	۲	ODD			
Stop B	it	● 1	O 2					
Flow C	ontrol	C NONE	• ER(DTR/CTS	6) O	XON/XOFF			
Timeo	ut	3 📫 (s	sec)					
Retry		2 📫						
Wait T	o Send	n) 🗧 🛛	ns)					
BLZ V	CC	• RI	O VCC					
or V0	CC (5V Power 9		t the 9th pin to RI ( the Digital's RS23					
12019	tion Unit, please	e select it to VLL.				Default		
	cific Settings		10					
Allowa Numb	ble Numberof D er Device Na		16 📷 Settings					
1	PLC1			=KOSTAC	SG/SU/SZ Seri	es,Station No=1		

#### Device Setting

💰 Individual D	evice Settings 3	×
PLC1		
Series	KOSTAC SG/SU/SZ Series	
Please reconfirm a you have changed	II of address settings that you are using if the series.	
Station No	1	
	Default	
	OK ( <u>O</u> ) Cancel	

For communication settings, use the rotary switch on the front of the link I/F unit, or the DIP switches on its back. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

#### Station No. Setting Rotary Switch

x10         0         Station No. of the External Device (tens digit)           x1         1         Station No. of the External Device (ones digit)	Rotary Switch	Settings	Setup Description
x1 1 Station No. of the External Device (ones digit)	x10	0	Station No. of the External Device (tens digit)
	x1	1	Station No. of the External Device (ones digit)

• Enter the station N

• Enter the station No. set on the Display.

#### Configuration DIP Switch SW4

DIP Switch	Settings	Setup Description
1	ON	
2	ON	Baud rate transmission speed: 19,200bps
3	ON	
4	ON	Parity enable/disable: Enabled (odd)
5	OFF	Self-diagnosis mode: OFF
6	OFF	
7	OFF	Response delay time: 0 ms
8	OFF	]

#### Configuration DIP Switch SW5

DIP Switch	Settings	Setup Description
1	OFF	Peer to Peer setting: 1:n mode
2	OFF	Master/Slave setting: Slave
3	OFF	Timeout enable/disable setting: Normal operation mode
4	OFF	Transmission mode: HEX mode

# 3.7 Setting Example 7

- Settings of GP-Pro EX
- Communication Settings

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

Devic	e/PLC 1		
Sum	mary		Change Device/PLC
	Maker KOYO EL	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Com	munication Settings		
	SIO Type	C RS232C	© RS422/485(2wire)  © RS422/485(4wire)
	Speed	19200	<b>v</b>
	Data Length	O 7	© 8
	Parity	O NONE	C EVEN    O DDD
	Stop Bit	⊙ 1	O 2
	Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF
	Timeout	3 📫 (	(sec)
	Retry	2 📫	
	Wait To Send	0 📫 (	ims)
	RI / VCC	🖲 BI	O VCC
	In the case of RS23 or VCC (5V Power ! Isolation Unit, pleas	Supply). If you use	et the 9th pin to RI (Input) e the Digital's RS232C Default
Devi	ce-Specific Settings		
	Allowable Number of I	Devices/PLCs	16 📊
	Number Device Na	ame	Settings
	👗 1 🛛 PLC1		Series=KOSTAC SG/SU/SZ Series, Station No=1

#### Device Setting

💣 Individual D	evice Settings 🛛 🗙
PLC1	
Series	KOSTAC SG/SU/SZ Series
Please reconfirm you have change	all of address settings that you are using if d the series.
Station No	1 📑
	Default
	OK ( <u>0</u> ) Cancel

For communication settings, use the rotary switch on the front of the link I/F unit, or the DIP switches on its back. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

#### Station No. Setting Rotary Switch

x10         0         Station No. of the External Device (tens digit)           x1         1         Station No. of the External Device (ones digit)	Rotary Switch	Settings	Setup Description
x1 1 Station No. of the External Device (ones digit)	x10	0	Station No. of the External Device (tens digit)
	x1	1	Station No. of the External Device (ones digit)

• Enter the station

• Enter the station No. set on the Display.

#### Configuration DIP Switch SW4

DIP Switch	Settings	Setup Description
1	ON	
2	ON	Baud rate transmission speed: 19,200bps
3	ON	
4	ON	Parity enable/disable: Enabled (odd)
5	OFF	Self-diagnosis mode: OFF
6	OFF	
7	OFF	Response delay time: 0 ms
8	OFF	]

#### Configuration DIP Switch SW5

DIP Switch	Settings	Setup Description
1	OFF	Peer to Peer setting: 1:n mode
2	OFF	Master/Slave setting: Slave
3	OFF	Timeout enable/disable setting: Normal operation mode
4	OFF	Transmission mode: HEX mode

# 3.8 Setting Example 8

- Settings of GP-Pro EX
- Communication Settings

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

Device/F	PLC1		
Summar	ſŷ		Change Device/PLC
Ma	aker KOYO ELE	CTRONICS CO., I	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Te	ext Data Mode	1 <u>Change</u>	
Commu	nication Settings		
SIC	О Туре	• RS232C	O RS422/485(2wire) O RS422/485(4wire)
Sp	eed	19200	<b>v</b>
Da	ata Length	O 7	© 8
Pa	nity	C NONE	O EVEN   O ODD
Sto	op Bit	⊙ 1	O 2
Flo	ow Control	C NONE	ER(DTR/CTS)     C XON/XOFF
Tin	neout	3 📫 (s	(sec)
Re	etry	2	
Wa	ait To Send	0 ÷ (n	ims)
BI	/ VCC	• RI	O VCC
0		upply). If you use	st the 9th pin to RI (Input) e the Digital's RS232C Default
Device-	Specific Settings		
	owable Number of D		16 📷
	umber Device Na ] 1 PLC1	me	Settings
	FLUI		Series=KOSTAC SG/SU/SZ Series,Station No=1

#### Device Setting

💰 Individual Devi	ice Settings 🛛 🗙
PLC1	
Series	KOSTAC SG/SU/SZ Series
Please reconfirm all o you have changed the	f address settings that you are using if e series.
Station No	1 .
	Default
	OK ( <u>O)</u> Cancel

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description
SW1	Optional	Battery mode: Adjust to the system.
SW2	OFF	CCM station No. setting: Enabled
SW3	ON	Baud rate transmission speed: 19.200bps
SW4	ON	baud rate transmission speed. 17,2000ps

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- **4** Set the parity to "ODD", and then press the Enter key.

# 3.9 Setting Example 9

- Settings of GP-Pro EX
- Communication Settings

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

Devid	ce/PLC 1		
Sum	nmary		Change Device/PLC
	Maker KOYO EL	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Com	nmunication Settings		
	SIO Type	C RS232C	C RS422/485(2wire)  © RS422/485(4wire)
	Speed	19200	<b>•</b>
	Data Length	O 7	© 8
	Parity	C NONE	C EVEN  © 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)
	RI / VCC	🖲 BI	O VCC
		Supply). If you use	t the 9th pin to RI (Input) the Digital's RS232C Default
Dev	vice-Specific Settings		
	Allowable Number of	Devices/PLCs	16 📷
	Number Device Na	ame	Settings
	👗 1 PLC1		Series=KOSTAC SG/SU/SZ Series, Station No=1

#### Device Setting

💣 Individual Devi	ce Settings	×
PLC1		
Series Please reconfirm all o you have changed the Station No	KOSTAC SG/SU/SZ Series f address settings that you ar e series.	
		Default
	OK ( <u>0)</u>	Cancel

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description
SW1	Optional	Battery mode: Adjust to the system.
SW2	OFF	CCM station No. setting: Enabled
SW3	ON	Baud rate transmission speed: 19,200bps
SW4	ON	Baud rate transmission speed. 19,2000ps
5w4	ON	

Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- ${f 3}$  Set the transmission mode to "HEX", and then press the Enter key.
- **4** Set the parity to "ODD", and then press the Enter key.

# 3.10 Setting Example 10

- Settings of GP-Pro EX
- Communication Settings

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

Device	e/PLC1		
Sumr	nary		Change Device/PLC
	Maker KOYO ELI	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Comr	munication Settings		
	SIO Type	• RS232C	C RS422/485(2wire) C RS422/485(4wire)
	Speed	19200	<b>•</b>
	Data Length	O 7	© 8
	Parity	○ NONE	○ EVEN
	Stop Bit	⊙ 1	© 2
	Flow Control	O NONE	• ER(DTR/CTS) • XON/XOFF
	Timeout	3 📑 (;	sec)
	Retry	2 📫	
	Wait To Send	0 🔅 (	ms)
	RI / VCC	• BI	O VCC
		Supply). If you use	t the 9th pin to RI (Input) • the Digital's RS232C Default
Devid	ce-Specific Settings		
	Allowable Number of [		16 📷
Г	Number Device Na	ime	Settings
	👗 1  PLC1		Series=KOSTAC SG/SU/SZ Series,Station No=1

#### Device Setting

💣 Individual Devi	ce Settings	×
PLC1		
Series Please reconfirm all of you have changed the	KOSTAC SG/SU/SZ Series address settings that you are	
Station No	1 🕂	Default
	OK ( <u>D)</u>	Cancel

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description
SW1	Optional	Battery mode: Adjust to the system.
SW2	OFF	CCM station No. setting: Enabled
SW3	ON	Baud rate transmission speed: 19,200bps
SW4	ON	Baud rate transmission speed. 19,2000ps

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- **4** Set the parity to "ODD", and then press the Enter key.

# 3.11 Setting Example 11

- Settings of GP-Pro EX
- Communication Settings

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

Device	/PLC1		
Summ	ary		Change Device/PLC
N	Maker KOYO ELE	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Т	Fext Data Mode	1 <u>Change</u>	
Comm	unication Settings		
S	810 Туре	C RS232C	© RS422/485(2wire)  © RS422/485(4wire)
9	opeed	19200	<b>•</b>
0	) ata Length	O 7	© 8
F	Parity	C NONE	C EVEN   ODD
S	Stop Bit	• 1	© 2
F	Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF
Т	limeout	3 📫 (s	ec)
F	Retry	2 📫	
V	√ait To Send	1) 🗧 🛛	ns)
F	RI / VCC	© RI	O VCC
		Supply). If you use	t the 9th pin to RI (Input) the Digital's RS232C Default
Devic	e-Specific Settings		
	Allowable Number of E	)evices/PLCs	16 🔤
_	Number _ Device Na	me	Settings
	🔏 1 PLC1		Series=KOSTAC SG/SU/SZ Series,Station No=1

#### Device Setting

💰 Individual Dev	ice Settings 🛛 🗙
PLC1	
Series	KOSTAC SG/SU/SZ Series
Please reconfirm all o you have changed th	of address settings that you are using if e series.
Station No	1 🔅
	Default
	OK ( <u>Q</u> ) Cancel

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description
SW1	Optional	Battery mode: Adjust to the system.
SW2	OFF	CCM station No. setting: Enabled
SW3	ON	Baud rate transmission speed: 19,200bps
SW4	ON	Baud rate transmission speed. 19,2000ps

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- ${f 3}$  Set the transmission mode to "HEX", and then press the Enter key.
- **4** Set the parity to "ODD", and then press the Enter key.

## 3.12 Setting Example 12

- Settings of GP-Pro EX
- Communication Settings

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

Device/Pl	LC 1				
Summary	,				Change Device/PLC
Mal	ker KOYO ELE	ECTRONICS CO., I	TD. Series KOSTA	C/DL Series CCM SIO	Port COM1
Tex	t Data Mode	1 <u>Change</u>			
Commun	ication Settings				
SIO	Туре	RS232C	C RS422/485(2wire)	C RS422/485(4wire)	
Spe	eed	19200	•		
Dat	a Length	O 7	© 8		
Pari	ity	C NONE	○ EVEN ●	ODD	
Sto	p Bit	€ 1	O 2		
Flov	w Control	C NONE	• ER(DTR/CTS) C	XON/XOFF	
Tim	eout	3 ÷ (s	ec)		
Ret	ry	2 ÷			
Wa	it To Send	n) 🛨 🔘	15)		
BL/	/ VCC	• RI	C VCC		
or		Supply). If you use	the 9th pin to RI (Input) the Digital's RS232C	Default	
Device-9	Specific Settings				
	wable Number of D		16 📷		
	mber DeviceNa	me	Settings		
<b>*</b>	1 PLC1		Series=KOSTAD	CSG/SU/SZ Series,Station No=1	

#### Device Setting

💰 Individual De	vice Settings	×
PLC1		
Series	KOSTAC SG/SU/SZ Series	
Please reconfirm a you have changed	l of address settings that you are using if the series.	
Station No	1	
	Default	
	OK ( <u>O</u> ) Cancel	

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

	Settings	Setup Description
SW1	Optional	Battery mode: Adjust to the system.
SW2	OFF	CCM station No. setting: Enabled
SW3	ON	Baud rate transmission speed: 19,200bps
SW4	ON	Baud rate transmission speed. 19,2000ps

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- **4** Set the parity to "ODD", and then press the Enter key.

## 3.13 Setting Example 13

- Settings of GP-Pro EX
- Communication Settings

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

Device	/PLC1				
Summ	hary		Change Device/PLC		
h	Maker KOYO ELE	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1		
1	Fext Data Mode	1 <u>Change</u>			
Comm	nunication Settings				
9	SIO Type	C RS232C	© RS422/485(2wire)		
9	Speed	19200	•		
[	Data Length	0.7	© 8		
F	Parity	C NONE	C EVEN  ODD		
9	Stop Bit	• 1	© 2		
F	Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF		
١	limeout	3 📫 (s	ec)		
F	Retry	2 📫			
N	Wait To Send	1) 🗧 🔍	ns)		
F	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					
Devic	e-Specific Settings				
	Allowable Number of E	)evices/PLCs	16 🔤		
	Number _ Device Na	me	Settings		
	🔏 1 PLC1		Series=KOSTAC SG/SU/SZ Series,Station No=1		

#### Device Setting

💣 Individual De	vice Settings	×
PLC1		
Series Please reconfirm all you have changed t Station No	KOSTAC SG/SU/SZ Serie: of address settings that you a he series.	
		Default
	OK ( <u>D</u> )	Cancel

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

	Settings	Setup Description
SW1	Optional	Battery mode: Adjust to the system.
SW2	OFF	CCM station No. setting: Enabled
SW3	ON	Baud rate transmission speed: 19,200bps
SW4	ON	

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- **4** Set the parity to "ODD", and then press the Enter key.

# 3.14 Setting Example 14

- Settings of GP-Pro EX
- Communication Settings

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

Summary Change Dev	
	DEVELL
Maker KOYO ELECTRONICS CO., LTD. Series KOSTAC/DL Series CCM SID Port COM1	
Text Data Mode 1 Change	
Communication Settings	
SID Type	
Speed 19200 💌	
Data Length C 7 C 8	
Parity CINDNE CIEVEN ODD	
Stop Bit 💿 1 💿 2	
Flow Control C NONE C ER(DTR/CTS) C X0N/X0FF	
Timeout 3 (sec)	
Retry 2	
Wait To Send 0 👘 (ms)	
RI/VCC   RI   VCC	
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. Default	
Device-Specific Settings	
Allowable Number of Devices/PLCs 16	
Number         Device Name         Settings           Image: PLC1         Image: Series = KOSTAC SG/SU/SZ Series , Station No=1	

#### Device Setting

💰 Individual Dev	vice Settings	×
PLC1		
Series Please reconfirm all you have changed th Station No	KOSTAC SG/SU/SZ Series of address settings that you ar e series.	
		Default
	OK ( <u>D</u> )	Cancel

For communication settings, use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

• Set the mode selector switch to TERM in the setup process.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- 2 Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- 4 Set the parity to "ODD", and then press the Enter key.
- 5 Set the transmission speed to "19200", and then press the Enter key.

### 3.15 Setting Example 15

- Settings of GP-Pro EX
- Communication Settings

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

Devid	e/PLC1		
Sum	imary		Change Device/PLC
	Maker KOYO EL	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Com	munication Settings		
	SIO Type	C RS232C	C RS422/485(2wire)  © RS422/485(4wire)
	Speed	19200	▼
	Data Length	O 7	© 8
	Parity	C NONE	O EVEN  O ODD
	Stop Bit	€ 1	O 2
	Flow Control	C NONE	ER(DTR/CTS)     O XON/XOFF
	Timeout	3 📫 (i	(sec)
	Retry	2 ÷	
	Wait To Send	0 📑 ()	(ms)
	RI / VCC	© BI	O VCC
		Supply). If you use	ct the 9th pin to RI (Input) e the Digital's RS232C Default
Dev	rice-Specific Settings		
	Allowable Number of		16 👧
	Number Device Na	ime	
	👗 1  PLC1		Series=KOSTAC SR Series,Station No=1

#### Device Setting

💰 Individual Dev	ice Settings	×
PLC1		
you have changed th	KOSTAC SR Series	
Station No	Default	

For communication settings, use the DIP switches on the side of the link I/F unit. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description	
1	ON	Baud rate transmission speed: 19,200bps	
2	ON	Badd rate transmission speed. 19,2000ps	
3	OFF	Parity enable/disable: Disabled	
4	ON	Self-diagnosis mode: OFF	
5	OFF	Turnaround delay: None	
6	OFF	Power-on mode: Adjust to the system.	
7	OFF	Always OFF	
8	OFF	Transmission mode: HEX mode	

#### Configuration DIP Switch SW1

#### Configuration DIP Switch SW2

DIP Switch	Settings	Setup Description	
1	ON		
2	OFF	1	
3	OFF	1	
4	OFF	Child station No.: 1	
5	OFF	1	
6	OFF	1	
7	OFF	1	
8	OFF	Always OFF	

# 3.16 Setting Example 16

- Settings of GP-Pro EX
- Communication Settings

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

Device/P	201					
Summar	у					Change Device/PLC
Ma	iker KOYO ELE	CTRONICS CO., I	LTD. Series K	OSTAC/DL Series CCM SIG	D Port	COM1
Te	xt Data Mode	1 <u>Change</u>				
Commun	nication Settings					
SIC	) Туре	RS232C	C RS422/485(2wi	re) 📀 RS422/485(4w	ire)	
Spe	eed	19200	•			
Da	ta Length	O 7	© 8			
Par	rity	C NONE	C EVEN	• ODD		
Sto	op Bit	€ 1	O 2			
Flo	w Control	C NONE	• ER(DTR/CTS)	C XON/XOFF		
Tim	neout	3 ÷ (s	ec)			
Re	try	2 🔅				
Wa	ait To Send	0 🕂 (n	ns)			
RL	/VCC	• RI	O VCC			
0	n the case of RS23 r VCC (5V Power S solation Unit, please	iupply). If you use	t the 9th pin to RI (Inp the Digital's RS2320		fault	
Device-	Specific Settings					
	owable Number of D		16 📷			
	umber Device Na	me	Settings			
	1 PLC1		Series=D	L-205/DL-405 Series,Statior	n No=I	

#### Device Setting

💣 Individual Devi	ice Settings	×
PLC1		
Series Please reconfirm all o you have changed the Station No	DL-205/DL-405 Series f address settings that you ar e series. 1	■ e using if
		Default
	OK ( <u>0)</u>	Cancel

For communication settings, use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

• Set the mode selector switch to TERM in the setup process.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- 2 Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- 4 Set the parity to "ODD", and then press the Enter key.
- **5** Set the transmission speed to "19200", and then press the Enter key.

# 3.17 Setting Example 17

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1							
Summary							Change Device/PLC
Maker KC	YO ELECTRONICS CO., L	TD. Series	KOSTAC	/DL Series C	CM SIO	Port	COM1
Text Data Mod	le 1 <u>Change</u>						
Communication Set	ángs						
SIO Type	C RS232C	C RS422/485	(2wire)	• RS422/	485(4wire)		
Speed	19200	•					
Data Length	O 7	© 8					
Parity	O NONE	C EVEN	•	DDD			
Stop Bit	• 1	C 2					
Flow Control	O NONE	ER(DTR/CT)	rs) O >	KON/XOFF			
Timeout	3 📫 (se	c)					
Retry	2 📫						
Wait To Send	0 📑 (m	s)					
RI / VCC	© BI	O VCC					
	of RS232C, you can select Power Supply). If you use						
	, please select it to VCC.	ne Digitalis Hoz			Default		
Device-Specific Se	itings						
Allowable Nur	ber of Devices/PLCs	16 📊					
	vice Name	Settings					
👗 1  PLC	1	Serie	s=DL-205/D	L-405 Series	;Station No=1		

#### Device Setting

💰 Individual Devi	ce Settings 🛛 🗙
PLC1	
Series Please reconfirm all of you have changed the	
Station No	1 ÷
	OK ( <u>O)</u> Cancel

For communication settings, use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

• Set the mode selector switch to TERM in the setup process.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- 2 Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- 4 Set the parity to "ODD", and then press the Enter key.
- 5 Set the transmission speed to "19200", and then press the Enter key.

### 3.18 Setting Example 18

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1			
Summary			Change Device/PLC
Maker	KOYO ELE	ECTRONICS CO.,	, LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Text Da	ta Mode	1 Change	
Communicatio	on Settings		
SIO Typ	-	• RS232C	© RS422/485(2wire) © RS422/485(4wire)
Speed	-	19200	
Data Le	nath	0.7	C 8
Parity	ngar	O NONE	C EVEN © ODD
Stop Bit		• 1	0 2
Flow Co		O NONE	ERIDTR/CTS)     O XON/XOFF
Timeout			(sec)
Retry		2 7	(900)
Wait To	Sand		(ms)
Wait TO	Jenu		· · ·
RI / VC	-	• RI	O VCC
			ect the 9th pin to RI (Input) the Digital's RS232C
		e select it to VCC.	
Device-Spec	ific Settings		
Allowabl		Devices/PLCs	16 📷
Number		me	Settings
<b>1</b>	PLC1		Series=DL-205/DL-405 Series,Station No=1

#### ♦ Device Setting

💣 Individual Devi	ice Settings	×
PLC1		
Series	DL-205/DL-405 Series	<b>•</b>
you have changed the	f address settings that you ar e series.	e using if
Station No	1 🕂	
		Default
	OK ( <u>D</u> )	Cancel

For communication settings, use the rotary switch on the front of the link I/F unit, or the DIP switches on its back. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

#### Station No. Setting Rotary Switch

x10         0         Station No. of the External Device (tens digit)           x1         1         Station No. of the External Device (ones digit)	Rotary Switch	Settings	Setup Description
x1 1 Station No. of the External Device (ones digit)	x10	0	Station No. of the External Device (tens digit)
	x1	1	Station No. of the External Device (ones digit)

• Enter the station N

• Enter the station No. set on the Display.

#### Configuration DIP Switch SW4

DIP Switch	Settings	Setup Description
1	ON	
2	ON	Baud rate transmission speed: 19,200bps
3	ON	
4	ON	Parity enable/disable: Enabled (odd)
5	OFF	Self-diagnosis mode: OFF
6	OFF	
7	OFF	Response delay time: 0 ms
8	OFF	

#### Configuration DIP Switch SW5

DIP Switch	Settings	Setup Description
1	OFF	Peer to Peer setting: 1:n mode
2	OFF	Master/Slave setting: Slave
3	OFF	Timeout enable/disable setting: Normal operation mode
4	OFF	Transmission mode: HEX mode

# 3.19 Setting Example 19

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker	OYO ELECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Text Data M	ode 1 <u>Change</u>	
Communication S	ettinas	
SIO Type	C RS232C	RS422/485(2wire)     RS422/485(4wire)
Speed	19200	
Data Length		68
Parity		O EVEN ● ODD
Stop Bit	© 1	0.2
Flow Control		ERIDTR/CTS)     C XON/XOFF
Timeout		
		(sec)
Retry	2 🗄	
Wait To Ser	nd 0 📑 (	(ms)
RI / VCC	💿 BI	O VCC
	e of RS232C, you can selec / Power Supply). If you use	
Isolation U	nit, please select it to VCC.	Default
Device-Specific S	Settings	
	umber of Devices/PLCs	16 📷
	evice Name	Settings
👗 1  Pi	_C1	Series=DL-205/DL-405 Series,Station No=1

#### Device Setting

💰 Individual Device Settings 🛛 🗙				
PLC1				
	DL-205/DL-405 Series	e using if		
you have changed the Station No	series.			
		Default		
	OK ( <u>D)</u>	Cancel		

For communication settings, use the rotary switch on the front of the link I/F unit, or the DIP switches on its back. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

#### Station No. Setting Rotary Switch

x10         0         Station No. of the External Device (tens digit)           x1         1         Station No. of the External Device (ones digit)	Rotary Switch	Settings	Setup Description
x1 1 Station No. of the External Device (ones digit)	x10	0	Station No. of the External Device (tens digit)
	x1	1	Station No. of the External Device (ones digit)

• Enter the station N

• Enter the station No. set on the Display.

#### Configuration DIP Switch SW4

DIP Switch	Settings	Setup Description
1	ON	
2	ON	Baud rate transmission speed: 19,200bps
3	ON	
4	ON	Parity enable/disable: Enabled (odd)
5	OFF	Self-diagnosis mode: OFF
6	OFF	
7	OFF	Response delay time: 0 ms
8	OFF	

#### Configuration DIP Switch SW5

DIP Switch	Settings	Setup Description
1	OFF	Peer to Peer setting: 1:n mode
2	OFF	Master/Slave setting: Slave
3	OFF	Timeout enable/disable setting: Normal operation mode
4	OFF	Transmission mode: HEX mode

### 3.20 Setting Example 20

- Settings of GP-Pro EX
- Communication Settings

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

Device	e/PLC1					
Summ	nary		Change Device/PLC			
ł	Maker KOYO ELE	ECTRONICS CO.,	, LTD. Series KOSTAC/DL Series CCM SIO Port COM1			
	Text Data Mode	1 <u>Change</u>				
Comm	nunication Settings					
9	SIO Type	RS232C	RS422/485(2wire) RS422/485(4wire)			
9	Speed	19200	<b>v</b>			
[	Data Length	O 7	© 8			
F	Parity	C NONE	C EVEN  © ODD			
9	Stop Bit	• 1	O 2			
F	Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF			
1	Timeout	3 📫 (s	(sec)			
F	Retry	2 📫				
١	Wait To Send	n) 🗧 🛛	(ms)			
F	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					
Devic	ce-Specific Settings					
	Allowable Number of D		16 📷			
_	Number Device Na	me	Settings			
	👗 1   PLC1		Series=DL-205/DL-405 Series,Station No=1			

#### Device Setting

💰 Individual Device Settings 🛛 🗙			
PLC1			
Series	DL-205/DL-405 Series	•	
Please reconfirm you have change	all of address settings that you are us d the series.	ing if	
Station No	1		
		Default	
	<u>OK (D)</u> C	ancel	

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

	Settings	Setup Description
SW1	Optional	Battery mode: Adjust to the system.
SW2	OFF	CCM station No. setting: Enabled
SW3	ON	Baud rate transmission speed: 19,200bps
SW4	ON	Badd rate transmission speed: 19,2000ps

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- **4** Set the parity to "ODD", and then press the Enter key.

### 3.21 Setting Example 21

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker KOYO E	LECTRONICS CO	D., LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	O RS422/485(2wire) O RS422/485(4wire)
Speed	19200	<b>•</b>
Data Length	O 7	© 8
Parity	O NONE	O EVEN   O ODD
Stop Bit	● 1	© 2
Flow Control	O NONE	ER(DTR/CTS) O XON/XOFF
Timeout	3 🕂	(sec)
Retry	2 ÷	1
Wait To Send	0 ÷	(ms)
RI / VCC	© BI	O VCC
	r Supply). If you u	lect the 9th pin to RI (Input) use the Digital's RS232C C. Default
Device Consilie Cottines		
Device-Specific Settings Allowable Number o	f Devices/PLCs	16 💵
Number Device N		Settings
👗 1 🛛 PLC1		Series=DL-205/DL-405 Series,Station No=1

#### Device Setting

💣 Individual Dev	vice Settings	×
PLC1		
Series	DL-205/DL-405 Series	•
Please reconfirm all you have changed th	of address settings that you a ne series.	e using if
Station No	1 ≑	
		Default
	OK ( <u>0</u> )	Cancel

For communication settings, use the DIP switches on the CPU unit. To set the station No., use the instruction word programmer (S-01P). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description
SW1	Optional	Battery mode: Adjust to the system.
SW2	OFF	CCM station No. setting: Enabled
SW3	ON	Baud rate transmission speed: 19.200bps
SW4	ON	baud rate transmission speed. 17,2000ps

#### Communication Setting Switch

NOTE

• Setting SW2 to ON switches the transmission mode to ASCII mode and thus disables communication. Make sure to set it to OFF and set the CCM station No. and transmission mode.

#### CCM Station No. Setting

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- **2** Enter the CCM station No. Press [0], [1], and then press the Enter key.

• Enter the station No. set on the Display.

- $\mathbf{3}$  Set the transmission mode to "HEX", and then press the Enter key.
- **4** Set the parity to "ODD", and then press the Enter key.

### 3.22 Setting Example 22

- Settings of GP-Pro EX
- Communication Settings

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

Devi	ce/PLC 1		
Sun	nmary		Change Device/PLC
	Maker KOYO EL	ECTRONICS CO.,	, LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Con	nmunication Settings		
	SIO Type	O RS232C	C RS422/485(2wire)  © RS422/485(4wire)
	Speed	19200	
	Data Length	0.7	© 8
	Parity	O NONE	○ EVEN
	Stop Bit	● 1	© 2
	Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF
	Timeout	3 🔅 (	(sec)
	Retry	2 🔹	
	Wait To Send	0 📫 (	(ms)
Γ	RI / VCC	© BI	C VCC
	In the case of RS2 or VCC (5V Power Isolation Unit, pleas	Supply). If you use	et the 9th pin to RI (Input) e the Digital's RS232C . <b>Default</b>
Dev	vice-Specific Settings		
	Allowable Number of	Devices/PLCs	16 👧
	Number Device N	ame	Settings
	👗 1 PLC1		Series=DL-305 Series,Station No=1

#### Device Setting

💰 Individual Devi	ce Settings	×
PLC1		
Series Please reconfirm all of you have changed the	DL-305 Series address settings that you ar	▼ e using if
Station No	1	
		Default
	OK ( <u>0)</u>	Cancel

For communication settings, use the DIP switches on the side of the link I/F unit. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

DIP Switch	Settings	Setup Description
1	ON	Baud rate transmission speed: 19,200bps
2	ON	Badd rate transmission speed. 19,2000ps
3	OFF	Parity enable/disable: Disabled
4	ON	Self-diagnosis mode: OFF
5	OFF	Turnaround delay: None
6	OFF	Power-on mode: Adjust to the system.
7	OFF	Always OFF
8	OFF	Transmission mode: HEX mode

#### Configuration DIP Switch SW1

#### Configuration DIP Switch SW2

DIP Switch	Settings	Setup Description	
1	ON		
2	OFF	1	
3	OFF	1	
4	OFF	Child station No.: 1	
5	OFF	1	
6	OFF	1	
7	OFF	1	
8	OFF	Always OFF	

### 3.23 Setting Example 23

- Settings of GP-Pro EX
- Communication Settings

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

Device/PLC 1		
Summary		Change Device/PLC
Maker KOYO ELE	CTRONICS CO., L	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	• R\$232C	C RS422/485(2wire) C RS422/485(4wire)
Speed	19200	
Data Length	0.7	© 8
Parity	C NONE	C EVEN © ODD
Stop Bit	• 1	© 2
Flow Control	C NONE	ER(DTR/CTS)     O XON/XOFF
Timeout	3 ÷ (s	ec)
Retry	2 📫	
Wait To Send	0 🕂 (m	ns)
RI / VCC	• RI	O VCC
	upply). If you use	t the 9th pin to RI (Input) the Digital's RS232C Default
Device-Specific Settings		
Allowable Number of D	evices/PLCs	16 💵
Number Device Nan	ne	Settings
👗 1 PLC1		Series=KOSTAC SG/SU/SZ Series,Station No=1

#### Device Setting

💣 Individual Devid	e Settings	×
PLC1		
Series	KOSTAC SG/SU/SZ Series	-
Please reconfirm all of you have changed the	address settings that you are series.	e using if
Station No	1 🗧	
		Default
	OK ( <u>D</u> )	Cancel

For communication settings, use the instruction word programmer (Z-20JP). After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

- 1 Select Menu 56. Press [Clear], [5], [6], [Menu], and then press the Enter key.
- 2 Set the protocol to "CCM2", and then press the Enter key.
- **3** Enter the CCM station No. Press [0], [1], and then press the Enter key.

```
• Enter the station No. set on the Display.
```

- 4 Set the transmission mode to "HEX", and then press the Enter key.
- 5 Set the transmission speed to "19200", and then press the Enter key.
- $\mathbf{6}$  Set the stop bit to "1", and then press the Enter key.
- 7 Set the parity to "ODD", and then press the Enter key.

### 3.24 Setting Example 24

- Settings of GP-Pro EX
- Communication Settings

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

Device.	/PLC 1		
Summ	ary		Change Device/PLC
M	1aker KOYO ELE	CTRONICS CO., I	TD. Series KOSTAC/DL Series CCM SIO Port COM1
Т	ext Data Mode	1 Change	
Comm	unication Settings		
S	ilO Type	RS232C	C RS422/485(2wire) C RS422/485(4wire)
S	ipeed	19200	<b>•</b>
D	)ata Length	O 7	© 8
F	arity	C NONE	C EVEN C ODD
S	itop Bit	⊙ 1	0 2
F	Tow Control	C NONE	ER(DTR/CTS)     C XON/XOFF
Т	imeout	3 🕂 (s	ec)
F	letry	2 📫	
۷	Vait To Send	0 📫 (n	(31
F	RI / VCC	• BI	C VCC
		upply). If you use	the 9th pin to RI (Input) the Digital's RS232C Default
Devic	e-Specific Settings		
	llowable Number of D		16 📷
	Number Device Na	me	Settings
	🔏 1 PLC1		Series=KOSTAC SG/SU/SZ Series,Station No=1

#### Device Setting

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

💣 Individual Devi	ce Settings 🛛 🗙
PLC1	
Series	KOSTAC SG/SU/SZ Series
Please reconfirm all of you have changed the	i address settings that you are using if e series.
Station No	1 🗄
	Default
	OK ( <u>O</u> ) Cancel

### Settings of External Device

The communication device does not require any communication settings.

The baud rate transmission speed and the station address are fixed.

The parity, data length, and stop bit also cannot be changed.

# 3.25 Setting Example 25

- Settings of GP-Pro EX
- Communication Settings

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

Device/F	PLC 1		
Summa	iry		Change Device/PLC
Ma	aker KOYO ELE	ECTRONICS CO., I	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Te	ext Data Mode	1 <u>Change</u>	
Commu	inication Settings		
SI	О Туре	• RS232C	O RS422/485(2wire) O RS422/485(4wire)
Sp	peed	19200	<b>v</b>
Da	ata Length	0.7	© 8
Pa	arity	O NONE	O EVEN   O ODD
Ste	op Bit	● 1	O 2
Flo	ow Control	O NONE	ER(DTR/CTS)     O XON/XOFF
Tir	meout	3 🕂 (s	(sec)
Re	etry	2 📫	
W	ait To Send	0 ÷ (n	ims)
BI	I / VCC	• RI	O VCC
0		Supply). If you use	e the 9th pin to RI (Input) e the Digital's RS232C Default
Device	-Specific Settings		
	lowable Number of D		16 📷
	lumber Device Na	me	Settings
	1 PLC1		Series=KOSTAC SG/SU/SZ Series,Station No=1

#### Device Setting

💣 Individual Devid	ce Settings 💦 👂	<
PLC1		
Series	KOSTAC SG/SU/SZ Series	
Please reconfirm all of you have changed the	address settings that you are using if series.	
Station No	1 📑	
	Default	
	OK ( <u>0</u> ) Cancel	

Use the ladder software (DirectSOFT32 programming version 4.0) for communication settings. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

- 1 Start the ladder software (DirectSOFT32) and go online with the External Device.
- 2 From the [PLC] menu, select [Settings] [General-purpose port settings].
- 3 In the [Communication port settings] dialog box, configure the following communication settings.

Item Settings	
Port	Port 2
Protocol	CCM Net (DirectNET)
Timeout	500 ms
RTS on Delay Time	20 ms
Station No.	1
Speed	19,200bps
Stop Bit	1
Parity	Odd
Data Format	Hex

4 When the settings are complete, click [Transfer] to transfer them to the External Device.

# 3.26 Setting Example 26

- Settings of GP-Pro EX
- Communication Settings

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

Device/	/PLC 1		
Summa	ary		Change Device/PLC
м	laker KOYO ELE	CTRONICS CO., L	TD. Series KOSTAC/DL Series CCM SIO Port COM1
T	ext Data Mode	1 <u>Change</u>	
Commu	unication Settings		
SI	Ю Туре	O R\$232C	C RS422/485(2wire)  © RS422/485(4wire)
S	peed	19200	•
D	ata Length	O 7	© 8
P	arity	O NONE	C EVEN © ODD
SI	top Bit	⊙ 1	© 2
FI	low Control	O NONE	ER(DTR/CTS)     C XON/XOFF
Ti	imeout	3 📫 (se	c)
R	etry	2 📫	
W	/ait To Send	0 📑 (m	s)
B	I / VCC	💿 BI	O VCC
	In the case of RS23 or VCC (5V Power S Isolation Unit, please	upply). If you use I	the 9th pin to RI (Input) he Digital's RS232C Default
Device	e-Specific Settings		
	llowable Number of D		16 📊
	Number Device Nar	me	Settings
	I FLUI		TEL Denes-Koat AC advauvaz aelies,atdium Nu=1

#### Device Setting

💣 Individual Devid	e Settings	×
PLC1		
Carias		
Series	KOSTAC SG/SU/SZ Series	
Please reconfirm all of you have changed the	address settings that you ar series.	e using if
Station No	1 🛨	
		Default
		1
	OK ( <u>0)</u>	Cancel

Use the ladder software (DirectSOFT32 programming version 4.0) for communication settings. After completing the settings, reboot the External Device to enable them. Please refer to the manual of the External Device for details.

- 1 Start the ladder software (DirectSOFT32) and go online with the External Device.
- 2 From the [PLC] menu, select [Settings] [General-purpose port settings].
- 3 In the [Communication port settings] dialog box, configure the following communication settings.

Item	Settings
Port	Port 2
Protocol	CCM Net (DirectNET)
Timeout	500 ms
RTS on Delay Time	20 ms
Station No.	1
Speed	19,200bps
Stop Bit	1
Parity	Odd
Data Format	Hex

4 When the settings are complete, click [Transfer] to transfer them to the External Device.

# 4 Setup Items

Set the 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 the External Device. "3 Example of Communication Setting" (page 11)

# 4.1 Setup Items in GP-Pro EX

### Communication Settings

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

Device/PLC 1	
Summary	Change Device/PLC
Maker KOYO ELECTRONICS CO., LTD. Series KOSTAC/DL Series CCM	1 SIO Port COM1
Text Data Mode 1 Change	
Communication Settings	
SIO Type 💿 RS232C 💿 RS422/485(2wire) 💿 RS422/485	5(4wire)
Speed 19200 💌	
Data Length O 7 💿 8	
Parity ONONE OEVEN ODD	
Stop Bit 💿 1 💿 2	
Flow Control O NONE O ER(DTR/CTS) O X0N/X0FF	
Timeout 3 芸 (sec)	
Retry 2	
Wait To Send 0 📫 (ms)	
RI / VCC   RI   VCC	
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC.	Default
Device-Specific Settings	
Allowable Number of Devices/PLCs 16	
Number Device Name Settings	
👗 1 PLC1 🔢 Series=KOSTAC SG/SU/SZ Ser	ies,Station No=1

Setup Items	Setup Description	
SIO Type	Select the SIO type for communicating with the External Device.	
Speed	Select the communication 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 (s) for which the Display waits for the response from the External Device.	

Continued to next page.

Setup Items	Setup Description	
RetryIn 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 the standby time (ms) from when the Display receives packets until it transmits the next command.	
RI/VCC	You can switch RI/VCC of the 9th pin when you select RS232C for the SIO type. To connect to the IPC, you need to use the IPC selector switch to change RI/5V. Please refer to the manual of the IPC for details.	

### Device Setting

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

To connect multiple External Devices, click if from [Device-Specific Settings] of [Device/PLC Settings] to add External Devices.

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

Setup Items	Setup Description	
Series	Select the series of the External Device.	
Station No.	Enter the station No. of the External Device, from "1 to 90".	

# 4.2 Settings in Off-Line Mode

### NOTE

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

Cf. Maintenance/Troubleshooting Manual "2.2 Off-line Mode"

### Communication Settings

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

Comm.	Device	Option		
KOSTAC/DL Serie	es CCM SIO		[COM1]	Page 1/1
	SIO Type Speed Data Length Parity Stop Bit Flow Control Timeout(s) Retry Wait To Send(ms)	RS232C 19200 8 ● 1 IER(DTR/C	<u> </u>	ODD
	Exit		Back	2007/06/14 16:00:19

Setup Items	Setup Description		
SIO Type	Select the SIO type for communicating with the External Device.  MPORTANT In the communication settings, confirm the serial interface specifications of the Display and set [SIO Type] correctly. If you select an SIO type that the serial interface does not support, we cannot guarantee the operation. Please refer to the manual of the Display for more details on the serial interface specifications.		
Speed	Select the communication 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.		

Setup Items	Setup Description		
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 the standby time (ms) from when the Display receives packets until it transmits the next command.		

# Device Setting

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

Comm.	Device	Option		
KOSTAC/DL Serie	s CCM SIO		[COM1]	Page 1/1
Devic	e/PLC Name PL	C1		-
	Series Station No.	KOSTAC SG	i/SU/SZ Series 1 ▼	
	Exit		Back	2007/06/14 16:00:27

Setup Items	Setup Description
Device/PLC Name	Select the External Device to set. Device name is the title of the External Device set with GP-Pro EX. (Initial value [PLC1])
Series	Displays the series of the External Device.
Station No.	Enter the station No. of the External Device, from "1 to 90".

# Option Settings

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

Comm.	Device	Option		-
	-			
KOSTAC/DL Serie	es CCM SIO		[COM1]	Page 1/1
	the 9th pin Power Suppl	• RI of RS232C, you ito RI(Input) or y).If you use th ation Unit, plea	• VCC(5V e Digital's	
	Exit	-	Back	2007/06/14 16:00:37

Setup Items	Setup Description
RI/VCC	You can switch RI/VCC of the 9th pin when you select RS232C for the SIO type. To connect to the IPC, you need to use the IPC selector switch to change RI/5V. Please refer to the manual of the IPC for details.

# 5 Cable Diagram

The following cable diagram may be different from the one recommended by KOYO ELECTRONICS CO., LTD. Please be assured, however, there is no operational problem in applying the cable diagram shown in this manual.

- The FG pin on the External Device must be D-class grounded. Please refer to the manual of the External Device for details.
- The SG and FG are connected inside the Display. If you connect the External Device to the SG, do not form any short-circuit loop in the system design.
- If the communication is not stable due to noise or other factors, connect an isolation unit.

Cable Diagram 1

Display (Connection Port)	Cable	Remarks
GP (COM1) ST (COM1) IPC <sup>*1</sup> PC/AT	Your own cable	Cable length: 15m or less

\*1 Available only with the COM ports that support RS-232C.

<sup>C</sup> ■ COM Port of IPC (page 8)

	Display D-Sub 9 pin (socket) Shield			External Device D-Sub 25 pin (socket)		
Display	Pin	Signal name		Pin	Signal name	
	2	RD(RXD)		2	TXD	
	3	SD(TXD)		3	RXD	
	4	ER(DTR)		4	RTS	
	5	SG	<b>↓</b>	5	CTS	
	7	RS(RTS)	$\neg$	7	SG	
	8	CS(CTS)	<u>ما //</u>		FG	

### Cable Diagram 2

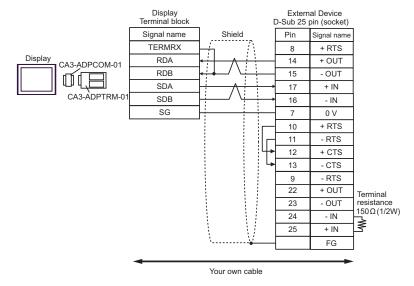
Display (Connection Port)		Cable	Remarks
GP <sup>*1</sup> (COM1) AGP3302B (COM2) ST <sup>*2</sup> (COM2) IPC <sup>*3</sup>	A	COM port conversion adapter by Digital Electronics Corp. CA3-ADPCOM-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
GP <sup>*1</sup> (COM2)	С	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + Your own cable	Cable length: 600m or less
	D	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Your own cable	

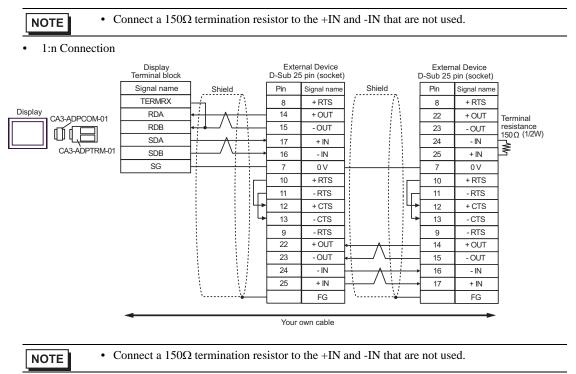
\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A

\*3 Available only with the COM ports that support RS-422/485 (4wire). <sup>(3)</sup> ■ COM Port of IPC (page 8)

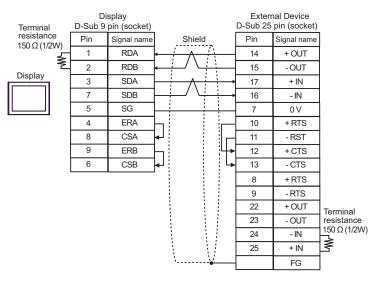
- A.When using the COM port conversion adapter (CA3-ADPCOM-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable
- 1:1 Connection

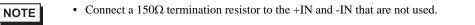




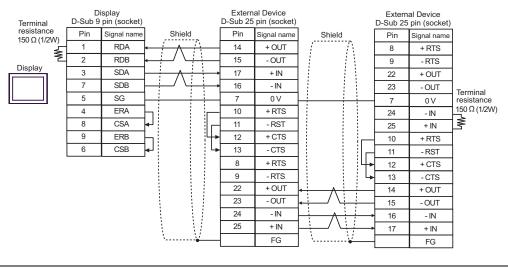
#### B.When using your own cable

• 1:1 Connection





#### • 1:n Connection

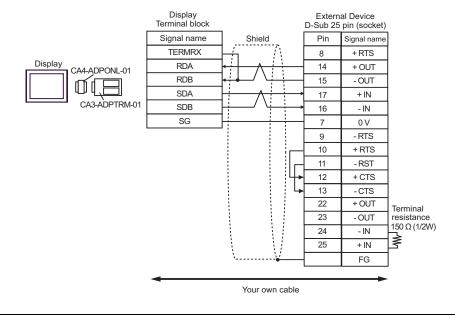


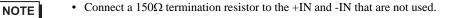


- Connect a 150 $\Omega$  termination resistor to the +IN and -IN that are not used.

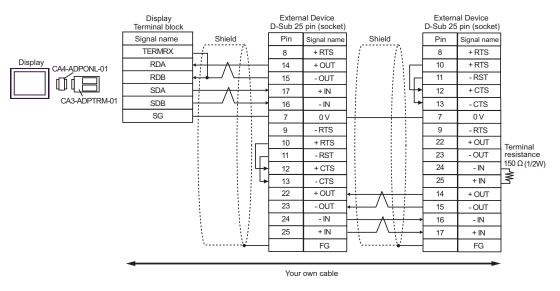
C.When using the online adapter (CA4-ADPONL-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable

• 1:1 Connection





• 1:n Connection

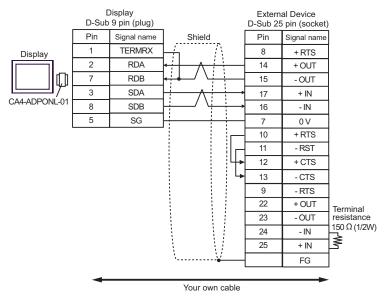


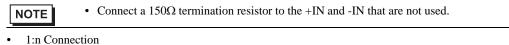
NOTE

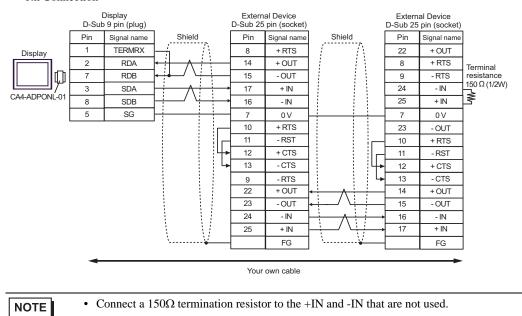
- Connect a 150  $\!\Omega$  termination resistor to the +IN and -IN that are not used.

D.When using the online adapter (CA4-ADPONL-01) by Digital Electronics Corp. and your own cable

• 1:1 Connection





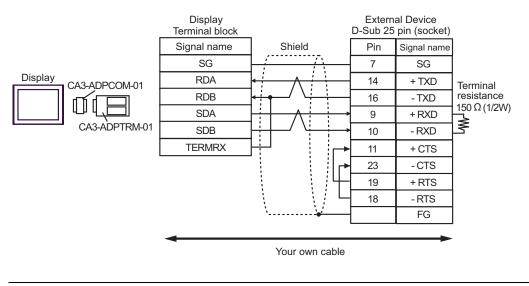


Display (Connection Port)		Cable	Remarks
GP <sup>*1</sup> (COM1) AGP3302B (COM2) ST <sup>*2</sup> (COM2) IPC <sup>*3</sup>	А	COM port conversion adapter by Digital Electronics Corp. CA3-ADPCOM-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
C GP (COM2)		Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + Your own cable	Cable length: 600m or less
	D	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Your own cable	

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A

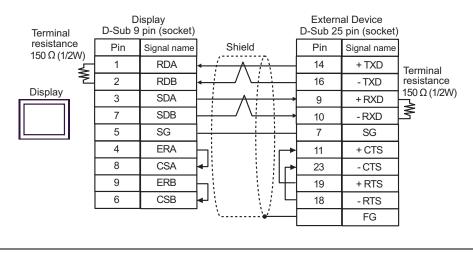
\*3 Available only with the COM ports that support RS-422/485 (4wire). <sup>™</sup> ■ COM Port of IPC (page 8) A.When using the COM port conversion adapter (CA3-ADPCOM-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable



NOTE

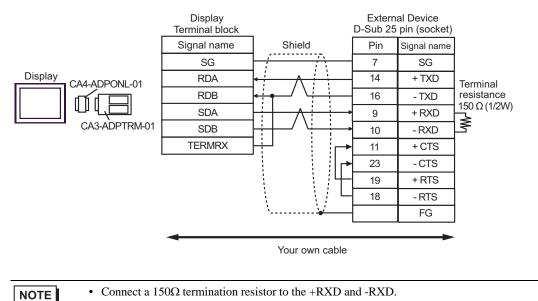
• Connect a 150 $\Omega$  termination resistor to the +RXD and -RXD.

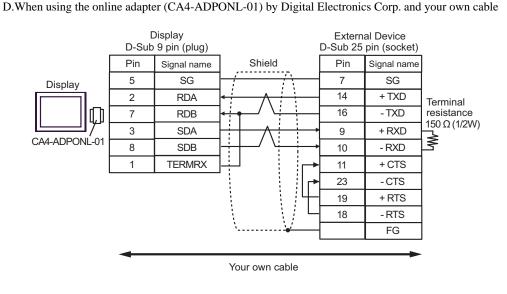
#### B.When using your own cable



• Connect a  $150\Omega$  termination resistor to the +RXD and -RXD.

C.When using the online adapter (CA4-ADPONL-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable





NOTE

- Connect a 150 termination resistor to the +RXD and -RXD.

Display (Connection Port)	Cable	Remarks
GP (COM1) ST (COM1) IPC <sup>*1</sup> PC/AT	Your own cable	Cable length: 15m or less

\*1 Available only with the COM ports that support RS-232C. <sup>C</sup> ■ COM Port of IPC (page 8)

Display D-Sub 9 pin (socket)					al Device ar 6 pin
	Pin	Signal name	Shield	Pin	Signal name
2 Display 3	2	RD(RXD)	<hr/>	4	TXD
	SD(TXD)		3	RXD	
	4	ER(DTR)		2	+ 5V
5 7 8	5	SG		1	0V
	7	RS(RTS)	$\square \setminus    $	5	RTS
	8	CS(CTS)	<b>↓</b> `` <del>\/</del>	6	0V

Cable Diagram 5

Display (Connection Port)	Cable	Remarks
GP (COM1) ST (COM1) IPC <sup>*1</sup> PC/AT	Your own cable	Cable length: 3m or less

\*1 Available only with the COM ports that support RS-232C. General COM Port of IPC (page 8)

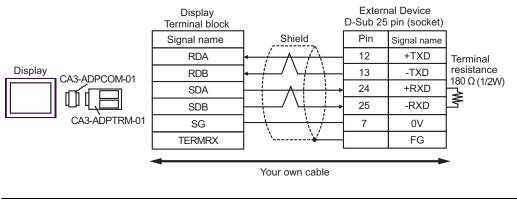
Display D-Sub 9 pin (socket)					al Device Ilar 6 pin
	Pin	Signal name	Shield	Pin	Signal name
	2	RD(RXD)		4	TXD
Display	3	SD(TXD)		3	RXD
	5	SG		1	SG
	4	ER(DTR)			
	7	RS(RTS)			
	8	CS(CTS)	<b>↓</b> \ / /		
	Shell	FG	<u> </u>		

Display (Connection Port)		Cable	Remarks
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) ST <sup>*2</sup> (COM2) IPC <sup>*3</sup>	А	COM port conversion adapter by Digital Electronics Corp. CA3-ADPCOM-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + Your own cable	
	В	Your own cable	
GP (COM2)	С	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + Your own cable	Cable length: 600m or less
	D	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Your own cable	

\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A

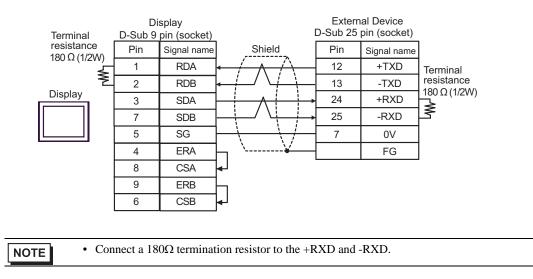
A.When using the COM port conversion adapter (CA3-ADPCOM-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable



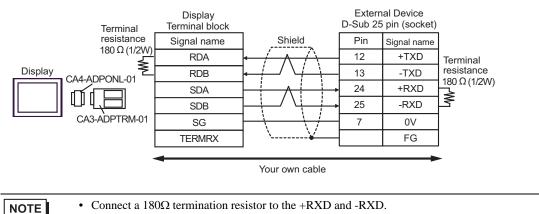
NOTE

- Connect a 180 $\Omega$  termination resistor to the +RXD and -RXD.

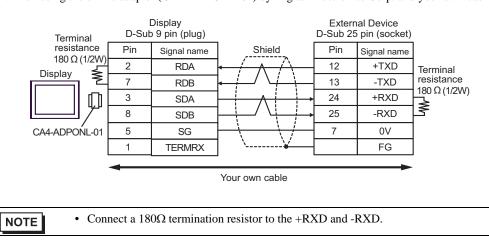
#### B.When using your own cable



C.When using the online adapter (CA4-ADPONL-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable



D.When using the online adapter (CA4-ADPONL-01) by Digital Electronics Corp. and your own cable

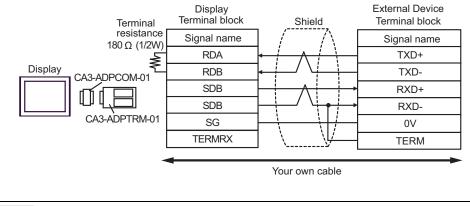


Display (Connection Port)	Cable	Remarks
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) ST (COM2) IPC <sup>*2</sup>	A COM port conversion adapter by Digital Electronic CA3-ADPCOM-01 + Connector terminal block conversion adapter by I Electronics Corp. CA3-ADPTRM-01 + Your own cable	
	B Your own cable	
GP (COM2)	C Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Connector terminal block conversion adapter by I Electronics Corp. CA3-ADPTRM-01 + Your own cable	600m or less
	D Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Your own cable	

\*1 All GP models except AGP-3302B

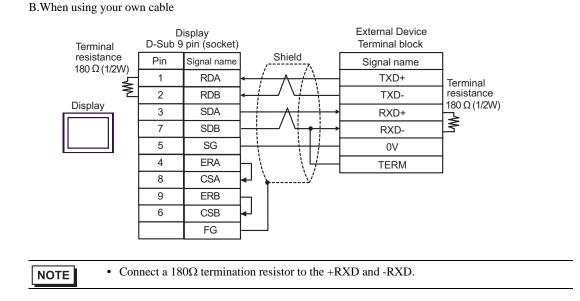
\*2 Available only with the COM ports that support RS-422/485 (4wire). <sup>CP</sup>■ COM Port of IPC (page 8)

A.When using the COM port conversion adapter (CA3-ADPCOM-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable

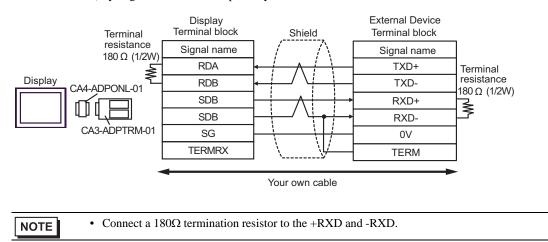


NOTE

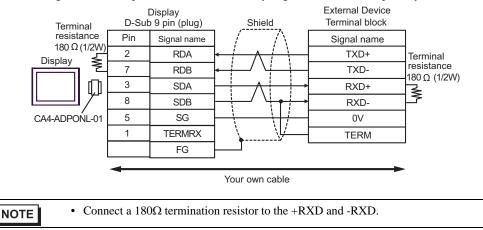
• Connect a 180 $\Omega$  termination resistor to the +RXD and -RXD.



C.When using the online adapter (CA4-ADPONL-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable



#### D.When using the online adapter (CA4-ADPONL-01) by Digital Electronics Corp. and your own cable



Display (Connection Port)	Cable	Remarks
GP (COM1) ST (COM1) IPC <sup>*1</sup> PC/AT	Your own cable	Cable length: 15m or less

\*1 Available only with the COM ports that support RS-232C.

Display D-Sub 9 pin (socket)			H Shield		al Device ty 15 pin (plug)
	Pin	Signal name	Shield	Pin	Signal name
Display 3 4 5 7 8	2	RD(RXD)	← / / / / / / / / / / / / / / / / / / /	2	TXD
	3	SD(TXD)		3	RXD
	4	ER(DTR)		4	RTS
	5	SG	<b>↓</b>	5	CTS
	7	RS(RTS)	$h \in \mathbb{N}^{+-}$	7	SG
	8	CS(CTS)	┥ <u>ヽ</u>		FG

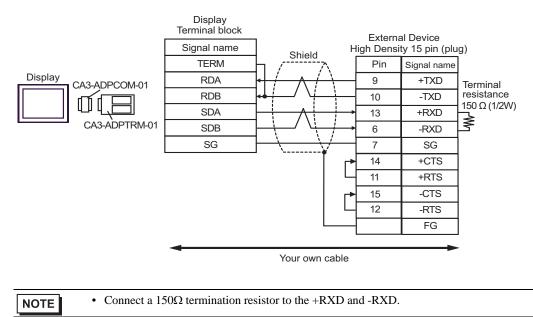
Display (Connection Port)		Cable	Remarks
GP <sup>*1</sup> (COM1) AGP-3302B (COM2) ST <sup>*2</sup> (COM2) IPC <sup>*3</sup>	А	COM port conversion adapter by Digital Electronics Corp. CA3-ADPCOM-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + Your own cable	
-		Your own cable	
GP (COM2)	С	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + Your own cable	Cable length: 600m or less
	D	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Your own cable	

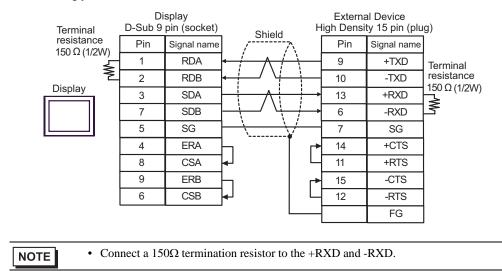
\*1 All GP models except AGP-3302B

\*2 All ST models except AST-3211A

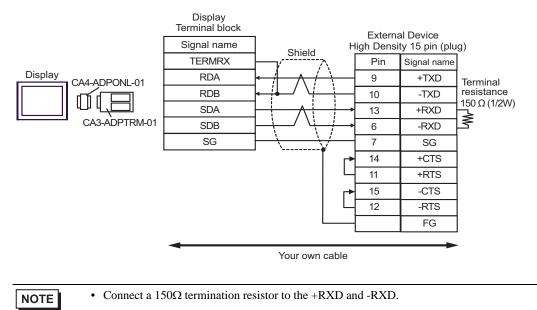
\*3 Available only with the COM ports that support RS-422/485 (4wire). <sup>C</sup> ■ COM Port of IPC (page 8)

A.When using the COM port conversion adapter (CA3-ADPCOM-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable



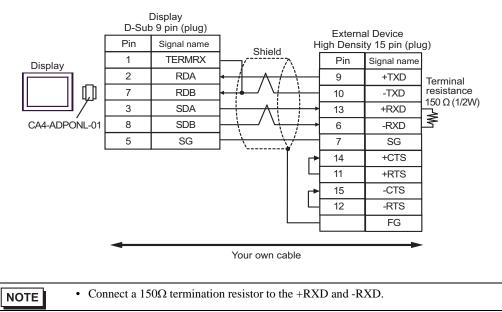


# C.When using the online adapter (CA4-ADPONL-01), the connector terminal block conversion adapter (CA3-ADPTRM-01) by Digital Electronics Corp., and your own cable



#### B.When using your own cable

D.When using the online adapter (CA4-ADPONL-01) by Digital Electronics Corp. and your own cable



# 6 Supported Device

The following table shows the range of supported device addresses. Available type and range of device may vary depending on the CPU. Be sure to check them in each CPU manual before use.

E

## KOSTAC SG Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	I0000 - I1777	R40400 - R40477		oct <b>8</b> ] *1
Output Relay	Q0000 - Q1777	R40500 - R40577		oct <b>8</b> ] *1
All Station Transmission Relay (Input)	GI0000 - GI3777	R40000 - R40177		οςτ <b>8</b> ] *1
Special Station Transmission Relay (Output)	GQ0000 - GQ3777	R40200 - R40377		οςτ <b>8</b> ] *1
Internal Relay	M0000 - M3777	R40600 - R40777		oct <b>8</b> ] *1
Special Relay	SP000 - SP777	R41200 - R41237	[L/H]	oct <b>8</b> ] *1
Timer (Contact)	T000 - T377	R41100 - R41117		oct <b>8</b> ] *1
Counter (Contact)	C000 - C377	R41140 - R41157		<u>oct</u> 8] *1
Stage	S0000 - S1777	R41000 - R41077		<u>oct</u> <b>8</b> ] *1
Timer (Elapsed Value)	-	R0000 - R0377		<b>8</b> ]
Counter (Elapsed Value)	-	R1000 - R1377		oct <b>8</b> ]
Data Register 1	-	R400 - R777		ост <b>8</b> ] <sub>Ві 1</sub> 15]
Data Register 2	-	R1400 - R7377		ост <b>8</b> ] <u>ві (</u> 15)
Special Register	-	R7400 - R7777		ост <b>8</b> ] <sub>Ві</sub> (15)
Data Register 3	-	R10000 - R37777		ост <b>8</b> ] <u>ві (</u> 15)

\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

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

#### KOSTAC SU Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	I000 - I477	R40400 - R40423		oct <b>8</b> *1
Output Relay	Q000 - Q477	R40500 - R40523		oct <b>8</b> ] *1
Link Relay/Link Input	GI0000 - GI1777	R40000 - R40077		ост <b>8</b> ] *1
Internal Relay	M0000 - M1777	R40600 - R40677		oct <b>8</b> ] *1
Special Relay	SP000 - SP137 SP320 - SP717	R41200 - R41205 R41215 - R41234		oct <b>8</b> ] *1
Timer (Contact)	T000 - T377	R41100 - R41117	L/H)	ост <b>8</b> ] *1
Counter (Contact)	C000 - C177	R41140 - R41147		ост <b>8</b> ] *1
Stage	S0000 - S1777	R41000 - R41077		ост <b>8</b> ] *1
Timer (Elapsed Value)	-	R0000 - R0377		oct <b>8</b> ]
Counter (Elapsed Value)	-	R1000 - R1177		oct 8]
Data Register	-	R1400 - R7377		ост <b>8</b> ] <u>ві</u> t15]
Special Register <sup>*2</sup>	-	R700 - R737 R7400 - R7777	ſ	<u>ост</u> 8] <u>ві</u> т15]
Extension Register <sup>*3</sup>	-	R10000 - R17777		<u>ост</u> 8ј <u>ві t</u> 15ј

\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

\*2 Data cannot be written. R700 to R737 of the special register are only available to SU-6B.

\*3 Available only to SU-6B.

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

#### KOSTAC SZ Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	I0000 - I0477	R40400 - R40423		ост <b>8</b> ] *1
Output Relay	Q0000 - Q0477	R40500 - R40523		ост <b>8</b> ] *1
Internal Relay	M0000 - M0377	R40600 - R40617		oct <b>8</b> *1
Special Relay	SP000 - SP137 SP320 - SP617	R41200 - R41205 R41215 - R41230		oct <b>8</b> ] *1
Timer (Contact)	T000 - T177	R41100 - R41107	[L/H]	ост <b>8</b> ] *1
Counter (Contact)	C000 - C177	R41140 - R41147		<u>ост</u> <b>8</b> ) *1
Stage	S000 - S777	R41000 - R41037		oct <b>8</b> ] *1
Timer (Elapsed Value)	-	R000 - R177		OCT 8
Counter (Elapsed Value)	-	R1000 - R1177		oct 8]
Data Register	-	R2000 - R3777		ост <b>8</b> ] віt15]
Special Register	-	R7746 - R7777	ſ	ост 8) <u>ві 1</u> 5)

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\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

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 (Direct Access Method)"

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

#### KOSTAC PZ3 Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	10000 - 10777	R40400 - R40437		ост <b>8</b> ] *1
Output Relay	Q0000 - Q0777	R40500 - R40537		ост <b>8</b> *1
Internal Relay	M0000 - M1777	R40600 - R40677		ост <b>8</b> ] *1
Special Relay	SP000 - SP777	R41200 - R41237		ост <b>8</b> ] *1
Timer (Contact)	T000 - T377	R41100 - R41117	- 715	ост <b>8</b> ] *1
Counter (Contact)	C000 - C377	R41140 - R41147	[L/H]	ост <b>8</b> ] *1
Stage	S0000 - S1777	R41000 - R41037		oct <b>8</b> *1
Timer (Elapsed Value)	-	R00000 - R41177		oct <b>8</b> ]
Counter (Elapsed Value)	-	R01000 - R41147		<u>ост</u> 8]
Data Register	-	R1400 - R7377 R10000 - R17777		OCT 8 BIT 15
Special Register	-	R41200 - R41237	ľ	<u>ост</u> 8ј <u>ві 1</u> 5ј

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\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

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 (Direct Access Method)"

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

#### KOSTAC SR Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
I/O Relay	000 - 157 700 - 767	R000 - R014 R070 - R076 (first half 1 byte)		<u>○ст</u> 8] ÷2] <sup>*1</sup>
Internal Relay	160 - 377 770 - 777	R016 - R036 R076 (latter half 1 byte)		<u>○ст</u> 8] ÷2] <sup>*1</sup>
Shift Register	400 - 577	R040 - R056	[L/H]	<u>∞ • 8</u> ÷ 2 *1
Timer/Counter (Contact)	600 - 677	R060 - R066		<u>○c⊤</u> 8] ÷2] <sup>*1</sup>
Timer/Counter (Elapsed Value)	-	R600 - R677		<u>ост</u> 8]
Data Register	-	R400 - R576		<u>∞.⊤8</u> ) <u>⊪.₁15</u> ) ÷2)

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\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

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 (Direct Access Method)"

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

■ DL-205 Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	X0000 - X0477	V40400 - V40423		oct <b>8</b> ] *1
Output Relay	Y0000 - Y0477	V40500 - V40523		<u>oct</u> <b>8</b> *1
Control Relay	C0000 - C0377	V40600 - V40617		oct <b>8</b> *1
Special Relay	SP000 - SP137 SP320 - SP617	V41200 - V41205 V41215 - V41230		oct <b>8</b> ] *1
Timer (Contact)	T000 - T177	V41100 - V41107	[L/H]	oct <b>8</b> *1
Counter (Contact)	CT000 - CT177	V41140 - V41147		oct <b>8</b> *1
Stage	S000 - S777	V41000 - V41037		oct <b>8</b> *1
Timer (Elapsed Value)	-	V0000 - V0177		<u>ост</u> <b>8</b> ]
Counter (Elapsed Value)	-	V1000 - V1177		000 8
Data Register	-	V2000 - V3777		ост <b>8</b> ] ві t <b>15</b> ]
Special Register	-	V7746 - V7777	1	ост 8) <u>ві t</u> 15)

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\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

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 (Direct Access Method)"

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

DL-305 Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
I/O Relay	000 - 157 700 - 767	V000 - V014 V070 - V076 (first half 1 byte)		<u>○с⊤</u> 8] ÷2] <sup>*1</sup>
Control Relay	160 - 377 770 - 777	V016 - V036 V076 (latter half 1 byte)		<u>○ст</u> 8] ÷2] <sup>*1</sup>
Shift Register	400 - 577	V040 - V056	[L/H]	<u>∞≂⊤8</u> ] ÷2]*1
Timer/Counter (Contact)	600 - 677	V060 - V066		<u>○ст</u> 8] ÷2] <sup>*1</sup>
Timer/Counter (Elapsed Value)	-	V600 - V677		8] ÷2]
Data Register	-	V400 - V576		<u>∞</u> 8) <u>⊪15</u> ÷2)

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\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

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 (Direct Access Method)"

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

■ DL-405 Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	X000 - X477	V40400 - V40423		oct <b>8</b> ] *1
Output Relay	Y000 - Y477	V40500 - V40523		oct <b>8</b> ] *1
Link Relay	GX0000 - GX1777	V40000 - V40077		oct <b>8</b> ] *1
Link Output Relay	GY0000 - GY3777	V40200 - V40377		oct <b>8</b> ] *1
Control Relay	C0000 - C1777	V40600 - V40677		oct <b>8</b> ] *1
Special Relay	SP000 - SP137 SP320 - SP717	V41200 - V41205 V41215 - V41234		<u>ост</u> <b>8</b> *1
Timer (Contact)	T000 - T377	V41100 - V41117	[L / H]	oct <b>8</b> ] *1
Counter (Contact)	CT000 - CT177	V41140 - V41147		oct <b>8</b> ] *1
Stage	S0000 - S1777	V41000 - V41077		oct <b>8</b> ] *1
Timer (Elapsed Value)	-	V0000 - V0377		<u>8</u> ]
Counter (Elapsed Value)	-	V1000 - V1177		00T <b>8</b> ]
Data Register 1	-	V400 - V777		ост 8] <u>ві</u> т15]
Data Register 2	-	V1400 - V7377		ост 8) <u>ві</u> т15)
Special Register	-	V7400 - V7777	Ĺ	ост 8) <u>ві</u> т15)
Data Register 3	-	V10000 - V37777		ост 8] <u>ві</u> т15]

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\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

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

## Direct Logic 05 Series

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: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	I0000 - I0377	R40400 - R40417		oct <b>8</b> ] *1
Output Relay	Q0000 - Q0377	R40500 - R40517		oct <b>8</b> ] *1
Internal Relay	M0000 - M0777	R40600 - R40637		oct <b>8</b> ] *1
Special Relay	SP000 - SP777	R41200 - R41237		oct <b>8</b> ] *1
Timer (Contact)	T000 - T177	R41100 - R41107		oct <b>8</b> ] *1
Counter (Contact)	C000 - C177	R41140 - R41147	[L/H]	oct <b>8</b> ] *1
Stage	S000 - S377	R41000 - R41017		oct <b>8</b> ] *1
Timer (Elapsed Value)	-	R000 - R177		<u>ост</u> <b>8</b> ]
Counter (Elapsed Value)	-	R1000 - R1177		<u>ост</u> 8]
V-Memory	-	R1200 - R7377		ост 8] віt15] *2
V-Memory Nonvolatile	-	R7400 -R7577		oct 8] Bit 15]
System Parameter	-	R7600 - R7777		ост <b>8</b> ] ві t <b>1</b> 5]

\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

\*2 No bits can be set for R1200 to R1377.

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 (Direct Access Method)"

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

## Direct Logic 06 Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	10000 - 10777	R40400 - R40437		<u>ост</u> <b>8</b> ] *1
Output Relay	Q0000 - Q0777	R40500 - R40537		oct <b>8</b> ] *1
Internal Relay	M0000 - M1777	R40600 - R40677		oct <b>8</b> ] *1
Special Relay	SP000 - SP777	R41200 - R41237		oct <b>8</b> ] *1
Timer (Contact)	T000 - T377	R41100 - R41117		oct <b>8</b> ] *1
Counter (Contact)	C000 - C177	R41140 - R41147		oct <b>8</b> ] *1
Stage	S0000 - S1777	R41000 - R41147	[[L/H]	oct <b>8</b> ] *1
Timer (Elapsed Value)	-	R000 - R377		0cT 8
Counter (Elapsed Value)	-	R1000 - R1177		OCT 8
V-Memory	-	R0400 - R0677 R1200 - R7377 R1000 - R1777		ост <b>8</b> ) вн t <b>15)</b> *2
V-Memory Nonvolatile	-	R7400 -R7577		oct 8] Bit 15]
System Parameter	-	R700 - R777 R7600 - R7777 R3600 - R3777		<u>oct</u> 8] <u>Bit</u> 15]

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\*1 When bits are written, the Display reads the corresponding word address from the External Device, sets particular bits of that word address to ON, and then returns the resulting address to the External Device. Note that the correct data may not be written if you change the word address using the ladder program while the Display reads data from the External Device and returns it.

\*2 No bits can be set for R1200 to R1377.

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 (Direct Access Method)"

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

# 7 Device Code and Address Code

Use device code and address code when you select "Device Type & Address" for the address type of the data display or other devices.

■KOSTAC SG/KOSTAC SU/KOSTAC SZ/KOSTAC PZ3/Direct Logic 05/Direct Logic 06 Series

Device	Device Name	Device Code (HEX)	Address Code
Input Relay	I/R	0080	Word Address
Output Relay	Q/R	0081	Word Address
Link Relay	GI/R	0082	Word Address
Link Output Relay	GQ/R	0083	Word Address
Internal Relay	M/R	0084	Word Address
Special Relay	SP/R	0085	Word Address
Timer (Contact)	T/R	00E0	Word Address
Counter (Contact)	C/R	00E1	Word Address
Stage	S/R	0004	Word Address
Timer (Elapsed Value)	R	0060	Word Address
Counter (Elapsed Value)	R	0061	Word Address
Data Register 1	R	0000	Word Address
Data Register 2	R	0001	Word Address
Special Register	R	0002	Word Address
Data Register 3	R	0003	Word Address

# ■KOSTAC SR Series

Device	Device Name	Device Code (HEX)	Address Code
I/O Relay (R000 - R014)			
I/O Relay (R070 - R076)			
Internal Relay (R016 - R036)	/R	0080	Value of word address
Internal Relay (R076)	/K	0080	divided by 2
Shift Register			
Timer/Counter (Contact)			
Timer/Counter (Elapsed Value)	R	0060	Word Address
Data Register	R	0000	Value of word address divided by 2

# ■DL-205/DL-405 Series

Device	Device Name	Device Code (HEX)	Address Code
Input Relay	X/V	0080	Word Address
Output Relay	Y/V	0081	Word Address
Link Relay	GX/V	0082	Word Address
Link Output Relay	GY/V	0083	Word Address
Control Relay	C/V	0084	Word Address
Special Relay	SP/V	0085	Word Address
Timer (Contact)	T/V	00E0	Word Address
Counter (Contact)	CT/V	00E1	Word Address
Stage	S/V	0004	Word Address
Timer (Elapsed Value)	V	0060	Word Address
Counter (Elapsed Value)	V	0061	Word Address
Data Register 1	V	0000	Word Address
Data Register 2	V	0001	Word Address
Special Register	V	0002	Word Address
Data Register 3	V	0003	Word Address

# ■DL-305 Series

Device	Device Name	Device Code (HEX)	Address Code
I/O Relay (V000 - V014)			
I/O Relay (V070 - V076)			
Control Relay (V016 - V036)	/V	0080	Value of word address divided by 2
Control Relay (V076)			
Shift Register			
Timer/Counter (Contact)			
Timer/Counter (Elapsed Value)	V	0060	Word Address
Data Register	V	0000	Value of word address divided by 2

# 8 Error Messages

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

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

#### Display Examples of Error Messages

"RHAA035: PLC1: Error has been responded for device write command (Error Code: 1[01H])"

NOTE

- Refer to your External Device manual for details on received error codes.
- Refer to "When an error is displayed (Error Code List)" in "Maintenance/Troubleshooting Manual" for details on the error messages common to the driver.

## Error Codes Specific to the External Device

Error codes specific to the External Device are shown below.

Error Code	Description
01	A timeout has occurred on the serial link.
04	Unavailable I/O data has been requested.
0C	During the header transfer, an error has occurred even after three retries.
0D	During the data transfer, an error has occurred even after three retries.
14	<ul> <li>During the data block transfer, one or more of the following errors have occurred:</li> <li>Invalid STX has been received.</li> <li>Invalid ETB has been received.</li> <li>Invalid ETX has been received.</li> <li>Invalid LRC has been received.</li> <li>A parity error, framing error, or overrun error has occurred.</li> </ul>
15	EOT reception from the parent station has resulted in failure.
16	ACK/NAC reception has resulted in failure during the wait state.

Error Code	Description
1D	<ul> <li>Except during the header/data transfer, one or more of the following errors have occurred:</li> <li>Invalid STX has been received.</li> <li>Invalid ETB has been received.</li> <li>Invalid ETX has been received.</li> <li>Invalid LRC has been received.</li> <li>A parity error, framing error, or overrun error has occurred.</li> </ul>
1E	<ul> <li>During the header transfer, one or more of the following errors have occurred:</li> <li>Invalid SOH has been received.</li> <li>Invalid ETB has been received.</li> <li>Invalid LRC has been received.</li> <li>A parity error, framing error, or overrun error has occurred.</li> </ul>