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 9)
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 10)
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 57)
5	Cable Diagram This section shows cables and adapters for connecting the Display and the External Device.	"5 Cable Diagram" (page 62)
	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 Typ		Setting Example	Cable Diagram
		CN1 on G-01DM	RS422/485 (4wire)	Setting Example 2 (page 12)	Cable Diagram 2 (page 63)
KOSTAC	SG-8	CN2 on G-01DM	RS232C	Setting Example 1 (page 10)	Cable Diagram 1 (page 62) Cable Diagram 1
SG	50-0	General-purpose communication	RS232C	232CExample 3 (page 14)Diagram 1 (page 62)22/485Setting Example 4Cable Diagram 3	
		port on CPU <sup>*1</sup>	RS422/485 (4wire)		ge 10)(page 62)ting ample 3Cable Diagram 1 (page 62)ting ge 14)Cable Diagram 3 (page 62)ting ample 4 ge 16)Cable Diagram 3 (page 69)ting ting ample 5 ge 18)Cable Diagram 1 (page 62)ting ge 18)Cable Diagram 1 (page 62)ting ample 6 ge 20)Cable Diagram 2 (page 63)ting ting cable Diagram 1Cable Diagram 1
	SU-5	U-01DM	RS232C	Setting Example 5 (page 18)	Diagram 1
	30-3	0-01DM	RS422/485 (4wire)	422/485 Example 6 Diagram 2	Diagram 2
KOSTAC		LI OIDM	-01DM RS422/485 Setting Cab (4wire) Setting Cab		
SU	SU-5E SU-6	0-01DM		Cable Diagram 2 (page 63)	
	SU-6B SU-6B-C	General-purpose communication	RS232C	Setting Example 7 (page 22)	Cable Diagram 1 (page 62)
		port on CPU	RS422/485 (4wire)	Setting Example 8 (page 24)	Cable Diagram 3 (page 69)

Series	CPU	Link I/F	Link I/F SIO Type		Cable Diagram
		U-01DM	RS232C	Setting Example 5 (page 18)	Cable Diagram 1 (page 62)
		0-01DM	RS422/485 (4wire)	Setting Example 6 (page 20)	Cable Diagram 2 (page 63)
	SU-5M SU-5M-C	General-purpose communication	RS232C	Setting Example 9 (page 26)	kample 9 Diagram 1
		port 1 on CPU	RS422/485 (4wire)	Example 10 (page 28)Diagram 3 (page 69)Setting Example 11Cable Diagram 4	
KOSTAC		General-purpose communication port 2 on CPU	RS232C		mpleDiagramgCableple 5Diagram 1(page 62)gCableple 6Diagram 2(page 63)gCableple 9Diagram 1(page 62)gCableple 9Diagram 1(page 62)gCableple 10Diagram 3(page 69)gCableple 11Diagram 4(page 73)gCableple 5Diagram 1(page 62)gCableple 6Diagram 2(page 63)gCableple 6Diagram 1(page 62)gCableple 6Diagram 1(page 62)gCableple 9Diagram 1(page 62)gCableDiagram 3(page 69)gCableple 10Diagram 430)(page 73)gCableple 12Diagram 430)(page 73)gCableple 23Diagram 653)Cableple 24Diagram 7(page 76)gCableDiagram 7(page 76)gCableDiagram 7(page 76)gCableDiagram 2
SU		U-01DM	RS232C	Setting Example 5 (page 18)	Diagram 1
			RS422/485 (4wire)	Setting Example 6 (page 20)	Diagram 2
		General-purpose communication port 1 on CPU	RS232C	Setting Example 9 (page 26)	Diagram 1
			RS422/485 (4wire)	Setting Example 10 (page 28)	Diagram 3
		General-purpose communication port 2 on CPU	RS232C	Setting Example 11 (page 30)	Diagram 4
KOSTAC SZ	SZ-4	General-purpose communication port on CPU	RS232C	Setting Example 12 (page 32)	Diagram 4
KOSTAC	PZ3-16ND1-16TD1 PZ3-T PZ3M	General-purpose communication port 2 on CPU	RS232C	Setting Example 23 (page 53)	Diagram 6
PZ3			RS422/485 (4wire)	Setting Example 24 (page 55)	Diagram 7
KOSTAC SR	SR-21 SR-22	E-02DM-R1	RS422/485 (4wire)	Setting Example 13 (page 34)	Diagram 2

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
	D2-240	General-purpose communication port 2 on CPU	RS232C	Setting Example 14 (page 36)	Cable Diagram 4 (page 73)
DL-205	D2-250-1	General-purpose communication port 2 on CPU	RS232C	Setting Example 14 (page 36)	Cable Diagram 6 (page 75)
DL-203	D2-260	General-purpose communication	RS232C	Setting Example 14 (page 36)	Cable Diagram 6 (page 75)
	D2-200	port 2 on CPU	RS422/485 (4wire)	Setting Example 15 (page 38)	Cable Diagram 7 (page 76)
	D4430	D4 DCM	RS232C	Setting Example 16 (page 40)	Cable Diagram 1 (page 62)
		D4-DCM	RS422/485 (4wire)	Setting Example 17 (page 42)	Cable Diagram 2 (page 63)
DL-405	D1.440	D4-DCM	RS232C	Setting Example 16 (page 40)	Cable Diagram 1 (page 62)
DL-403			RS422/485 (4wire)	Setting Example 17 (page 42)	Cable Diagram 2 (page 63)
	D4-440	General-purpose communication port on CPU	RS232C	Setting Example 18 (page 44)	Cable Diagram 1 (page 62)
			RS422/485 (4wire)	Setting Example 19 (page 46)	Cable Diagram 3 (page 69)
DL-305	D3-330	D3-DCM	RS422/485 (4wire)	Setting Example 20 (page 48)	Cable Diagram 2 (page 63)
	D0-05AA D0-05AD D0-05AR	General-purpose communication port 1 on CPU	RS232C	Setting Example 22 (page 52)	Cable Diagram 5 (page 74)
DirectLogic 05	D0-05DA D0-05DD D0-05DD-D D0-05DR D0-05DR-D	General-purpose communication port 2 on CPU	RS232C	Setting Example 21 (page 50)	Cable Diagram 5 (page 74)

Series	CPU	Link I/F	SIO Type	Setting Example	Cable Diagram
	D0-06DD1 D0-06DD1-D D0-06DD2 D0-06DD2	General-purpose communication port 1 on CPU	RS232C	Setting Example 22 (page 52)	Cable Diagram 5 (page 74)
DirectLogic 06	D0-06DD2-D D0-06DR D0-06DR-D D0-06DA D0-06AR D0-06AA	General-purpose communication port 2 on CPU	RS232C	Setting Example 21 (page 50)	Cable Diagram 5 (page 74)

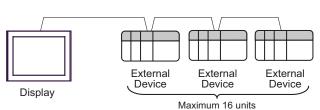
\*1 Remove the instruction word programmer from the programmer communication port during communication.

## Connection Configuration

• 1:1 Connection



• 1:n Connection



## ■ IPC COM Port

When connecting IPC with an External Device, the COM port used depends on the series and SIO type. Please refer to the IPC manual for details.

#### Usable port

Series	Usable Port				
Conco	RS-232C	RS-422/485(4 wire)	RS-422/485(2 wire)		
PS-2000B	COM1 <sup>*1</sup> , COM2, COM3 <sup>*1</sup> , COM4	-	-		
PS-3450A, PS-3451A, PS3000-BA, PS3001-BD	COM1, COM2 <sup>*1*2</sup>	COM2 <sup>*1*2</sup>	COM2 <sup>*1*2</sup>		
PS-3650A, PS-3651A	COM1 <sup>*1</sup>	-	-		
PS-3700A (Pentium®4-M) PS-3710A	COM1 <sup>*1</sup> , COM2 <sup>*1</sup> , COM3 <sup>*2</sup> , COM4	COM3 <sup>*2</sup>	COM3 <sup>*2</sup>		
PS-3711A	COM1 <sup>*1</sup> , COM2 <sup>*2</sup>	COM2 <sup>*2</sup>	COM2 <sup>*2</sup>		
PL-3000B, PL-3600T, PL-3600K, PL-3700T, PL-3700K, PL-3900T	COM1 <sup>*1*2</sup> , COM2 <sup>*1</sup> , COM3, COM4	COM1 <sup>*1*2</sup>	COM1 <sup>*1*2</sup>		

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

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

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

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

\*1 When using PS-3450A, PS-3451A, PS3000-BA and PS3001-BD, turn ON the set value.

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

DIP switch	Setting	Description
1	OFF	Reserved (always OFF)
2	ON	SIO type: RS-422/485
3	ON	SIO type. K3-422/463
4	OFF	Output mode of SD (TXD) data: Always output
5	OFF	Terminal resistance (220 $\Omega$ ) insertion to SD (TXD): None
6	OFF	Terminal resistance (220 $\Omega$ ) insertion to RD (RXD): None
7	OFF	Short-circuit of SDA (TXA) and RDA (RXA): Not available
8	OFF	Short-circuit of SDB (TXB) and RDB (RXB): Not available
9	OFF	RS (RTS) Auto control mode: Disabled
10	OFF	KS (K13) Auto control mode. Disabled

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

DIP switch	Setting	Description	
1	OFF	Reserved (always OFF)	
2	ON	SIO type: RS-422/485	
3	ON	510 type. 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): Available	
8	ON	Short-circuit of SDB (TXB) and RDB (RXB): Available	
9	ON	- RS (RTS) Auto control mode: Enabled	
10	ON		

# 2 Selection of External Device

Select the External Device to be connected to the Display.

💰 New Project File					×
GP-Pro 🛃	Device/PL Maker Series	C KOYO ELECTRONIC: KOSTAC/DL Series C			
	🗖 Use S	iystem Area	Ī	Refer to the manual of this Device/PLC	
	Connection Port	COM1	•		
				So to Device/PLC Manua	I
Back	( <u>B)</u> Cor	nmunication 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	Check this option when you synchronize the system data area of Display and the device (memory) of External Device. When synchronized, you can use the ladder program of External Device to switch the display or display the window on the display. Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)" This can also be set in GP-Pro EX or in the Display's off-line mode. Cf. GP-Pro EX Reference Manual "Display Unit (System Area) Settings Guide" Cf. Maintenance/Troubleshooting Manual "Main Unit - System Area Settings"
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.

Device/PLC1		
Summary		Change Device/PLC
Maker KOYO ELE	CTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Text Data Mode 🛛 🗍	1 <u>Change</u>	
Communication Settings		
SIO Type	RS232C	O RS422/485(2wire) O RS422/485(4wire)
Speed	19200	<b>v</b>
Data Length	O 7	© 8
Parity	O NONE	O EVEN O ODD
Stop Bit	⊙ 1	0 2
Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF
Timeout	3 📫 (s	(sec)
Retry	2 📫	
Wait To Send	n) 🛨 🛛	ims)
RI / VCC	• RI	O VCC
	upply). If you use	st the 9th pin to RI (Input) e the Digital's RS232C Default
Device-Specific Settings		
Allowable Number of D		16 📷
Number Device Nar	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 address settings that you are using if you have changed the series.			
Station No	1		
	Default		
	OK ( <u>O</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 ENABLE	SIO Type: RS232C	

## 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.

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	Response delay time. O his
9	OFF	Transmission mode: HEX mode

#### Short plug (2)

Short plug		Setup Description
232C DISABLE	SIO Type: RS422	

## 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	RS232C	© RS422/485(2wire) © 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)     C XON/XOFF
	Timeout	3 📑 (	(sec)
	Retry	2 📑	
	Wait To Send	0 🕂 (	(ms)
Γ	RI / VCC	RI	C VCC
		Supply). If you use	ect the 9th pin to RI (Input) se the Digital's RS232C Default
Der	vice-Specific Settings		
Dev	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 Dev	vice Settings	×	
PLC1			
Series	KOSTAC SG/SU/SZ Series	s <b>•</b>	
Please reconfirm all of address settings that you are using if you have changed the series.			
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.

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.
------	---------------------------------------------

3 Set the transmission mode to "HEX", and then press the Enter key.

## 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.

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/XOFF         Timeout       3       (sec)         Retry       2       Image: Communication Settings         Wait To Send       0       (ms)         RI / VCC       6       BI       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       Image: Communication Settings	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 🔺 (ms)				
or VCC (5V Power Supply). If you use the Digital's RS232C	RI / VCC	RL/VCC © RL C VCC				
	or VCC (5V Power Supply). If you use the 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.

SW1     OFF     SIO Type: RS422       SW2     OFF     CCM station No. setting: Enabled       SW3     ON     Bundant transmission seconds 10 200hpc	DIP Switch	Settings	Setup Description
SW3 ON	SW1	OFF	SIO Type: RS422
	SW2	OFF	CCM station No. setting: Enabled
	SW3	ON	Baud rate transmission speed: 19,200bps
SW4 ON Baut fate transmission speed. 19,2000ps	SW4	ON	bauu 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.

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

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.

Device/P	2LC 1					
Summar	у		Change Device/PLC			
Ma	iker KOYO ELE	CTRONICS CO.,	, LTD. Series KOSTAC/DL Series CCM SIO Port COM1			
Te	xt Data Mode 🛛 🗍	1 <u>Change</u>				
Commur	nication Settings					
SIC	) Туре	RS232C	C RS422/485(2wire) C RS422/485(4wire)			
Sp	eed	19200	<b>•</b>			
Da	ta Length	O 7	© 8			
Par	rity	C NONE	C EVEN  © ODD			
Sto	op Bit	● 1	© 2			
Flo	w Control	C NONE	ER(DTR/CTS)     C XON/XOFF			
Tim	neout	3 📫 (s	(sec)			
Re	try	2 🔅				
Wa	ait To Send	n 🕂 (	(ms)			
RL	/VCC	• RI	C VCC			
0	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.					
Device-	Specific Settings					
	owable Number of D		16			
	umber Device Nai ]1  PLC1	me	Settings			
	I PLUI		Series=KOSTAC SG/SU/SZ Series,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)	Γ	Rotary Switch	Settings	Setup Description
x1 1 Station No. of the External Device (ones digit)	Γ	x10	0	Station No. of the External Device (tens digit)
	Γ	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

## 3.6 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.

Devid	ce/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)
	Speed	19200	
	Data Length	07	© 8
	Parity	C NONE	O EVEN    O ODD
	Stop Bit	● 1	0 2
	Flow Control	C NONE	© ER(DTR/CTS) C XON/XOFF
	Timeout	3 📑 (	(sec)
	Retry	2 🔅	
	Wait To Send	0 🕂 (	[ms]
Γ	RI / VCC	© RI	O VCC
		Supply). If you use	e the 9th pin to RI (Input) e the Digital's RS232C Default
Day	ice-Specific Settings		Dorday
Dev	Allowable Number of	Devices/PLCs	16 📲
	<u>Number</u> Device Na		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	f address settings that you are e series.	e using if
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)	Γ	Rotary Switch	Settings	Setup Description
x1 1 Station No. of the External Device (ones digit)	Γ	x10	0	Station No. of the External Device (tens digit)
	Γ	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.

Summary       Change Device/PLC         Maker       KOYO ELECTRONICS CO., LTD.       Series       KOSTAC/DL Series CCM SIO       Pot       COM1         Text Data Mode       1       Change       Pot       COM1       COM1         Communication Settings       I       Change       RS232C       RS422/485(2wire)       RS422/485(4wire)       Speed       19200       Image: Communication Settings       Image: Com	Device/PLC 1	
Text Data Mode       1       Change         Communication Settings         SID Type	Summary	Change Device/PLC
Communication Settings         SID Type          •             RS232C              RS422/485(2wire)              RS422/485(4wire)          Speed              19200                 RS422/485(4wire)          Data Length              7               8               Parity               NONE               EVEN               ODD               Stop Bit               1               2               Row Control               NDNE               ER(DTR/CTS)               XBN/X0FF	Maker KOYO EL	CTRONICS CO., LTD. Series KOSTAC/DL Series CCM SIO Port COM1
SIO Type          • RS232C          • RS422/485(2wire)          • RS422/485(4wire)          Speed          • 19200           • 19200           • 19200          Data Length          • 7           • 8           • 0DD          Parity          • NONE          • EVEN         • ODD           • 0DD          Stop Bit          • 1           • 2           • NONE           • KON/KOFF	Text Data Mode	1 Change
Speed     19200       Data Length     C       Parity     C       NDNE     C       Stop Bit     C       Flow Control     C       ER(DTR/CTS)     XBN/X0FF	Communication Settings	
Data Length     C     7     C     8       Parity     C     NONE     C     EVEN     O DD       Stop Bit     C     1     C     2       Flow Control     C     NONE     C     REN/X0FF	SIO Type	RS232C O RS422/485(2wire) O RS422/485(4wire)
Parity ONDNE OEVEN ODD Stop Bit O1 O2 Flow Control ONDNE OER(DTR/CTS) OX0N/X0FF	Speed	19200
Stop Bit   1  2  Flow Control  NONE  ER(DTR/CTS)  X0N/X0FF	Data Length	C 7 C 8
Flow Control C NONE C ER(DTR/CTS) C X0N/X0FF	Parity	O NONE O EVEN O ODD
	Stop Bit	© 1 © 2
Timeout 3 🗮 (sec)	Flow Control	O NONE O ER(DTR/CTS) O XON/XOFF
	Timeout	3 📑 (sec)
Retry 2	Retry	2 📑
Wait To Send 0 👘 (ms)	Wait To Send	0 💼 (ms)
RI/VCC   RI   VCC	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	or VCC (5V Power	Supply). If you use the Digital's RS232C
Device-Specific Settings	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 o you have changed th	of address settings that you are using if e series.
Station No	1
	Default
	OK (Q) 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     Optional     Battery mode: Adjust to the system.       SW2     OFF     CCM station No. setting: Enabled       SW3     ON     Baud rate transmission speed: 19,200bps	DIP Switch	Settings	Setup Description
SW3 ON Baud rate transmission speed: 19.200bps	SW1	Optional	Battery mode: Adjust to the system.
Baud rate transmission speed: 19.200bps	SW2	OFF	CCM station No. setting: Enabled
Badd fate transmission speed. 19,2000ps	SW3	ON	Raud rate transmission speed: 10 200hps
SW4 ON	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.

## 3.8 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.

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

#### 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.

## 3.9 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.

Devic	e/PLC1		
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	• RS232C	O RS422/485(2wire) O RS422/485(4wire)
	Speed	19200	
	Data Length	0.7	© 8
	Parity	O NONE	○ EVEN
	Stop Bit	● 1	0 2
	Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF
	Timeout	3 📑 (	sec)
	Retry	2 📫	
	Wait To Send	0 🔅 (	ms)
Γ	RI / VCC	• RI	O VCC
		Supply). If you use	st the 9th pin to RI (Input) e the Digital's RS232C Default
Dev	ice-Specific Settings		
501	Allowable Number of [	Devices/PLCs	16 📊
	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 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 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.

- 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.

## 3.10 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/P	2LC 1		
Summary	y		Change Device/PLC
Ma	ker KOYO ELE	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Tex	xt Data Mode 🛛	1 <u>Change</u>	
Commun	nication Settings		
SIC	) Туре	C RS232C	RS422/485(2wire)
Spe	eed	19200	<b>•</b>
Dal	ta Length	O 7	© 8
Par	rity	C NONE	C EVEN  O ODD
Sto	ip Bit	• 1	© 2
Flo	w Control	C NONE	ER(DTR/CTS)     O XON/XOFF
Tim	neout	3 📑 (s	(sec)
Rel	try	2 📫	
Wa	ait To Send	n) 🗧 O	(ms)
BL.	/ VCC	🖲 BI	O VCC
01		Supply). If you use	ct the 9th pin to RI (Input) e the Digital's RS232C Default
Device-9	Specific Settings		
	opecine oettings owable Number of E	)evices/PLCs	16 📊
	umber <u>Device Na</u>	me	Settings
	1 PLC1		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 of address settings that you are using if you have changed the series.				
Station No	1 🗄				
	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.

- 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.

## 3.11 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.

Summary Change D	evice/PLC
Maker KOYO ELECTRONICS CO., LTD. Series KOSTAC/DL Series CCM SIO Port COM1	
Text Data Mode 1 Change	
Communication Settings	
SID Type © RS232C © RS422/485(2wire) © RS422/485(4wire)	
Speed 19200	
Data Length O 7 O 8	
Parity CINONE CIEVEN © ODD	
Stop Bit 💿 1 O 2	
Flow Control C NONE C ER(DTR/CTS) C XON/XOFF	
Timeout 3 🚖 (sec)	
Retry 2 📑	
Wait To Send 0 📑 (ms)	
RI / VCC © RI O VCC	
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. Default	
Device-Specific Settings	
Allowable Number of Devices/PLCs 16	
Number         Device Name         Settings           Image: Plant state stat	

#### Device Setting

💰 Individual Dev	ice Settings	×
PLC1		
Series Please reconfirm all c you have changed th Station No	KOSTAC SG/SU/SZ Series of address settings that you ar e series.	
		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.

- 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.

## 3.12 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.

Change Device/PLC         Maker       K0YD ELECTRONICS CO., LTD.       Series       K0STAC/DL Series CCM SIO       Port       Comm         Text Data Mode       1       Change       Port       Communication       Port       Communication         Stormunication Settings       Speed       19200       Port       RS422/485(4wire)       Picture       Picture <th< th=""><th>Device/PLC 1</th><th></th><th></th><th></th></th<>	Device/PLC 1			
Text Data Mode       I       Change         Communication Settings       SIO Type       RS232C       RS422/485(2wire)       RS422/485(4wire)         Speed       19200       Image: Communication Settings       Image: Communication Settings       Image: Communication Settings         Data Length       7       Image: Communication Settings       Image: Communication Settings         Data Length       7       Image: Communication Settings       Image: Communication Settings         Parity       NONE       EVEN       Image: Communication Settings         Stop Bit       1       2         Flow Control       NONE       ER(DTR/CTS)       Image: Communication Settings         Retry       2       Image: Communication Settings       Image: Communication Settings         Rit / VCC       Rit       C VCC       In the case of RS232C, you can select the 9th pin to RI (Input) or VCC [Image: Supplier Supp	Summary			Change Device/PLC
Communication Settings         SID Type       RS232C       RS422/485(2wire)       RS422/485(4wire)         Speed       19200       Image: Speed Spee	Maker KOYO EL	ECTRONICS CO.,	, LTD. Series KOSTAC/DL Series CCM SIO Port	COM1
SID Type       © RS232C       © RS422/485(2wire)       © RS422/485(4wire)         Speed       19200       Image: Comparison of the standard stan	Text Data Mode	1 <u>Change</u>		
Speed       19200         Data Length       7         Data Length       7         Parity       NONE         Stop Bit       1         O       2         Flow Control       NONE         ER(DTR/CTS)       XON/XOFF         Timeout       3         Image: Speed       9         Wait To Send       0         RI / VCC       RI         VC [SV Power Supply]. If you use the Digital's RS232C	Communication Settings			
Data Length       7       6         Parity       NONE       EVEN       0 DDD         Stop Bit       1       2         Flow Control       NONE       ER(DTR/CTS)       XON/XOFF         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 [SV Power Supply]. If you use the Digital's RS232C	SIO Type	RS232C	C RS422/485(2wire) C RS422/485(4wire)	
Parity       C       NONE       C       EVEN       © DDD         Stop Bit       © 1       C       2         Flow Control       C       NONE       © ER(DTR/CTS)       © XON/XOFF         Timeout       3	Speed	19200	<b>•</b>	
Stop Bit     I     I     I       Flow Control     NONE     ER(DTR/CTS)     XON/XOFF       Timeout     Image: State S	Data Length	O 7	© 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 (SV Power Supply). If you use the Digital's RS232C	Parity	C NONE	C EVEN    O ODD	
Timeout     3        Retry     2        Wait To Send     0        RI / VCC     RI     C VCC       In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C	Stop Bit	• 1	© 2	
Retry     2       Wait To Send     0       Bit / VCC     Ri     C       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	C NONE	ER(DTR/CTS)     C XON/XOFF	
Wait To Send 0 (ms) RI / VCC (RI O VCC In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C	Timeout	3 📫 (s	(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	n) 🛨 🛛	(ms)	
or VCC (5V Power Supply). If you use the Digital's RS232C	RI / VCC	RI	O VCC	
Isolation Unit, please select it to VCC. Default	or VCC (5V Power 3	Supply). If you use	e the Digital's RS232C	
Device-Specific Settings	Device-Specific Settings			
Allowable Number of Devices/PLCs 16				
Number         Device Name         Settings           3         1         PLC1         Image: Series=KOSTAC SG/SU/SZ Series,Station No=1		ame		

#### Device Setting

💣 Individual Dev	ice Settings	×
PLC1		
Series Please reconfirm all o you have changed th Station No	KOSTAC SG/SU/SZ Series of address settings that you ar e series.	
		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.

## 3.13 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.

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 Device 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	
3	OFF	
4	OFF	Child station No.: 1
5	OFF	
6	OFF	
7	OFF	1
8	OFF	Always OFF

## 3.14 Setting Example 14

- Settings of GP-Pro EX
- Communication Settings

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

Device	e/PLC 1		
Sumr	nary		Change Device/PLC
	Maker KOYO EL	ECTRONICS CO., I	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Comr	munication Settings		
	SIO Type	• RS232C	O RS422/485(2wire) O RS422/485(4wire)
	Speed	19200	•
	Data Length	O 7	© 8
	Parity	C NONE	○ EVEN
	Stop Bit	● 1	0 2
	Flow Control	C NONE	ER(DTR/CTS)     O XON/XOFF
	Timeout	3 🔹 (s	sec)
	Retry	2 🔹	
	Wait To Send	n) 🗧 🛛	ms)
	RI / VCC	• RI	O VCC
	In the case of RS23 or VCC (5V Power 9 Isolation Unit, please	Supply). If you use	st the 9th pin to RI (Input) a the Digital's RS232C Default
Devi	ce-Specific Settings		
	Allowable Number of [		16 📊
ſ	Number Device Na	me	Settings
	👗 1   PLC1		Series=DL-205/DL-405 Series,Station No=1

#### Device Setting

💣 Individual De	vice Settings	×				
PLC1	PLC1					
Series Please reconfirm al you have changed Station No	DL-205/DL-405 Series I of address settings that you ar the series.	▼ e using if				
		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.

Device/PLC 1		
Summary		Change Device/PLC
Maker KOYO E	LECTRONICS CO.	L, LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Settings		
SIO Type	C RS232C	RS422/485(2wire)
Speed	19200	
Data Length	O 7	© 8
Parity	O NONE	O EVEN O ODD
Stop Bit	€ 1	0 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
		ect the 9th pin to RI (Input)
	r Supply). If you us ase select it to VCC	se the Digital's RS232C C. Default
Device-Specific Settings		
Allowable Number o		16 11
Number Device N	Vame	Settings
👗 1 🛛 PLC1		Series=DL-205/DL-405 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	DL-205/DL-405 Series
Please reconfirm all of you have changed the	address settings that you are using if series.
Station No	1
	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.

# 3.16 Setting Example 16

- Settings of GP-Pro EX
- Communication Settings

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

Device	/PLC 1		
Summ	ary		Change Device/PLC
M	1aker KOYO EL	ECTRONICS CO.,	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
т	ext Data Mode	1 Change	
Comm	unication Settings		
	ilO Type	• RS232C	RS422/485(2wire)     RS422/485(4wire)
5	ipeed	19200	
D	)ata Length	O 7	© 8
P	Parity	O NONE	○ EVEN
S	itop Bit	● 1	0 2
F	'low Control	O NONE	ER(DTR/CTS)     O XON/XOFF
Т	imeout	3 📫 (s	sec)
R	letry	2 +	
V	Vait To Send	0 📑 (r	ms)
B	81 / VCC	• RI	O VCC
			st the 9th pin to RI (Input)
	or VCC (5V Power 9 Isolation Unit, please	Supply). If you use e select it to VCC.	e the Digital's RS232C Default
			Delauk
Device	e-Specific Settings		
	Ilowable Number of [		16 🔢
	Number Device Na	me	
d	1 PLC1		Series=DL-205/DL-405 Series,Station No=1

### ♦ Device Setting

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

💣 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 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

# 3.17 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 KOYO E	LECTRONICS CO.	, LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Text Data Mode	1 Change	
Communication Settings		
SIO Type	C RS232C	C RS422/485(2wire)  • RS422/485(4wire)
Speed	19200	
Data Length	0.7	© 8
Parity	O NONE	C EVEN  © ODD
Stop Bit	● 1	C 2
Flow Control	O NONE	ER(DTR/CTS)     C XON/XOFF
Timeout	3 🕂	(sec)
Retry	2 +	
Wait To Send	0 🕂	(ms)
BL/VCC	© BI	O Vec
In the case of RS2	232C, you can sele	ect the 9th pin to RI (Input)
or VCC (5V Power Isolation Unit, plea		e the Digital's RS232C Default
Device-Specific Settings		
Allowable Number of	Devices/PLCs	16 11
Number Device N		Settings
👗 1 🛛 PLC1		Series=DL-205/DL-405 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 Please reconfirm all o you have changed the Station No.	DL-205/DL-405 Series f address settings that you ar e series.	■ e using if
		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

# 3.18 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	e/PLC 1		
Sum	nary		Change Device/PLC
	Maker KOYO EL	ECTRONICS CO., I	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
	Text Data Mode	1 <u>Change</u>	
Comr	munication Settings		
	SIO Type	• RS232C	O RS422/485(2wire) O RS422/485(4wire)
	Speed	19200	•
	Data Length	O 7	© 8
	Parity	C NONE	○ EVEN
	Stop Bit	● 1	0 2
	Flow Control	C NONE	ER(DTR/CTS)     O XON/XOFF
	Timeout	3 🔹 (s	sec)
	Retry	2 🔹	
	Wait To Send	n) 🗧 🛛	ms)
	RI / VCC	• RI	O VCC
	In the case of RS23 or VCC (5V Power 9 Isolation Unit, please	Supply). If you use	st the 9th pin to RI (Input) a the Digital's RS232C Default
Devi	ce-Specific Settings		
	Allowable Number of [		16 📊
ſ	Number Device Na	me	Settings
	👗 1   PLC1		Series=DL-205/DL-405 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 D	evice 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	Baud fate 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.

### 3.19 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 KOYO	ELECTRONICS CO	D., LTD. Series KOSTAC/DL Series CCM SIO Port COM1
Text Data Mode	1 <u>Change</u>	
Communication Setting	18	
SIO Type	C RS232C	C RS422/485(2wire)
Speed	19200	
Data Length	O 7	© 8
Parity	O NONE	C EVEN    ODD
Stop Bit	● 1	O 2
Flow Control	C NONE	ER(DTR/CTS)     C XON/XOFF
Timeout	3 🕂	(sec)
Retry	2 🕂	1
Wait To Send	0 ÷	(ms)
RI / VCC	© RI	O VCC
or VCC (5V Pov	RS232C, you can sel wer Supply). If you u lease select it to VC(	lect the 9th pin to RI (Input) ise the Digital's RS232C C. Default
Device-Specific Settin	gs rofDevices/PLCs	16 11
	e Name	16 UL Settings
👗 1 🛛 PLC1		Series=DL-205/DL-405 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 Device Settings 🛛 🗙						
PLC1						
Series	DL-205/DL-405 Series	•				
Please reconfirm all you have changed th	of address settings that you are ne series.	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. 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.

### 3.20 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.

Devic	æ/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	C RS422/485(2wire) C RS422/485(4wire)
	Speed	19200	×
	Data Length	O 7	© 8
	Parity	C NONE	C EVEN  © ODD
	Stop Bit	● 1	© 2
	Flow Control	C 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
Dev	ice-Specific Settings		
	Allowable Number of		16 📊
	Number Device Na	ame	Settings
	🍈   '  PLUI		Series=DL-305 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 Please reconfirm all of you have changed the	DL-305 Series address settings that you ar	▼ e using if				
Station No						
		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	

### 3.21 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 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

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 Devid	e 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>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.

### 3.22 Setting Example 22

- Settings of GP-Pro EX
- Communication Settings

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

Device/	PLC 1			
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	• RS232C	C RS422/485(2wire) O RS422/485(4wire)	
S	peed	9600	<b>•</b>	
D	ata Length	O 7	© 8	
P	arity	O NONE	C EVEN C ODD	
S	top Bit	⊙ 1	O 2	
FI	low Control	O NONE	ER(DTR/CTS)     O XON/XOFF	
Ti	imeout	3 📫 (s	ec)	
R	etry	2 📫		
W	/ait To Send	n) 🗧 이	[21	
R	I/VCC	• BI	O VCC	
In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC. Default				
Device-Specific Settings				
	llowable Number of D		16 📷	
	Number Device Nat	me		
1	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 Device 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>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.

# 3.23 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		
Summ	hary		Change Device/PLC
N	Maker KOYO ELE	CTRONICS CO., L	LTD. Series KOSTAC/DL Series CCM SIO Port COM1
T	Fext Data Mode	1 Change	
Comm	nunication Settings		
9	610 Туре	RS232C	O RS422/485(2wire) O RS422/485(4wire)
9	Speed	19200	×
0	Data Length	O 7	© 8
F	Parity	O NONE	C EVEN  ODD
9	Stop Bit	⊙ 1	0 2
F	Flow Control	O NONE	ER(DTR/CTS)     O XON/XOFF
I	Fimeout	3 📫 (s	sec)
F	Retry	2 ÷	
١	Wait To Send	0 🔅 (m	ms)
F	RI / VCC	• BI	O VCC
	In the case of RS23 or VCC (5V Power S Isolation Unit, please	upply). If you use	st the 9th pin to RI (Input) e the Digital's RS232C Default
Devic	e-Specific Settings		
	Allowable 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 Device 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>D</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.

# 3.24 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			
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-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

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	<b>_</b>	
Please reconfirm all of address settings that you are using if you have changed the series.			
Station No	1 🛨		
		Default	
	OK ( <u>0)</u>	Cancel	

Use the 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 10)

# 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.				
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.	
TimeoutUse an integer from "1 to 127" to enter the time (s) for which the Display waits for response from the External Device.		

Continued to next page.

Setup Items	Setup Description	
Retry In case of no response from the External Device, use an integer from "0 to 255" to e how many times the Display retransmits the command.		
Wait To SendUse an integer from "0 to 255" to enter the standby time (ms) from when the 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 in from [Device-Specific Settings] of [Device/PLC Settings] to add External Devices.

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

Setup Items	Setup Description	
Series	Select the 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 "Off-line Mode"
- The number of the setup items to be displayed for 1 page in the off-line mode depends on the Display in use. Please refer to the Reference manual for details.

### Communication Settings

To display the setting screen, touch [Device/PLC Settings] from [Peripheral 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	s 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 • NONE • 1 FER(DTR/C	<u> </u>	• ODD
	Exit		Back	2007/06/14
	Exit		Rack	16:00:19

Setup Items	Setup Description		
	Select the SIO type for communicating with the External Device.		
SIO Type	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.		

Continues to the next page.

Setup Items	Setup Description
Parity	Select how to check parity.
Stop Bit	Select stop bit length.
Flow Control	Select the communication control method to prevent overflow of transmission and reception data.
Timeout	Use an integer from "1 to 127" to enter the time (s) for which the Display waits for the response from the External Device.
Retry	In case of no response from the External Device, use an integer from "0 to 255" to enter how many times the Display retransmits the command.
Wait To Send	Use an integer from "0 to 255" to enter 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	/SU/SZ Series 1 ▼	
	5.11	[]		2007/06/14
	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	s CCM SIO		[COM1]	Page 1/1
	the 9th pin Power Suppl	• RI of RS232C, you to RI(Input) or y).If you use th ation Unit, plea	• VCC(5V e Digital's	
4	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.

NOTE

• GP-4100 series do not have the [Option] setting in the off-line mode.

# 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
GP3000 (COM1) ST (COM1) IPC <sup>*1</sup> PC/AT	1A	User-created cable	Cable length: 15m or less
GP-4105 (COM1)	1B	User-created cable	

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

■ IPC COM Port (page 7)

1A)

	Di D-Sub 9	isplay pin (socket)	Chield		al Device 5 pin (plug)
	Pin	Signal name	Shield [	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)	$\neg \land \land \neg \dashv \neg$	7	SG
	8	CS(CTS)	┥ <u>ヽヽ</u>		FG

1B)

	Display side Terminal block	Shield		al Device 5 pin (plug)
	Signal name	Shield	Pin	Signal name
Display	RD(RXD)		2	TXD
	SD(TXD)		3	RXD
	ER(DTR)		4	RTS
	SG -	L•	5	CTS
	RS(RTS)	┓\ <u>\</u>	7	SG
	CS(CTS)	┙╰ <u>┈╲</u> ┏╧──┤		FG

### Cable Diagram 2

Display (Connection Port)		Cable	Remarks
GP3000 <sup>*1</sup> (COM1) AGP3302B (COM2) ST <sup>*2</sup> (COM2) IPC <sup>*3</sup>	2A COM port conversion adapter by Digital Electronics Corp. CA3-ADPCOM-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + User-created cable		
	2B	User-created cable	
GP3000 <sup>*4</sup> (COM2)	2C	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less
	2D	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + User-created cable	
GP-4106 (COM1)	2E	User-created cable	

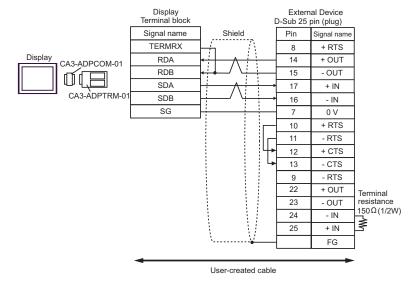
\*1 All GP3000 models except AGP-3302B

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

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

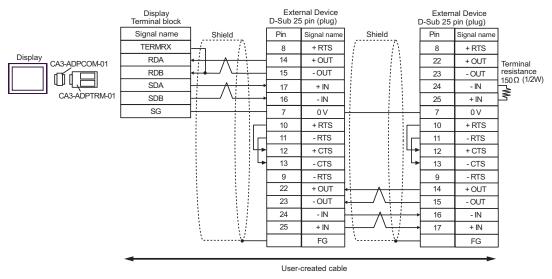
### 2A)

• 1:1 Connection



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

• 1:n Connection

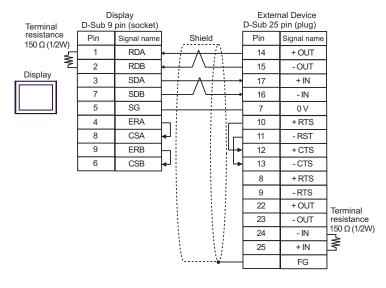


NOTE

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

#### 2B)

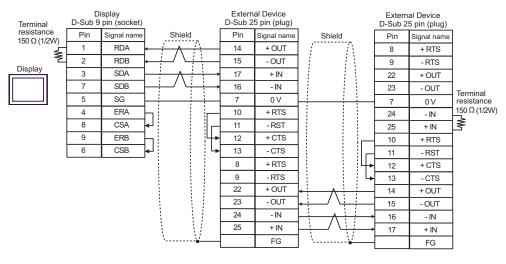
1:1 Connection



NOTE

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

• 1:n Connection

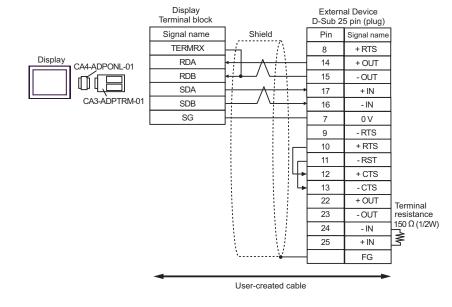




- Connect a 150  $\!\Omega$  termination resistor to the +IN and -IN that are not used.

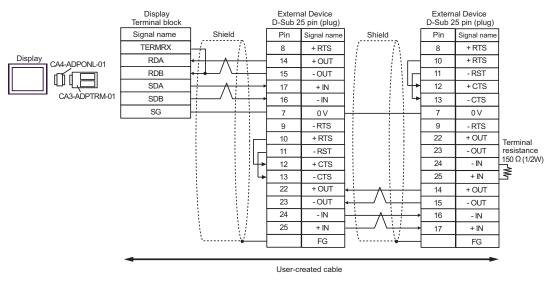
#### 2C)

• 1:1 Connection



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

• 1:n Connection

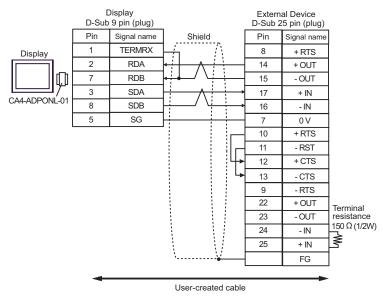


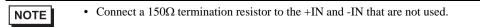
NOTE

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

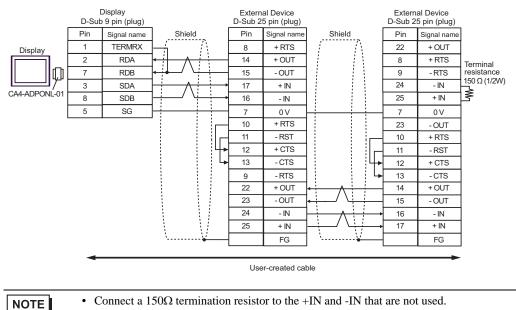
### 2D)

• 1:1 Connection



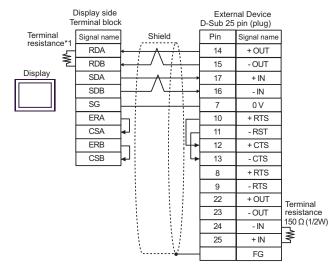


• 1:n Connection



2E)

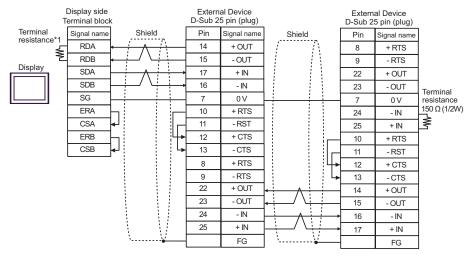
• 1:1 Connection



NOTE

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

#### 1:n Connection



NOTE

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

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

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

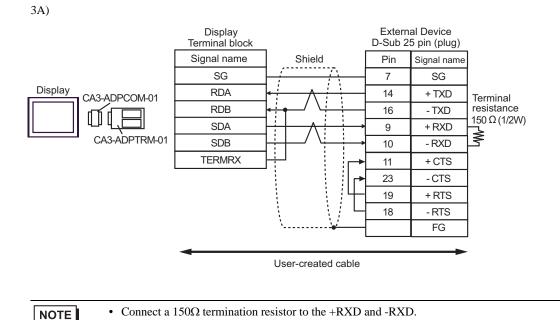
### Cable Diagram 3

Display (Connection Port)	Cable		Remarks
GP3000 <sup>*1</sup> (COM1) AGP3302B (COM2) ST <sup>*2</sup> (COM2) IPC <sup>*3</sup>	3A	COM port conversion adapter by Digital Electronics Corp. CA3-ADPCOM-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + User-created cable	
	3B	User-created cable	
GP3000 <sup>*4</sup> (COM2)	3C	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less
	3D	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + User-created cable	
GP-4106 (COM1)	3E	User-created cable	

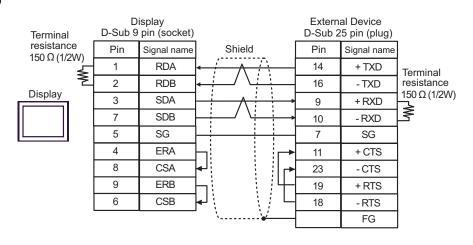
\*1 All GP3000 models except AGP-3302B

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

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

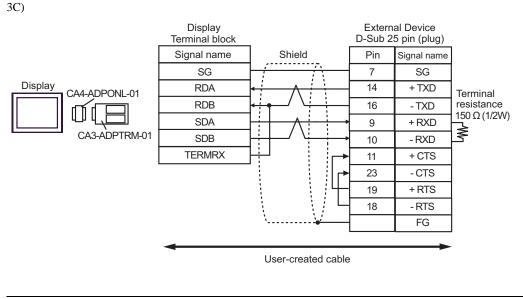


3B)



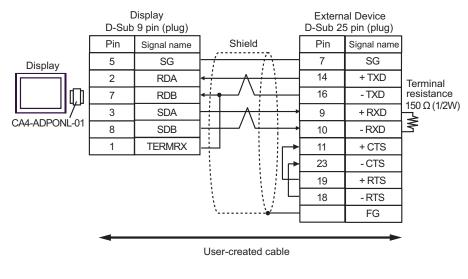
NOTE

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



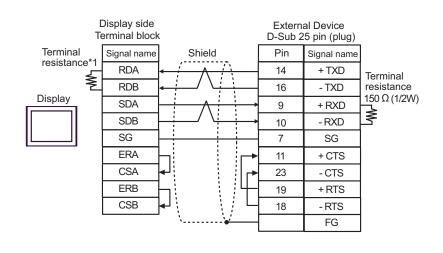
NOTE	• Connect a 150 $\Omega$ termination resistor to the +RXD and -RXD.
------	---------------------------------------------------------------------

3D)



NOTE

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



NOTE

3E)

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

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

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

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Display (Connection Port)		Cable	Remarks
GP3000 (COM1) ST (COM1) IPC <sup>*1</sup> PC/AT	4A	User-created cable	Cable length: 15m or less
GP-4105 (COM1)	4B	User-created cable	

4A)

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

4B)

	Display side Ferminal bloc	k		al Device ar 6 pin
	Signal name	Shield	Pin	Signal name
Display	RD(RXD)	<u>← / / / / / / / / / / / / / / / / / / /</u>	4	TXD
	SD(TXD)		3	RXD
	ER(DTR)		2	+ 5V
	SG		1	0V
	RS(RTS)	$h \in \{i\}$	5	RTS
	CS(CTS)	<b>↓</b> ``` <del>\*'</del>	6	0V

Display (Connection Port)		Cable	Remarks
GP3000 (COM1) ST (COM1) IPC <sup>*1</sup> PC/AT	5A	User-created cable	Cable length: 3m or less
GP-4105 (COM1)	5B	User-created cable	

5A)

	D D-Sub 9	isplay 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)	┝┛╲╶┊╱┊		
	Shell	FG	<u></u>		

5B)

٦	Display side Ferminal blocl	κ.		al Device Ilar 6 pin
	Signal name	Shield	Pin	Signal name
Display	RD(RXD)		4	TXD
	SD(TXD)		3	RXD
	SG		1	SG
	ER(DTR)			
	RS(RTS)			
	CS(CTS)	<b>↓</b>		
		``` <u>`</u>		

Display (Connection Port)		Cable	Remarks
GP3000 (COM1) ST (COM1) IPC <sup>*1</sup> PC/AT	6A	User-created cable	Cable length: 15m or less
GP-4105 (COM1)	6B	User-created cable	

6A)

Display D-Sub 9 pin (socket)			H Shield		al Device sy 15 pin (plug)
	Pin	Signal name	Shield	Pin	Signal name
	2	RD(RXD)	$\leftarrow$	2	TXD
Display	3	SD(TXD)		3	RXD
	4	ER(DTR)		4	RTS
	5	SG	<b>L</b>	5	CTS
	7	RS(RTS)		7	SG
	8	CS(CTS)			FG

6B)

	Display side 「erminal bloc	k	Н		al Device sy 15 pin (plug
	Signal name	Shield		Pin	Signal name
Display	RD(RXD)		_	2	TXD
	SD(TXD)		→	3	RXD
	ER(DTR)		Ч	4	RTS
	SG	$\vdash$	4	5	CTS
	RS(RTS)	$\neg $	-	7	SG
	CS(CTS)	┝┛╵┈┈┶┷──	-		FG

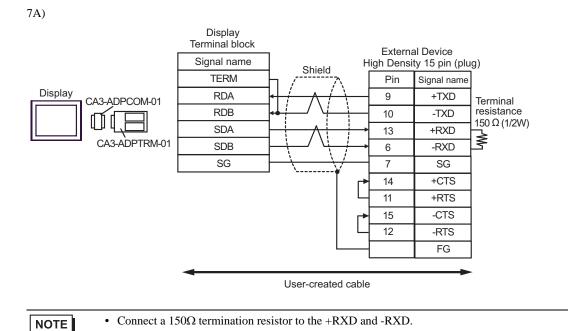
Display (Connection Port)		Cable	Remarks
GP3000 <sup>*1</sup> (COM1) AGP-3302B (COM2) ST <sup>*2</sup> (COM2) IPC <sup>*3</sup>	7A	COM port conversion adapter by Digital Electronics Corp. CA3-ADPCOM-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + User-created cable	
	7B	User-created cable	
GP3000 <sup>*4</sup> (COM2)	7C	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + Connector terminal block conversion adapter by Digital Electronics Corp. CA3-ADPTRM-01 + User-created cable	Cable length: 600m or less
	7D	Online adapter by Digital Electronics Corp. CA4-ADPONL-01 + User-created cable	
GP-4106 (COM1)	7E	User-created cable	

\*1 All GP3000 models except AGP-3302B

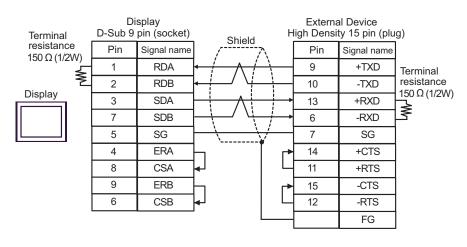
\*2 All ST models except AST-3211A and AST-3302B

\*3 Available only with the COM ports that support RS-422/485 (4wire). <sup>™</sup> IPC COM Port (page 7)

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

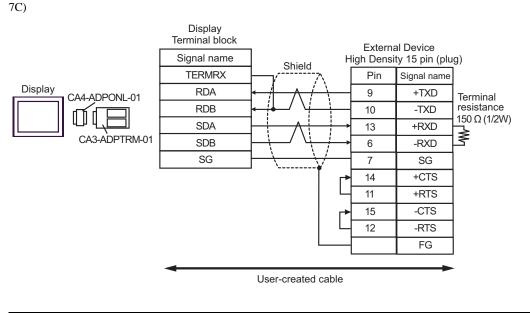


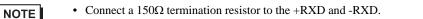
7B)



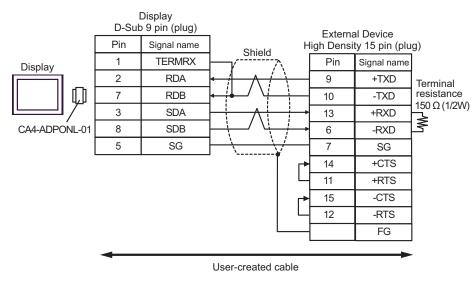
NOTE

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



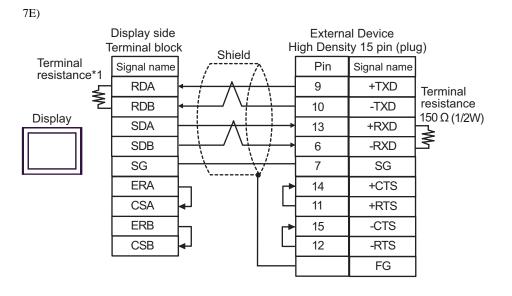


7D)



NOTE

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



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

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

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

# 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.

### 6.1 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		<u>ост</u> <b>8</b> ] *1
Output Relay	Q0000 - Q1777	R40500 - R40577		oct <b>8</b> ] *1
All Station Transmission Relay (Input)	GI0000 - GI3777	R40000 - R40177		<sup>(0</sup> تعم) *۱
Special Station Transmission Relay (Output)	GQ0000 - GQ3777	R40200 - R40377		oct <b>8</b> ] *1
Internal Relay	M0000 - M3777	R40600 - R40777		<u>ост</u> <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> <b>8</b> *1
Stage	S0000 - S1777	R41000 - R41077		oct <b>8</b> ] *1
Timer (Elapsed Value)	-	R0000 - R0377		<u>ост 8</u> ]
Counter (Elapsed Value)	-	R1000 - R1377		οcτ <b>8</b> ]
Data Register 1	-	R400 - R777		ост 8] <u>ві</u> т15]
Data Register 2	-	R1400 - R7377		ост <b>8</b> ] ві t
Special Register	-	R7400 - R7777	Í	ост <b>8</b> ] <u>ві т</u> 15]
Data Register 3	-	R10000 - R37777		ост <b>8</b> ] <u>ві</u> t15]

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

#### 6.2 **KOSTAC SU Series**

SU-5/5E/6 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		oct <b>8</b> ] *1
Internal Relay	M0000 - M0737	R40600 - R40635		oct <b>8</b> ] *1
Special Relay	SP000 - SP137 SP320 - SP617	R41200 - R41205 R41215 - R41230	rL/H)	<u>ост</u> <b>8</b> ] *1
Timer (Contact)	T000 - T177	R41100 - R41107		oct <b>8</b> ] *1
Counter (Contact)	C000 - C177	R41140 - R41147		oct <b>8</b> ] *1
Stage	S0000 - S0577	R41000 - R41027		oct <b>8</b> ] *1
Timer (Elapsed Value)	-	R0000 - R0177		<u>oct</u> 8]
Counter (Elapsed Value)	-	R1000 - R1177		0cT <b>8</b> ]
Data Register	-	R1400 - R7377		ост <b>8</b> ] ві t <b>15</b> ]
Special Register <sup>*2</sup>	-	R7400 - R7777	ĺ	ост 8) <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.

\*2 Data cannot be written.

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

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

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

NOTE

#### ■ SU-6B/6B-C 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		oct <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)	oct <b>8</b> ] *1
Counter (Contact)	C000 - C177	R41140 - R41147		oct <b>8</b> ] *1
Stage	S0000 - S1777	R41000 - R41077		oct <b>8</b> ) *1
Timer (Elapsed Value)	-	R0000 - R0377		oct 8
Counter (Elapsed Value)	-	R1000 - R1177		ост <b>8</b> ]
Data Register	-	R1400 - R7377		ост <b>8</b> ] ві t <b>15</b> ]
Special Register <sup>*2</sup>	-	R700 - R737 R7400 - R7777	ſ	oct 8] Bit 15]
Extension Register	-	R10000 - R17777		ост 8] <u>ві</u> т15]

E

\*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.

NOTE

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

SU-5M/5M-C/6M/6M-C 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
Link Relay/Link Input	GI0000 - GI3777	R40000 - R40177		oct <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		oct <b>8</b> ] *1
Timer (Contact)	T000 - T377	R41100 - R41117	[L/H]	oct <b>8</b> ] *1
Counter (Contact)	C000 - C377	R41140 - R41157		oct <b>8</b> ] *1
Stage	S0000 - S1777	R41000 - R41077		<u>○○□</u> *1
Timer (Elapsed Value)	-	R0000 - R0377		<u>ост</u> 8]
Counter (Elapsed Value)	-	R1000 - R1377		<u>007</u> 8]
Data Register	-	R1400 - R7377		
Special Register <sup>*2</sup>	-	R700 - R777 R7400 - R7777		oct 8] BIT15]
Extension Register	-	R10000 - R36777		ост 8) віt15)

E

\*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.

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

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

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

NOTE

### 6.3 KOSTAC SZ Series

Device Bit Address Word Address 32 bit Remarks <u>ост</u> **8**1 \*1 Input Relay 10000 - 10477 R40400 - R40423 oct **8**) \*1 **Output Relay** Q0000 - Q0477 R40500 - R40523 <u>ост</u>8) \*1 Internal Relay M0000 - M0377 R40600 - R40617 SP000 - SP137 R41200 - R41205 <u>ост</u>8) \*1 Special Relay SP540 - SP617 R41226 - R41230 <u>ост</u>**8**] \*1 Timer (Contact) T000 - T177 R41100 - R41107 rL/H) ост**8**] \*1 Counter (Contact) C000 - C177 R41140 - R41147 <u>ост</u>**8**] \*1 Stage S000 - S777 R41000 - R41037 ост 8] Timer (Elapsed Value) R000 - R177 Counter (Elapsed ост 8] R1000 - R1177 Value) R2000 - R3777 ост 8] ві (15) Data Register \_ ост 8] ві (15) Special Register R7746 - R7777 \_

\*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 "LS Area (Direct Access Method)"

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

#### 6.4 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		oct <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	- 115	oct <b>8</b> ] *1
Counter (Contact)	C000 - C177	R41140 - R41147	[L/H]	oct <b>8</b> ] *1
Stage	S0000 - S1777	R41000 - R41037		oct <b>8</b> ] *1
Timer (Elapsed Value)	-	R00000 - R41177		<u>ост</u> <b>8</b> ]
Counter (Elapsed Value)	-	R01000 - R41147		<b>8</b> 100
Data Register	-	R1400 - R7377 R10000 - R17777		ост <b>8</b> ] ві (15)
Special Register	-	R41200 - R41237	ĺ	ост <b>8</b> ] ві t15]

\*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 "LS Area (Direct Access Method)"

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

### 6.5 KOSTAC SR Series

Device **Bit Address** Word Address 32 bit Remarks 000 - 157 R000 - R014 **Ο**ςτ**8**] ÷ 2]<sup>\*1</sup> I/O Relay 700 - 767 R070 - R076 (first half 1 byte) 160 - 377 R016 - R036 <u>○ ○ ⊤ 8</u>] ÷ 2] \*1 Internal Relay 770 - 777 R076 (latter half 1 byte) րե/H) [÷**2**] \*1 ост**8**] Shift Register 400 - 577 R040 - R056 Timer/Counter **○**□□⊤**8**] ÷ **2**] \*1 600 - 677 R060 - R066 (Contact) Timer/Counter ост 8] R600 - R677 (Elapsed Value) <u>ост</u>8] <u>ві</u>т15] Data Register R400 - R576 ( ÷ 2

\*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 "LS Area (Direct Access Method)"

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

### 6.6 DL-205 Series

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		<u>oct</u> <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> 1
Counter (Elapsed Value)	-	V1000 - V1177		OCT 8
Data Register	-	V2000 - V3777		ост <b>8</b> ] <u>ві</u> t15]
Special Register	-	V7746 - V7777	Ī	ост <b>8</b> ] <u>ві</u> t15]

Г

\*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 "LS Area (Direct Access Method)"

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

### 6.7 DL-305 Series

Device	Bit Address	Word Address	32 bit	Remarks
I/O Relay	000 - 157 700 - 767	V000 - V014 V070 - V076 (first half 1 byte)		<u>○c⊤</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>○ст</u> 8] ÷2] <sup>*1</sup>
Timer/Counter (Contact)	600 - 677	V060 - V066		<u>○ст</u> 8] ÷2] <sup>*1</sup>
Timer/Counter (Elapsed Value)	-	V600 - V677		<u>∞ст</u> 8] ÷2]
Data Register	-	V400 - V576		<u>₀₅⊤8</u> ) <u>⊪⊤15</u> ) ÷2)

Г

\*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 "LS Area (Direct Access Method)"

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

### 6.8 DL-405 Series

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]	[oc⊤ <b>8</b> ] *1
Counter (Contact)	CT000 - CT177	V41140 - V41147		<u>○○□</u> *1
Stage	S0000 - S1777	V41000 - V41077		<u>○○□</u> *1
Timer (Elapsed Value)	-	V0000 - V0377		oct <b>8</b> ]
Counter (Elapsed Value)	-	V1000 - V1177		00T 8
Data Register 1	-	V400 - V777		ост <b>8</b> ] <u>ві 1</u> 5]
Data Register 2	-	V1400 - V7377		ост 8] ві 15
Special Register	-	V7400 - V7777	[	ост <b>8</b> ] ві т
Data Register 3	-	V10000 - V37777		ост <b>8</b> ] ві (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.

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

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

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

"Manual Symbols and Terminology"

NOTE

#### 6.9 Direct Logic 05 Series

: This address can be specified as system data area.

Device	Bit Address	Word Address	32 bit	Remarks
Input Relay	I0000 - I0377	R40400 - R40417		<u>oct</u> 8] *1
Output Relay	Q0000 - Q0377	R40500 - R40517		<u>oct</u> 8] *1
Internal Relay	M0000 - M0777	R40600 - R40637		<u>oct</u> 8] *1
Special Relay	SP000 - SP777	R41200 - R41237		<u>○○□</u> *1
Timer (Contact)	T000 - T177	R41100 - R41107		<u>oct</u> 8] *1
Counter (Contact)	C000 - C177	R41140 - R41147	[L/H]	<u>oct</u> 8] *1
Stage	S000 - S377	R41000 - R41017		<u>oct</u> 8] *1
Timer (Elapsed Value)	-	R000 - R177		<u>ост</u> <b>8</b> ]
Counter (Elapsed Value)	-	R1000 - R1177		<u>ост</u> <b>8</b> ]
V-Memory	-	R1200 - R7377		ост 8) ві t15) *2
V-Memory Nonvolatile	-	R7400 -R7577		oct 8] BI (15)
System Parameter	-	R7600 - R7777		<u>ост</u> 8ј <u>вт</u> 15ј

Г

\*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 "LS Area (Direct Access Method)"

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

#### 6.10 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 - R41077	[L/H]	oct <b>8</b> ] *1
Timer (Elapsed Value)	-	R000 - R377		<b>8</b> T 20
Counter (Elapsed Value)	-	R1000 - R1177		<u>ост</u> 8]
V-Memory	-	R0400 - R0677 R1200 - R7377 R10000 - R17777		ост <b>8</b> ) (Вн <b>15)</b> *2
V-Memory Nonvolatile	-	R7400 -R7577		<u>∞≂⊤8</u> ] <u>в⊤1</u> 5]
System Parameter	-	R700 - R777 R7600 - R7777 R36000 - R37777		<u>∞∝⊤8</u> ] <u>в⊤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.

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

NOTE	•	Please refer to the GP-Pro EX Reference Manual for system data area.
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- Cf. GP-Pro EX Reference Manual "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 divided by 2
Internal Relay (R076)			
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)	/V		
I/O Relay (V070 - V076)			
Control Relay (V016 - V036)		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/NAK 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>