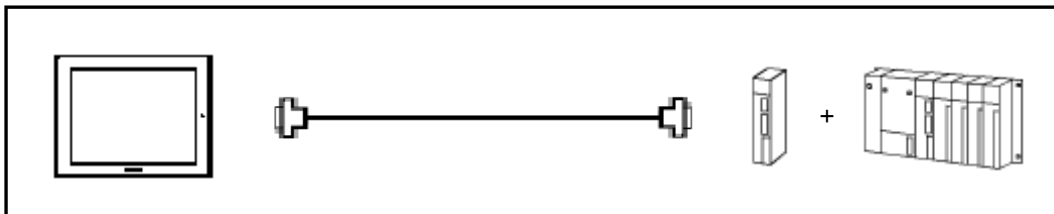


OMRON Corporation PLC

SYSMAC C Series Connection

System Structure



GP

Machine 	Model	Remark
GP	GP70 Series GP77/77R Series GP2000 Series	Excepting for handy types.
GLC	GLC2000 Series	

PLC

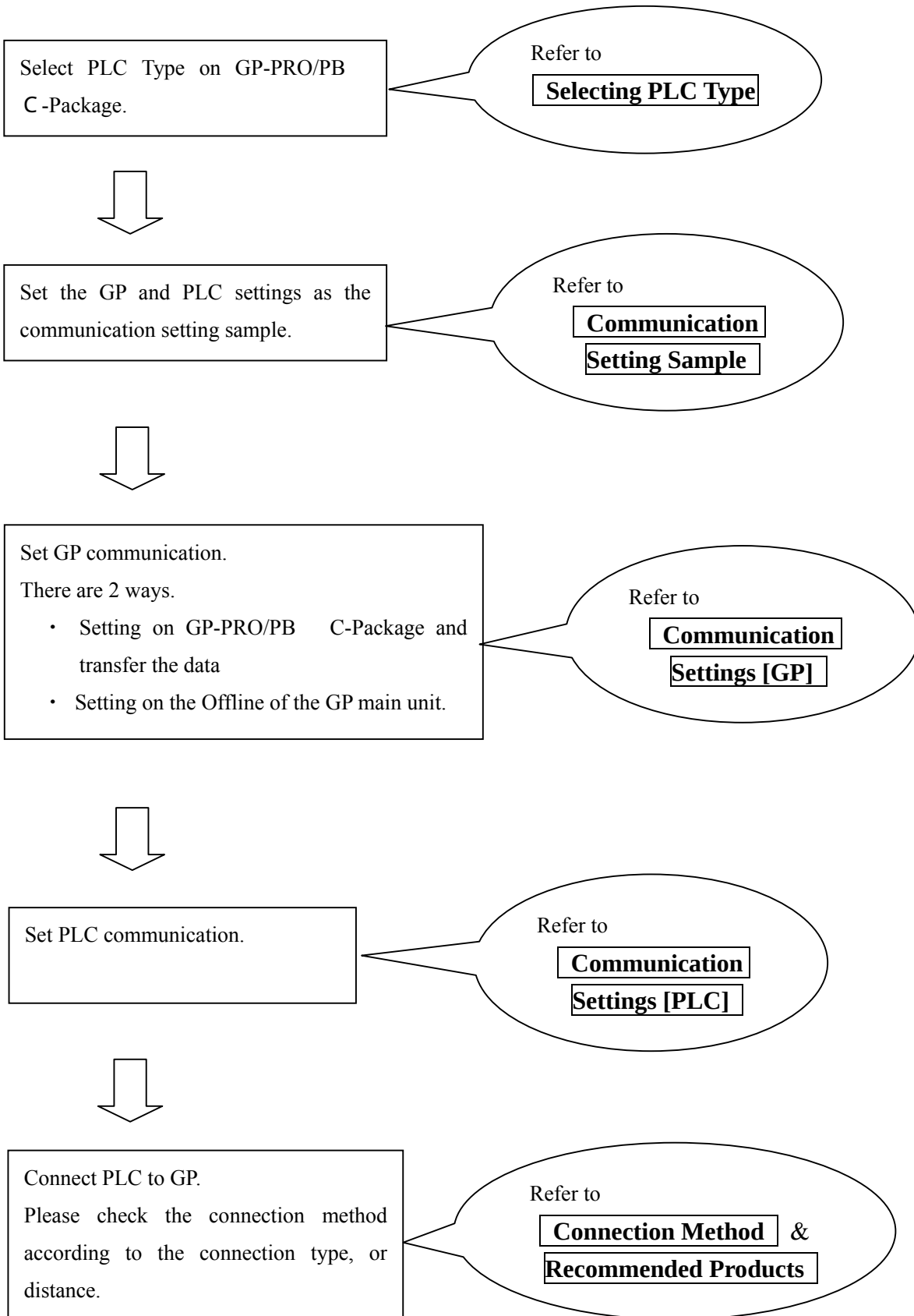
CPU 	Host Link Interface 	Communication Method	Connection Cable 	GP 
C200H	C200H-LK201 *1	RS-232C	Connection Method [2]	
	C120-LK201-V1 *2			
C200HS	C200H-LK202 *1	RS-422	Connection Method [3]	
	C120-LK202-V1 *2			
	C200H-LK201 *1	RS-232C	Connection Method [2]	
	C120-LK201-V1 *2			
C200HS	C200H-LK202 *1	RS-422	Connection Method [3]	
	Link I/F on CPU Unit *3		Connection Method [1]	

*1 Base installation type

*2 CPU installation type

*3 Connect to RS-232C Port

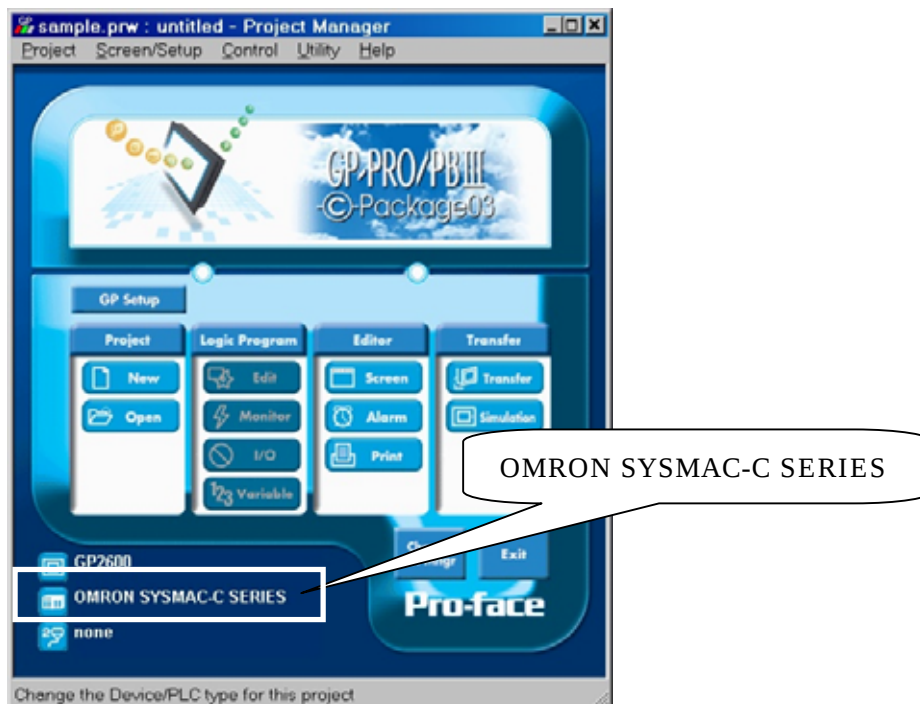
Procedure to Connect PLC



Selecting PLC Type

Start up GP-PRO /PBIII.

Select the following PLC Type when creating the project file.



Communication Setting Sample

■ SYSMAC-C Series

GP Setup		PLC Setup	
Baud Rate	19200bps	Baud Rate	19200bps
Data Length	7 bits	Data Length	7 bits
Stop Bit	2 bits	Stop Bit	2 bits
Parity Bit	Even	Parity Bit	Even
Data Flow Control	ER Control		
Communication Format (RS-232)	RS-232C	Communication Format *1	RS-232C
Communication Format (RS-422)	4 Line	Communication Format *1	RS-422
		Command Level *1	Level 1,2,and 3 are valid.
		Relation *1	1 to n
		5V Power Supply *1	No
		CTS Setup *1	Normally ON
		Mode Setup *2	Host Link
Unit No.	0	Station Number	0

*1 This setup is unavailable for the RS-232C port of C200HS.

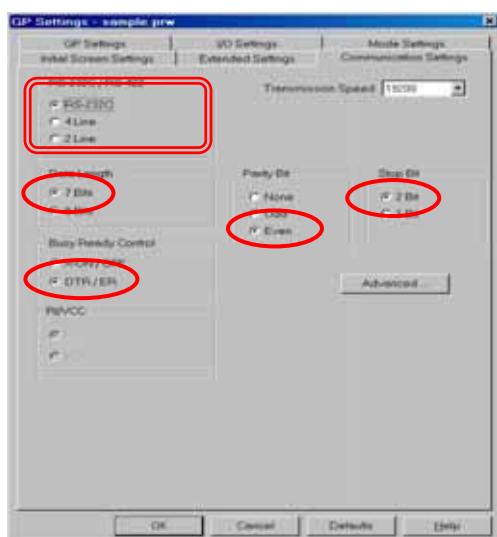
*2 This setup is available only for the RS-232C port of C200HS.

Communication Settings [GP]

1. [GP-PRO/PB C-Package Setting]

Select [GP Setup] on Project Manager.

1) Communication Settings

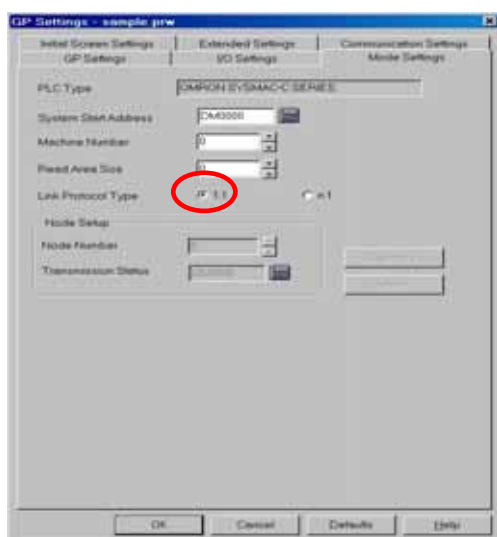


1) Communication Settings

Transmission Speed: 19200bps
Data Length: 7 Bits
Stop Bit: 2 Bits
Parity Bit: Even
Busy Ready Control: DTR / ER
RS-232C/ RS-422
RS-232C Connection: RS-232C
RS-422 Connection: 4 Line

* Select one in .

2) Mode Settings



2) Mode Settings

System Start Address: Arbitrary Address
Machine Number: 0
Link Protocol Type: 1:1

Select [Transfer] --> [Setup] --> [Transfer Settings].

3) Transfer Settings

Transfer Settings

Send Information

- ☒ Download Information
- ☒ GP System Screen
- ☐ Filing Data(CF card)
- ☐ Data Trans Func CSV Data(CF card)

Transfer Method

- ☒ Send All Screens
- ☐ Automatically Send Changed Screens
- ☐ Send User Selected Screens

Transfer Mode

- ☒ Preparation for a transfer and a transfer are made simultaneous.
- ☐ It is transferred after preparation for a transfer is finished.

Setup

- ☒ Automatic Setup
- ☐ Force System Setup
- ☐ Do NOT Perform Setup

Use Extended Program :

- ☒ Simulation

System Screen

Setup CFG file :

- ☒ English
- ☐ Japanese
- ☐ Selection

Communications Port

- ☒ COM
 - Comm Port: COM1
 - Baud Rate: 115.2K (bps)
 - Retry Count: 5
- ☐ Ethernet
 - IP Address: 0. 0. 0. 0
 - Port: 8000
- ☐ Ethernet: Auto Acquisition
- ☐ Memory Loader

OK Cancel Help

3) Transfer Settings GP System Settings: Checked

Transfer to GP after settings completed.

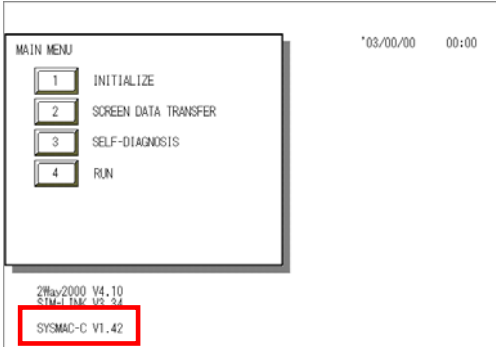
2. [GP Settings]

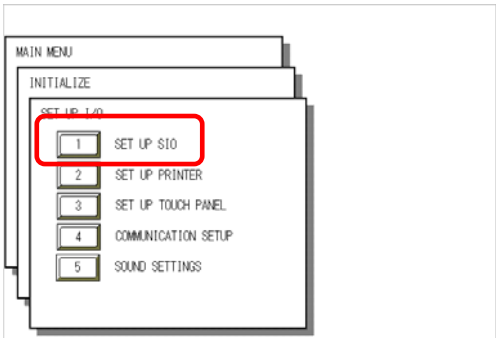
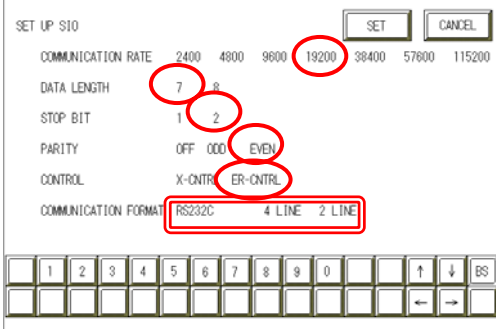
- Displaying Setting Screen -

Touch the top left of the screen within 10 second after powering on.

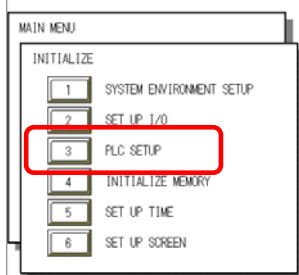
Or touch the top right and the bottom right of the screen at the same time. Keep 2 points touched and touch the bottom left. The menu bar will display on the bottom of the screen.

Then touch [Offline].

	1) Checking GP Type If you have selected OMRON SYSMAC-C Series, following will be shown. “SYSMAC-C”
---	--

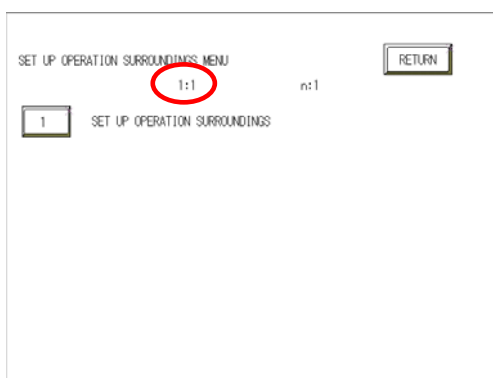
2) Communication Settings 	2) Communication Settings <pre> [MAIN MENU] ↓ [INITIALIZE] ↓ [SET UP I/O] ↓ [SET UP SIO] </pre>
	Communication Rate: 19200bps Data Length: 7 Bits Stop Bit: 2 Bits Parity: Even Control: ER Cntrl Communication Format RS-232C Connection: RS-232C RS-422 Connection: 4 Line * Select one in .

3) Setting up Operation Surroundings

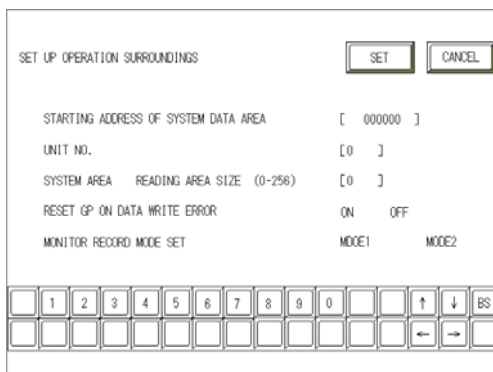


3) Setting up Operation Surroundings

[MAIN MENU]
↓
[INITIALIZE]
↓
[PLC SETUP]
↓
[PLC SETUP]



SET UP OPERATION SURROUNDINGS MENU:
1:1



Starting Address of System Data Area:
Arbitrary Address
Unit No.: 0

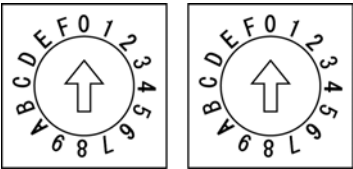
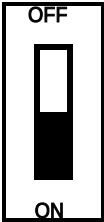
Communication Settings [PLC]

1. RS-232C Port on CPU Unit

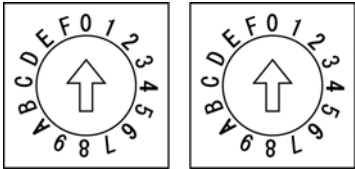
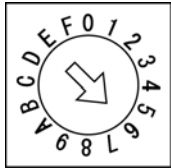
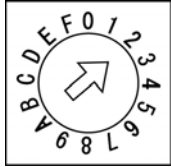
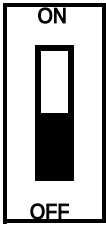
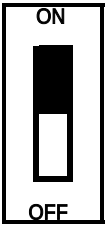
Word Address	Value	Setting Contents
DM6645	0001 (HEX)	Depending on the settings of DM6646 Mode Setup: Host Link
DM6646	0304 (HEX)	Baud Rate: 19200bps Data Length: 7 Bits Stop Bit: 2 Bits Parity Bit: Even
DM6648	0000 (HEX)	Host Link Station No. Settings: Station No. 0

* Please make sure to turn OFF the mode setup switch SW5 on the CPU unit.

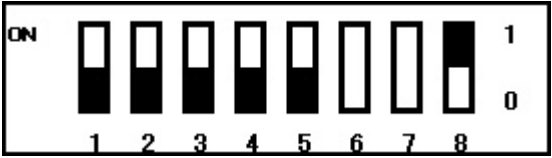
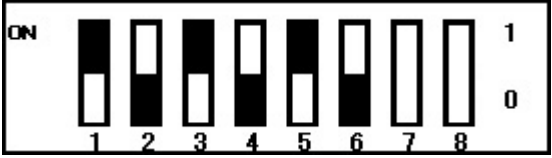
2. Host Link Unit C200H-LK201

<u>1) Front Switch Settings</u> SW1 SW2  SW3  SW4 	<u>1) Front Switch Settings</u> 0: Station No. Settings (× 10) 0: Station No. Settings (× 1) 6: Baud Rate Settings (19200bps) 2: (Parity/Data/Stop Bit Settings) Parity Bit: Even Data Bit: 7 Bits Stop Bit: 2 Bits
<u>2) Back Dipswitch Settings</u> <u>Set the switches to the black.</u> 	<u>2) Back Dipswitch Settings</u> SW1: Unused SW2: Unused SW3 (Relation): 1 to n SW4 (5V Power Supply): No
<u>3) CTS Switch Settings</u> 	<u>3) CTS Switch Settings</u> ON (Turning CTS ON)

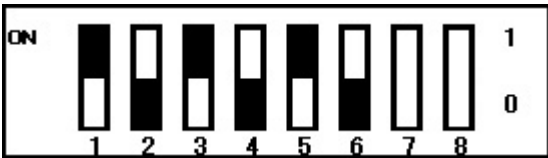
3. Host Link Unit C200H-LK202

<u>1) Front Switch Settings</u> SW1 SW2  SW3  SW4 	<u>1) Front Switch Settings</u> 0: Station No. Settings (× 10) 0: Station No. Settings (× 1) 6: Baud Rate Settings (19200bps) 2: (Parity/Data/Stop Bit Settings) Parity Bit: Even Data Bit: 7 Bits Stop Bit: 2 Bits
<u>2) Relation Switch Settings</u> 	<u>2) Relation Switch Settings</u> OFF (1 to n Relation)
<u>3) Termination Resistance Connection Switch Settings</u> 	<u>3) Termination Resistance Connection Switch Settings</u> ON (With Termination Resistance)

4. Host Link Unit C120-LK201-V1

<u>1) Dipswitch 1 Settings</u> <u>Set the switches to the black.</u> 	<u>1) Dipswitch 1 Settings</u> SW1 – 5 (Station No.): 0 SW6 – 7: Unused SW8 (Run/Stop): Run
<u>2) Dipswitch 2 Settings</u> <u>Set the switches to the black.</u> 	<u>2) Dipswitch 2 Settings</u> SW1 – 4 (Baud Rate): 19200bps SW5: Unused SW6 (Relation): 1 to n SW7 – 8 (Level Settings): Level 1, 2, and 3 are valid.
<u>3) Dipswitch 3 Settings</u> <u>Set the switches to the black.</u> 	<u>3) Dipswitch 3 Settings</u> SW1 – 2 (CTS Signal): Always ON SW3 – 6 (Sync): Internal Sync SW7 – 8: Unused

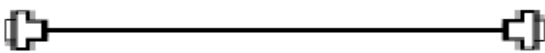
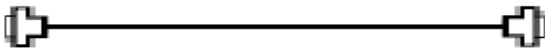
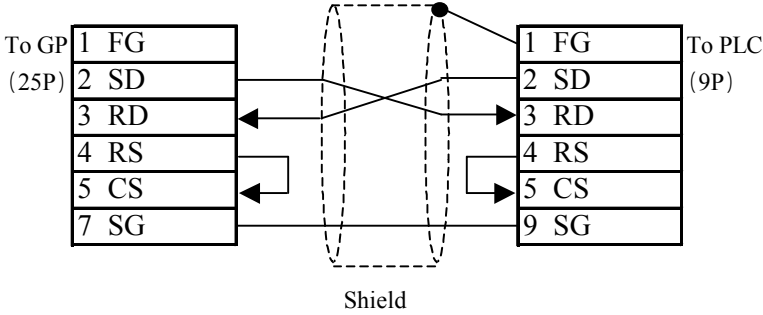
5. Host Link Unit C120-LK202-V1

<u>6) Dipswitch 1 Settings</u> <u>Set the switches to the black.</u> 	<u>6) Dipswitch 1 Settings</u> SW1 – 5 (Station No.): 0 SW6 – 7: Unused SW8 (Run/Stop): Run
<u>2) Dipswitch 2 Settings</u> <u>Set the switches to the black.</u> 	<u>2) Dipswitch 2 Settings</u> SW1 – 4 (Baud Rate): 19200bps SW5: Unused SW6 (Relation): 1 to n SW7 – 8 (Level Settings): Level 1, 2, and 3 are valid.
<u>3) Dipswitch 3 Settings</u> <u>Set the switches to the black.</u> 	<u>3) Dipswitch 3 Settings</u> SW1 – 6 (Terminal Resistance): On SW7 – 8: Unused

Connection Method

1. RS-232C Connection

[RS-232C Port on CPU Unit]

Type	Connection Method	Distance
Using GP000-IS03-MS		3m
Using XW2Z-200S or XW2Z-500S by OMRON		2m 5m
Creating Cable		Within 15m

NOTE

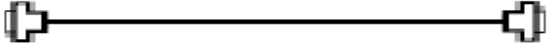
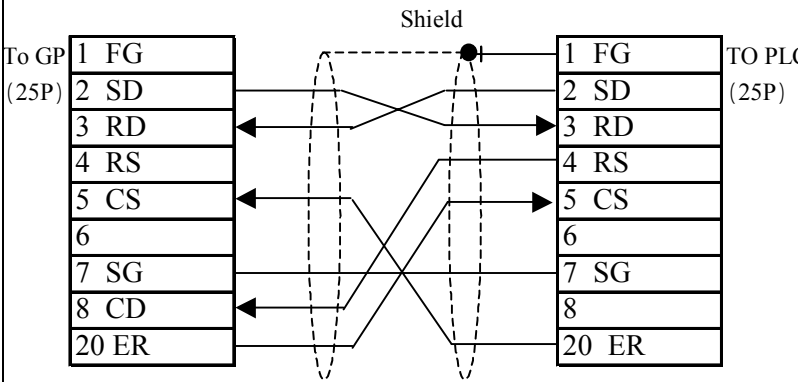
While the above connection diagram differs slightly from the OMRON XW2Z-200S (2m) and XW2Z-500S (5m) RS-232C cables, the system will operate correctly using this design.

Recommended Products

Connector/Cover for GP	D-sub 25 pin Plug	XM2A-2501 <OMRON Co.>
	Cover for D-sub 25 pin	XM2S-2511 <OMRON Co.>
	Jack Screw	XM2Z-0071 <OMRON Co.>
Cable	H-9293A (CO-HC-ESV-3P*7/0.2) <Hirakawa Hewtech Corp.>	
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45	

2. RS-232C Connection

[RS-232C Port on C200H-LK201 / C120-LK201-V1]

Type	Connection Method	Distance
Using GP410-IS00-O		5m
Creating Cable		Within 15m

NOTE

The option cable GP410-IS00-O is 5m. If you need a longer cable or shorter, please use a User-Created cable to connect.

Recommended Products

Connector/Cover for GP	D-sub 25 pin Plug	XM2A-2501	<OMRON Co.>
	Cover for D-sub 25 pin	XM2S-2511	<OMRON Co.>
	Jack Screw	XM2Z-0071	<OMRON Co.>
Cable	H-9293A (CO-HC-ESV-3P*7/0.2) <Hirakawa Hewtech Corp.>		
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45		

3. RS-422 Connection

[C200H-LK202 / C120-LK202-V1]

Type	Connection Method	Distance
Using GP230-IS11-O		5m
Using GP070-CN10-O		Within 500m
Creating Cable		Within 500m



- * Turn on the termination resistance switch on the PLC.
- * Names of Signal A and Signal B are opposite on the GP and the PLC.
- * One each of the connector and connector hood, listed below, are included with the CV500 / CV1000 CPU unit. Only these connectors listed below can be used.

Connector XM2A-0901

Connector Hood XM2S-0901

NOTE

- * When connecting the #9 and #10 pin on the GP Serial I/F, a termination resistance of 100Ω is added between RDA and RDB.

Recommended Products

Connector/Cover for GP	D-sub 25 pin Plug	XM2A-2501	<OMRON Co.>
	Cover for D-sub 25 pin	XM2S-2511	<OMRON Co.>
	Jack Screw	XM2Z-0071	<OMRON Co.>
Cable	H-9293A (CO-HC-ESV-3P*7/0.2) <Hirakawa Hewtech Corp.>		
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45		