Pro-face

Digital
Human Machine Interface

Device/PLC Connection Manuals

About the Device/PLC Connection Manuals

Prior to reading these manuals and setting up your device, be sure to read the "Important: Prior to reading the Device/PLC Connection manual" information. Also, be sure to download the "Preface for Trademark Rights, List of Units Supported, How to Read Manuals and Documentation Conventions" PDF file. Furthermore, be sure to keep all manual-related data in a safe, easy-to-find location.
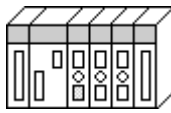
2.15 IDEC

2.15.1 System Structure

The following describes the system structure for connecting the GP to IDEC PLCs.

▼Reference▲ *The* Cable Diagrams *mentioned in the following tables are listed in the section titled "2.15.2 Cable Diagrams".*

■ FA Series (using Link I/F)

CPU	Link I/F	Cable Diagram	Cables	GP
	Serial Interface Module			
PF3S-CP12, PF3S-CP13	PF3S-SIF2	RS-232C (Cable Diagram 1)	IDEC Corp.'s PF3S-KS1 *1	GP Series
	PF3S-SIF4	RS-422 (Cable Diagram 2)		

*1 Due to the size of its connector, this cable cannot be used for GP-270, GP-370, GP-377,GP-377R and GP-2300 series.
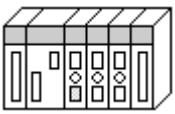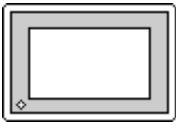
Note:
• **After powering up, it takes about 1 second to enter RUN mode when the *memory pack* capacity of the PF3S-SIF2(4) is 1K *step*, and it takes about 4 seconds when the memory pack capacity is 4K step. As a result, the GP Start Time setup needs to be set for these situations.**

▼Reference▲ *About the GP Start Time setup, refer to each GP Series User Manual, " System Environment Setup"*

• **Wherever RS-422 appears, RS-485 can be substituted on the PLC.**

■ **FA Series** (CPU Direct Connection)

CPU[1]	Adapter[2]	Cable Diagram	Cables	GP
PF2-CPU1, PF2-CPU5M, PF2J-CPU1, PF3S-CP11, PF3S-CP12, PF3S-CP13	PF2-CLA PFA-1U51	RS-232C (Cable Diagram 3)	IDEC Corp.'s PFA-1A52 shaped computer cable [3]	GP Series
	PFJ-U21	RS-422 (Cable Diagram 4)		

1 Connect to the programming loader port.

2 It is necessary to connect the programming loader port and the adapter with Izumi PFA link cable PFA-1A51(30cm). Diagram below

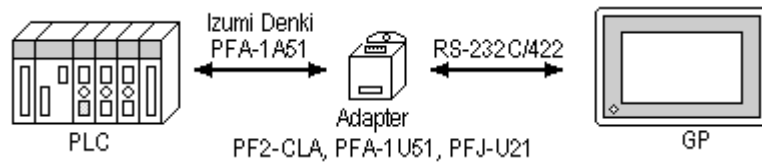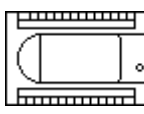*3 Due to the size of its connector size, this cable cannot be used for GP-270, GP-370 ,GP-377 and GP-377R series.*

■ **MICRO³** (CPU Direct Connection)

CPU	Adapter	Cable Diagram	Cables	GP
MICRO³			PC Link I/F cable [1] [2] FC2A-KC1	GP Series
	PC I/F Unit FC2A-LC1 [3]	RS-422 (Cable Diagram 5)		

1 Use Izumi exclusive PC interface cable as the communication cable.

2 When using the PC I/F cable FC2A-KC1, the GP side becomes RS-232C SIO.

3 Izumi PC Link I/F cable—FC2A-KC3—is necessary when connecting the PC I/F Unit—FC2A-LC1—and the PLC. Diagram below
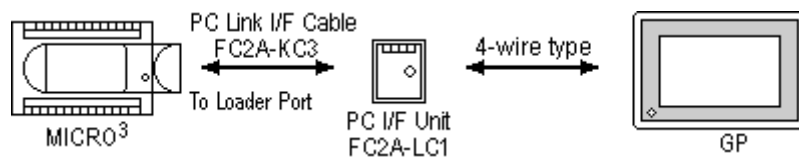
Note: **Places noted as RS-422 can also use RS-485 on the PLC side.**

■ MICROSmart FC4A Series (All-In-One Type)

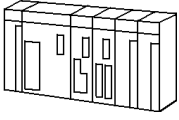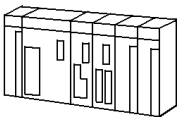| CPU	Link I/F	Cable Diagram	Cables	GP/GLC
FC4A-C10R2B FC4A-C16R2B FC4A-C24R2B	Port 1 on CPU module	RS-232C <Cable Diagram 6>	IDEC Corporation FC2A-KP1C (2.4m) [2] FC4A-KC2C (5m) [3]	GP or GLC Series
	FC4A-PC1 (Mini DIN type) [1]	RS-232C <Cable Diagram 7>		
	FC4A-PC3 (Terminal type) [1]	RS-422 <Cable Diagram 8>		
	FC4A-PC2 (Mini DIN type) [1]	RS-422 <Cable Diagram 9>	IDEC Corporation HG9Z-XC135	

*1 Connect to Port 2 Connector.

*2 The connector for the GP unit must be created.

*3 This cable has the connector for the GP unit.

■ MICROSmart FC4A Series (Slim Type)

CPU	Link I/F	Cable Diagram	Cables	GP/GLC
FC4A-D20K3 FC4A-D20S3 FC4A-D20RK1 FC4A-D20RS1 FC4A-D40K3 FC4A-D40S3	Port 1 on CPU module	RS-232C <Cable Diagram 6>	IDEC Corporation FC2A-KP1C (2.4m) [2] FC4A-KP2C (5m) [3]	GP or GLC Series
	FC4A-PC1 (Mini DIN type) [4]	RS-232C <Cable Diagram 7>		
	FC4A-PC3 (Terminal type) [4]	RS-422 <Cable Diagram 8>		
	FC4A-PC2 (Mini DIN type) [4]	RS-422 <Cable Diagram 9>	IDEC Corporation HG9Z-XC135	
	FC4A-HPC1 (Mini DIN Type) [1]	RS-232C <Cable Diagram 7>	IDEC Corporation FC2A-KP1C (2.4 m) [2] FC4A-KP2C (5 m) [3]	
	FC4A-HPC2 (Terminal Type) [1]	RS-422 <Cable Diagram 8>		
	FC4A-HPC3 (Mini DIN Type) [1]	RS-422 <Cable Diagram 9>	IDEC Corporation HG9Z-XC135	
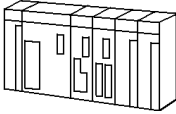
*1. Connect to Port 2 Connector.

*2. The connector for the GP unit must be created.

*3. The connector for the GP unit will not need to be created.

*4. The HMI base module (model FC4A-HPH1) is required.

■OpenNet Controller FC3 Series

CPU	Link I/F	Cable Diagram	Cables	GP/GLC
FC3A-CP2K FC3A-CP2S	RS-232C Port 1 on CPU module	RS-232C <Cable Diagram 7>	IDEC Corporation HG9Z-XCM12 (2m) FC2A-KP1C (2.4m) [*1] FC4A-KC2C (5m) [*2]	GP or GLC Series
	RS-232C Port 2 on CPU module			
	RS-485 Port on CPU module	RS-422 <Cable Diagram 10>		

*1 The connector for the GP unit must be created.

*2 This cable has the connector for the GP unit.

2.15.2 **Cable Diagrams**

The cable diagrams illustrated below and the cable diagrams recommended by IDEC Corp. may differ; however, using these cables for your PLC operations will not cause any problems.

Careful! *Ground your PLC's FG terminal according to your country's applicable standard. For details, refer to the corresponding PLC manual.*

Important
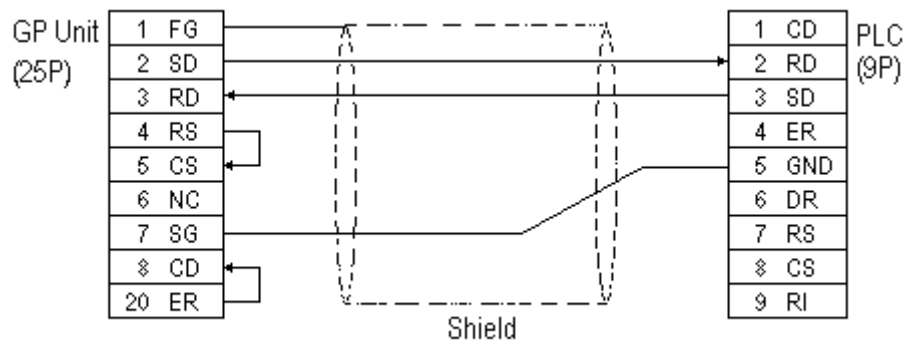- **Connect the FG line of the Shield cable to either the GP or PLC, depending on your environment settings. When using a connector hood *and grounding the FG line, be sure to use an electrical conductor.***
- **If a communications cable is used, it must be connected to the SG (signal ground).**

Cable Diagram 1 (RS-232C)

Important
- **Be sure the RS-232C cable length is 15m or less.**

Cable Diagram 2 (RS-422)

• When using Digital's RS-422 connector terminal adapter, GP070-CN
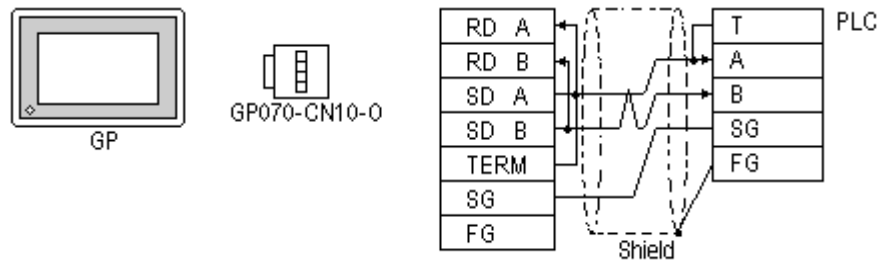
• When using Digital's RS-422 Cable, GP230-IS11-0

• When making your own cable connections

Note:
• **When making your own connections, we recommend using Hitachi Densen's CO-SPEV-SB(A)3P*0.5SQ twist pair cable.**

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

• **For the RS-422 connection, refer to IDEC's PLC manual for the cable length.**

Cable Diagram 3 (RS-232C)

Cable Diagram 4 (RS-422)

• When using Digital's RS-422 connector terminal adapter, GP070-CN10-0

• When using Digital's RS-422 Cable, GP230-IS11-0

• When making your own cable connections

Note:
When connecting the #9 and #10 pins in the GP Serial I/F, a termination resistance of 100Ω is added between RDA and RDB.
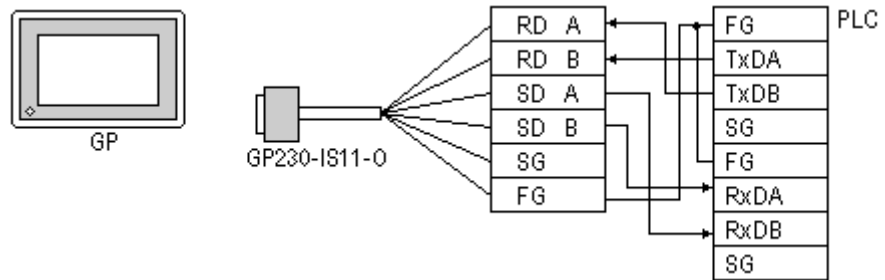
• **For the RS-422 connection, refer to IDEC's PLC manual for the cable length.**
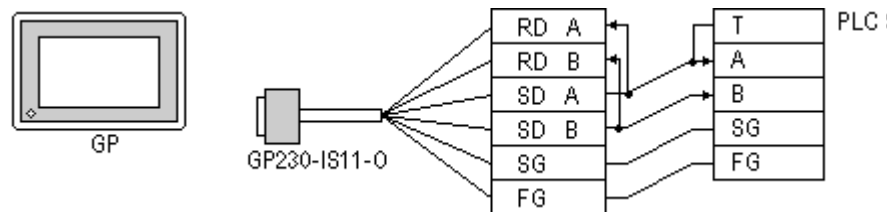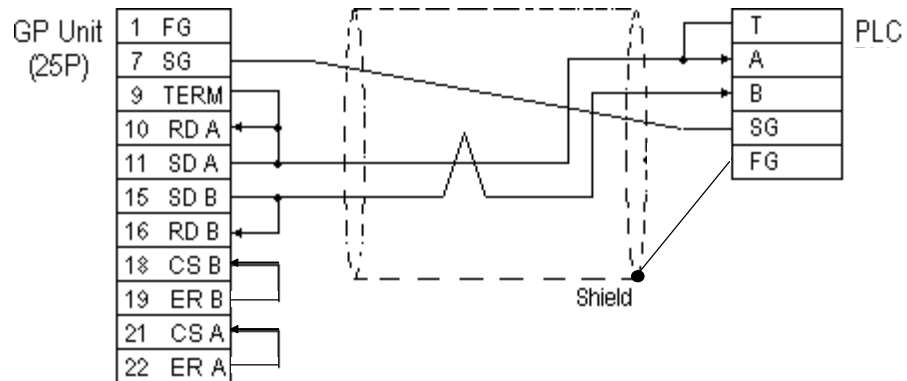
Cable Diagram 5 (RS-422)

• When using Digital's RS-422 connector terminal adapter, GP070-CN10-0
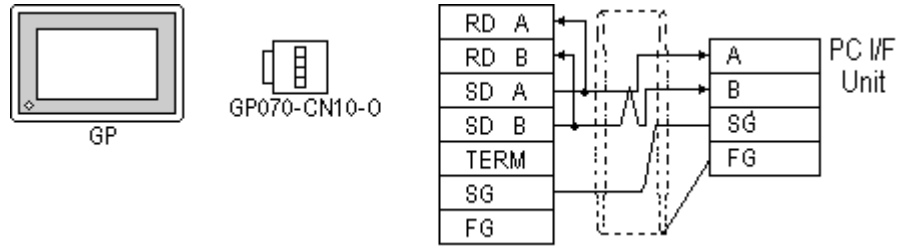
• When using Digital's RS-422 Cable, GP230-IS11-0

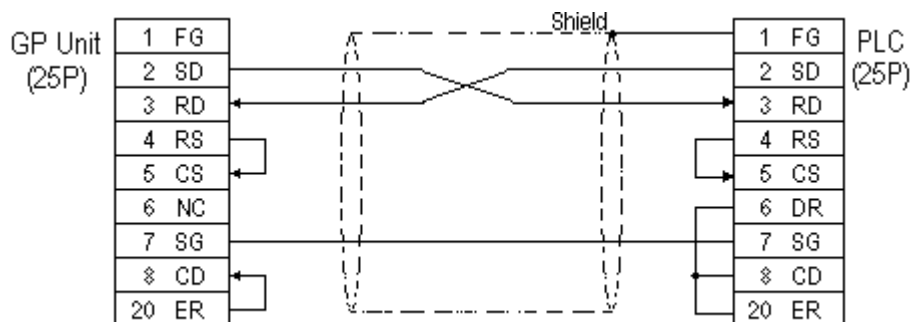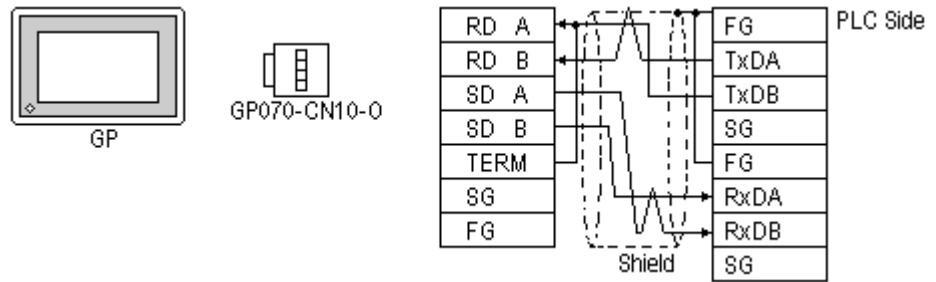• When making your own cable connections

Note:
- **When connecting the #9 and #10 pins in the GP Serial I/F, a termination resistance of 100Ω is added between RDA and RDB.**
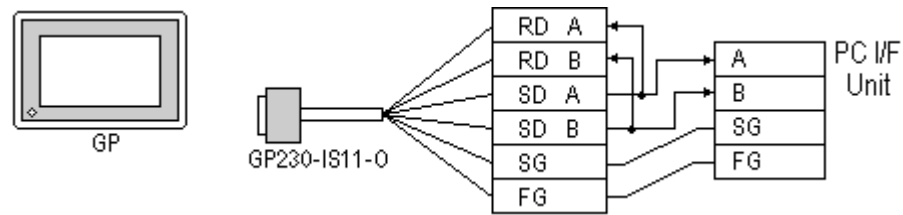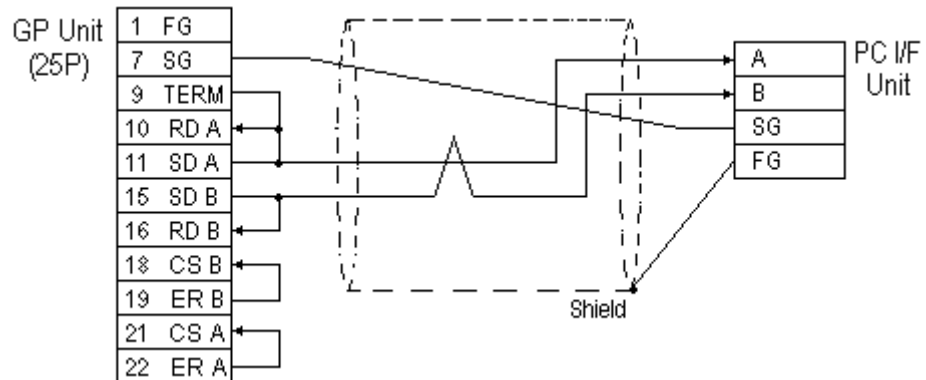
- **For the RS-422 connection, refer to IDEC's PLC manual for the cable length.**
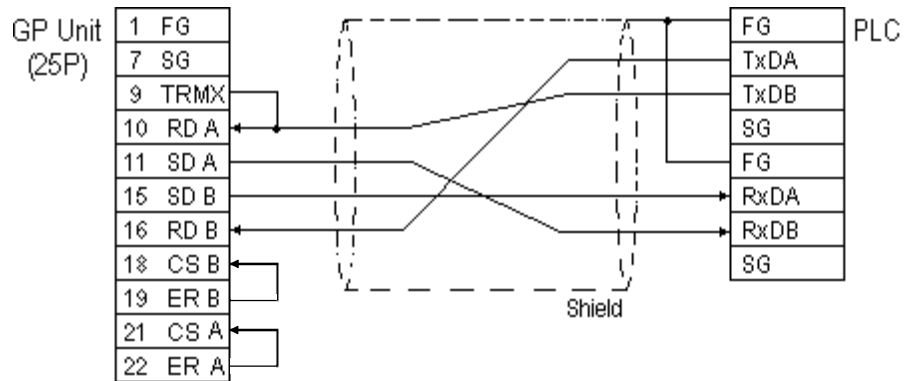
Cable Diagram 6 (RS-232C)

⚠️ *Important*

• *For RS-232C communication format, use IDEC Corporation Communication Cable.*

• *When connecting the cable more than 5m, use RS-422 communication format.*

▼*Reference* ◢ *Cable Diagram 8.*

• Using IDEC Corporation Communication Cable (model:FC2A-KP1C)>

The GP's Dsub 25-pin connector must be created by the user. Be sure to make your own cable as shown below.

Mini DIN8 Pin

Dsub25-pin Connector (male)

GP				Pin No	Name	Color	
	1	FG		Cover	Shield	-	
(25P)	2	SD		1	RS	Black	PLC
	3	RD		2	ER	Yellow	
	4	RS		3	SD	Blue	(Mini DIN8 Pin)
	5	CS		4	RD	Green	
	6	NC		5	DR	Brown	
	7	SG		6	CMSW	Gray	
	8	CD		7	SG	Red	
	20	ER		8	NC	White	
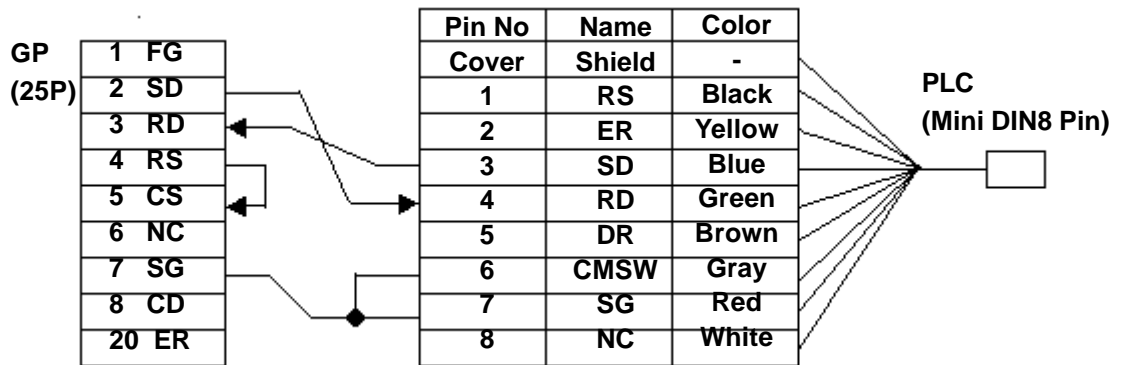
Cable Diagram 7 (RS-232C)

⚠️
Important

- **For RS-232C communication format, use IDEC Corporation Communication Cable.**

- **When connecting the cable more than 5m, use RS-422 communication format.**

◤Reference◢ *Cable Diagram 8 for MICROSmart FC4A Series, or Cable Diagram 10 for OpenNet Controller FC3 Series.*

• Using IDEC Corporation Communication Cable (model:FC2A-KP1C)

The GP's Dsub 25-pin connector must be created by the user. Be sure to make your own cable as shown below.

Mini DIN8 Pin

Dsub25-pin Connector (male)

GP (25P)		Pin No.	Name	Color	PLC (Mini DIN8 Pin)
1	FG	Cover	Shield	-	
2	SD	1	RS	Black	
3	RD	2	ER	Yellow	
4	RS	3	SD	Blue	
5	CS	4	RD	Green	
6	NC	5	DR	Brown	
7	SG	6	SG	Gray	
8	CD	7	SG	Red	
20	ER	8	NC	White	
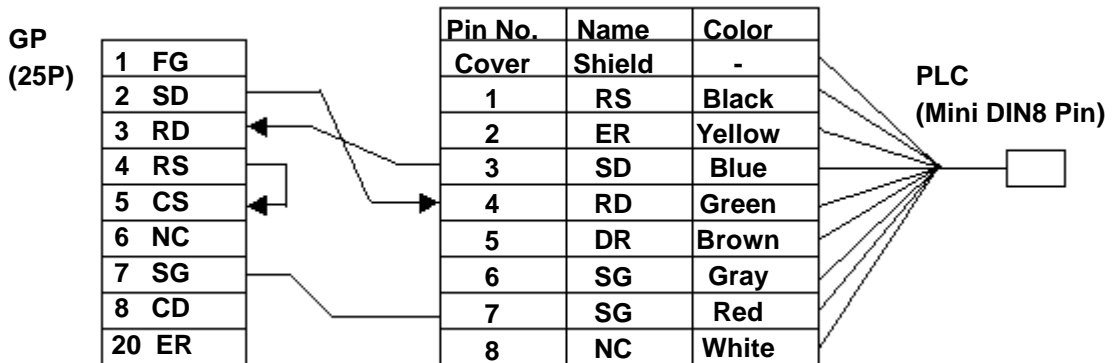
Cable Diagram 8 (RS-422, 2-wire type)

⚠
Important

- **• *Use the following cable for the MICROSmart RS-485 Communication Board FC4A-PC3 (Terminal type):***

  Coaxial Twisted pair wire

- **• *All RS-422 cables should be no more than 200 meters long.***

- **• *When using RS-422 communication format, be sure not to connect the termination resistance. If you do, the GP will not work properly.***

• Using Pro-face RS-422 connector terminal adaptor GP070-CN10-0
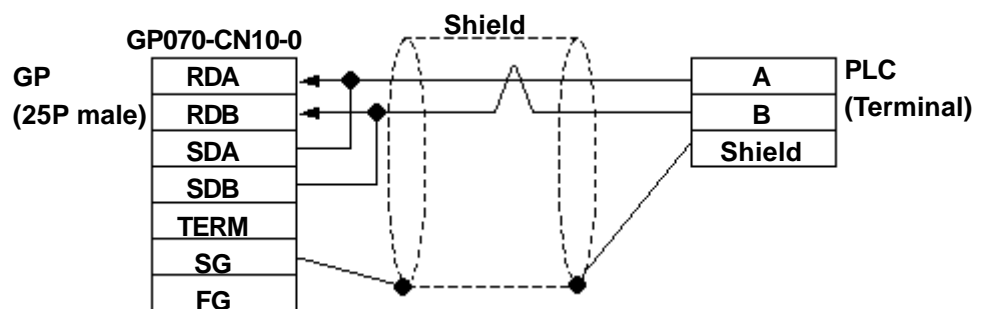
• When making your own cables
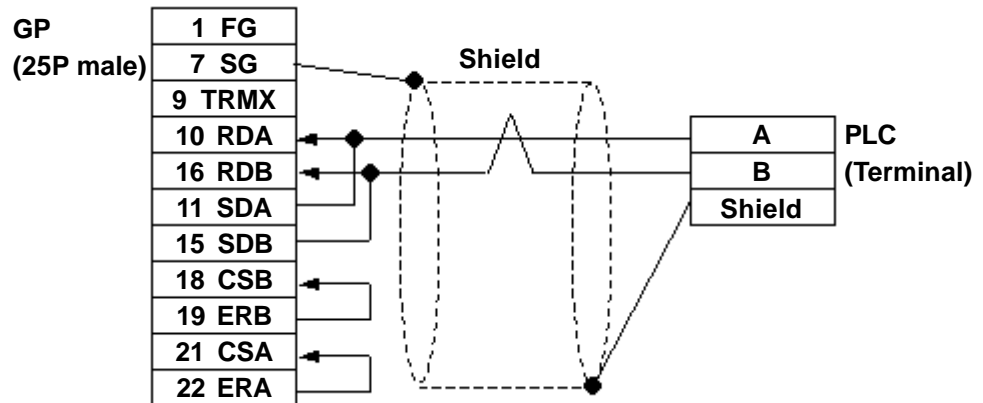
Cable Diagram 9 (RS-422, 2-wire type)

⚠️
Important

• *When using RS-422 communication format, be sure not to connect the termination resistance. If you do, the GP will not work properly.*

• Using IDEC Corporation cable HG9Z-XC135

HG9Z-XC135 (Y Terminal)

GP070-CN10-0

GP
(25P male)

Pin No.	Name
1	A (SDA)
2	B (SDB)
3	A (RDA)
4	B (RDB)
5	SG
6	FG

RDA
RDB
SDA
SDB
TERM
SG
FG

PLC
Mini DIN8 Pin

Note:

• **The PLC side connector's No. 1 and No. 3 pins, and No. 2 and No. 4 pins, respectively, are connected internally.**

• **Since the HG9Z-XC135 cable's No. 2 and No. 3 terminals cannot be used, be sure to wrap them with insulating tape.**

Cable Diagram 10 (RS-422, 2-wire type)

⚠
!
Important

- *Recommended cable for OpenNet Controller RS-485 Port:*

  Twisted pair wire with ϕ 0.9 Shield

- *All RS-422 cables should be no more than 200 meters long.*

- *When using RS-422 communication format, be sure not to connect the termination resistance. If you do, the GP will not work properly.*

• Using Pro-face RS-422 connector terminal adaptor GP070-CN10-0
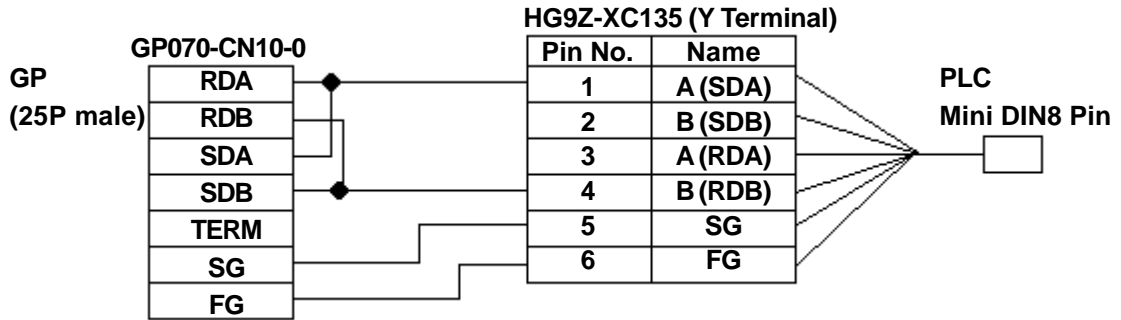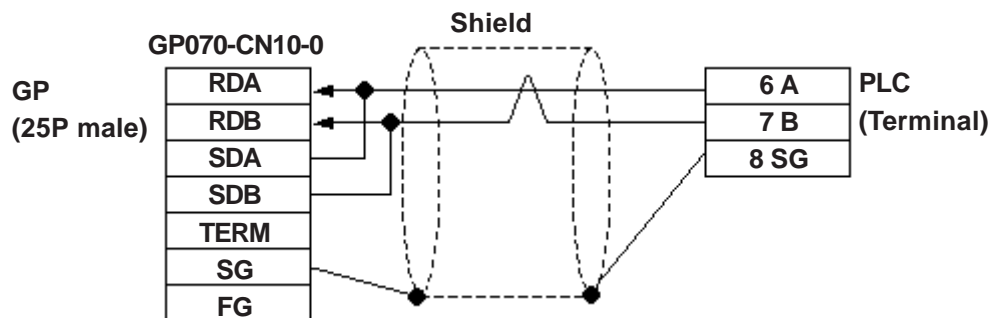

• When making your own cable
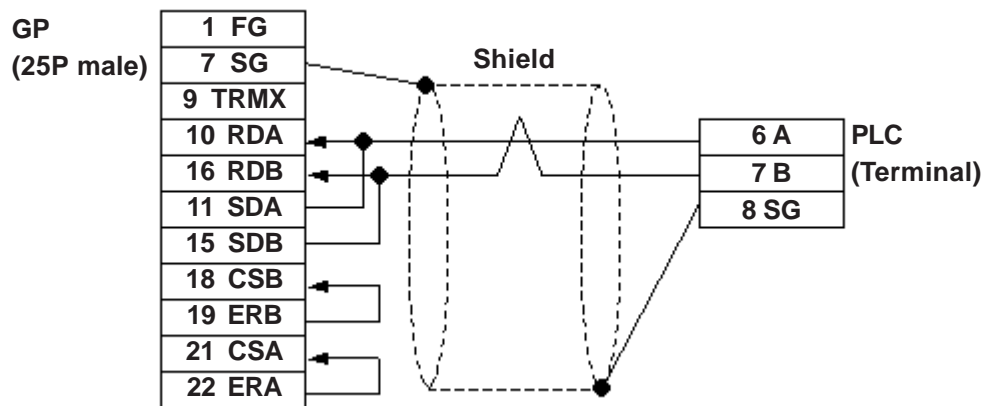
2.15.3   Supported Devices

The following describes the range of devices supported by the GP.

■ FA Series

<div align="right">☐ Setup System Area here.</div>

Device	Bit Address	Word Address	Particulars	
Input Relay	X000 ~ X637	WX00 ~ WX63	÷2	
Output Relay	Y000 ~ Y637	WY000 ~ WY63	÷2	
Internal Relay	M000 ~ M2557	WM000 ~ WM255	÷2	
Shift Register	R000 ~ R223	WR000 ~ WR223	÷16	
Timer (contact)	T000 ~ T255	---	*1	
Timer 10msec (contact)	H000 ~ H079	---	*1	
Counter (contact)	C000 ~ C255	---	*1	
Timer (setup value)	---	TS000 ~ TS255		L/H
Timer (current value)	---	T000 ~ T255	*1	
Timer 10msec (current value)	---	H000 ~ H079	*1	
Counter (setup value)	---	CS000 ~ CS255		
Counter (current value)	---	C000 ~ C255	*1	
Data Register	---	D0000 ~ D2989	Bit 15	
Control Register	---	D3000 ~ D3071	Bit 15	

1 Cannot perform data write.

⚠ *Careful!*   *Enter Decimal Octal bit address input for the Input Relay, Output Relay, and the Internal Relay.*

E.g. X63 7
            └ Octal
          Decimal

■ MICRO³

☐ Setup System Area here.

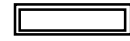| Device	Bit Address	Word Address	Particulars	
Input Relay	x00000 ~ x0037	X0000 ~ X0002	÷2	
Output Relay	y00000 ~ y0037	Y0000 ~ Y0002	÷2	
Internal Relay	m00000 ~ m0277	M0000 ~ M0026	÷2	
Shift Register	r0000 ~ r0063	R0000 ~ R0048	÷16	
Timer (contact)	T0000 ~ T0031	---	*1*2	L/H
Counter (contact)	C0000 ~ C0031	---	*1*2	
Timer (setup value)	---	T0000 ~ T0031	*2	
Timer (elapsed time)	---	t0000 ~ t0031	*2	
Counter (setup value)	---	C0000 ~ C0031	*2	
Counter (elapsed value)	---	c0000 ~ c0031	*2	
Data Register	---	D0000 ~ D0099	Bit 15	

1 Cannot perform data write.

2 The combined total of timers and counters can be up to 32.

Note:

• **The Input/Output Relay range depends on the basic unit's Input/Output number.**

• **The address' High/Low relationship is as follows:**

**Careful!** *Enter Decimal Octal bit address input for the Input Relay, Output Relay, and the Internal Relay.*
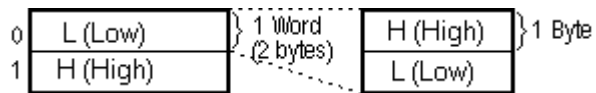
E.g. m0002 7
└ Octal
└── Decimal

■ MICROSmart FC4A Series

		Setup System Area here

Device	Bit Address	Word Address	Other	
Input	X0000 ~ X0307	X000 ~ X030	÷2 *1	
Output	Y0000 ~ Y0307	Y000 ~ Y030	÷2	
Internal Relay	M0000 ~ M1277	M000 ~ M126	÷2	
Special Internal Relay	M8000 ~ M8157	M800 ~ M814	÷2	
Shift Register	R0000 ~ R0127	R0000 ~ R0112	÷16	
Timer (contact value)	T0000 ~ T0099	———————	*1 *2	
Counter (contact value)	C0000 ~ C0099	———————	*1 *2	
Timer (setup value)	———————	T0000 ~ T0099		L/H
Timer (elapsed value)	———————	t0000 ~ t0099		
Counter (setup value)	———————	C0000 ~ C0099		
Counter (elapsed value)	———————	c0000 ~ c0099		
Data Register	———————	D0000 ~ D1299	Bit 15	
Special Data Register	———————	D8000 ~ D8199	Bit 15	
Extended Data Register	———————	D2000 ~ D7999	Bit 15 *4	
Enter Timer/Counter setup value	———————	Q0 *3	—	

1 Data Write is not possible.

2 When writing to this device, the "Host Communication Error (02:FB)" will appear.

3 Q0 is a virtual device. This is the only device used to write Timer/Counter setup values to Non-volatile Memory. When data is written to this address, new Timer/Counter setup values are written to Non-volatile Memory. To prevent accidental deletion of data due to RAM Backup Battery recharge failure, be sure to write your data to Non-volatile Memory. However, when Non-volatile Memory is written to, the Ladder program's scan time is delayed. Be sure not to write to this device every time the Timer/Counter setup value is changed. Also, data cannot be read out from this device.

4 Depending on the CPU used, the devices address ranges may differ.

■ OpenNet Controller FC3 Series

	Setup System Area here

Device	Bit Address	Word Address	Other	
Input	X0000 ~ X0597	X000 ~ X058	÷2 *1	
Output	Y0000 ~ Y0597	Y000 ~ Y058	÷2	
Internal Relay	M0000 ~ M2557	M000 ~ M254	÷2	
Special Internal Relay	M8000 ~ M8237	M800 ~ M822	÷2	
Shift Register	R0000 ~ R0255	R0000 ~ R0240	÷16	
Timer (contact value)	T0000 ~ T0255	———————	*1 *2	
Counter (contact value)	C0000 ~ C0255	———————	*1 *2	L/H
Timer (setup value)	———————	T0000 ~ T0255		
Timer (elapsed value)	———————	t0000 ~ t0255		
Counter (setup value)	———————	C0000 ~ C0255		
Counter (elapsed value)	———————	c0000 ~ c0255		
Data Register	———————	D0000 ~ D7999	Bit 15	
Special Data Register	———————	D8000 ~ D8999	Bit 15	
Link Register	———————	L0100 ~ L1317	Bit 15 *3	

*1 Data Write is not possible.

*2 When writing to this device, the "Host Communication Error (02:FB)" will appear.

*2 *Link Register Device Restrictions*

In GP-PRO/PBIII for Windows, even though from 0 to 9 (Decimal) can be entered as the last digit of a word address, only 0 to 7 can be entered for a PLC address.

Also, even though addresses L0728 to L0999 can be entered, this range does not exist on the PLC, and therefore cannot be used.

Additionally, when entering tag settings, any of the following conditions may occur.

A) During Data Read

When a non-existing address is designated for a Tag, or when Read Out is performed from an area that includes a non-existing address, a Host Communication Error (02:06) will appear on the GP.

Ex) When an N-tag's word address is designated as L0108.

Or, when an S-tag's word address is designated as L0100, and the number of display characters is set to 20.

B) During Data Write

When a non-existing address is designated for a Tag, or when Block Write is performed for a block that exceeds 40 words, a Host Communication Error (02:06) will appear on the GP.

Ex) When an N-tag's word address is designated as L0108.

> *Or, when using the D-Script Memory Copy function, if the Word Address starts from L0100 and 41 copies are designated.*

C) Using the Tag Multiple Copy Feature

When creating multiple copies of a Tag, after the copying is finished, be sure to check that all the Tag addresses created can actually be used.

Ex) When an L-Tag's initial word address is designated as L0100 and the copy setting is 10, addresses L0100 to L0109 will be used. In this case, L0108 and L0109 will be out of the available (Base 8) range.

◤Reference◢ *For the available range of Link Register Addresses and detailed information, refer to the IDEC Corporation's "OpenNet Controller FC3 Series Instruction Manual".*

2.15.4 Environment Setup

The following tables list Digital's recommended PLC and GP communication settings.

■ FA Series (using Serial Interface Module)

GP Setup		Serial Interface Module Setup	
Baud Rate	19200 bps	Baud Rate	19200 bps
Data Length	8 bits	Data Bit	8 bits
Stop Bit	1 bit	Stop Bit	1 bit
Parity Bit	Even	Parity Bit	Even
Data Flow Control	ER Control	---	
Communication Format (RS-232C)	RS-232C	---	
Communication Format (RS-422)	2-wire type	---	
Unit No.	0	Device Number	0

■ FA Series (CPU Direct Connection)

GP Setup		PLC Setup	
Baud Rate	9600 bps	Baud Rate	9600 bps
Data Length	8 bits	Data Bit	8 bits
Stop Bit	1 bit	Stop Bit	1 bit
Parity Bit	Even	Parity Bit	Even
Data Flow Control	ER Control	---	
Communication Format (RS-232C)	RS-232C	---	
Communication Format (RS-2422)	4-wire type	---	
Unit. No.	0	Device Number	0

■ MICRO³

GP Setup		Loader Port Setup	
Baud Rate	9600 bps	Baud Rate	9600 bps
Data Length	7 bits	Data Bit	7 bits
Stop Bit	1 bit	Stop Bit	1 bit
Parity Bit	Even	Parity Bit	Even
Data Flow Control	ER Control	---	
Communication Format (when using PC I/F Unit FC2A-KC1)	RS-232C	---	
Communication Format (RS-422)	2-wire type	---	
Unit No.	0	Device Number	0

Note: **The PLC setup above is the same as the Basic setup mode. When connected to the GP or Loader, communication is available in Basic setup mode (condition when the Mode Change Input Number terminal is OFF). To change the communication setup, use Option setup mode (condition when the Mode Change Input Number terminal is ON).**

■ MICROSmart FC4A Series

GP/GLC Settings		PLC Settings	
Baud Rate	9600 bps	Baud Rate	9600 bps
Data Length	7 bits	Data Length	7 bits
Stop Bit	1 bit	Stop Bit	1 bit
Parity Bit	Even	Parity Bit	Even
Data Flow Control	ER Control	---	---
Communication Format (RS-232C)	RS-232C	---	---
Communication Format (RS-485)	2-wire type	---	---
Unit No.	0	Device No.	0
---	---	Port Communication Type	Maintenance Communication
---	---	Communication Switchover Input	No

■ OpenNet Controller FC3 Series

GP/GLC Settings		PLC Settings	
Baud Rate	9600 bps	Baud Rate	9600 bps
Data Length	7 bits	Data Length	7 bits
Stop Bit	1 bit	Stop Bit	1 bit
Parity Bit	Even	Parity Bit	Even
Data Flow Control	ER Control	---	
Communication Format (RS-232C)	RS-232C	---	
Communication Format (RS-485)	2-wire type	---	
Unit No.	0	Device No. DIP-SW4 ~ 8	0
---	---	RS-485 Communication Mode DIP-SW1	OFF (Maintenance)
		RS-232C Port 1Communication Mode DIP-SW2	OFF (Maintenance)
		RS-232C Port 2 Communication Mode DIP-SW3	OFF (Maintenance)
---	---	Communication Switchover Input	No

◆**Monitor Register**

When using OpenNet Controller FC3 Series, the Monitor Register feature can be set. Using this function, Block reads of discrete addresses (maximum of 40 words) can be made. This function can also be used, when using the Multi Port Communication or connecting your PC. Be sure to set the Monitor Register feature from the SETUP OPERATION SURROUNDINGS MENU in the GP OFFLINE mode or from [GP SETUP] -> [MODE SETTINGS] in the GP Screen Editor (GP-PRO/PBIII for Windows).

▼*Reference*▲ Refer to each GP User Manual, OFFLINE MODE.

Note: • **The Monitor Register feature cannot be used on MICROSmart FC4A Series. Be sure to set the Monitor Register setting to "No". If the MONITOR SETTING feature is set to "Yes", a "Host Communication Error (02:03)" will appeare.**

▼*Reference*▲ *Refer to this manual, 2.15.4 Error Codes.*

• **Default setting is "No".**

• **Depending on whether you are using a GP or a GLC series unit, the OFFLINE mode's SETUP OPERATION SURROUNDING MENU, the menu that appears may differ. Setup the Monitor Register area as shown below.**

<GP-H70/ GP-270/GP-370/GLC-100 Series>

```
SET UP OPERATION SURROUNDINGS [SET] [ESC]

    SYSTEM AREA START DEV    [      ]

              START ADR      [      ]

    UNIT No.                 [      ]

    SYSTEM AREA READ SIZE    [      ]

    MONITOR REGISTER         [      ]
```

<GP-470/GP-570/GP-675/GP-870 Series>

```
SET UP OPERATION SURROUNDINGS

    STARTING ADDRESS OF SYSTEM DATA AREA      [          ]

    UNIT NO.                                  [   ]

    SYSTEM AREA    READING AREA SIZE (0-256)  [   ]

    MONITOR REGISTER                          ON     OFF
```

<GP-377/GP-377R/GP-2300/GLC-2300Series>

Set the Monitor Register feature from the SETUP OPERATION SURROUND-
INGS MENU [PLC SETUP MENU] -> [PLC SETUP 2] in the GP OFFLINE
mode.

```
MAIN      /INITIALIZE/PLC SETUP MENU

    PLC SETUP 1

    PLC SETUP 2
```

```
PLC SETUP 2                  SET  ESC

MONITOR REGISTER
```

<GP-477R/GP-577R/GP2000/GLC300/GLC2000 Series>

```
SET UP OPERATION SURROUNDINGS

    STARTING ADDRESS OF SYSTEM DATA AREA        [          ]

    UNIT NO.                                    [    ]

    SYSTEM AREA    READING AREA SIZE  (0-256)   [    ]

    RESET GP ON DATA WRITE ERROR                ON      OFF

    MONITOR REGISTER                            ON      OFF
```
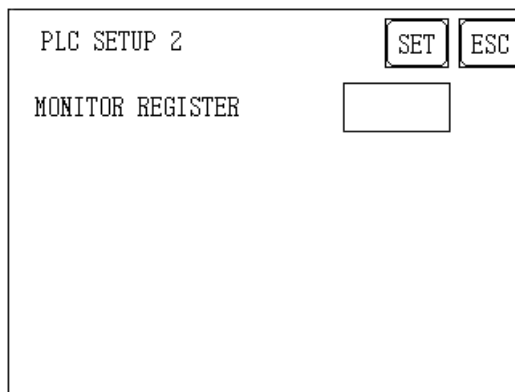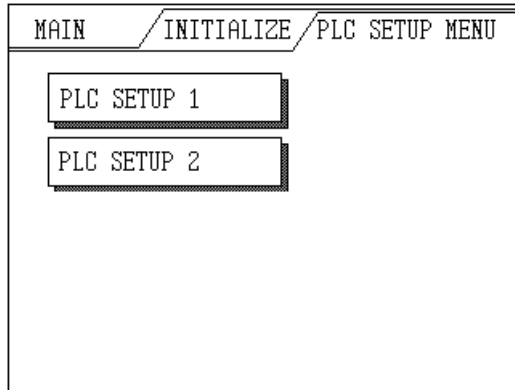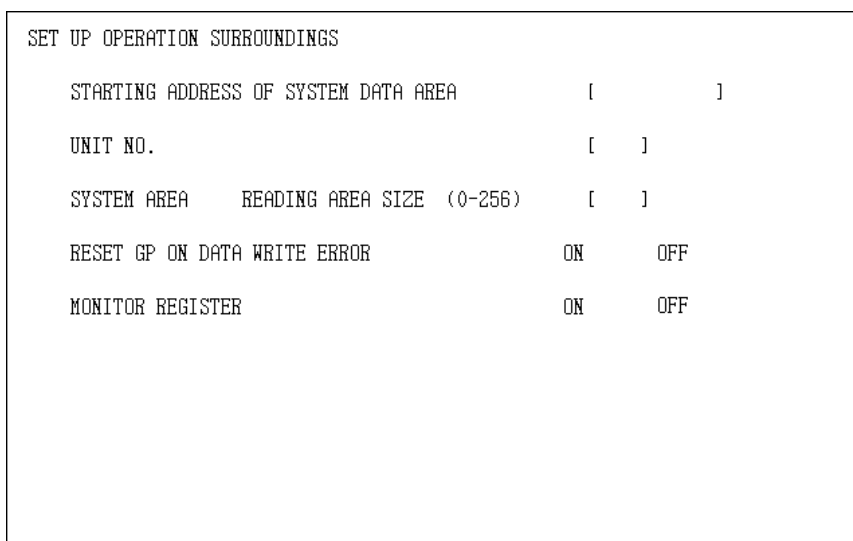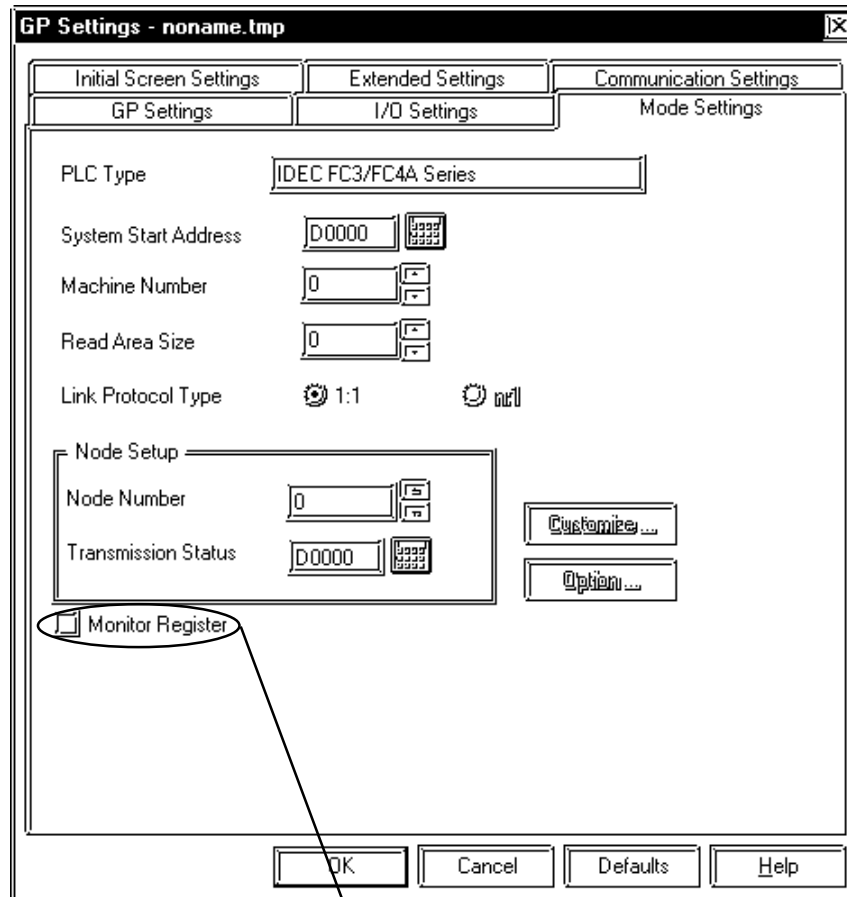
• **Setting Monitor Register from the GP Screen Editor (GP-PRO/PBIII for Windows)**

Set the Monitor Register feature from [GP SETUP] -> [MODE SETTINGS] in the GP Screen Editor (GP-PRO/PBIII for Windows). This feature's default setting is "not selected".

Click this radio box to set the Monitor Register.

2.15.5   Error Codes

■PLC Specific Error Codes

◆MICROSmart FC4A Series/OpenNet Controller FC3 Series

IDEC Corporation PLCs have two types of error codes, "Communication Error Code" and "NG Code". A "Communication Error" means the error occurred during transmission. "NG Error" means the error occurred after receiving the message from the PLC. "NG Code" is the error code for standard GP/GLC units. "Communication Error Code" and "NG Error Code" are displayed via the "Host Communication Error (02:**)", and will appear in the left lower corner of the GP/GLC screen (** indicates the PLC's error code).

• Communication Error Code

Error Code	Error Type	Error Contents
00	BCC error	Appended BCC code does not match BCC calculated value of received data.
01	Flame error	Quantity of received bits differs from the preset value (stop bit is 0 for example).
02	Data send/receive error	Parity Error or Overrun error occured.
03	Command error	Unsupported request message is received.
04	Procedure/data quantity error	Received request message does not match the expected data (including quantity of data).

• NG Code

Error Code	Error Name	Meanings
06	Data range error	Invalid data range designated.
07	Timer/Counter preset value change error	Preset value change attempted to timer or counter with preset value designated by data register.
10	Data error	Invalid data other than 0 (30h) - 9 (39h) or A (41h) - F (46h).
11	Setting error	Incorrect setting for user communication.

Reference   *For more details about error codes, refer to the IDEC Corporation's "COMPUTER LINK SYSTEM USER'S MANUAL".*

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