

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.

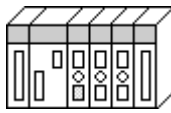


2.15 IDEC

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.

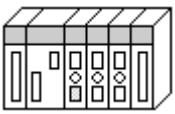

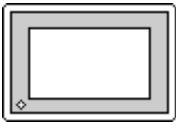


- After powering up, it takes about 1 second to enter RUN mode when the memory pack capacity of the PF3S-SIF2(4) is 1K step, and it takes about 4 seconds when the memory pack capacity is 4K step. As a result, the GP Start Time setup needs to be set for these situations.

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

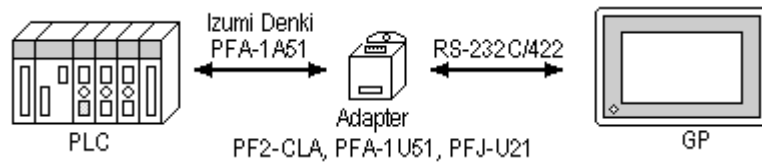
- Wherever RS-422 appears, RS-485 can be substituted on the PLC.

■ 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 PFJ-U21 | RS-232C (Cable Diagram 3) RS-422 (Cable Diagram 4) | IDEC Corp.'s PFA-1A52 shaped computer cable ^{*3} | GP Series |

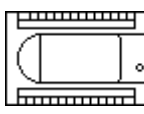


*1 Connect to the programming loader port.

*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.

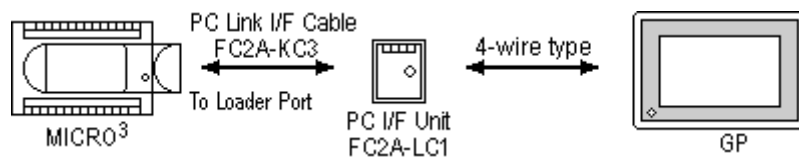
■ MICRO³ (CPU Direct Connection)

| CPU | Adapter | Cable Diagram | Cables | GP |
|---|---|-----------------------------|---|---|
|  |  | | |  |
| MICRO ³ | PC I/F Unit FC2A-LC1 ^{*3} | RS-422 (Cable Diagram 5) | PC Link I/F cable ^{*1*2} FC2A-KC1 | GP Series |

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

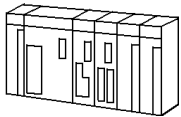

*2 When using the PC I/F cable FC2A-KC1, the GP side becomes RS-232C SIO.

*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



Places noted as RS-422 can also use RS-485 on the PLC side.

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

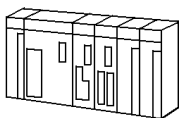

| CPU | Link I/F | Cable Diagram | Cables | GP/GLC |
|---|---|------------------------------|--|---|
|  | ←————→ | | |  |
| FC4A-C10R2B FC4A-C16R2B FC4A-C24R2B | Port 1 on CPU module | RS-232C <Cable Diagram 6> | IDEC Corporation FC2A-KP1C (2.4m) ^{*2} | GP or GLC Series |
| | FC4A-PC1 (Mini DIN type) ^{*1} | RS-232C <Cable Diagram 7> | FC4A-KC2C (5m) ^{*3} | |
| | 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} | GP or GLC Series |
| | FC4A-PC1 (Mini DIN type) ^{*4} | RS-232C <Cable Diagram 7> | FC4A-KP2C (5m) ^{*3} | |
| | 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 | |

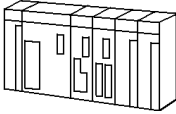

**1. Connect to Port 2 Connector.*

**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) | GP or GLC Series |
| | RS-232C Port 2 on CPU module | | FC2A-KP1C (2.4m) ^{*1} FC4A-KC2C (5m) ^{*2} | |
| | 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.



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

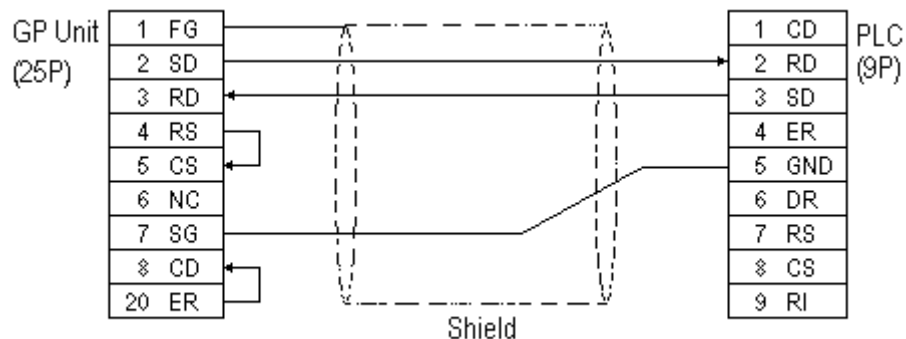


- **Connect the FG line of the Shield cable to either the GP or PLC, depending on your environment settings. When using a connector hood and grounding the FG line, be sure to use an electrical conductor.**
- **If a communications cable is used, it must be connected to the SG (signal ground).**

Cable Diagram 1 (RS-232C)

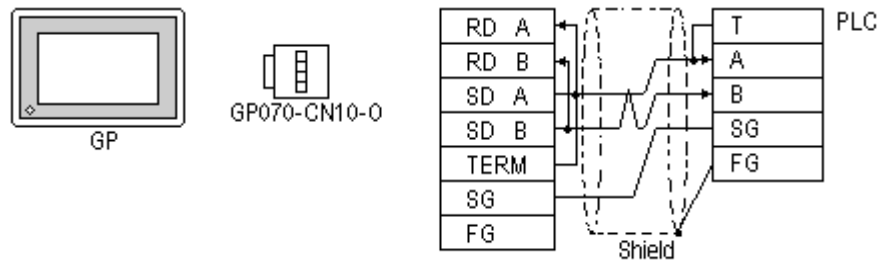


- **Be sure the RS-232C cable length is 15m or less.**

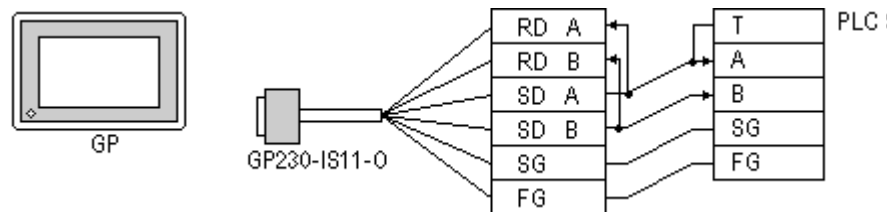


Cable Diagram 2 (RS-422)

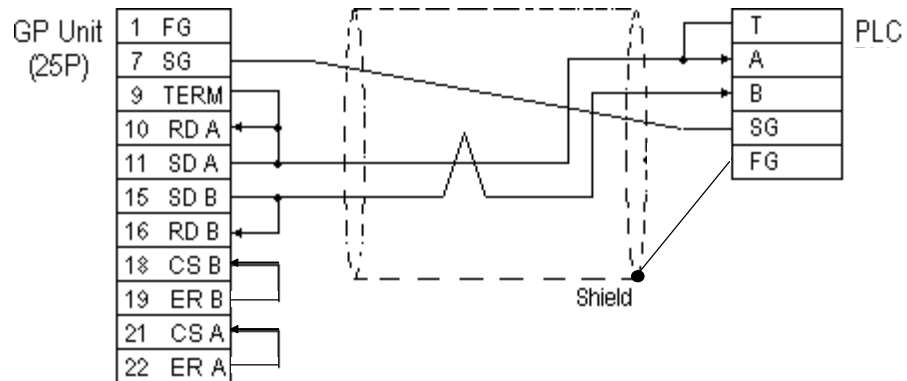
- When using Digital's RS-422 connector terminal adapter, GP070-CN



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

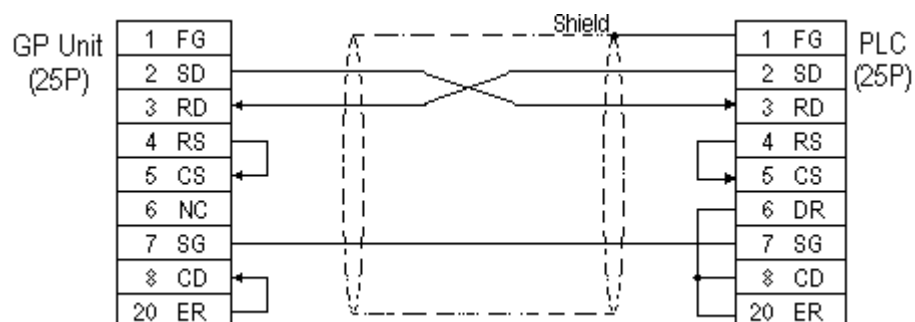


- When making your own cable connections



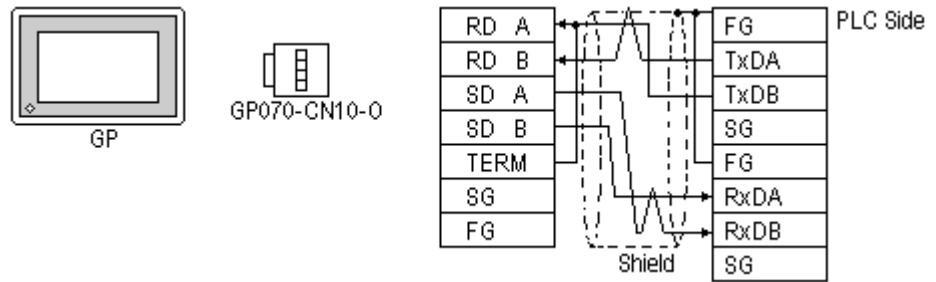
- When making your own connections, we recommend using Hitachi Densen's CO-SPEV-SB(A)3P*0.5SQ twist pair cable.
- When connecting the #9 and #10 pins in the GP Serial I/F, a termination resistance of 100Ω is added between RDA and RDB.
- For the RS-422 connection, refer to IDEC's PLC manual for the cable length.

Cable Diagram 3 (RS-232C)

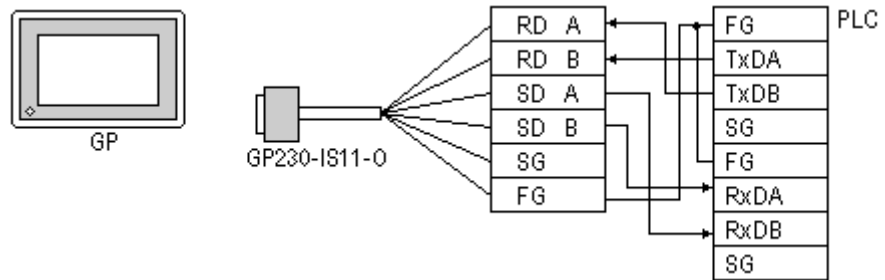


Cable Diagram 4 (RS-422)

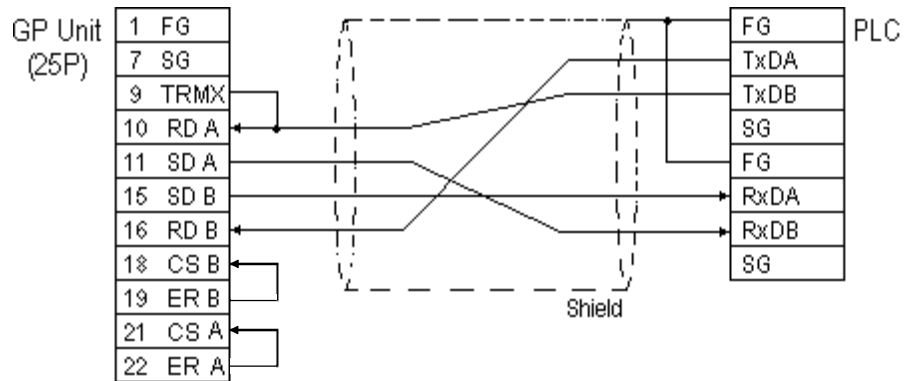
- When using Digital's RS-422 connector terminal adapter, GP070-CN10-0



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



- When making your own cable connections

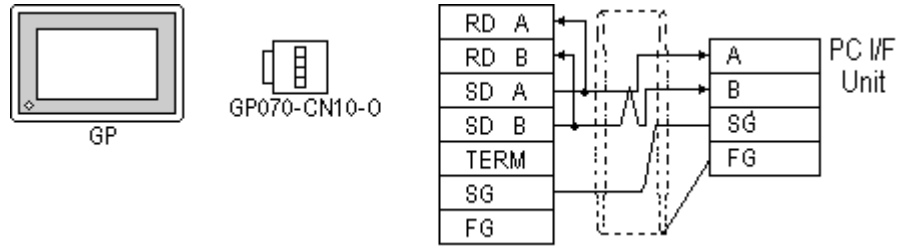


When connecting the #9 and #10 pins in the GP Serial I/E, a termination resistance of 100Ω is added between RDA and RDB.

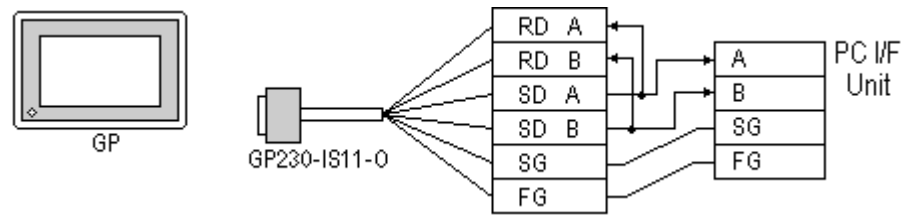
- For the RS-422 connection, refer to IDEC's PLC manual for the cable length.

Cable Diagram 5 (RS-422)

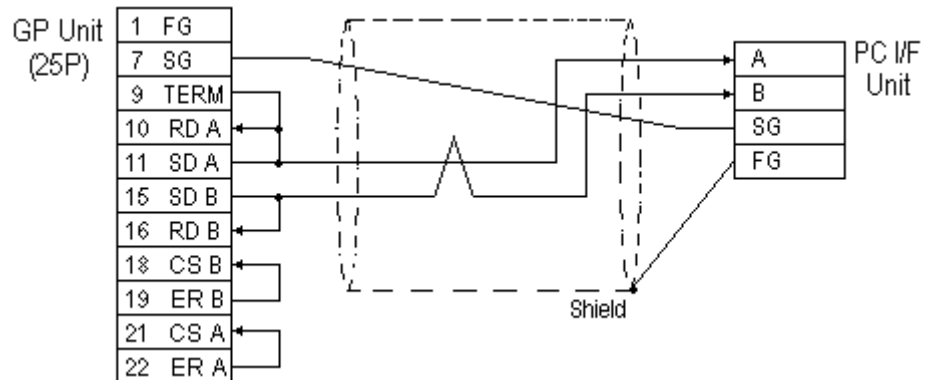
- When using Digital's RS-422 connector terminal adapter, GP070-CN10-0



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



- When making your own cable connections



- 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)



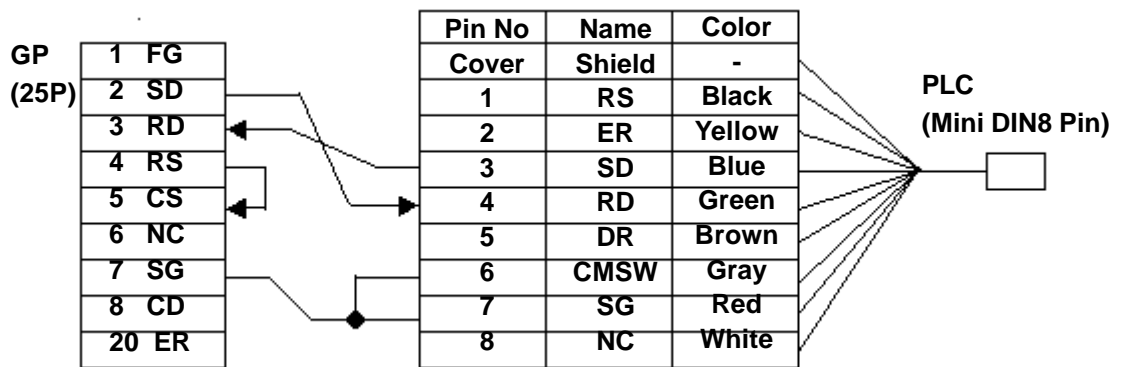
- For RS-232C communication format, use IDEC Corporation Communication Cable.
- When connecting the cable more than 5m, use RS-422 communication format.

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.



Dsub25-pin Connector (male)



Cable Diagram 7 (RS-232C)

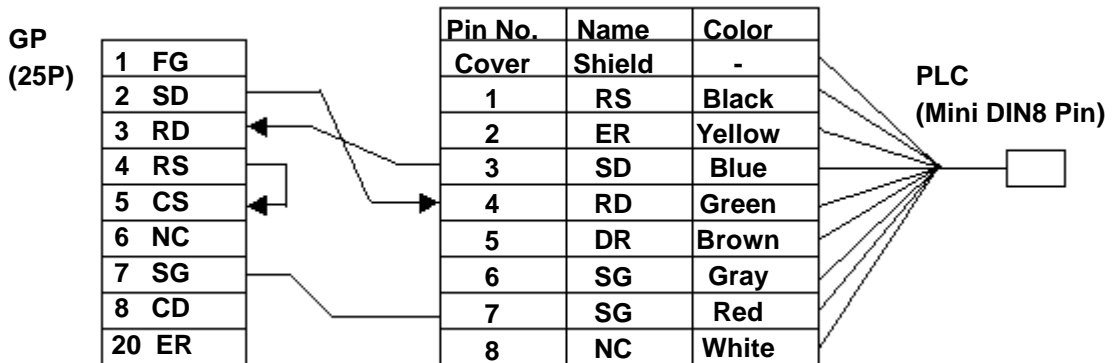


- For RS-232C communication format, use IDEC Corporation Communication Cable.
- When connecting the cable more than 5m, use RS-422 communication format.

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.



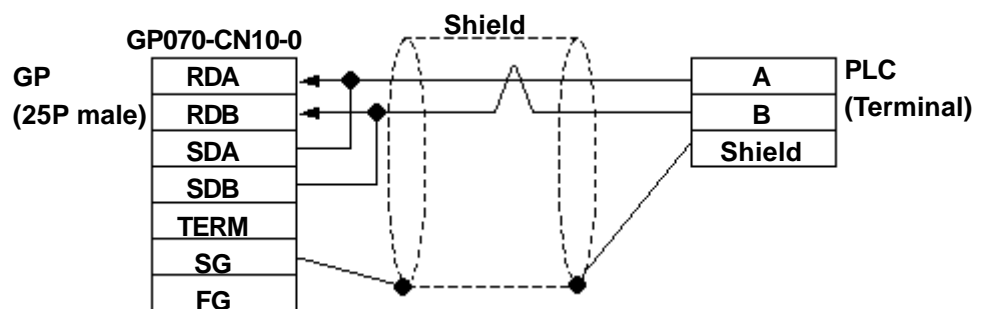
Cable Diagram 8 (RS-422, 2-wire type)



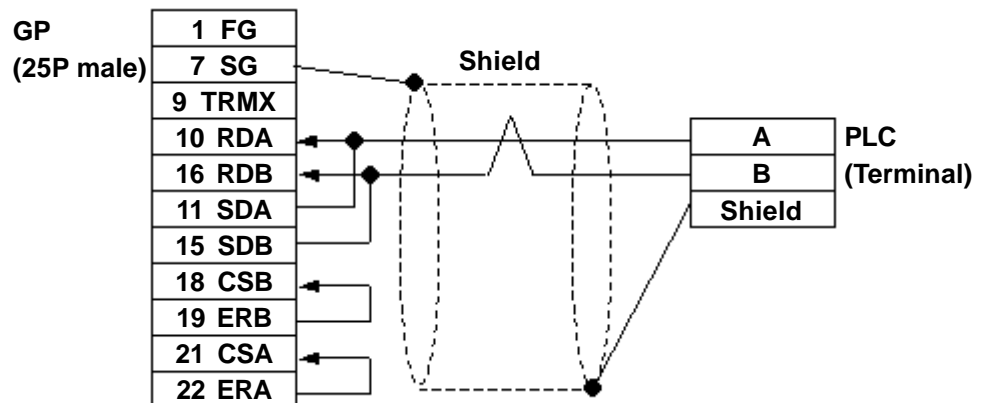
- Use the following cable for the MICROSmart RS-485 Communication Board FC4A-PC3 (Terminal type):

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

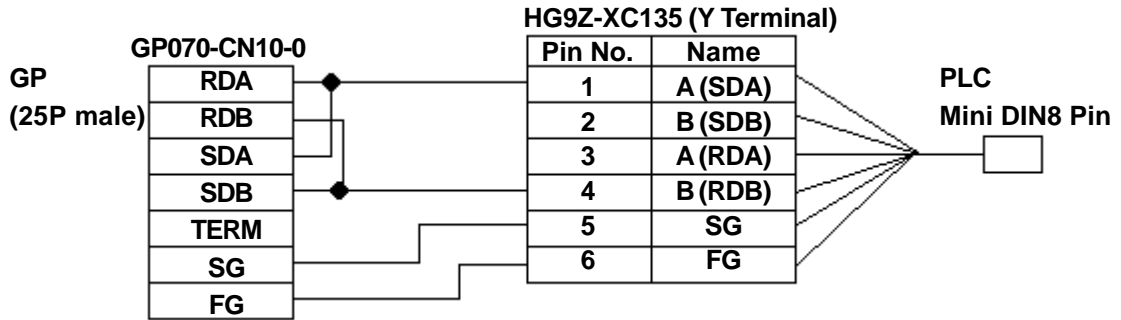


Cable Diagram 9 (RS-422, 2-wire type)



- 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

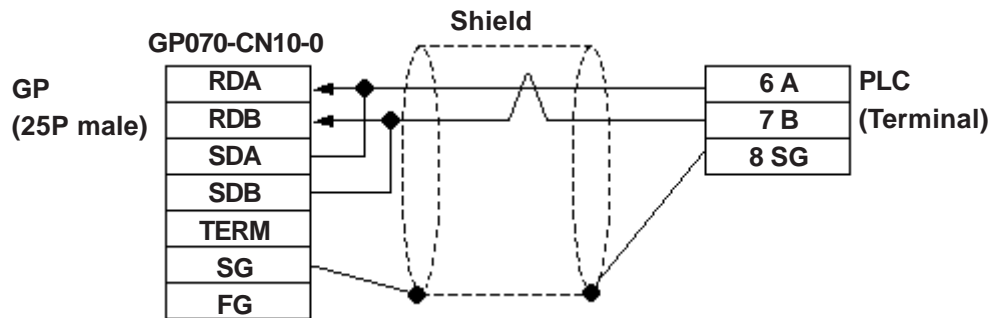


- The PLC side connector's No. 1 and No. 3 pins, and No. 2 and No. 4 pins, respectively, are connected internally.
- Since the HG9Z-XC135 cable's No. 2 and No. 3 terminals cannot be used, be sure to wrap them with insulating tape.

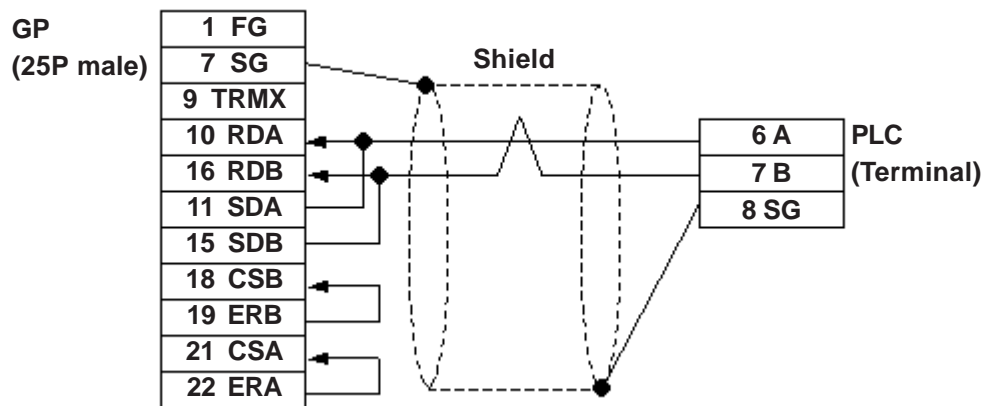
Cable Diagram 10 (RS-422, 2-wire type)



- **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

Setup System Area here.

| Device | Bit Address | Word Address | Particulars | |
|------------------------------|--------------|---------------|---|-----|
| Input Relay | X000 ~ X637 | WX00 ~ WX63 | ÷2 | L/H |
| 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 | | |
| 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 5 | |
| Control Register | --- | D3000 ~ D3071 | Bit 5 | |

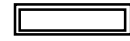
*1 Cannot perform data write.








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.

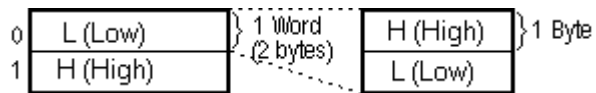
| Device | Bit Address | Word Address | Particulars | |
|-------------------------|----------------|---------------|---|-----|
| Input Relay | x00000 ~ x0037 | X0000 ~ X0002 |  | L/H |
| Output Relay | y00000 ~ y0037 | Y0000 ~ Y0002 |  | |
| Internal Relay | m00000 ~ m0277 | M0000 ~ M0026 |  | |
| Shift Register | r0000 ~ r0063 | R0000 ~ R0048 |  | |
| Timer (contact) | T0000 ~ T0031 | --- | *1,2 | |
| 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 |  | |

*1 Cannot perform data write.

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



- The Input/Output Relay range depends on the basic unit's Input/Output number.
- The address' High/Low relationship is as follows:











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 |  | *1 | L/H |
| Output | Y0000 ~ Y0307 | Y000 ~ Y030 |  | | |
| Internal Relay | M0000 ~ M1277 | M000 ~ M126 |  | | |
| Special Internal Relay | M8000 ~ M8157 | M800 ~ M814 |  | | |
| Shift Register | R0000 ~ R0127 | R0000 ~ R0112 |  | | |
| Timer (contact value) | T0000 ~ T0099 | ————— | | *1 *2 | |
| Counter (contact value) | C0000 ~ C0099 | ————— | | *1 *2 | |
| Timer (setup value) | ————— | T0000 ~ T0099 | | | |
| Timer (elapsed value) | ————— | t0000 ~ t0099 | | | |
| Counter (setup value) | ————— | C0000 ~ C0099 | | | |
| Counter (elapsed value) | ————— | c0000 ~ c0099 | | | |
| Data Register | ————— | D0000 ~ D1299 |  | | |
| Special Data Register | ————— | D8000 ~ D8199 |  | | |
| Extended Data Register | ————— | D2000 ~ D7999 |  | *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 |  *1 | |
| Output | Y0000 ~ Y0597 | Y000 ~ Y058 |  | |
| Internal Relay | M0000 ~ M2557 | M000 ~ M254 |  | |
| Special Internal Relay | M8000 ~ M8237 | M800 ~ M822 |  | |
| Shift Register | R0000 ~ R0255 | R0000 ~ R0240 |  | |
| Timer (contact value) | T0000 ~ T0255 | ————— | *1 *2 | |
| Counter (contact value) | C0000 ~ C0255 | ————— | *1 *2 | |
| Timer (setup value) | ————— | T0000 ~ T0255 | L/H | |
| Timer (elapsed value) | ————— | t0000 ~ t0255 | | |
| Counter (setup value) | ————— | C0000 ~ C0255 | | |
| Counter (elapsed value) | ————— | c0000 ~ c0255 | | |
| Data Register | ————— | D0000 ~ D7999 | |  |
| Special Data Register | ————— | D8000 ~ D8999 | |  |
| Link Register | ————— | L0100 ~ L1317 | |  *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 |



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 1 Communication 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.



- **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 appear.**

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>

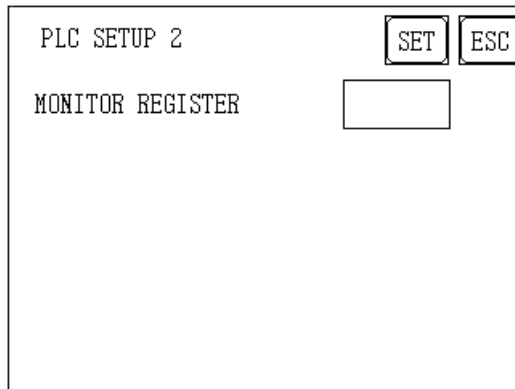
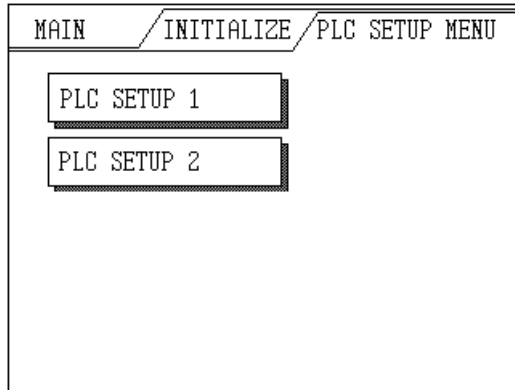
| | | | |
|-------------------------------|--|-----|-----|
| SET UP OPERATION SURROUNDINGS | | SET | ESC |
| SYSTEM AREA START DEV | | | |
| START ADR | | | |
| UNIT No. | | | |
| SYSTEM AREA READ SIZE | | | |
| MONITOR REGISTER | | | |

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

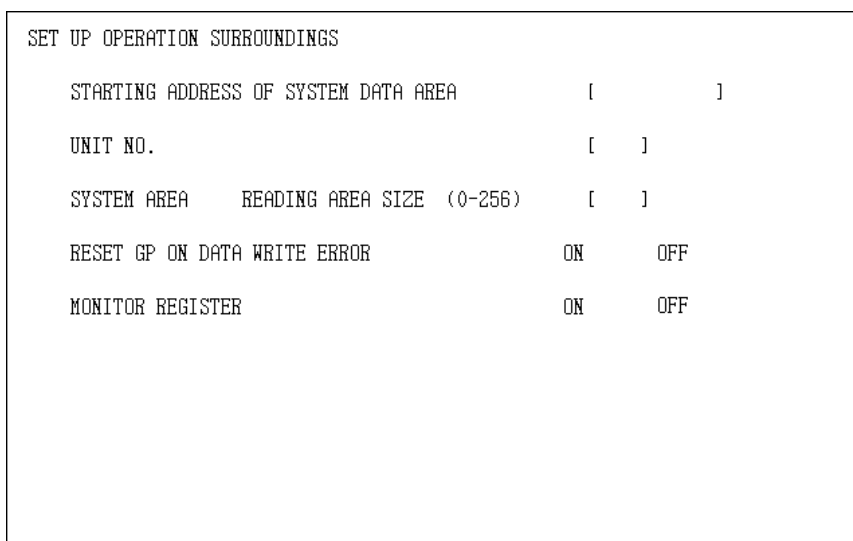
| | | | |
|---------------------------------------|----|-----|---|
| SET UP OPERATION SURROUNDINGS | | | |
| STARTING ADDRESS OF SYSTEM DATA AREA | [| |] |
| UNIT NO. | [| |] |
| SYSTEM AREA READING AREA SIZE (0-256) | [| |] |
| MONITOR REGISTER | ON | OFF | |

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

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

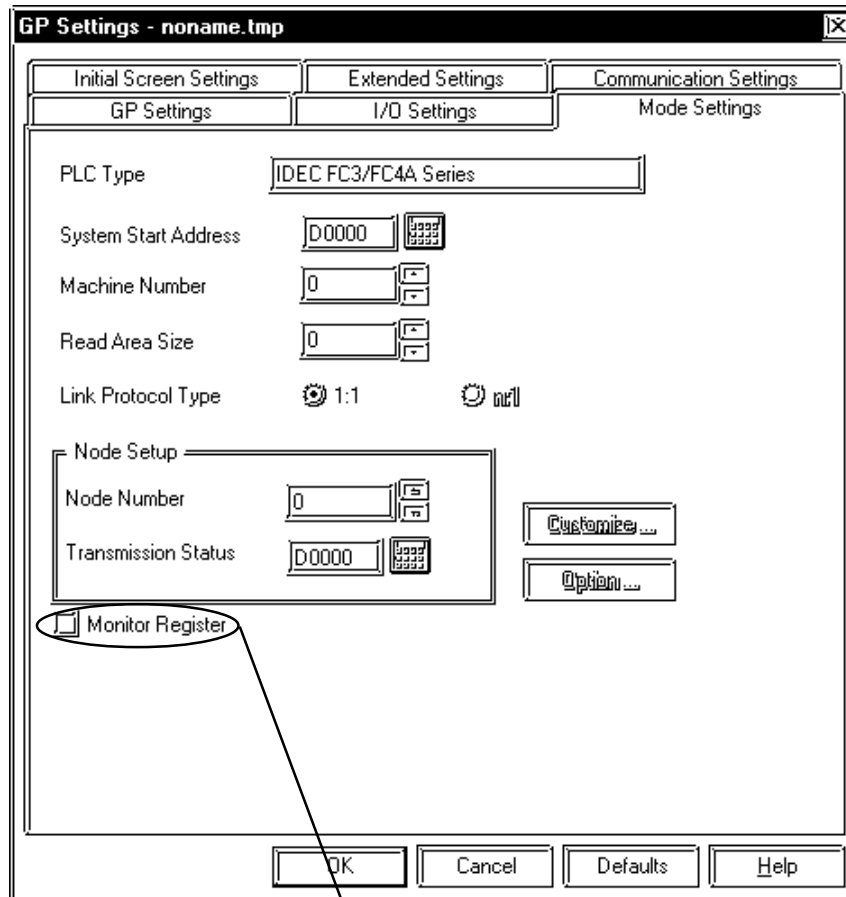


<GP-477R/GP-577R/GP2000/GLC300/GLC2000 Series>



- **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 occurred. |
| 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”.

