



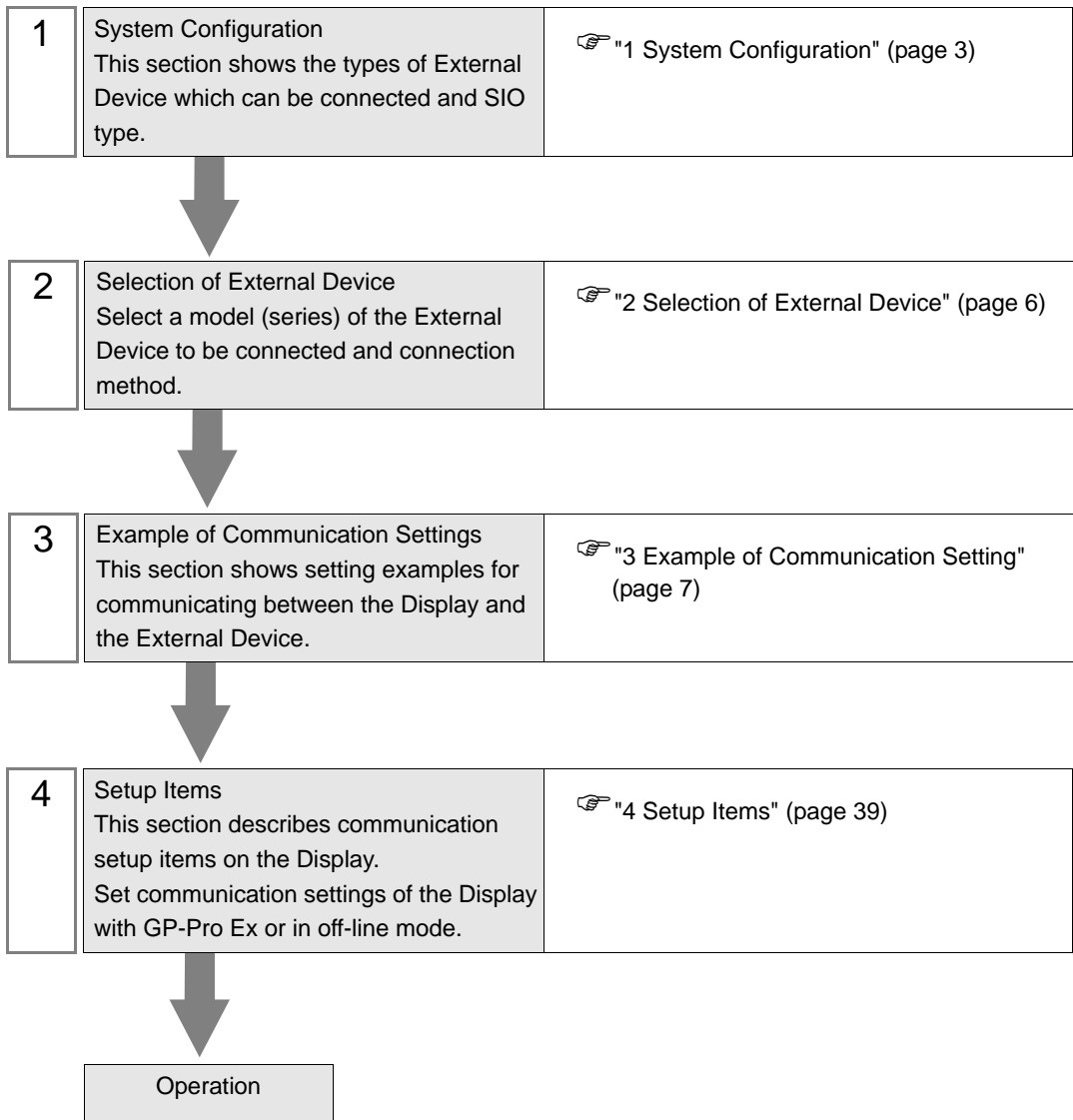
# Personal Computer Link Ethernet Driver

|   |                                       |    |
|---|---------------------------------------|----|
| 1 | System Configuration.....             | 3  |
| 2 | Selection of External Device .....    | 6  |
| 3 | Example of Communication Setting..... | 7  |
| 4 | Setup Items.....                      | 39 |
| 5 | Supported Device.....                 | 43 |
| 6 | Device Code and Address Code.....     | 48 |
| 7 | Error Messages.....                   | 52 |

## Introduction

This manual describes how to connect the Display and the External Device (target PLC).

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



# 1 System Configuration

The system configuration in the case when the External Device of YOKOGAWA Electric Corp. and the Display are connected is shown.

| Series | CPU  | Link I/F     | Port No.       | SIO Type       | Data Code Settings          | Setting Example             |
|--------|--|--------------|----------------|----------------|-----------------------------|-----------------------------|
| FA-M3  | F3SP21-0N<br>F3SP25-2N<br>F3SP28-3N<br>F3SP35-5N<br>F3SP38-6N<br>F3SP53-4H<br>F3SP58-6H<br>F3SP28-3S<br>F3SP38-6S<br>F3SP53-4S<br>F3SP58-6S<br>F3SP59-7S | F3LE01-5T *1 | 12289          | Ethernet (UDP) | Binary *2                   | Setting Example 1 (page 7)  |
|        |  |              |                |                | ASCII *3                    | Setting Example 2 (page 9)  |
|        |  |              |                | Ethernet (TCP) | Binary *2                   | Setting Example 5 (page 15) |
|        |  |              |                |                | ASCII *3                    | Setting Example 6 (page 17) |
|        |  | F3LE11-0T *1 | 12289          | Ethernet (UDP) | Binary *2                   | Setting Example 1 (page 7)  |
|        |  |              |                |                | ASCII *3                    | Setting Example 2 (page 9)  |
|        |  |              |                | Ethernet (TCP) | Binary *2                   | Setting Example 5 (page 15) |
|        |  |              |                |                | ASCII *3                    | Setting Example 6 (page 17) |
|        |  | 12291        | Ethernet (UDP) | Binary *3      | Setting Example 3 (page 11) |                             |
|        |  |              |                | ASCII *2       | Setting Example 4 (page 13) |                             |
|        |  |              | Ethernet (TCP) | Binary *3      | Setting Example 7 (page 19) |                             |
|        |  |              |                | ASCII *2       | Setting Example 8 (page 21) |                             |

continued to next page

| Series | CPU                    | Link I/F                    | Port No. | SIO Type          | Data Code Settings   | Setting Example                 |
|--------|------------------------|-----------------------------|----------|-------------------|----------------------|---------------------------------|
| FA-M3  | F3SP66-4S<br>F3SP67-6S | Ethernet I/F on<br>CPU Unit | 12289    | Ethernet<br>(UDP) | Binary <sup>*2</sup> | Setting Example 9<br>(page 23)  |
|        |                        |                             |          |                   | ASCII <sup>*3</sup>  | Setting Example<br>10 (page 25) |
|        |                        |                             |          | Ethernet<br>(TCP) | Binary <sup>*2</sup> | Setting Example<br>11 (page 27) |
|        |                        |                             |          |                   | ASCII <sup>*3</sup>  | Setting Example<br>12 (page 29) |
|        |                        |                             | 12291    | Ethernet<br>(UDP) | Binary <sup>*3</sup> | Setting Example<br>13 (page 31) |
|        |                        |                             |          |                   | ASCII <sup>*2</sup>  | Setting Example<br>14 (page 33) |
|        |                        |                             |          | Ethernet<br>(TCP) | Binary <sup>*3</sup> | Setting Example<br>15 (page 35) |
|        |                        |                             |          |                   | ASCII <sup>*2</sup>  | Setting Example<br>16 (page 37) |

\*1 In TCP connection, you can connect max 8 units of the External Device to 1 display unit.

\*2 Set the data code setting to ON.

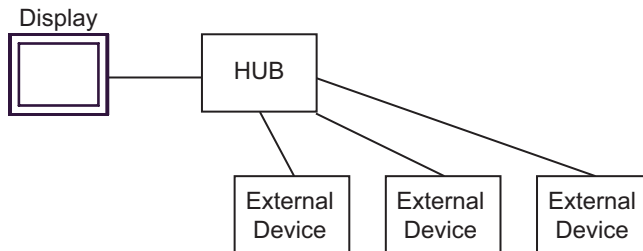
\*3 Set the data code setting to OFF.

## ■ Connection Configuration

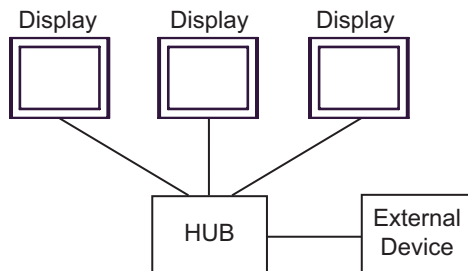
1:1 Connection



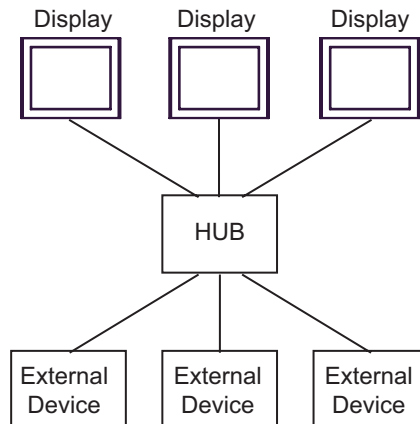
1:n Connection



n:1 Connection

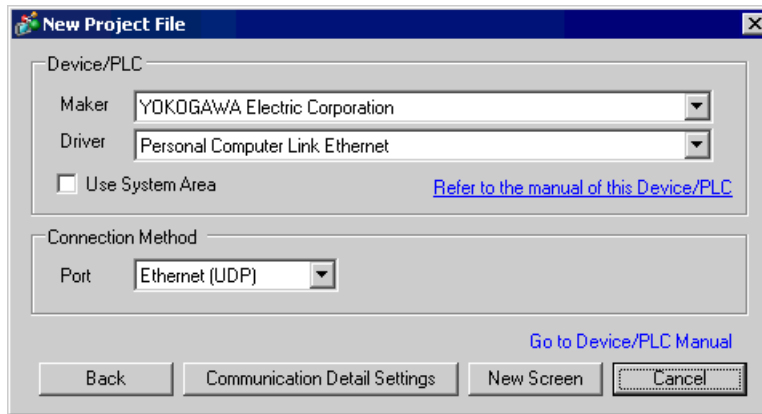


n:m Connection



## 2 Selection of External Device

Select the External Device to be connected to the Display.



| Setup Items     | Setup Description   |
|-----------------|---|
| Maker           | Select the maker of the External Device to be connected. Select "YOKOGAWA Electric Corporation".  |
| Driver          | Select a model (series) of the External Device to be connected and connection method. Select "Personal Computer Link Ethernet".<br>Check the External Device which can be connected in "Personal Computer Link Ethernet" in system configuration.<br>☞ "1 System Configuration" (page 3)  |
| Use System Area | Check this option to synchronize the system data area of the Display and the device (memory) of the External Device. When they are synchronized, you can use the ladder program of the External Device to switch the display or to display a window on the Display.<br>Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (Direct Access Method)"<br>This can also be set in GP-Pro EX or in the Display's off-line mode.<br>Cf. GP-Pro EX Reference Manual "5.17.6 [System Settings] Setting Guide, [Display Unit] Settings Guide, System Area Settings"<br>Cf. Maintenance/Troubleshooting Manual "2.15.1 Settings common to all Display models, [Main Unit Settings] Settings Guide, System Area Settings" |
| Port            | Select the Display port to be connected to the External Device.   |

## 3 Example of Communication Setting

Examples of communication settings of the Display and the External Device, recommended by Pro-face, are shown.

When you use the FA-M3 Series, use GP-Pro EX and the ladder software to set as below.


### 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 Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.

##### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

### ◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

| Setup Items                      | Setup Description |
|----------------------------------|-------------------|
| IP Address Setting Rotary Switch | Option            |

### ◆ Port No.

| Setup Items | Setup Description |
|-------------|-------------------|
| Port No.    | 12289             |

### ◆ Condition Setting Switch

| DIP Switch        | Settings | Setup Description |
|-------------------|----------|-------------------|
| SW1               | ON       | Binary            |
| SW2               | OFF      | Not protect       |
| SW3               | ---      | (Reserved)        |
| SW4               | ---      | (Reserved)        |
| SW5               | ---      | (Reserved)        |
| SW6               | ---      | (Reserved)        |
| SW7 <sup>*1</sup> | OFF      | Close             |
| SW8               | OFF      | Normal            |

\*1 SW7 is available to set in F3LE01-5T only.

### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.

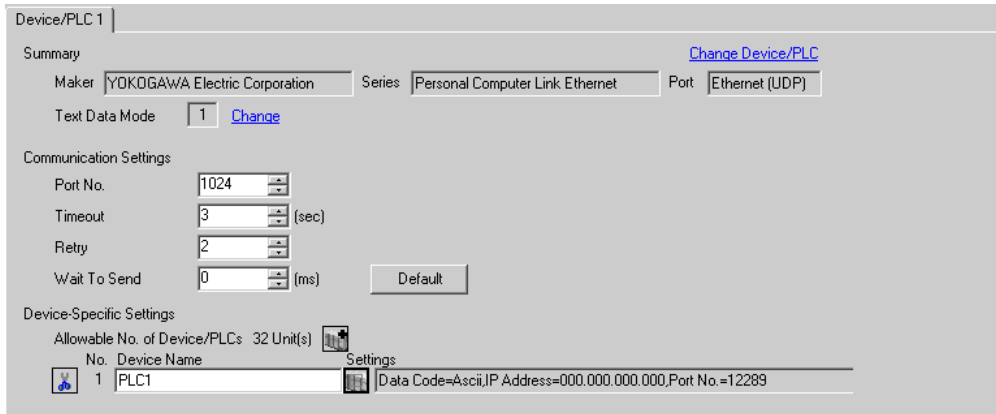


## 3.2 Setting Example 2


### ■ Settings of GP-Pro EX

#### ◆ Communication Settings

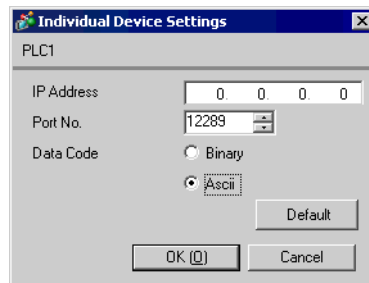
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



#### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



#### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

### ◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

| Setup Items                      | Setup Description |
|----------------------------------|-------------------|
| IP Address Setting Rotary Switch | Option            |

### ◆ Port No.

| Setup Items | Setup Description |
|-------------|-------------------|
| Port No.    | 12289             |

### ◆ Condition Setting Switch

| DIP Switch        | Settings | Setup Description |
|-------------------|----------|-------------------|
| SW1               | OFF      | ASCII             |
| SW2               | OFF      | Not protect       |
| SW3               | ---      | (Reserved)        |
| SW4               | ---      | (Reserved)        |
| SW5               | ---      | (Reserved)        |
| SW6               | ---      | (Reserved)        |
| SW7 <sup>*1</sup> | OFF      | Close             |
| SW8               | OFF      | Normal            |

\*1 SW7 is available to set in F3LE01-5T only.

### ◆ Notes

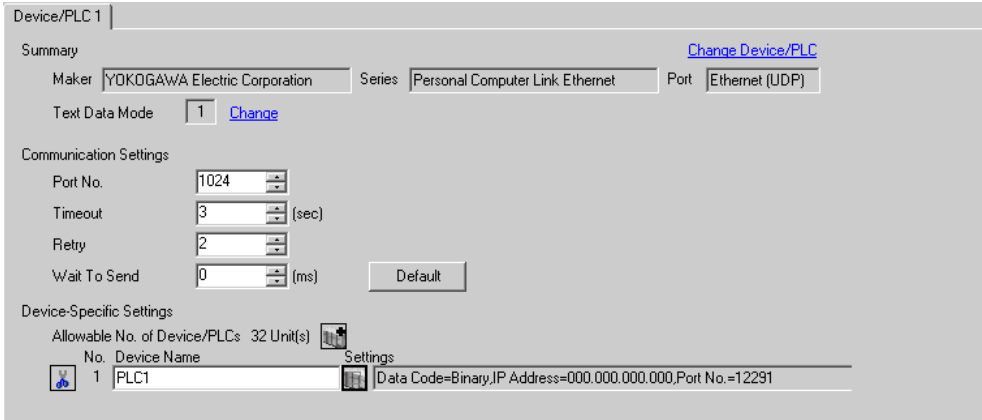
- Check with a network administrator about IP address. Do not set the duplicate IP address.

### 3.3 Setting Example 3


#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

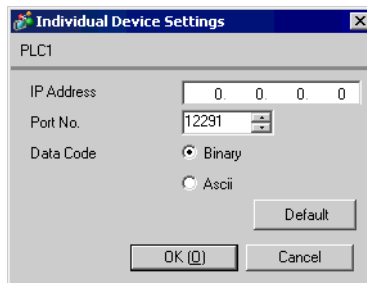
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



##### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



##### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

### ◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

| Setup Items                      | Setup Description |
|----------------------------------|-------------------|
| IP Address Setting Rotary Switch | Option            |

### ◆ Port No.

| Setup Items | Setup Description |
|-------------|-------------------|
| Port No.    | 12291             |

### ◆ Condition Setting Switch

| DIP Switch | Settings | Setup Description |
|------------|----------|-------------------|
| SW1        | OFF      | Binary            |
| SW2        | OFF      | Not protect       |
| SW3        | ---      | (Reserved)        |
| SW4        | ---      | (Reserved)        |
| SW5        | ---      | (Reserved)        |
| SW6        | ---      | (Reserved)        |
| SW7        | OFF      | Close             |
| SW8        | OFF      | Normal            |

### ◆ Notes

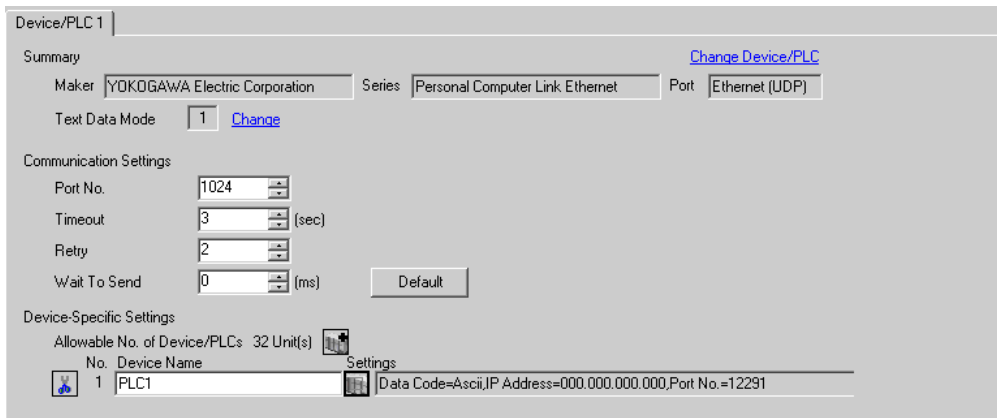
- Check with a network administrator about IP address. Do not set the duplicate IP address.

## 3.4 Setting Example 4


### ■ Settings of GP-Pro EX

#### ◆ Communication Settings

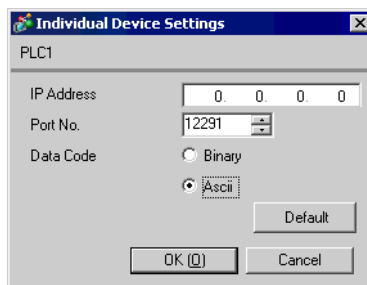
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



#### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



#### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

### ◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

| Setup Items                      | Setup Description |
|----------------------------------|-------------------|
| IP Address Setting Rotary Switch | Option            |

### ◆ Port No.

| Setup Items | Setup Description |
|-------------|-------------------|
| Port No.    | 12291             |

### ◆ Condition Setting Switch

| DIP Switch | Settings | Setup Description |
|------------|----------|-------------------|
| SW1        | ON       | ASCII             |
| SW2        | OFF      | Not protect       |
| SW3        | ---      | (Reserved)        |
| SW4        | ---      | (Reserved)        |
| SW5        | ---      | (Reserved)        |
| SW6        | ---      | (Reserved)        |
| SW7        | OFF      | Close             |
| SW8        | OFF      | Normal            |

### ◆ Notes

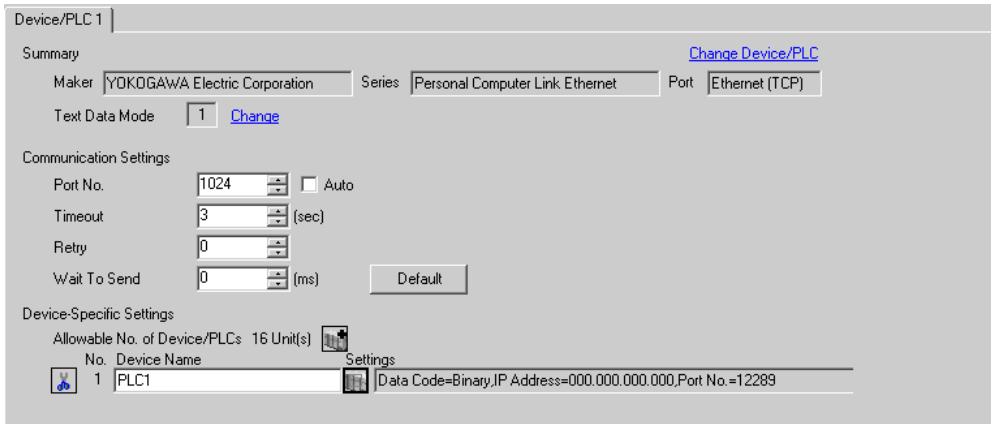
- Check with a network administrator about IP address. Do not set the duplicate IP address.

## 3.5 Setting Example 5


### ■ Settings of GP-Pro EX


#### ◆ Communication Settings

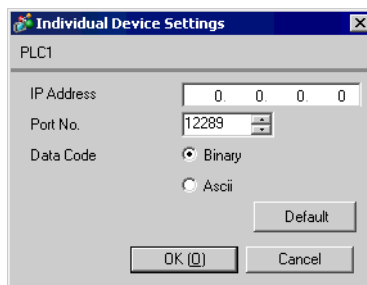
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



#### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



#### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

### ◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

| Setup Items                      | Setup Description |
|----------------------------------|-------------------|
| IP Address Setting Rotary Switch | Option            |

### ◆ Port No.

| Setup Items | Setup Description |
|-------------|-------------------|
| Port No.    | 12289             |

### ◆ Condition Setting Switch

| DIP Switch        | Settings | Setup Description |
|-------------------|----------|-------------------|
| SW1               | ON       | Binary            |
| SW2               | OFF      | Not protect       |
| SW3               | ---      | (Reserved)        |
| SW4               | ---      | (Reserved)        |
| SW5               | ---      | (Reserved)        |
| SW6               | ---      | (Reserved)        |
| SW7 <sup>*1</sup> | OFF      | Close             |
| SW8               | OFF      | Normal            |

\*1 SW7 is available to set in F3LE01-5T only.

### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.




## 3.6 Setting Example 6

### ■ Settings of GP-Pro EX

#### ◆ Communication Settings

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

#### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.

#### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

### ◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

| Setup Items                      | Setup Description |
|----------------------------------|-------------------|
| IP Address Setting Rotary Switch | Option            |

### ◆ Port No.

| Setup Items | Setup Description |
|-------------|-------------------|
| Port No.    | 12289             |

### ◆ Condition Setting Switch

| DIP Switch        | Settings | Setup Description |
|-------------------|----------|-------------------|
| SW1               | OFF      | ASCII             |
| SW2               | OFF      | Not protect       |
| SW3               | ---      | (Reserved)        |
| SW4               | ---      | (Reserved)        |
| SW5               | ---      | (Reserved)        |
| SW6               | ---      | (Reserved)        |
| SW7 <sup>*1</sup> | OFF      | Close             |
| SW8               | OFF      | Normal            |

\*1 SW7 is available to set in F3LE01-5T only.

### ◆ Notes

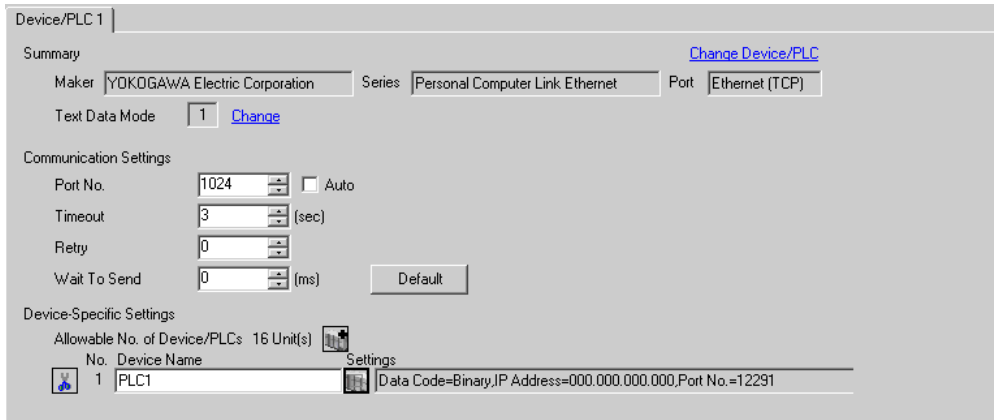
- Check with a network administrator about IP address. Do not set the duplicate IP address.

## 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.



#### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



#### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

### ◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

| Setup Items                      | Setup Description |
|----------------------------------|-------------------|
| IP Address Setting Rotary Switch | Option            |

### ◆ Port No.

| Setup Items | Setup Description |
|-------------|-------------------|
| Port No.    | 12291             |

### ◆ Condition Setting Switch

| DIP Switch | Settings | Setup Description |
|------------|----------|-------------------|
| SW1        | OFF      | Binary            |
| SW2        | OFF      | Not protect       |
| SW3        | ---      | (Reserved)        |
| SW4        | ---      | (Reserved)        |
| SW5        | ---      | (Reserved)        |
| SW6        | ---      | (Reserved)        |
| SW7        | OFF      | Close             |
| SW8        | OFF      | Normal            |

### ◆ Notes

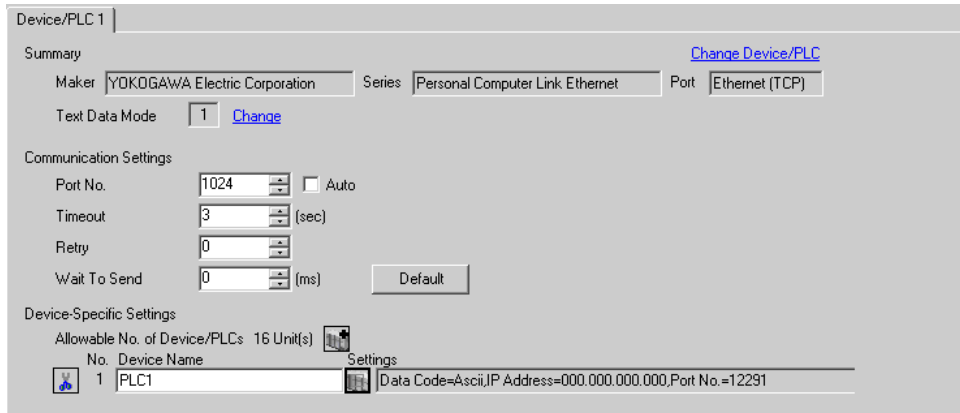
- Check with a network administrator about IP address. Do not set the duplicate IP address.

## 3.8 Setting Example 8


### ■ Settings of GP-Pro EX


#### ◆ Communication Settings

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



#### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



#### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

### ◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

| Setup Items                      | Setup Description |
|----------------------------------|-------------------|
| IP Address Setting Rotary Switch | Option            |

### ◆ Port No.

| Setup Items | Setup Description |
|-------------|-------------------|
| Port No.    | 12291             |

### ◆ Condition Setting Switch

| DIP Switch | Settings | Setup Description |
|------------|----------|-------------------|
| SW1        | ON       | ASCII             |
| SW2        | OFF      | Not protect       |
| SW3        | ---      | (Reserved)        |
| SW4        | ---      | (Reserved)        |
| SW5        | ---      | (Reserved)        |
| SW6        | ---      | (Reserved)        |
| SW7        | OFF      | Close             |
| SW8        | OFF      | Normal            |

### ◆ Notes

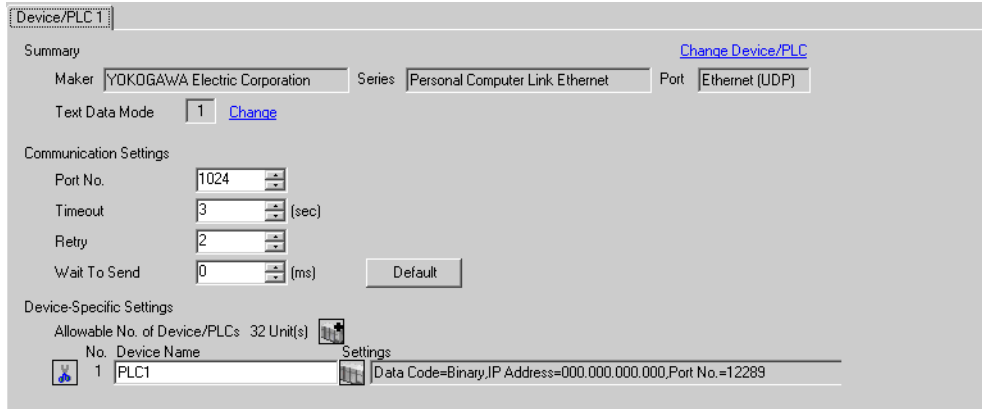
- Check with a network administrator about IP address. Do not set the duplicate IP address.

### 3.9 Setting Example 9


#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

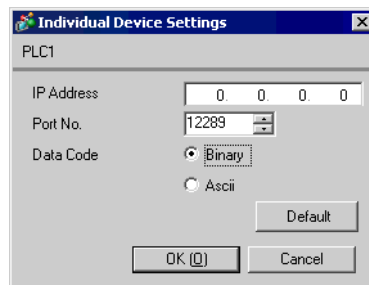
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



##### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



##### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

### ◆ Procedure

- (1) Start the ladder soft.
- (2) Create a new project. Select the External Device to be used when creating the project.
- (3) Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.
- (4) In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

| Setup Items               | Setup Description |
|---------------------------|-------------------|
| NETWORK                   | 1                 |
| ETHERNET                  | 1                 |
| HIGHER-LEVEL LINK SERVICE | 1                 |

- (5) Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

| Setup Items    | Setup Description |
|----------------|-------------------|
| NETWORK_SELECT | 1                 |

- [ETHERNET] Settings

| Setup Items        | Setup Description                                       |
|--------------------|---|
| ETHER_MY_IPADDRESS | IP Address of the External Device<br>Ex: 192.168.0.3    |
| ETHER_SUBNET_MASK  | Subnet Mask of the External Device<br>Ex: 255.255.255.0 |

- [HIGHER-LEVEL LINK SERVICE] Settings

| Setup Items          | Setup Description |
|----------------------|-------------------|
| HILINK_PROTOCOL_A    | 1                 |
| HILINK_DATA_FORMAT_A | 1                 |

- (6) Select [Save as] from the [File] menu and save the CPU property file.
- (7) Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

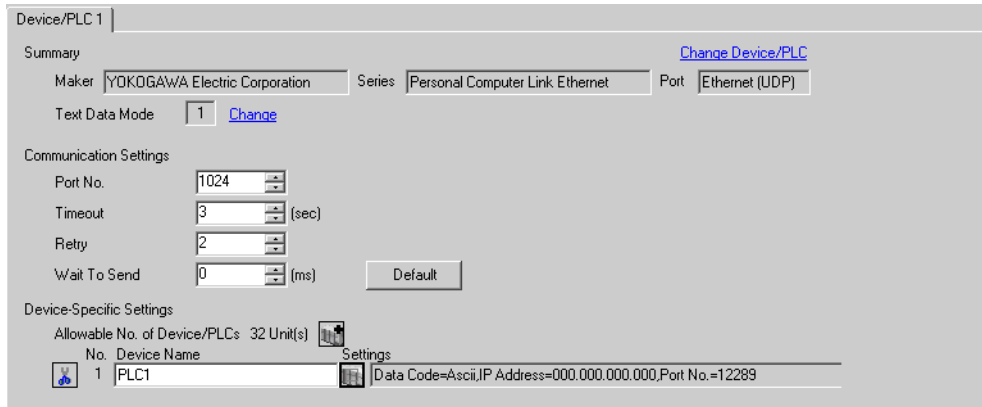


### 3.10 Setting Example 10


#### ■ Settings of GP-Pro EX


##### ◆ Communication Settings

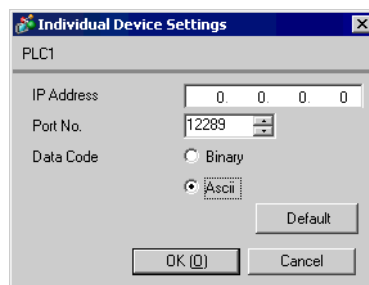
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



##### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



##### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

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Please refer to the manual of the External Device for more details.

### ◆ Procedure

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- (3) Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.
- (4) In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

| Setup Items               | Setup Description |
|---------------------------|-------------------|
| NETWORK                   | 1                 |
| ETHERNET                  | 1                 |
| HIGHER-LEVEL LINK SERVICE | 1                 |

- (5) Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

| Setup Items    | Setup Description |
|----------------|-------------------|
| NETWORK_SELECT | 1                 |

- [ETHERNET] Settings

| Setup Items        | Setup Description                                       |
|--------------------|---|
| ETHER_MY_IPADDRESS | IP Address of the External Device<br>Ex: 192.168.0.3    |
| ETHER_SUBNET_MASK  | Subnet Mask of the External Device<br>Ex: 255.255.255.0 |

- [HIGHER-LEVEL LINK SERVICE] Settings

| Setup Items          | Setup Description |
|----------------------|-------------------|
| HILINK_PROTOCOL_A    | 1                 |
| HILINK_DATA_FORMAT_A | 0                 |

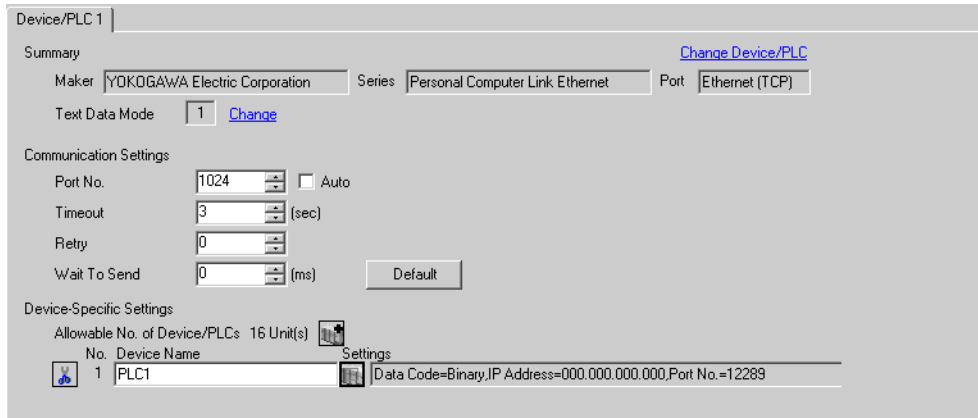
- (6) Select [Save as] from the [File] menu and save the CPU property file.
- (7) Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

### 3.11 Setting Example 11


#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

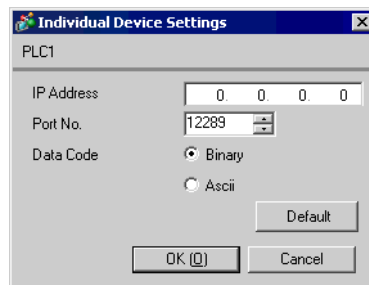
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



##### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



##### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

### ◆ Procedure

- (1) Start the ladder soft.
- (2) Create a new project. Select the External Device to be used when creating the project.
- (3) Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.
- (4) In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

| Setup Items               | Setup Description |
|---------------------------|-------------------|
| NETWORK                   | 1                 |
| ETHERNET                  | 1                 |
| HIGHER-LEVEL LINK SERVICE | 1                 |

- (5) Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

| Setup Items    | Setup Description |
|----------------|-------------------|
| NETWORK_SELECT | 1                 |

- [ETHERNET] Settings

| Setup Items        | Setup Description                                       |
|--------------------|---|
| ETHER_MY_IPADDRESS | IP Address of the External Device<br>Ex: 192.168.0.3    |
| ETHER_SUBNET_MASK  | Subnet Mask of the External Device<br>Ex: 255.255.255.0 |

- [HIGHER-LEVEL LINK SERVICE] Settings

| Setup Items          | Setup Description |
|----------------------|-------------------|
| HILINK_PROTOCOL_A    | 0                 |
| HILINK_DATA_FORMAT_A | 1                 |

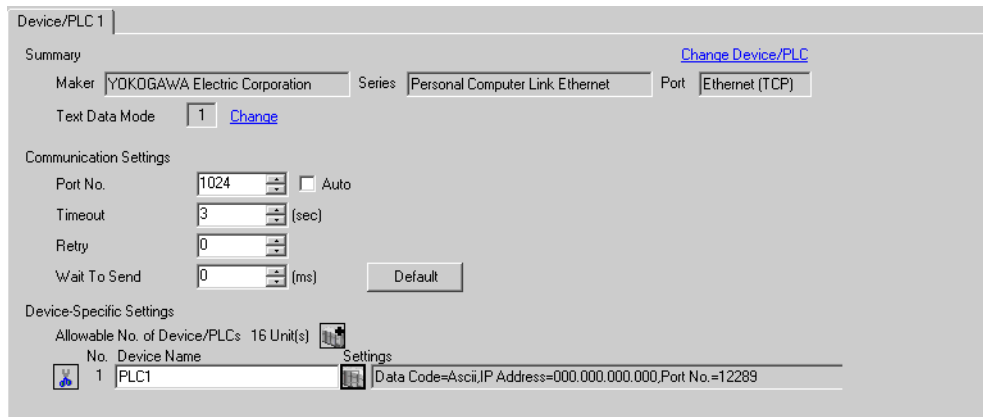
- (6) Select [Save as] from the [File] menu and save the CPU property file.
- (7) Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

## 3.12 Setting Example 12


### ■ Settings of GP-Pro EX


#### ◆ Communication Settings

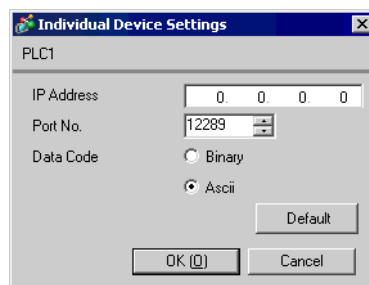
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



#### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



#### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

### ◆ Procedure

- (1) Start the ladder soft.
- (2) Create a new project. Select the External Device to be used when creating the project.
- (3) Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.
- (4) In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

| Setup Items               | Setup Description |
|---------------------------|-------------------|
| NETWORK                   | 1                 |
| ETHERNET                  | 1                 |
| HIGHER-LEVEL LINK SERVICE | 1                 |

- (5) Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

| Setup Items    | Setup Description |
|----------------|-------------------|
| NETWORK_SELECT | 1                 |

- [ETHERNET] Settings

| Setup Items        | Setup Description                                       |
|--------------------|---|
| ETHER_MY_IPADDRESS | IP Address of the External Device<br>Ex: 192.168.0.3    |
| ETHER_SUBNET_MASK  | Subnet Mask of the External Device<br>Ex: 255.255.255.0 |

- [HIGHER-LEVEL LINK SERVICE] Settings

| Setup Items          | Setup Description |
|----------------------|-------------------|
| HILINK_PROTOCOL_A    | 0                 |
| HILINK_DATA_FORMAT_A | 0                 |

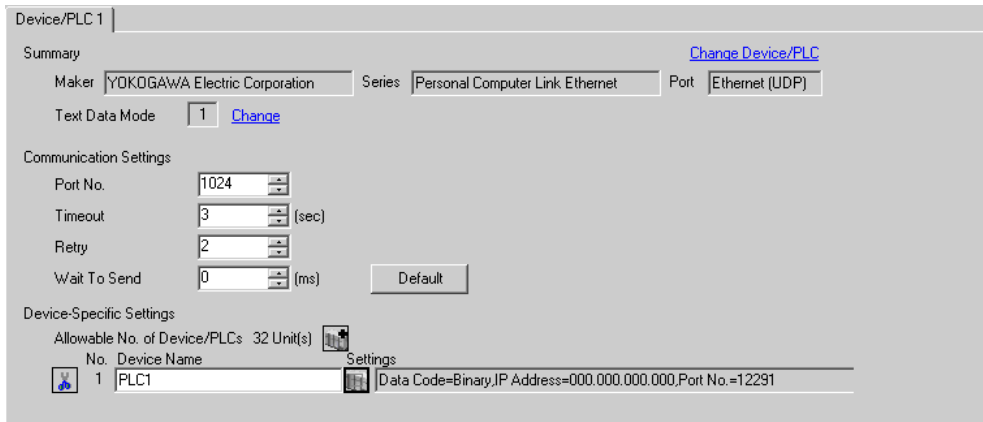
- (6) Select [Save as] from the [File] menu and save the CPU property file.
- (7) Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

### 3.13 Setting Example 13


#### ■ Settings of GP-Pro EX

##### ◆ Communication Settings

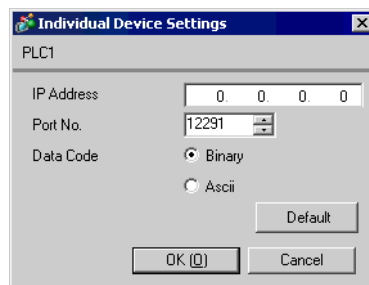
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



##### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



##### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

### ◆ Procedure

- (1) Start the ladder soft.
- (2) Create a new project. Select the External Device to be used when creating the project.
- (3) Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.
- (4) In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

| Setup Items               | Setup Description |
|---------------------------|-------------------|
| NETWORK                   | 1                 |
| ETHERNET                  | 1                 |
| HIGHER-LEVEL LINK SERVICE | 1                 |

- (5) Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

| Setup Items    | Setup Description |
|----------------|-------------------|
| NETWORK_SELECT | 1                 |

- [ETHERNET] Settings

| Setup Items        | Setup Description                                       |
|--------------------|---|
| ETHER_MY_IPADDRESS | IP Address of the External Device<br>Ex: 192.168.0.3    |
| ETHER_SUBNET_MASK  | Subnet Mask of the External Device<br>Ex: 255.255.255.0 |

- [HIGHER-LEVEL LINK SERVICE] Settings

| Setup Items          | Setup Description |
|----------------------|-------------------|
| HILINK_PROTOCOL_B    | 1                 |
| HILINK_DATA_FORMAT_B | 1                 |

- (6) Select [Save as] from the [File] menu and save the CPU property file.
- (7) Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

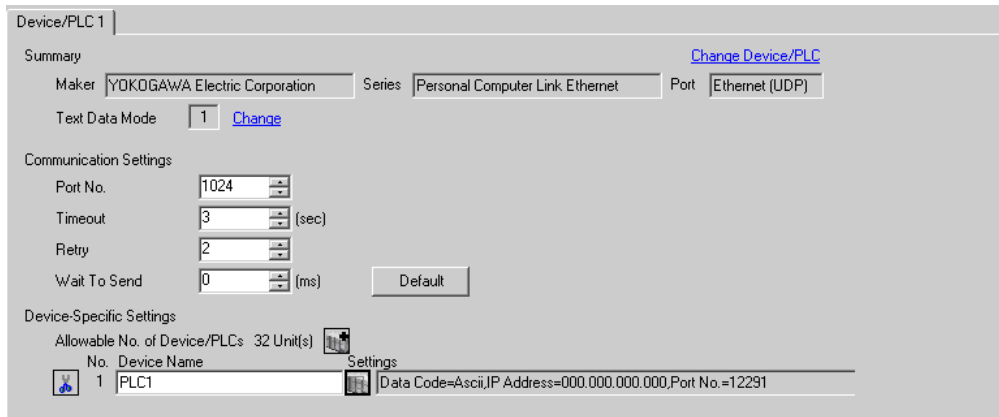


### 3.14 Setting Example 14


#### ■ Settings of GP-Pro EX


##### ◆ Communication Settings

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



##### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



##### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

### ◆ Procedure

- (1) Start the ladder soft.
- (2) Create a new project. Select the External Device to be used when creating the project.
- (3) Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.
- (4) In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

| Setup Items               | Setup Description |
|---------------------------|-------------------|
| NETWORK                   | 1                 |
| ETHERNET                  | 1                 |
| HIGHER-LEVEL LINK SERVICE | 1                 |

- (5) Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

| Setup Items    | Setup Description |
|----------------|-------------------|
| NETWORK_SELECT | 1                 |

- [ETHERNET] Settings

| Setup Items        | Setup Description                                       |
|--------------------|---|
| ETHER_MY_IPADDRESS | IP Address of the External Device<br>Ex: 192.168.0.3    |
| ETHER_SUBNET_MASK  | Subnet Mask of the External Device<br>Ex: 255.255.255.0 |

- [HIGHER-LEVEL LINK SERVICE] Settings

| Setup Items          | Setup Description |
|----------------------|-------------------|
| HILINK_PROTOCOL_B    | 1                 |
| HILINK_DATA_FORMAT_B | 0                 |

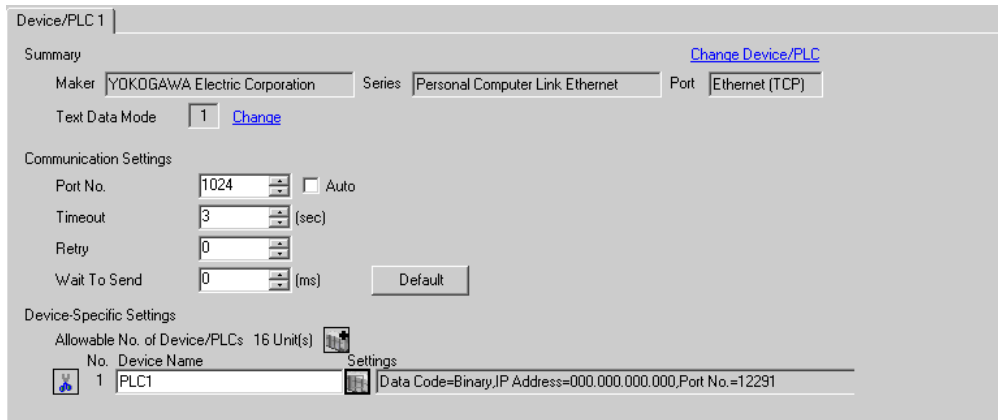
- (6) Select [Save as] from the [File] menu and save the CPU property file.
- (7) Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

### 3.15 Setting Example 15


#### ■ Settings of GP-Pro EX


##### ◆ Communication Settings

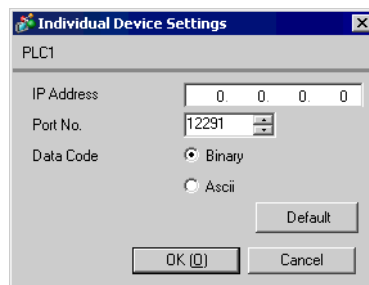
To display the setting screen, select [Device/PLC Settings] from [System setting window] in workspace.



##### ◆ Device Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



##### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

### ◆ Procedure

- (1) Start the ladder soft.
- (2) Create a new project. Select the External Device to be used when creating the project.
- (3) Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.
- (4) In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

| Setup Items               | Setup Description |
|---------------------------|-------------------|
| NETWORK                   | 1                 |
| ETHERNET                  | 1                 |
| HIGHER-LEVEL LINK SERVICE | 1                 |

- (5) Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

| Setup Items    | Setup Description |
|----------------|-------------------|
| NETWORK_SELECT | 1                 |

- [ETHERNET] Settings

| Setup Items        | Setup Description                                       |
|--------------------|---|
| ETHER_MY_IPADDRESS | IP Address of the External Device<br>Ex: 192.168.0.3    |
| ETHER_SUBNET_MASK  | Subnet Mask of the External Device<br>Ex: 255.255.255.0 |

- [HIGHER-LEVEL LINK SERVICE] Settings

| Setup Items          | Setup Description |
|----------------------|-------------------|
| HILINK_PROTOCOL_B    | 0                 |
| HILINK_DATA_FORMAT_B | 1                 |

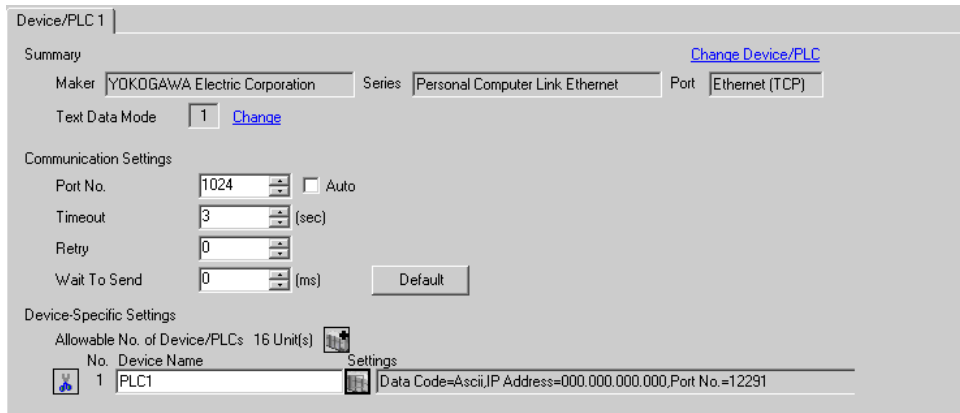
- (6) Select [Save as] from the [File] menu and save the CPU property file.
- (7) Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

## 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 Setting

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

When you connect multiple External Device, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



#### ◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the off-line mode of the Display.

## ■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

### ◆ Procedure

- (1) Start the ladder soft.
- (2) Create a new project. Select the External Device to be used when creating the project.
- (3) Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.
- (4) In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

| Setup Items               | Setup Description |
|---------------------------|-------------------|
| NETWORK                   | 1                 |
| ETHERNET                  | 1                 |
| HIGHER-LEVEL LINK SERVICE | 1                 |

- (5) Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

| Setup Items    | Setup Description |
|----------------|-------------------|
| NETWORK_SELECT | 1                 |

- [ETHERNET] Settings

| Setup Items        | Setup Description                                       |
|--------------------|---|
| ETHER_MY_IPADDRESS | IP Address of the External Device<br>Ex: 192.168.0.3    |
| ETHER_SUBNET_MASK  | Subnet Mask of the External Device<br>Ex: 255.255.255.0 |

- [HIGHER-LEVEL LINK SERVICE] Settings

| Setup Items          | Setup Description |
|----------------------|-------------------|
| HILINK_PROTOCOL_B    | 0                 |
| HILINK_DATA_FORMAT_B | 0                 |

- (6) Select [Save as] from the [File] menu and save the CPU property file.
- (7) Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

## 4 Setup Items

Set 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 External Device.

☞ "3 Example of Communication Setting" (page 7)

**NOTE** • Set the Display's IP address in off-line mode.

Cf. Maintenance/Troubleshooting Manual "2.5 Ethernet Settings"

### 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.

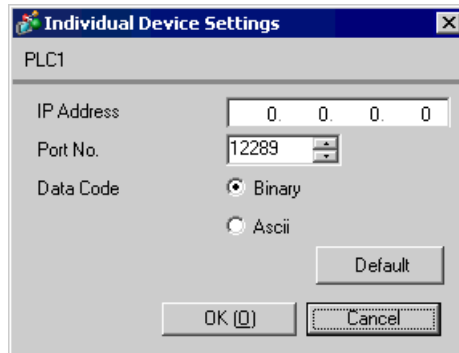
The screenshot shows the 'Device/PLC 1' configuration window. It has three main sections: 'Summary', 'Communication Settings', and 'Device-Specific Settings'.  
 - **Summary:** Maker: YDKOGAWA Electric Corporation; Series: Personal Computer Link Ethernet; Port: Ethernet (UDP); Text Data Mode: 1.  
 - **Communication Settings:** Port No.: 1024; Timeout: 3 (sec); Retry: 2; Wait To Send: 0 (ms).  
 - **Device-Specific Settings:** Allowable No. of Device/PLCs: 32 Unit(s). A table lists one device: No. 1, Device Name PLC1, Settings: Data Code=Binary, IP Address=000.000.000.000, Port No.=12289.

| Setup Items  | Setup Description  |
|--------------|--|
| Port No.     | Use an integer from 1024 to 65535 to enter the port No. of the Display. When you check the option of [Auto Assign], the port No. will be automatically set.<br><b>NOTE</b><br>• [Auto Assign] option is available to set only when you select "Ethernet (TCP)" in [Connecting Method]. |
| 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 standby time (ms) for the Display from receiving packets to transmitting next commands.  |

## ■ Device Setting

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

When [Allowable No. of Device/PLCs] is multiple, click  from [Device-Specific Settings] of [Device/PLC Settings] to add another External Device.



| Setup Items | Setup Description  |
|-------------|--|
| IP Address  | Set IP address of the External Device.<br><b>NOTE</b><br><ul style="list-style-type: none"> <li>• Check with a network administrator about IP address. Do not set the duplicate IP address.</li> </ul> |
| Port No.    | Use an integer 12289 or 12291 to enter the port No. of the External Device.  |
| Data Code   | Select the data format to communicate with the External Device from "Binary" or "ASCII".   |



## 4.2 Setup Items in Off-Line Mode

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

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

### ■ Communication Settings

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

| Comm.                           | Device  |  |       |                        |
|---------------------------------|---|--|-------|------------------------|
| Personal Computer Link Ethernet |   |  | [UDP] | Page 1/1               |
| Port No.                        | <input checked="" type="radio"/> Fixed <input type="radio"/> Auto |  | 1024  | ▼ ▲                    |
| Timeout(s)                      |   |  | 3     | ▼ ▲                    |
| Retry                           |   |  | 2     | ▼ ▲                    |
| Wait To Send(ms)                |   |  | 0     | ▼ ▲                    |
|                                 | Exit  |  | Back  | 2005/09/01<br>19:39:44 |

| Setup Items  | Setup Description  |
|--------------|--|
| Port No.     | Set the Port No. of the Display. In UDP connection, entered port No. will be assigned regardless of whether you select [Fixed] or [Auto]. In TCP connection, select either of [Fixed] or [Auto]. When you select [Fixed], use an integer from 1024 to 65535 to enter the port No. of the Display. When you select [Auto], the port No. will be automatically assigned regardless of the entered value. |
| 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 standby time (ms) for the Display from receiving packets to transmitting next commands.  |

## ■ Device Setting

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

|                                 |                   |       |          |                        |
|---------------------------------|-------------------|-------|----------|------------------------|
| Comm.                           | Device            |       |          |                        |
| Personal Computer Link Ethernet |                   | [UDP] | Page 1/1 |                        |
| Device/PLC Name                 | [PLC1]            |       |          |                        |
| IP Address                      | [ 0 0 0 0 ]       |       |          |                        |
| Port No.                        | [ 12289 ] [▼] [▲] |       |          |                        |
| Data Code                       | [ Binary ] [▼]    |       |          |                        |
| Exit                            |                   | Back  |          | 2005/09/01<br>19:39:47 |

| Setup Items     | Setup Description  |
|-----------------|--|
| Device/PLC Name | Select the External Device for device setting. Device name is a title of External Device set with GP-Pro EX.(Initial value [PLC1])   |
| IP Address      | Set IP address of the External Device.<br><b>NOTE</b><br><ul style="list-style-type: none"> <li>Check with a network administrator about IP address. Do not set the duplicate IP address.</li> </ul> |
| Port No.        | Use an integer 12289 or 12291 to enter the port No. of the External Device.  |
| Data Code       | Select the data format to communicate with the External Device from "Binary" or "ASCII".   |

## 5 Supported Device

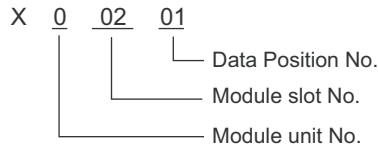
Range of supported device address is shown in the table below. Please note that the actually supported range of the devices varies depending on the External Device to be used. Please check the actual range in the manual of your External Device.

     This address can be specified as system data area.

| Device                  | Bit Address      | Word Address            | 32 bits   | Notes  |
|-------------------------|------------------|-------------------------|---|--|
| Input Relay             | X00201 to X71664 | X00201 to X71649        | L/H   | <span style="border: 1px solid black; padding: 2px;">+1B+1</span> *1*2 |
| Output Relay            | Y00201 to Y71664 | Y00201 to Y71649        |   | <span style="border: 1px solid black; padding: 2px;">+1B+1</span> *1   |
| Internal Relay          | I00001 to I65535 | I0001 to I65521         |   | <span style="border: 1px solid black; padding: 2px;">+1B+1</span>      |
| Common Relay            | E0001 to E4096   | E0001 to E4081          |   | <span style="border: 1px solid black; padding: 2px;">+1B+1</span>      |
| Special Relay           | M0001 to M9984   | M0001 to M9969          |   | <span style="border: 1px solid black; padding: 2px;">+1B+1</span>      |
| Link Relay              | L00001 to L78192 | L00001 to L78177        |   | <span style="border: 1px solid black; padding: 2px;">+1B+1</span> *3   |
| Timer (Contact)         | TU0001 to TU3072 | ---                     |   |  |
| Counter (Contact)       | CU000 to CU3072  | ---                     |   |  |
| Timer (Current Value)   | ---              | TP0001 to TP3072        |   |  |
| Timer (Setting Value)   | ---              | TS0001 to TS3072        |   | *2   |
| Counter (Current Value) | ---              | CP0001 to CP3072        |   |  |
| Counter (Setting Value) | ---              | CS001 to CS3072         |   | *2   |
| Data Register           | ---              | D00001 to D65535        |   | <span style="border: 1px solid black; padding: 2px;">Bit 15</span>     |
| Common Register         | ---              | B000001 to B262144      |   | <span style="border: 1px solid black; padding: 2px;">Bit 15</span>     |
| General Register        | ---              | R0001 to R4096          |   | <span style="border: 1px solid black; padding: 2px;">Bit 15</span>     |
| Special Register        | ---              | Z0001 to Z1024          |   | <span style="border: 1px solid black; padding: 2px;">Bit 15</span>     |
| Link Register           | ---              | W00001 to W78192        |   | <span style="border: 1px solid black; padding: 2px;">Bit 15</span> *3  |
| Special Module          | ---              | SW0010000 to SW7169999  |   | *2*4   |
| Information             | ---              | INF100 to INF101        |   | *2*5   |
|                         | ---              | INF200 to INF214        |   | *2*5   |
|                         | ---              | INF30010 to INF37163    | *2*5  |  |
|                         | ---              | INF4100 to INF4215      | <span style="border: 1px solid black; padding: 2px;">Bit 15</span> *2*5 |  |
|                         | ---              | INF500                  | *5  |  |
| Program Information     | ---              | PRI00000 to PRI99913    | *2*6  |  |
| User Log Read           | ---              | ULR000000 to ULR 064128 | *2*7  |  |
| Error History Read      | ---              | ERH000000 to ERH 128000 | *2*8  |  |

- \*1 Address for input relay and output relay can be specified when data position number (bit) 01 to 49 for lower 2 digits is the value of (multiples of 16) + 1 only.

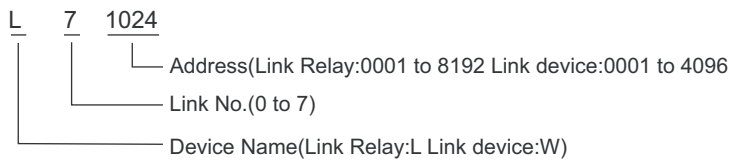
Example: X00201



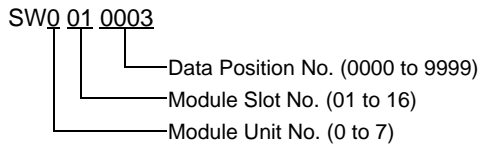
- \*2 Write disable

- \*3 In link relay (L) and link register (W), the upper 1st digit on address input area shows the link number, and lower 4th digit shows the address. Specify the word address for link relay (L) and link register (W) with the value of (multiples of 16) + 1.

Example: When specifying L71024 of link relay

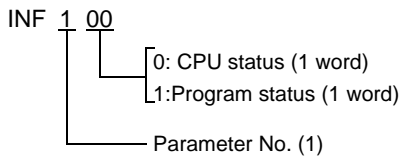


- \*4 Information of Special Module Read/Write

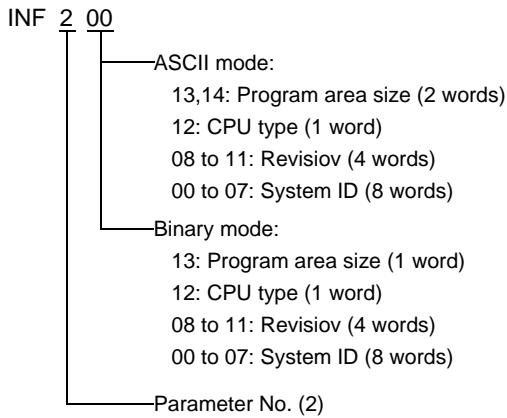


\*5 Information Read

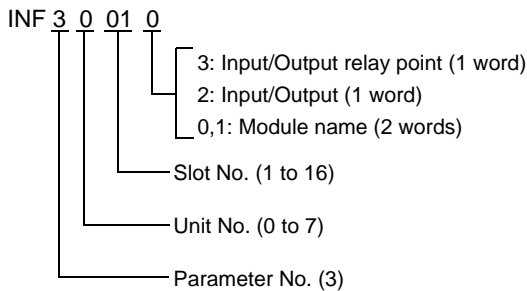
1. Read the status of CPU module and program



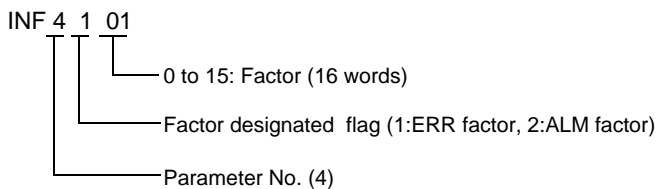
2. Read the information of system ID, CPU type and area size



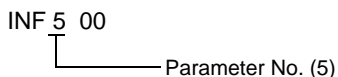
3. Read the mounting module name



4. Read the ERR LED of CPU module or the ALM LED lighting factor

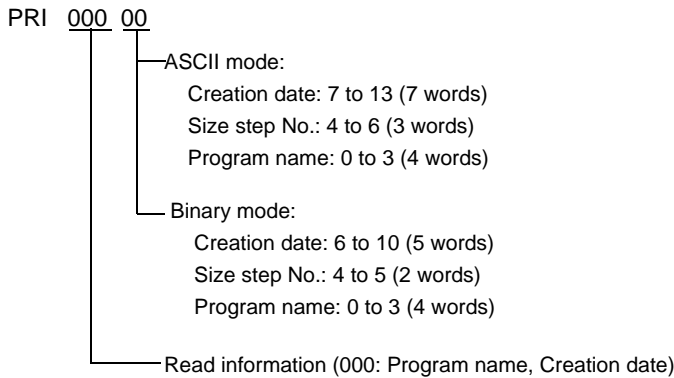


5. Delete the current alarm information of CPU module (write only)

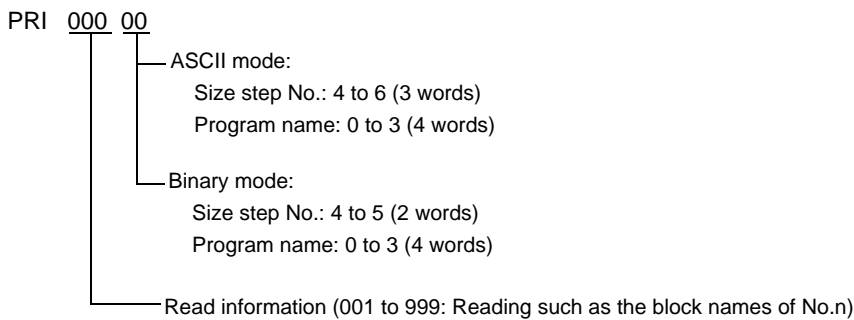


\*6 Program Information Read

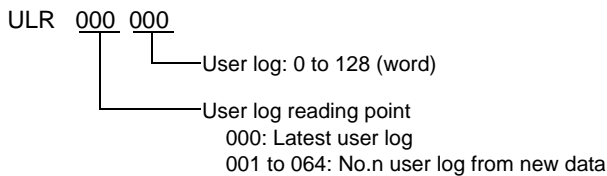
When 000 is written in Read information



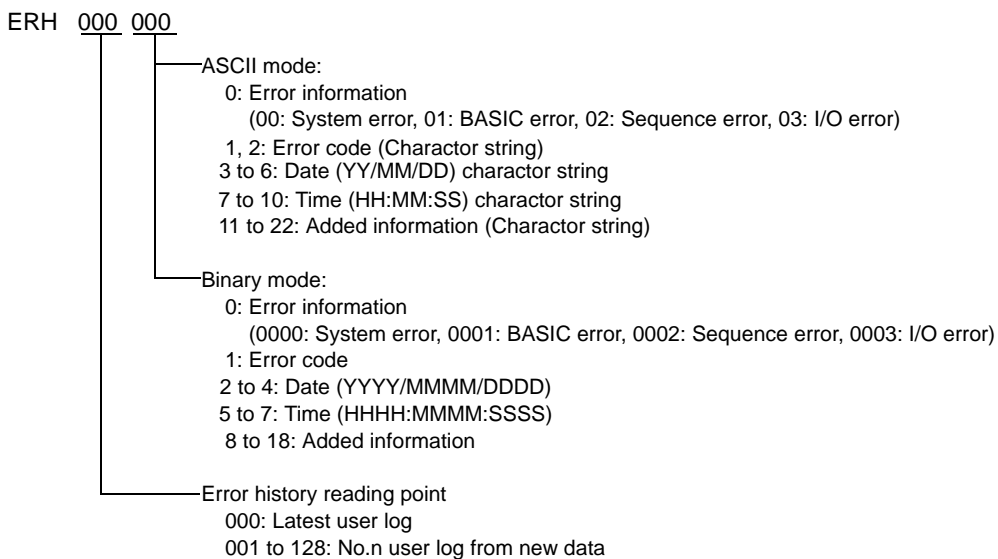
When one of the numbers from 001 to 999 is written in Read information




\*7 User Log Read



\*8 Error History Read



**NOTE**

- Please refer to the GP-Pro EX Reference Manual for system data area.  
Cf. GP-Pro EX Reference Manual "Appendix 1.4 LS Area (Direct Access Method)"
  - Please refer to the precautions on manual notation for icons in the table.  
 "Manual Symbols and Terminology"
-

## 6 Device Code and Address Code

Use device code and address code when you select "Device Type & Address" for the address type in data displays.

| Device                | Device Name | Device Code (HEX) | Address Code   |
|-----------------------|-------------|-------------------|--|
| Input Relay           | 1X          | 0080              | $(\text{Module unit No.} \times 0x40) + ((\text{Module slot No.} - 1) \times 0x4) + ((\text{Terminal No.} - 1) \text{ divided by } 16)^{*1}$ |
|                       | 2X          | 0180              |  |
|                       | 3X          | 0280              |  |
|                       | 4X          | 0380              |  |
| Output Relay          | 1Y          | 0081              | $(\text{Module unit No.} \times 0x40) + ((\text{Module slot No.} - 1) \times 0x4) + ((\text{Terminal No.} - 1) \text{ divided by } 16)^{*1}$ |
|                       | 2Y          | 0181              |  |
|                       | 3Y          | 0281              |  |
|                       | 4Y          | 0381              |  |
| Internal Relay        | 1I          | 0082              | Value of (word address - 1) divided by 16  |
|                       | 2I          | 0182              |  |
|                       | 3I          | 0282              |  |
|                       | 4I          | 0382              |  |
| Common Relay          | 1E          | 0084              | Value of (word address - 1) divided by 16  |
|                       | 2E          | 0184              |  |
|                       | 3E          | 0284              |  |
|                       | 4E          | 0384              |  |
| Special Relay         | 1M          | 0083              | Value of (word address - 1) divided by 16  |
|                       | 2M          | 0183              |  |
|                       | 3M          | 0283              |  |
|                       | 4M          | 0383              |  |
| Link Relay            | 1L          | 0088              | $(\text{Link No.} \times 0x10000) + ((\text{word address} - 1) \text{ divided by } 16)^{*2}$   |
|                       | 2L          | 0188              |  |
|                       | 3L          | 0288              |  |
|                       | 4L          | 0388              |  |
| Timer (Current Value) | 1TP         | 0060              | Value of word address from which 1 is deducted   |
|                       | 2TP         | 0160              |  |
|                       | 3TP         | 0260              |  |
|                       | 4TP         | 0360              |  |

continued to next page



| Device                  | Device Name | Device Code (HEX) | Address Code   |
|-------------------------|-------------|-------------------|--|
| Timer (Setting Value)   | 1TS         | 0063              | Value of word address from which 1 is deducted   |
|                         | 2TS         | 0163              |  |
|                         | 3TS         | 0263              |  |
|                         | 4TS         | 0363              |  |
| Counter (Current Value) | 1CP         | 0061              | Value of word address from which 1 is deducted   |
|                         | 2CP         | 0161              |  |
|                         | 3CP         | 0261              |  |
|                         | 4CP         | 0361              |  |
| Counter (Setting Value) | 1CS         | 0064              | Value of word address from which 1 is deducted   |
|                         | 2CS         | 0164              |  |
|                         | 3CS         | 0264              |  |
|                         | 4CS         | 0364              |  |
| Data Register           | 1D          | 0000              | Value of word address from which 1 is deducted   |
|                         | 2D          | 0100              |  |
|                         | 3D          | 0200              |  |
|                         | 4D          | 0300              |  |
| Common Register         | 1B          | 0004              | Value of word address from which 1 is deducted   |
|                         | 2B          | 0104              |  |
|                         | 3B          | 0204              |  |
|                         | 4B          | 0304              |  |
| General Register        | 1R          | 0003              | Value of word address from which 1 is deducted   |
|                         | 2R          | 0103              |  |
|                         | 3R          | 0203              |  |
|                         | 4R          | 0303              |  |
| Special Register        | 1Z          | 0001              | Value of word address from which 1 is deducted   |
|                         | 2Z          | 0101              |  |
|                         | 3Z          | 0201              |  |
|                         | 4Z          | 0301              |  |
| Link Register           | 1W          | 0002              | $(\text{Link No.} \times 0x10000) + ((\text{word address} - 1) \text{ divided by } 16)^{*2}$ |
|                         | 2W          | 0102              |  |
|                         | 3W          | 0202              |  |
|                         | 4W          | 0302              |  |

| Device              | Device Name | Device Code (HEX) | Address Code                 |
|---------------------|-------------|-------------------|------------------------------|
| Special Module      | 1SW         | 0065              | Word address                 |
|                     | 2SW         | 0165              |                              |
|                     | 3SW         | 0265              |                              |
|                     | 4SW         | 0365              |                              |
| Information         | 1INF1       | 0066              | Word address<br>(Read only)  |
|                     | 2INF1       | 0166              |                              |
|                     | 3INF1       | 0266              |                              |
|                     | 4INF1       | 0366              |                              |
|                     | 1INF2       | 006a              | Word address<br>(Read only)  |
|                     | 2INF2       | 016a              |                              |
|                     | 3INF2       | 026a              |                              |
|                     | 4INF2       | 036a              |                              |
|                     | 1INF3       | 006b              | Word address<br>(Read only)  |
|                     | 2INF3       | 016b              |                              |
|                     | 3INF3       | 026b              |                              |
|                     | 4INF3       | 036b              |                              |
|                     | 1INF4       | 0005              | Word address<br>(Read only)  |
|                     | 2INF4       | 0105              |                              |
|                     | 3INF4       | 0205              |                              |
|                     | 4INF4       | 0305              |                              |
|                     | 1INF5       | 006c              | Word address<br>(Write only) |
|                     | 2INF5       | 016c              |                              |
|                     | 3INF5       | 026c              |                              |
|                     | 4INF5       | 036c              |                              |
| Program Information | 1PRI        | 0067              | Word address<br>(Read only)  |
|                     | 2PRI        | 0167              |                              |
|                     | 3PRI        | 0267              |                              |
|                     | 4PRI        | 0367              |                              |
| User Log Read       | 1ULR        | 0068              | Word address<br>(Read only)  |
|                     | 2ULR        | 0168              |                              |
|                     | 3ULR        | 0268              |                              |
|                     | 4ULR        | 0368              |                              |

| Device             | Device Name | Device Code (HEX) | Address Code                |
|--------------------|-------------|-------------------|-----------------------------|
| Error History Read | 1ERH        | 0069              | Word address<br>(Read only) |
|                    | 2ERH        | 0169              |                             |
|                    | 3ERH        | 0269              |                             |
|                    | 4ERH        | 0369              |                             |

\*1 Please refer to "5 Supported Device \*1" for each name.

\*2 Please refer to "5 Supported Device \*3" for each name.

## 7 Error Messages

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

| Item                  | Description  |
|-----------------------|--|
| No.                   | Error No.  |
| Device Name           | Name of External Device where error occurs. Device name is a title of External Device set with GP-Pro EX.(Initial value [PLC1])  |
| Error Message         | Displays messages related to the error which occurs.   |
| Error Occurrence Area | <p>Displays IP address or device address of External Device where error occurs, or error codes received from External Device.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• IP address is displayed such as "IP address (Decimal): MAC address (Hex)".</li> <li>• Device address is displayed such as "Address: Device address".</li> <li>• Received error codes are displayed such as "Decimal [Hex]".</li> </ul> |

Display Examples of Error Messages

"RHAA035: PLC1: Error has been responded for device write command (Error Code: 2 [02H])"

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- 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.
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