



FACTORY AUTOMATION

Programmable Controller MELSEC iQ-F Series



Web Server Function Application Guide Using Web Page Startup and Introduction



INTRODUCTION

Thank you for purchasing the MELSEC iQ-F Series.

This guide describes the settings related to the Web server function of the FX5 CPU module.

It should be read and understood before attempting to install or use the module.

Regarding use of this product

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used for purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine, or passenger movement vehicles, consult Mitsubishi Electric representative.
- This product has been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

Note

- If in doubt at any stage during the installation of the product, always consult a professional electrical engineer who is qualified and trained in the local and national standards. If in doubt about the operation or use, please consult the nearest Mitsubishi Electric representative.
- Mitsubishi Electric will not accept responsibility for actual use of the product based on these illustrative examples.
- This guide content, specification, etc., may be changed, without a notice, for improvement.
- The information in this guide has been carefully checked and is believed to be accurate; however, if you notice a doubtful point, an error, etc., please contact the nearest Mitsubishi Electric representative. When doing so, please provide the document number given at the end of this guide.

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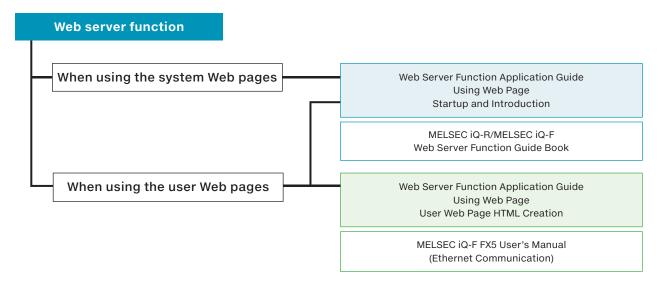
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RELEVANT CATALOGS/MANUALS

▶ Configuration of catalogs and manuals

The following catalogs and manuals should be referred to before using the Web pages.

For details of the function of these Web pages, refer to 1.1 Function Introduction



► Relevant catalogs/manuals

For the detailed specifications, precautions, and limitations of the product, refer to the following catalogs or manuals.

Name [Catalog/manual number]	Description	Available form
Web Server Function Application Guide Using Web Page Startup and Introduction [L(NA)08643ENG (This guide)]	Preparation of necessary equipment for the use of the Web server function of the MELSEC iQ-F and the introduction procedure for displaying the Web page.	PDF
Web Server Function Application Guide Using Web Page User Web Page HTML Creation [L(NA)08645ENG]	For users who create their own Web page from the User Web page. Details on Style Sheet-based designs, JavaScript objects and CGI objects used during HTML creation.	PDF
MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book [SH-081982ENG]	Specifications, procedures before operation, and troubleshooting of the Web server function.	e-Manual, PDF
MELSEC iQ-F FX5 User's Manual (Ethernet Communication) [JY997D56201]	Details on the Ethernet communication function. For the Web server function, details on CGI objects that can be used in the user Web page.	e-Manual, PDF, Print book

Point

- e-Manual refers to the Mitsubishi Electric's FA electronic book manuals that can be browsed using a dedicated tool.
- e-Manual has the following features:
- Required information can be cross-searched in multiple manuals. (Cross Document Search)
- Pages that users often browse can be bookmarked.

PRECAUTIONS

Illegal access from external devices

Incorporate other measures if the safety of the programmable controller system must be maintained against illegal access from an external device. Mitsubishi shall not be held liable for any system problems that may occur due to illegal access. The user authentication of the Web server function is one of the methods for preventing illegal access (such as program or data destruction) from an external device. It does not completely prevent illegal access.

Examples of measures against illegal access are given below.

- · Install a firewall.
- Install a personal computer as a relay station, and control the relay of send/receive data with an application program.
- Install an external device for which the access rights can be controlled as a relay station. (Contact the network provider or equipment dealer for details on the external devices for which access rights can be controlled.)

Firewall functions

A firewall is a software program, a device or a system that is installed at the boundary between the computer or network and external networks. It relays and monitors incoming and outgoing communications and protects the inside from external attacks. A firewall has the following functions:

• Filtering function

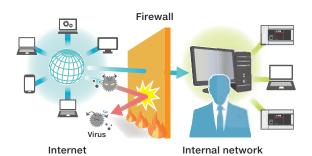
This function intercepts illegal packets and passes permitted packets only.

Address conversion function

This function assigns conversion of IP addresses between the internal and external networks.

• Remote control and monitoring function

This function allows setting of a firewall and checking logs from another computer.



LIMITATIONS

Response performance of Web pages

The response performance of Web pages varies according to the following causes.

The response performance may degrade due to the network line status or the communication status of the Ethernet function of the FX5 CPU.

- Load factor of an Ethernet line (line congestion)
- Number of connections that are used simultaneously (Refreshing other connections)
- Communication load status including the communication functions other than the Web server function set using the Ethernet function of the FX5 CPU
- Large scan time of the FX5 CPU when Web page update is requested

Web server access

Up to four users can log in to the MELSEC iQ-F Series simultaneously.

If the file reading was not completed successfully or a message that requests to reload the page appears while the Web server function is used, read the file again.

Communication timeout time

Since the communication timeout time depends on the browser specifications, it may not be the same as the timeout time of the Web server (five minutes). The design of the error window differs depending on the browser.

Special Note

For the precautions and limitations, refer also to "FX5 User's Manual (Ethernet Communication) [JY997D56201]".

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1. WEB SERVER FUNCTION

Function Introduction

Usage Example

Web Page Overview

1.1 Function Introduction

The Web server function is a function to connect personal computers, tablet terminals or smartphones to the network using the built-in Ethernet port of the CPU module and operate the Web page for the Web server function displayed on a standard Web browser (such as Internet Explorer® and Safari®) to read/write the device data from/to the CPU module. Since no special engineering tool (such as GX Works3) is required, users can check the current values or error status of the device from a remote office or outside the office by using a personal computer or smartphone.

Two types of page can be displayed on a Web browser. Accessible pages can be limited with the access rights setting.

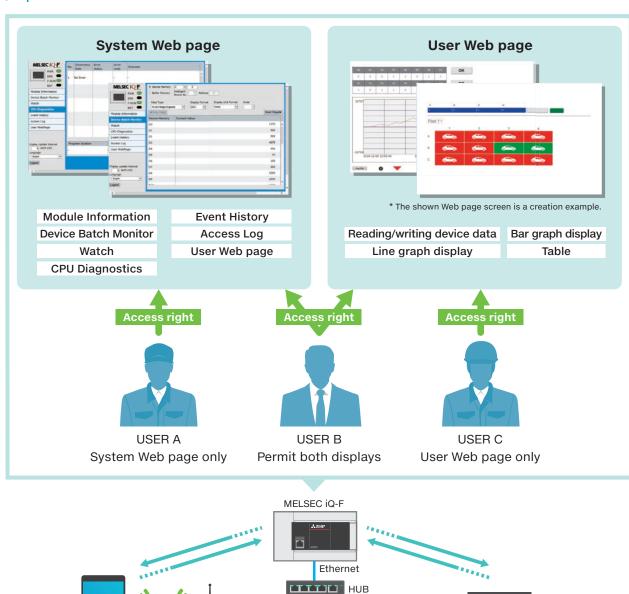
- System Web page ··········· A default Web page that can be used with the Web server function.
- User Web page ······ A Web page that can be freely customized by users.

Wireless LAN equipment

(Wireless access point)

Tablet terminal

▶ Operations that can be done for the CPU module



Personal computer

1. WEB SERVER FUNCTION

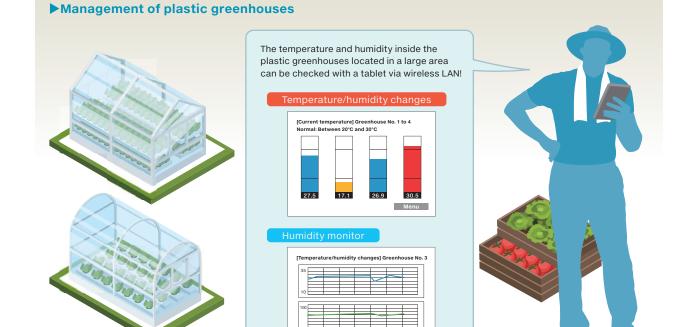
on Introduction

Usage Example

Web Page Overview

1.2 Usage Example





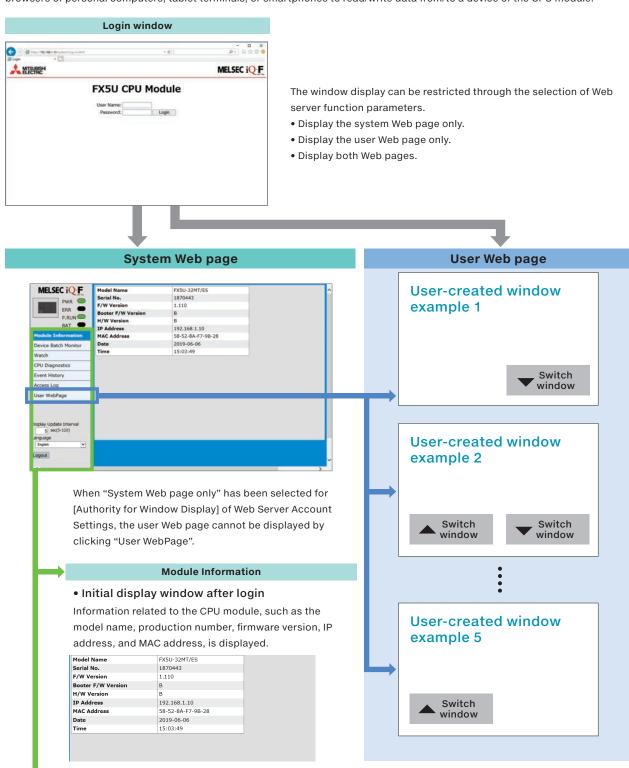
^{*} The shown Web page screen is a creation example.

1. WEB SERVER FUNCTION

Nutroduction Usage Example Web Page Overview

1.3 Web Page Overview

This section introduces the Web pages used with the Web server function. The Web page can be displayed on standard Web browsers of personal computers, tablet terminals, or smartphones to read/write data from/to a device of the CPU module.



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1. WEB SERVER FUNCTION

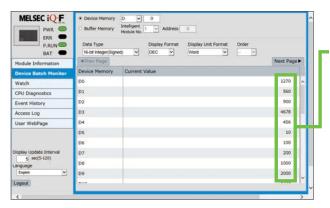
tion Introduction

Usage Example

Web Page Overview

Device Batch Monitor

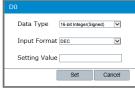
Devices and buffer memory areas can be monitored in a batch.



Click the current value of the device and the device test window appears.

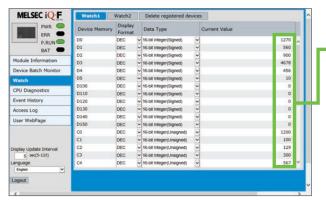
Device test

The current value of the device can be changed.



Watch

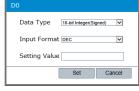
Devices and buffer memory areas can be monitored individually for each point.



Click the current value of the device and the device test window appears.

➤ Device test

The current value of the device can be changed.



The following devices cannot be monitored:

- Index modification
- Bit-specified word device
- Digit-specified bit device

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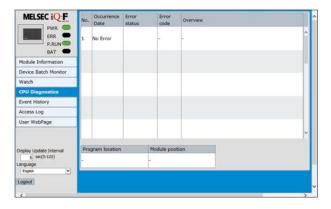
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1. WEB SERVER FUNCTION

Web Page Overview

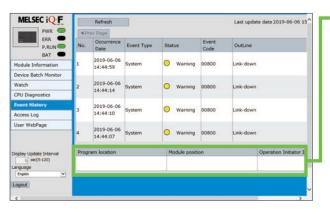
CPU Diagnostics

Up to 16 existing errors can be displayed in one screen.



Event History

The event history retrieved from the CPU module (such as the occurrence date, event code, and outline) is displayed. Up to 32 records are displayed in one screen.



Detailed Information

- Information on the location in the program where the error has occurred
- Information on the position of the module where the error has occurred
- Information on the port that was used by the operation initiator to connect to the CPU module

1. WEB SERVER FUNCTION

ntroduction

Usage Example

Web Page Overview

Access Log

The history of access to the Web server, operations performed to the Web server, and the IP address of the access source can be displayed. Thus, the access frequency, each operation, and illegal accesses to the Web server can be monitored.



Displayed item

- HTTP login
- HTTP login failure
- HTTP logout
- Target device area: Set value

Refer to the following chapter.

6. USING USER WEB PAGE ····· P34

Example: D100: H10

User Web page

An original Web page can be created by users.

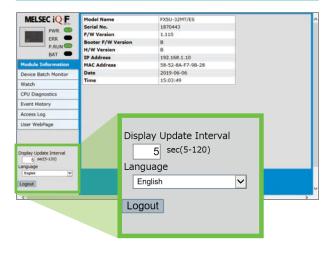
To use the user Web page, write the created Web page to the SD memory card.

• Creating the HTML for a user Web page

Relevant

Web Server Function Application Guide Using Web Page User Web Page HTML Creation [L(NA)08645ENG]

Setting options



Display Update Interval

Set the interval for refreshing monitor items of each function on the system Web page to the latest information.

► Language

The display language of the system Web page can be switched to the selected language.

- Japanese
- English
- Chinese (Simplified)

▶ Logout

Click this button to log out from the system Web page.

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2. BEFORE STARTING

Preparation of Necessary Equipment

Function Specification

2.1 Preparation of Necessary Equipment

Prepare equipment that can use a Web browser, and the Ethernet connection with the CPU module.

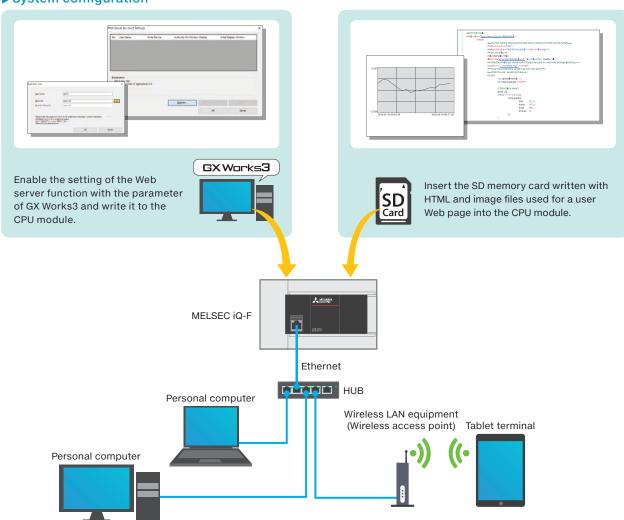
The network equipment to be used varies depending on the connection method such as Ethernet (wired) or wireless LAN equipment.

▶Equipment list

<u> </u>		
Equipment	Usage	
Personal computer	Setting the Web server function or accessing via a Web browser	
Smartphone, tablet, and others	Accessing via a Web browser	
FX5 CPU module	Web server function (contained in the PLC)	
SD memory card	Required when user Web pages are used	
Ethernet cable*	For the connection between a personal computer and the CPU module	
Hub	Required when multiple personal computers are connected to the CPU module	
Wireless LAN equipment (Wireless access point)	Required when a smartphone or a tablet is connected	

^{*: 100}BASE-TX connection: Category 5 or higher (STP cable), 10BASE-T connection: Category 3 or higher (STP cable)

► System configuration



2.BEFORE STARTING

Function Specifications

2.2 Function Specifications

▶ Specifications of Web server function

The following table lists the specifications of the Web server function.

Item	Description	
Number of users that can simultaneously log in	4	
Host station port number	Default: 80 (variable)	
Supported language	System Web page	Japanese
		English
		Chinese (Simplified)*
	User Web page*	Multiple languages supported
Supported character code	UTF-8	
Number of accounts	4	
Update interval	5 to 120 seconds (Default: 5 seconds)	

^{*:} These items can be used with the CPU modules with the firmware version "1.100" or later.

▶Client operating environment

The following table lists the clients whose operations have been checked in the Web server function.

Terminal	Web browser	Web browser version	OS supporting the browser
	Internet Explorer®	11 or later	Microsoft® Windows® 7 or later (Microsoft® Windows® 8 is not supported.)
Personal computer	Microsoft® Edge	41 or later	Microsoft® Windows® 10
	Google Chrome™	55 or later	Microsoft® Windows® 7 or later
Tablet	Mobile Google Chrome™	55 or later	Android® 4.1 or later
	Mobile Safari®	9 or later	iOS® 9.0 or later

▶ Applicable CPU module

The following table lists the firmware versions of the CPU modules supporting each Web page and the software version of the engineering tool.

	Function	CPU module	Firmware version	GX Works3
Sys	tem Web page			
	Detailed Module Information (Module Information)			
unc.	Device Batch Monitor		" 4 000"	#4.0400W
Function	Device Test	FX5U CPU	"1.060" or later	"1.040S" or later
	Watch	FX5UC CPU		
window	CPU Diagnostics			
Ē	Access Log			
	Event History		"1.110" or later	"1.050C" or later
Use	r Web page		"1.100" or later	"1.047Z" or later

Restriction

When updating the firmware version of the CPU module to "1.100" or later, use a CPU module with the product number 17X**** or later.

3. SETTING WEB SERVER FUNCTION

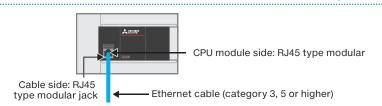
Connecting PCs

Troubleshooting

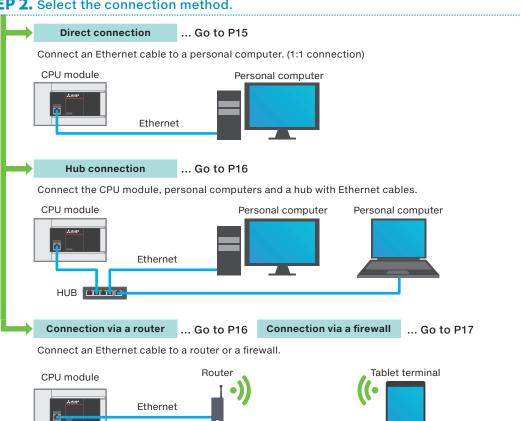
3.1 Connecting Personal Computers and Tablet Terminals

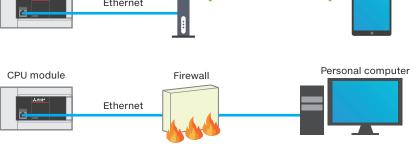
This section describes how to connect personal computers and tablet terminals to the Web server.

STEP 1. Connect the Ethernet cable to the built-in Ethernet port of the CPU module.



STEP 2. Select the connection method.





Caution

When a firewall is enabled and communication with the CPU module is not allowed, a timeout may occur. When using security software with a firewall function, refer to the manual of the software and allow the communication with the CPU module.

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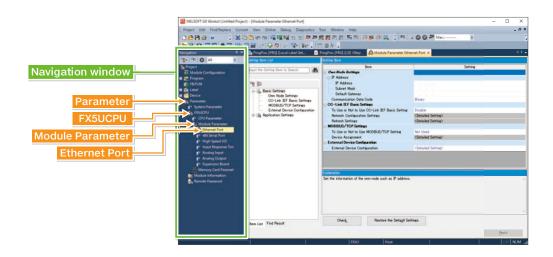
3. SETTING WEB SERVER FUNCTION

Setting CPU Parameters

3.2 Setting CPU Parameters

This section describes the parameter settings of GX Works3. In the navigation window, select the items in the tree.

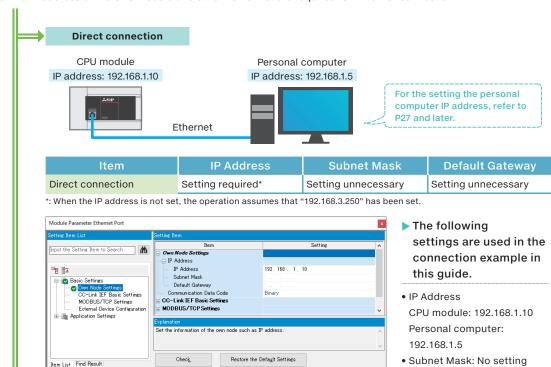
Tree operation >> [Parameter] ▶ [FX5UCPU] ▶ [Module Parameter] ▶ [Ethernet Port]



Own Node Settings

Tree operation >> [Basic Settings] ▶ [Own Node Settings] ▶ IP Address

Set the IP address of the CPU module and other items that are required for Ethernet connection.



<u>A</u>pply

• Default Gateway: No setting

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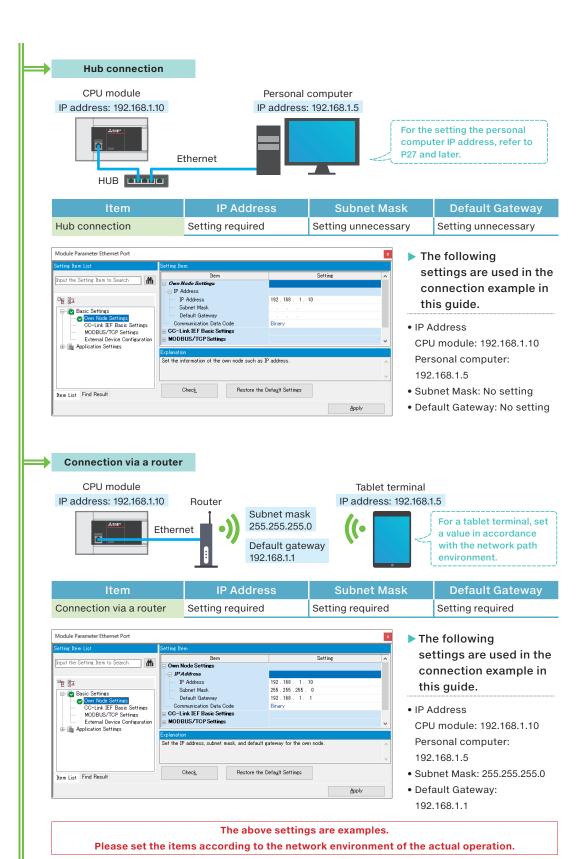
3. SETTING WEB SERVER FUNCTION

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Setting CPU Parameters

Writing Parameters

Troubleshooting



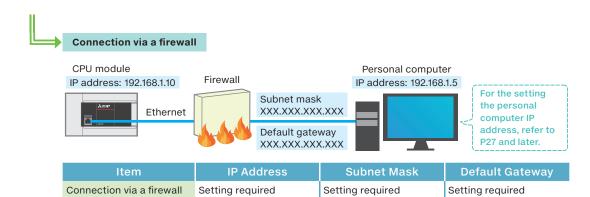
3. SETTING WEB SERVER FUNCTION

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Setting CPU Parameters

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▶ This guide does not describe an example of the connection via a firewall.

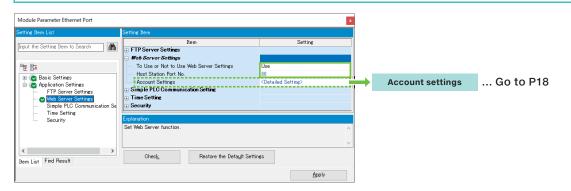
When using security software with a firewall function, refer to the manual of the software and set the subnet mask and default gateway.

- IP Address CPU module: 192.168.1.10 Personal computer: 192.168.1.5
- Subnet Mask: To be set in accordance with the network path environment
- Default Gateway: To be set in accordance with the network path environment

Web server settings

Set the Web server function.

Tree operation >> [Application Settings] ▶ [Web Server Settings]



▶ The following settings are used in the connection examples in this guide.

To Use or Not to Use Web Server Settings: "Use" Host Station Port No.: 80 (Default)

When changing the host station port number, refer to the following table.

Item	Description	Setting range
Host Station Port No.	Set the port number to be used with the Web server function.	80, 1024 to 5548, 5570 to 65534

Caution

Precaution when the host station port number is changed

The value changed here must be included in the address that will be entered on the browser. Example when the host station port number is set to $8080 \rightarrow \text{http://192.168.1.10:}8080$

3. SETTING WEB SERVER FUNCTION

ecting PCs

Setting CPU Parameters

Writing Parameters

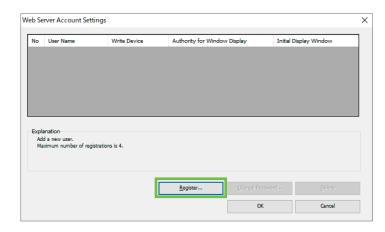
Troubleshooting

Account settings

Set the user name and password used to log in to the Web server.

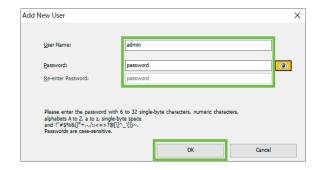
Tree operation >> Click < Detailed Setting> for "Account Settings" shown above.

Click [Register].



- Input a user name, a password, and a confirmation password and click [OK].
 - Settings for the connection example in this guide

User Name: admin Password: password



Item details

Item	Description	Setting range
User Name	Input a user name to be used for the authentication at the access to the Web server. This parameter is case-sensitive. For the characters available for the user name, refer to the following.	1 to 20 single-byte characters (alphanumeric characters and symbols)
Password	Input a password to be used for the authentication at the access to the Web server. This parameter is case-sensitive.	6 to 32 single-byte characters (alphanumeric characters and symbols)
Re-enter Password	Input a password for confirmation. Input the same password as the one entered above.	6 to 32 single-byte characters (alphanumeric characters and symbols)

3. SETTING WEB SERVER FUNCTION

Setting CPU Parameters

Select options for Write Device, Authority for Window Display, and Initial Display Window and click [OK].

> Settings for the connection example in this guide

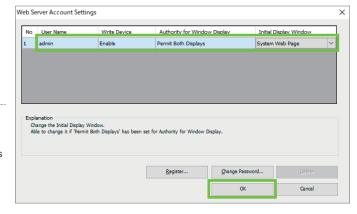
Write Device : Enable

Authority for

Window Display: Permit Both Displays

Initial Display

Window : System Web Page



Item details

Item	Description	Setting range
No	An account No. of each user for the Web server is displayed.	1 to 4
User Name	A user name to be used for the authentication at the access to the Web server is displayed. Click the user name to change it.	1 to 20 single-byte characters (alphanumeric characters and symbols)
Write Device	Enable or disable changing the value in the device test window.	Disable (Default) Enable
Authority for Window Display	Enable or disable access to the system Web page or user Web page.	Permit Both DisplaysSystem Web Page Only (Default)User Web Page Only
Initial Display Window	Set a window that is displayed immediately after the user logs in. The setting range depends on the setting of "Authority for Window Display".	System Web Page (Default) User Web Page

Characters available for the user name and password

Character	Detail
Single-byte alphanumeric characters (upper-case/lower-case characters)	0 to 9, A to Z, a to z
Symbols	Single-byte space, !, ", #, \$, %, &, ', (,), *, +, ,, -, ., /, :, ;, <, =, >, ?, @, [,], ^, _, `, {, , }, ~

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3. SETTING WEB SERVER FUNCTION

nnecting PCs

Setting CPU Parameters

Writing Parameters

Troubleshooting

3.3 Writing Parameters

This section describes the procedure of operating GX Works3 to write the set parameters to the CPU module.

Connectio

Connect the built-in Ethernet port of the CPU module and the personal computer (GX Works3) directly with an Ethernet cable.

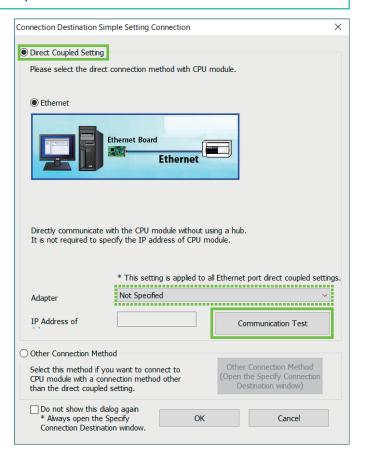


Tree operation >> [Online] ▶ [Current Connection Destination]

In the Connection Destination Simple Setting Connection window, enter a check to [Direct Coupled Setting] and select the adapter to be used for the connection from the pulldown menu.

If the personal computer has several LAN ports or you want to use a USB \$\infty\$ LAN conversion adapter, select according to the adapter that has been connected to the CPU module.

After the setting, click [Communication Test].



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3. SETTING WEB SERVER FUNCTION

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Setting CPU Parameters

Writing Parameters

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When the communication test was successful

"Successfully connected with the FX5UCPU" is displayed in the window. Click $[{\sf OK}]$.

1 Click [OK] in the Ethernet Direct Coupled Setting Connection window to close the window and start writing to the PLC.

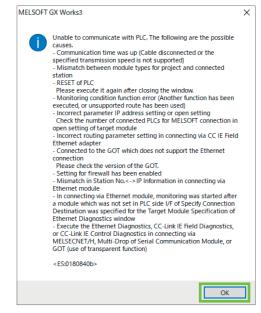


When the communication test failed

"Unable to communicate with PLC. The following are the possible causes" is displayed in the window. Click [OK].

1 Check that the adapter selected in the Ethernet Direct Coupled Setting Connection window is correct. If the problem continues, refer to Troubleshooting.

Troubleshooting... P22

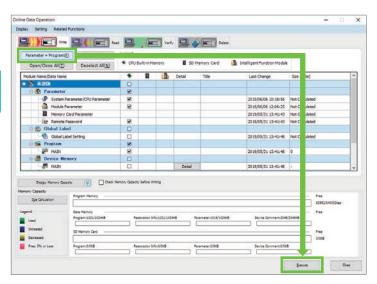


GX Works3 Writing data to the PLC

After the communication setting is completed, write data to the PLC.

Toolbar operation >>[Online] ▶ [Write to PLC]

Click [Parameter + Program] and click [Execute]. After the writing is completed, reset the CPU module.



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3. SETTING WEB SERVER FUNCTION Connecting PCs Setting CPU Parameters Writing Parameters Troubleshooting

Indirect connection

- When a CPU module is connected to an external device via a hub, communication cannot be performed by direct connection.
 - →Refer to P14 3.1 Connecting personal computers and tablet terminals .



• When two or more Ethernet ports are enabled in the network connections setting on the personal computer, communication by direct connection is not possible. In the personal computer setting, leave only one Ethernet port enabled for direct connection and disable other Ethernet ports.

Conditions that disallow direct connection

When the following condition is met, the communication through direct connection may fail. In such case, check the setting of the CPU module and/or personal computer.

■In the CPU module IP address bits, the bits corresponding to "0" in the personal computer subnet mask are all ON or all OFF.

Ex.

CPU module IP address : 64 . 64 . 255 . 255

Personal computer IP address : 64 . 64 . 1 . 1

Personal computer subnet mask : 255 . 255 . 0 . 0

■In the CPU module IP address bits, the bits corresponding to the host address of the class of the personal computer IP address are all ON or all OFF.

Ex.

Personal computer IP address : 192 . 168 . 0 . 1 ← Since 192.x.x.x is set, the address class is C so that the host address is the fourth octet.

Personal computer subnet mask: 255 . 0 . 0 . 0

CPU module IP address : 64 . 64 . 255 . 255 ← The fourth octet is 255, which means all bits are ON.

Point

The IP addresses for each class are as follows.

```
Class A: 0 . x . x . x . to 127 . x . x . x
Class B: 128 . x . x . x . to 191 . x . x . x
Class C: 192 . x . x . x . to 223 . x . x . x
```

The host address for each class is the portion including "0" as shown below.

```
• Class A: 255 . 0 . 0 . 0
• Class B: 255 . 255 . 0 . 0
• Class C: 255 . 255 . 255 . 0
```

3. SETTING WEB SERVER FUNCTION

nnecting PCs Setting CPU Parar

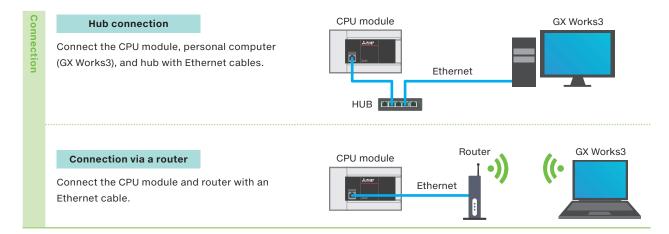
Writing Parameter

Troubleshooting

Troubleshooting

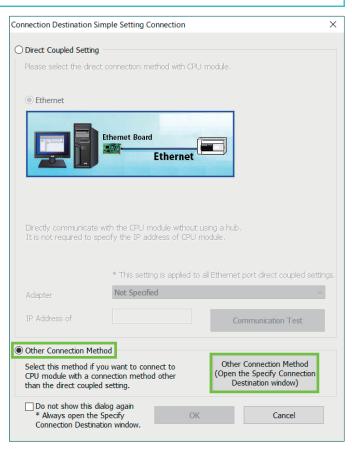
When connecting GX Works3 via a hub or a router

This section describes the procedure to connect the CPU module and GX Works3 via a hub or a router after parameter writing is completed.



Tree operation >> [Online] ▶ [Current Connection Destination]

1 In the Connection Destination Simple
Setting Connection window, enter a check to
[Other Connection Method] and click [Other
Connection Method].



3. SETTING WEB SERVER FUNCTION

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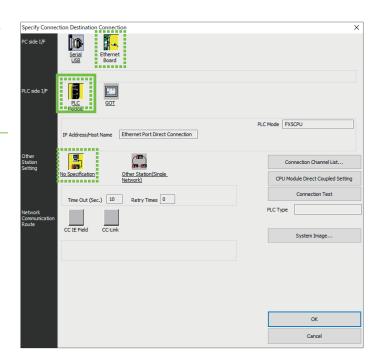
Setting CPU Parameter

Writing Parameters

Troubleshooting

Troubleshooting

- 2 Ensure that the following items are selected (their icons are shown in yellow).
 - PC side I/F: [Ethernet Board]*
 - PLC side I/F: [PLC Module]*
 - Other Station Setting: [No Specification]*
 - *: Clicking the icon selects the item.
- After the confirmation, double-click [PLC Module].

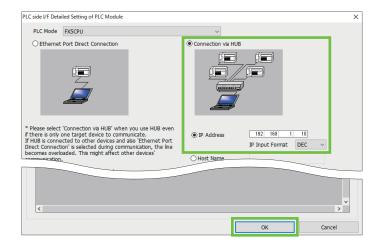


 When the connection via a hub or a router is used

When using a hub or a router between the PLC and personal computer for connection, select [Connection via HUB]. For the IP address, input the IP address set on the PLC and click [OK].

➤ Settings for the connection example in this guide

192.168.1.10



3. SETTING WEB SERVER FUNCTION

Connecting PCs

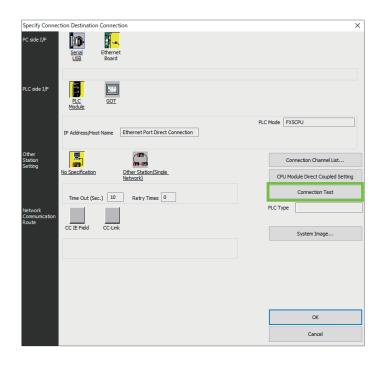
Setting CPU Parameters

Writing Parameters

Troubleshooting

Troubleshooting

After the setting, click [Connection Test].



• When the communication test was successful

"Successfully connected with the FX5UCPU" is displayed in the window. Click [OK].

5 Click [OK] in the Specify Connection Destination Connection window to close the window.

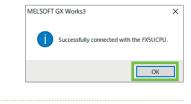
• When the communication test failed

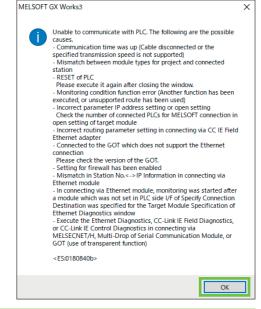
"Unable to communicate with PLC. The following are the possible causes" is displayed in the window. Click [OK].

4 Check that the IP address input in the PLC side I/F Detailed Setting of PLC Module window is correct.

If the communication still fails, check that the IP address, subnet mask, and default gateway set in 3.2 Setting CPU Parameters

Setting CPU Parameters... P16





4

3. SETTING WEB SERVER FUNCTION

inecting PCs Setting CPU Paramel

Writing Parameters

Troubleshooting

Troubleshooting

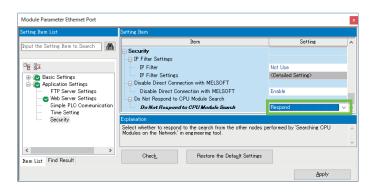
When the communication between the PLC and GX Works3 fails

Operate GX Works3 to check the parameter settings and the communication with the PLC.

▶ Checking the parameter (Ethernet port) setting

Check the parameter setting.

Tree operation >> [Parameter] ▶ [FX5UCPU] ▶ [Module Parameter] ▶ [Ethernet Port] ▶ [Application Settings] ▶ [Security] ▶ [Do Not Respond to CPU Module Search]

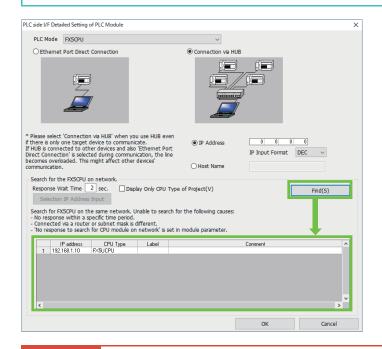


View the module parameters and check the setting for [Do Not Respond to CPU Module Search]. When "Do Not Respond" is set, the communication with the PLC is disabled. Change the setting to "Respond".

▶ Searching for the CPU modules on the network

Search for the CPU modules on the network.

Toolbar operation >> [Online] ▶ [Current Connection Destination] ▶ [Other Connection Method] on the Select Connection Destination window ▶ [PLC Module] in the Specify Connection Destination Connection window ▶ Detailed Setting of PLC Module window



In the Detailed Setting of PLC Module window, select [Connection via HUB] and click [Find]. The function searches for the CPU modules connected to the hub to which GX Works3 (personal computer) is connected. (When the CPU module has been connected directly to the personal computer, the function searches for the CPU modules connected to the adapter specified in the Specify Connection Destination Connection window.)

When a CPU module is found, its IP address, CPU type and other information are displayed in the list.

Caution

- CPU modules connected via a router cannot be found.
- Appropriate CPU modules may not be found if the service processing load is heavy. If the search is unstable, increase the "response waiting time value" (default: 2 seconds).

3. SETTING WEB SERVER FUNCTION

orinecting PCs Setting CPU Paramete

Writing Parameter

Troubleshooting

Troubleshooting

When the communication setting is not established

The communication setting may not be established properly when the Ethernet adapter of the personal computer is connected directly. In such a case, set an IP address in the network setting of the personal computer.

Microsoft® Windows® 10



Click the Start button. ▶ Click [Settings].

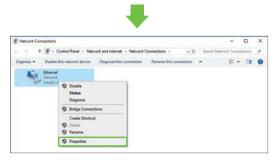


Click [Network & Internet].

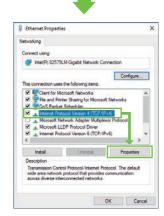


Click [Ethernet] on the left. ▶ Click [Change adapter options].

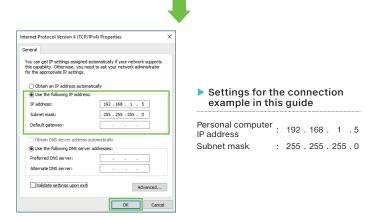




Right-click the [Ethernet] icon to be used. ▶ From the displayed menu, select [Properties].



Select Internet Protocol Version 4 (TCP/IPv4). Click [Properties].



 Change the setting of Internet Protocol Version 4 (TCP/IPv4) as shown above

Select [Use the following IP address].

For [IP address], set 192.168.1.5 (IP address of the personal computer). ▶ For [Subnet mask], set 255.255.255.0. ▶ Click [OK].

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3. SETTING WEB SERVER FUNCTION

necting PCs Setting CPU Parame

Writing Parameters

Troubleshooting

Troubleshooting

Microsoft® Windows® 8 or Microsoft® Windows® 8.1



Display the Start screen.





Click [Control Panel].





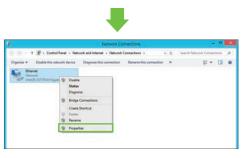
Click [View network status and tasks].





Click [Change adapter settings].



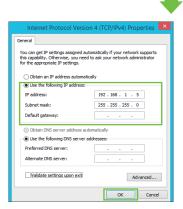


Right-click the network to which the CPU module will be connected. Click [Properties].

- When wired LAN is used. Right-click [Ethernet]. > Click [Properties].
- When wireless LAN is used. Right-click [Wi-Fi]. > Click [Properties].



Select Internet Protocol Version 4 (TCP/IPv4). ▶ Click [Properties].



Settings for the connection example in this guide

Personal computer : 192 . 168 . 1 . 5 Subnet mask : 255 . 255 . 255 . 0

• Change the setting of Internet Protocol Version 4 (TCP/IPv4) as shown above.

Select [Use the following IP address].

For [IP address], set 192.168.1.5 (IP address of the personal computer). For [Subnet mask], set 255.255.255.0. Click [OK].

6

3. SETTING WEB SERVER FUNCTION

nnecting PCs Setting CPU Paramet

Writing Parameter

Troubleshooting

Troubleshooting

Microsoft® Windows® 7



Click the Start button and select [Control Panel].

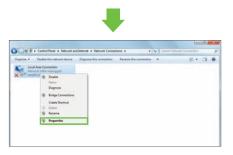


Click [View network status and tasks].

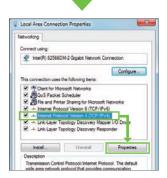


Click [Change adapter settings].

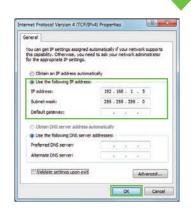




Right-click the [Local Area Connection] icon to be used. From the displayed menu, select [Properties].



From the list under "This connection uses the following items", click [Internet Protocol Version 4 (TCP/IPv4)]. Click [Properties].



Settings for the connection example in this guide

Personal computer : 192 . 168 . 1 . 5 IP address : 255 . 255 . 25 . 0

 Change the setting of Internet Protocol Version 4 (TCP/IPv4) as shown above.

Select [Use the following IP address].

For [IP address], set 192.168.1.5 (IP address of the personal computer). For [Subnet mask], set 255.255.255.0. Click [OK].

4. ACCESSING WEB SERVER

cess Login Log

Troubleshooting

4.1 Access

Input the set address in the address bar of a Web browser. → Refer to P15 3.2 Setting CPU Parameters



When the default host station port number is used

When the host station port number is 80 (default), you can access the Web server by specifying the IP address only. http://[IP address of the Web server (CPU module)]/

Example: When the IP address of the CPU module is 192.168.1.10 and the host station port number is set to 80 (default)

http://192.168.1.10

When the host station port number has been changed

When the host station port number has been changed to the value other than 80, input the port number after the IP address.

http://[IP address of the Web server (CPU module)]:[Host station port number]

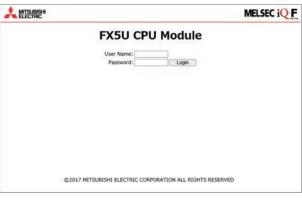
Example: When the IP address of the CPU module is 192.168.1.10 and the host station port number has been changed to 8080

http://192.168.1.10:8080/

Caution

Do not directly specify the URL of each page after login to access the Web server. Doing so displays an incorrect window, and prevents collection of information from the Web server.

Screen when the access is successful



If the screen on the left is not displayed

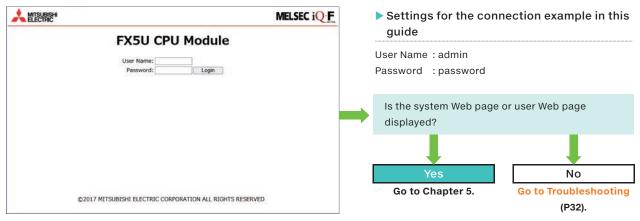


Go to the next page.

4. ACCESSING WEB SERVER Login Logout Troubleshooting

4.2 Login

Input the "User Name" and "Password" set with GX Works3 and click the [Login] button.



Incorporate the following measures if the programmable controller system's safety must be maintained against illegal access from external devices. Mitsubishi Electric shall not be held liable for any system problems that may occur due to illegal access.

The user authentication of the Web server function is one of the methods of preventing illegal access (such as program or data destruction) from external devices. It does not completely prevent illegal access.

Caution

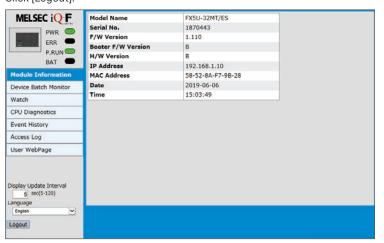
Examples of measures against illegal access

- Install a firewall.
- Install a personal computer as a relay station, and control the relay of send/receive data with an application program.
- Install an external device which can control access rights as a relay station.

 (Contact the network provider or equipment dealer for details on the external devices which can control access rights.)

4.3 Logout

Click [Logout].



Caution

To log out from the Web server, always use the [Logout] button. Do not log out by using other methods such as the [X] button on a Web browser.

If an account logs out without using the [Logout] button, the login information remains for a certain time, and thus the other users may not be able to log in.

4. ACCESSING WEB SERVER Login Logout Troubleshooting

Troubleshooting

This section describes countermeasures against errors and other messages shown on the screens of the Web browser.

No system Web page exists in the PLC or the page is damaged.

500 Internal Server Error

Cause

The system Web page has a problem.

Countermeasure

Update the firmware version of the CPU module again and reset the CPU module. If you still cannot display the Web page, the hardware failure may have been occurred in the CPU module. Please consult your local Mitsubishi representative.

Network Error (tcp_error) is displayed.

Network Error (tcp error)

A communication error occurred: "Operation timed out"

The Web Server may be down, too busy, or experiencing other problems preventing it from responding to requests. You may wish to try again at a later time.

For assistance, contact your network support team

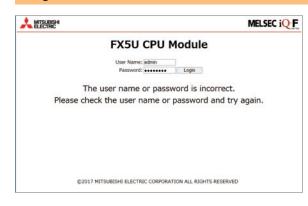
Cause

The PLC has not been connected.

Countermeasure

This problem also occurs when the IP address or proxy setting of the personal computer or mobile terminal is incorrect. Ensure that the setting is correct.

Login fails.



Cause

The entered user name or password is incorrect.

Countermeasure

Input the user name and password registered in the parameter setting of GX Works3.

Settings for the connection example in this guide

User Name : admin
Password : password

Related page

The set user name and password can be checked with the parameter setting of GX Works3.

Web server account settingP18

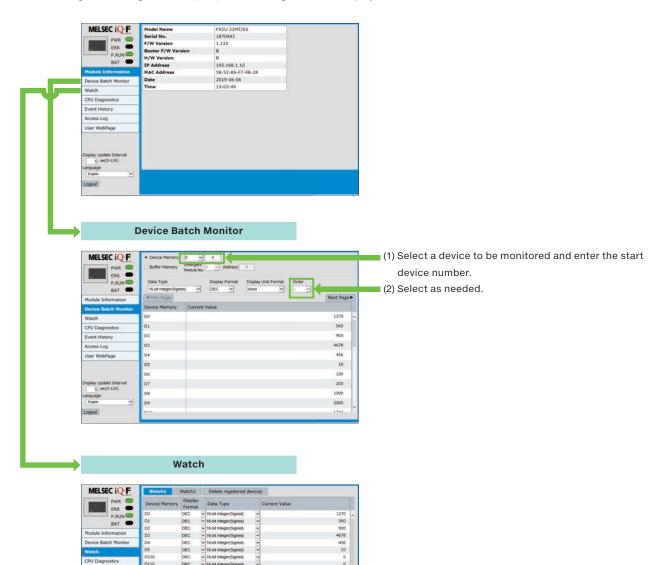
5. USING SYSTEM WEB PAGE

Firmware version "1.060" or later

Operating System Web Page

5.1 Operating System Web Page

After the login on the login window (P31), the following window is displayed.



For details of the following functions, see the manual below.

v 16-bit integ v 16-bit integ

• CPU Diagnostics • Event History • Access Log

Relevant Document MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book [SH-081982ENG]

4

6. USING USER WEB PAGE

Firmware version "1.100" or later

User Web Page Display Example

Setting Procedure

Preparing SD Memory Card Accessing Web Pages

6.1 User Web Page Display Example

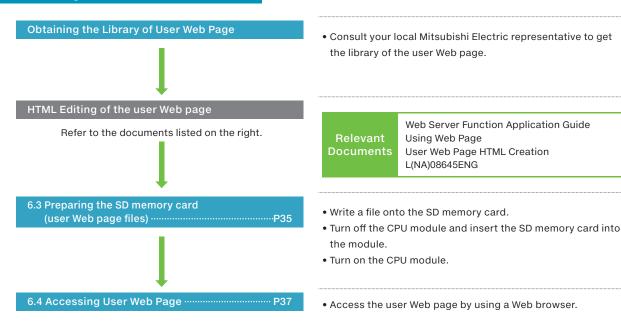
This chapter describes operation based on the user Web page library.

(The object names shown below are the file names of the objects and images used in the library.)

Customers can use the user Web page to display their original Web pages on Web browsers by using HTML, JavaScript, and image files.



6.2 Setting Procedure



6

Firmware version "1.100" or later

6. USING USER WEB PAGE

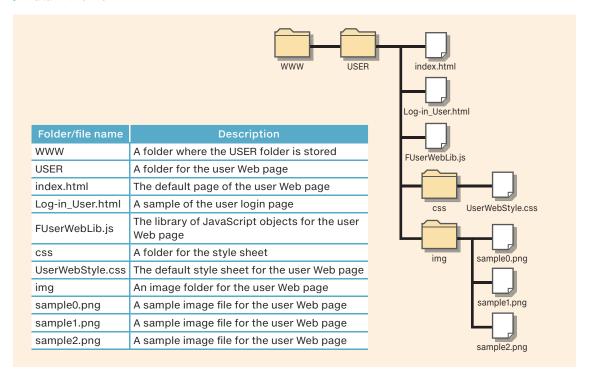
age Display Example Setting Procedure Preparing SD Memory Card Accessing Web Pages

6.3 Preparing the SD Memory Card (User Web Page Files)

▶Writing the user Web page library onto the SD memory card

Getting Library of User Web Page

Data in the file



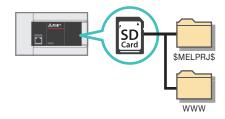
Inserting the SD memory card into the personal computer

For the SD memory card insertion method, refer to the manual of your personal computer.

Writing the user Web page library onto the SD memory card

Store the WWW folder in the decompressed file immediately below the root directory of the SD memory card.

> Status when the SD memory card is inserted into the CPU module



The "\$MELPRJ\$" folder is created automatically when the SD memory card is inserted into the CPU module. It is unnecessary to delete it.

Removing the SD memory card from the personal computer

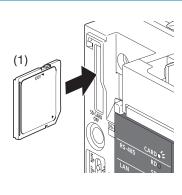
6. USING USER WEB PAGE

Firmware version "1.100" or later

Setting Procedure | Preparing SD Memory Card | Accessing Web Pages

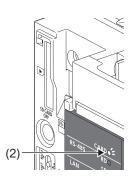
Turning off the CPU module

Inserting the SD memory card



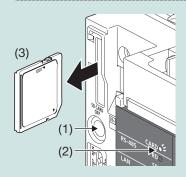
1. Insert the SD memory card (1) straight into the SD memory card slot. Make sure that the notch of the card is directed downward. After the insertion, check that the card is mounted completely. If the card is mounted incompletely, malfunctions may occur because of poor contact.

Turning on the CPU module



- 2. The CARD LED (2) blinks until the SD memory card becomes available.
- 3. The CARD LED (2) turns on when the SD memory card is available.
- 4. If the CARD LED (2) does not turn on even though the SD memory card is mounted, make sure that SM606 (instruction of forcibly stop using SD memory card) and SM607 (forcibly stop using SD memory card flag) are OFF by using engineering tools (GX Works3).

Removing the SD memory card



- 1. Press the SD memory card stop switch (1) for one second or more to stop access to the card. The CARD LED (2) blinks during the access stop operation, and then the LED is turned off when the operation is completed.
- 2. Push the SD memory card (3) once, and then pull it out straight from the slot.

Caution

- When mounting or removing the SD memory card while the power is ON, follow the above-mentioned procedure. Otherwise, the data in the card may be broken.
- When removing the SD memory card which is being accessed by any function, the CARD LED is turned off after the access is completed. Time required until the CARD LED is turned off depends on the accessing function.
- When SM605 (mount and remove memory card disabling flag) is ON, CARD LED is not turned OFF even if the SD memory card stop switch is pressed. If the CARD LED is not turned off, turn ON SM606 (instruction to forcibly stop the usage of SD memory card) so that the SD memory card cannot be used.

6

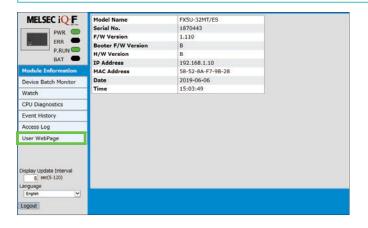
6. USING USER WEB PAGE Firmware version "1.100" or later Preparing SD Memory Card Accessing Web Pages Troubleshooting

6.4 Accessing User Web Page

Access the user Web page with one of the following methods.

► Access from the system Web page

Operation >> [System Web page] Click the [User WebPage] button.



► Access by inputting the URL directly in the address bar

Input the following address in the address bar of a Web browser. http://[IP address of the Web server (CPU module)]/USER/index.html

http:// $\underline{192.168.1.10}$ /USER/index.html \nearrow ×

The underlined section is the host station IP set with the parameter.

The example in this guide is "192.168.1.10".

If the host station port number has been changed from the default (80), input the following address. http://[IP address of the Web server (CPU module)]:[Host station port number]/USER/index.html

The underlined section is the host station IP set with the parameter.

This is an example when the host station port address was changed to 8080.

6. USING USER WEB PAGE

Firmware version "1.100" or later

age Display Example Setting Procedure Preparing SD Memory Card Accessing Web Pages

Troubleshooting

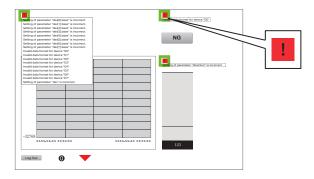
Only the user Web page cannot be accessed.

▶Is the system Web page accessible?

- If the page can be accessed from the system Web page but cannot be accessed with the direct URL input in the address bar, the input URL might be incorrect.
- Note that URLs are case-sensitive.

Device monitor values and graphs do not change.

When an object is used incorrectly, the user Web page is displayed with a button that indicates an error.



Description	Cause	Countermeasure	
The specified element "XXX" does not exist.	The specified element does not exist.		
Mandatory parameter "XXX" is not set.	A parameter that must be set is not set.		
	The parameter is out of the setting range.		
Setting of parameter "XXX" is incorrect.	The setting value of a parameter that should be specified as a numerical value is not a numerical value.		
Settings of parameters "XXX" and "XXX" are incorrect.	The specified upper limit value is lower than the lower limit value.		
Invalid data format for device "XXX"	The data notation or data format of the device is invalid.		
Logged out. Log in to the Web server and retry the operation.	You are logged out. (The communication was disconnected.)	Check that the CPU module and terminal are connected properly and retry login.	

Objects such as level or graph display are not displayed.

► All objects are not displayed.

Description	Cause	Countermeasure
		Ensure that the WWW folder is stored immediately below the root directory of the SD memory card.

▶Some objects are not displayed.

Description	Cause	Countermeasure
An object is used more than the maximum usable number.	There is an object that is used more than the maximum number allowed on one page.	Ensure that the logout object is not used more than once on one page.

► Device monitor values are not updated.

Description	Cause	Countermeasure
An object is used more than the maximum usable number.	,	Ensure that the logout object is not used more than once on one page.
Received data is abnormal.		Check that the CPU module and client terminal are connected properly and update the Web page.

WARRANTY

Please confirm the following product warranty details before using this product.

- "WARRANTY" in MELSEC iQ-F FX5U User's Manual (Hardware) Manual number: JY997D55301
- "WARRANTY" in MELSEC iQ-F FX5UC User's Manual (Hardware) Manual number: JY997D61401

A SAFETY GUIDELINES

- To ensure proper use of the product described in this guide, be sure to read the manuals of the product before use.
- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used for purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine, or passenger movement vehicles, consult Mitsubishi Electric representative.
- This product has been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.
- For the precautions concerning design, wiring, and others, read SAFETY PRECAUTIONS provided in the relevant manuals.

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REVISIONS

 * The document number is given on the bottom left of the back cover of this guide.

Revision date	Document number	Description
September 2019	L(NA)08643ENG-A	First edition

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Programmable Controller MELSEC iQ-F Series

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