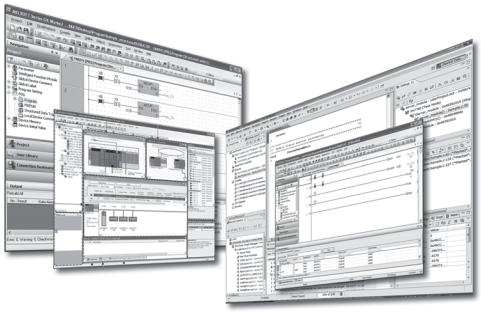
MELSOFT

MITSUBISHI ELECTRIC

User Web Page Design Tool Operating Manual

-SW1DNN-WSVDT-MD



SAFETY PRECAUTIONS

(Read this section before using this product.)

When using this product, make sure that this manual and other related manuals introduced in this manual are read carefully, and be reminded to treat this product correctly while paying due attention to safety.

Precautions shown in this manual describe only those about this product. For safety precautions as a PLC system, refer to the user's manual of a module used.

In this manual, safety precautions are ranked and classified into "⚠WARNING" and "⚠CAUTION".

⚠ **WARNING**	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
⚠ **CAUTION**	Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

For your information, even if a precaution is classified into the category "⚠CAUTION" and described, it may lead to a significant consequence, depending on its situation.

Precautions classified into both categories describe what are important, and therefore make sure to observe them.

Keep this manual in a safe place so that it can be read whenever necessary, and make sure that it will be delivered to its end users.

[DESIGN PRECAUTIONS]

⚠WARNING

- If a communication cable is disconnected, the network may be unstable, resulting in a communication failure of multiple stations. Construct an interlock circuit in the program so that the system always operates on the safe side even if communications fail. Incorrect output or malfunction may result in an accident.

[SECURITY PRECAUTIONS]

⚠WARNING

- To maintain the security (confidentiality, integrity, and availability) of the programmable controller and the system against unauthorized access, denial-of-service (DoS) attacks, computer viruses, and other cyberattacks from unreliable networks and devices via network, take appropriate measures such as firewalls, virtual private networks (VPNs), and antivirus solutions.

[STARTUP AND MAINTENANCE PRECAUTIONS]

⚠CAUTION

- Especially, when a remote programmable controller is controlled by an external device, immediate action cannot be taken if a problem occurs in the programmable controller due to a communication failure. To prevent this, configure an interlock circuit in the program, and determine corrective actions to be taken between the external device and CPU module in case of a communication failure.

CONDITIONS OF USE FOR THE PRODUCT

(1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

(2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.
MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.
("Prohibited Application")
Prohibited Applications include, but not limited to, the use of the PRODUCT in;
- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above restrictions, Mitsubishi may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi representative in your region.

INTRODUCTION

Thank you for purchasing Mitsubishi Electric Corporation's PLC.
This manual is to help users understand the user Web page design tool.
Before using this product, read this manual carefully to fully understand the user Web page design tool's functions/capabilities, and make sure that this product is used correctly.
Be reminded that this manual will surely be delivered to this product's end users.

CONTENTS

RELEVANT MANUALS

Manual name <manual number>	Description
MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book <SH-081982ENG>	This describes the specifications of the Web server's functions, procedures before its operations, and its troubleshooting.
MELSEC iQ-R Ethernet User's Manual (Application) <SH-081257ENG>	This describes Ethernet functions, parameter settings, programming, troubleshooting, I/O signals, and buffer memory. For the Web server functions, this describes the details of JavaScript components which can be used in a user Web page.
MELSEC iQ-F FX5 User's Manual (Ethernet Communication) <JY997D56201>	This describes contents about built-in Ethernet port communication's functions. For the Web server functions, this describes the details of JavaScript components which can be used in a user Web page.
MELSEC iQ-R CPU Module User's Manual (Application) <SH-081264ENG>	This describes CPU module memory, functions, devices, and parameters, etc.
User Web Page Design Tool Operating Manual <SH-082315ENG> (this manual)	This describes the user Web page tool's functions and how to use it.

TERMS

Unless otherwise stated expressly, the following terms shall be used in this manual for an explanation.

Terms	Description
RCPU	This is a generic name for MELSEC iQ-R series CPU modules.
FX5CPU	This is a generic name for MELSEC iQ-F series CPU modules.
Device	This is a device which a CPU module has in it (such as X, Y, M, D, etc.)
GX Works3	This is a generic name for products whose product model name is SWnDND-GXW3. ("n" denotes their version.)

1 BEFORE USING THIS PRODUCT

This user Web page design tool (hereinafter, referred to as the "design tool)" is a tool to help its users create user Web pages using Web server functions.

1.1 Features

This section describes the design tool's features.

Easy operations enabling users to create user Web pages

Its screen operations allocate PLC and generic components and configure property settings, and thereby HTML files for user Web pages can be created, which will operate on a CPU module's Web server functions.
Components prepared beforehand are selected and their property settings are configured, and therefore its users can create HTML files without knowing HTML tags and CSS.

HTML files transferrable to FX5CPU

HTML files created by the design tool can be transferred to an SD memory card attached to FX5CPU through FTP communication.
HTML files can be stored in an SD memory card without detaching it from FX5CPU.

1.2 Operating Environment

This section describes the design tool's operating environment.

Item	Description
Personal computer main part	This must be a personal computer that can run Microsoft® Windows®.
CPU	Intel® Core® i3 2 GHz or better is recommended.
Required memory size	For a 64 bit OS: 8 GB or more is recommended.
Hard disk free space	400 MB or more
Display resolution	1280 × 1024 pixels or better
OS (English, Japanese, and Chinese (simplified characters) versions)*1	Windows 10 (Home, Pro, Enterprise, and Education)
Supporting CPU modules	■MELSEC iQ-R series*2 • R01CPU and R02CPU: Firmware version "18" or later • CPU modules other than those above: Firmware version "50" or later ■MELSEC iQ-F series FX5U/FX5UC CPU modules: Firmware version "1.220" or later

*1 English, Japanese, and Chinese (simplified characters) are supported as the design tool's display languages. (☞ Page 16 Switch Display Language) However, selection button displays, etc. depend on an OS's language, and therefore they may be displayed in one other than those languages above.

*2 There are some restrictions on the combination of user Web page and CPU module firmware versions. (📖MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book)

Client operating environment

Clients whose operability have been confirmed by Mitsubishi Electric Corporation are as shown below. Use a Web browser that supports HTML5, CSS3, and JavaScript.

Terminal	OS	Browser	Browser version	
			MELSEC iQ-R	MELSEC iQ-F
Personal computer	Microsoft® Windows®	Internet Explorer®	11	11
		Microsoft® Edge	85	85
		Google Chrome	85	85
Tablet Smartphone	Android®	Mobile Google Chrome	81	81
	iOS®	Mobile Safari	12	12

1.3 Software License

The design tool is composed of multiple software components. There are copyrights of our company and third parties to those individual software components. The design tool includes the software items shown below.

- Software items to which there exist third-party copyrights and which are distributed as free software. For software items to which Mitsubishi Electric Corporation or third parties have copyrights, their source codes shall not be distributed.

Please refrain from contacting Mitsubishi Electric Corporation about open sources' source codes.

Software information

This product contains the software items shown below.

OSS (Open Source Software)	Software version	License name
electron	8.2.5	MIT License
electron-splashscreen	1.0.0	MIT License
electron-progressbar	1.2.0	MIT License
connected-react-router	6.8.0	MIT License
react	16.13.1	MIT License
react-bootstrap	1.0.1	MIT License
react-dnd	16.13.1	MIT License
react-dnd-html5-backend	7.4.4	MIT License
react-helmet	6.1.0	MIT License
react-dom	16.13.0	MIT License
react-id-generator	3.0.0	MIT License
react-router	5.1.2	MIT License
react-select	3.1.0	MIT License
react-tabs	3.1.0	MIT License
react-i18next	11.3.5	MIT License
react-redux	7.2.0	MIT License
redux-actions	2.6.5	MIT License
redux-localstorage	0.4.1	MIT License
redux	4.0.5	MIT License
redux-thunk	2.2.0	MIT License
bootstrap	4.4.1	MIT License
i18next	19.4.2	MIT License
sweetalert2	9.10.12	MIT License
fs-extra	9.0.0	MIT License
file-exists	5.0.1	MIT License
babel	7.9.0	MIT License
history	4.10.1	MIT License
immer	6.0.3	MIT License
jquery	3.5.1	MIT License
popper.js	1.16.0	MIT License
prop-types	15.7.2	MIT License
Json.NET	12.0.3	MIT License
lodash	4.17.15	MIT License
mxgraph-js	1.0.1	Apache License 2.0
guid-typescript	1.0.9	ISC License

■electron

This product uses electron which is licensed by MIT.

The copyright and license notice of electron is shown below.

```
Version 8.2.5
MIT License
Copyright (c) 2013-2019 GitHub Inc.
```

■electron-splashscreen

This product uses electron-splashscreen which is licensed by MIT.

The copyright and license notice of electron-splashscreen is shown below.

```
Version: 1.0.0
MIT License
Copyright (c) 2017 Troy McKinnon.
```

■electron-progressbar

This product uses electron-progressbar which is licensed by MIT.

The copyright and license notice of electron-progressbar is shown below.

```
Version: 1.2.0
MIT License
Copyright (c) 2017 Anderson Ravagnani Mamede
```

■connected-react-router

This product uses connected-react-router which is licensed by MIT.

The copyright and license notice of connected-react-router is shown below.

```
Version: 6.8.0
MIT License
Copyright (c) 2016-present Supasate Choochaisri
```

■react

This product uses react which is licensed by MIT.

The copyright and license notice of react is shown below.

```
Version 16.13.1
MIT License
Copyright (c) Facebook, Inc. and its affiliates.
```

■react-bootstrap

This product uses react-bootstrap which is licensed by MIT.

The copyright and license notice of react-bootstrap is shown below.

```
Version 1.0.1
MIT License
Copyright (c) 2014-present Stephen J. Collings, Matthew Honnibal, Pieter Vanderwerff
```

■react-dnd

This product uses react-dnd which is licensed by MIT.

The copyright and license notice of react-dnd is shown below.

```
Version 16.13.1
MIT License
Copyright (c) 2015 Dan Abramov.
```

■react-dnd-html5-backend

This product uses react-dnd-html5-backend which is licensed by MIT.

The copyright and license notice of react-dnd-html5-backend is shown below.

```
Version 7.4.4
MIT License
Copyright (c) 2015 Dan Abramov.
```

■react-helmet

This product uses react-helmet which is licensed by MIT.

The copyright and license notice of react-helmet is shown below.

Version 6.1.0
MIT License
Copyright (c) 2015 NFL.

■react-dom

This product uses react-dom which is licensed by MIT.

The copyright and license notice of react-dom is shown below.

Version 16.13.0
MIT License
Copyright (c) Facebook, Inc. and its affiliates.

■react-id-generator

This product uses react-id-generator which is licensed by MIT.

The copyright and license notice of react-id-generator is shown below.

Version 3.0.0
MIT License
Copyright (c) 2019 Tomek.

■react-router

This product uses react-router which is licensed by MIT.

The copyright and license notice of react-router is shown below.

Version 5.1.2
MIT License
Copyright (c) React Training 2016-2018

■react-select

This product uses react-select which is licensed by MIT.

The copyright and license notice of react-select is shown below.

Version 3.1.0
MIT License
Copyright (c) 2018 Jed Watson

■react-tabs

This product uses react-tabs which is licensed by MIT.

The copyright and license notice of react-tabs is shown below.

Version 3.1.0
MIT License
Copyright (c) 2015-2019 by Matt Zabriskie

■react-i18next

This product uses react-i18next which is licensed by MIT.

The copyright and license notice of react-i18next is shown below.

Version: 11.3.5
MIT License
Copyright (c) 2015 i18next

■react-redux

This product uses react-redux which is licensed by MIT.

The copyright and license notice of react-redux is shown below.

Version 7.2.0
MIT License
Copyright (c) 2015-present Dan Abramov

■redux-actions

This product uses redux-actions which is licensed by MIT.

The copyright and license notice of redux-actions is shown below.

Version: 2.6.5
MIT License
Copyright (c) Andrew Clark.

■redux-localstorage

This product uses redux-localstorage which is licensed by MIT.

The copyright and license notice of redux-localstorage is shown below.

Version: 0.4.1
MIT License
Copyright (c) 2015 Elger Lambert

■redux

This product uses redux which is licensed by MIT.

The copyright and license notice of redux is shown below.

Version 4.0.5
MIT License
Copyright (c) 2015-present Dan Abramov

■redux-thunk

This product uses redux-thunk which is licensed by MIT.

The copyright and license notice of redux-thunk is shown below.

Version: 2.2.0
MIT License
Copyright (c) 2015-present Dan Abramov.

■bootstrap

This product uses bootstrap which is licensed by MIT.

The copyright and license notice of bootstrap is shown below.

Version 4.4.1
MIT License
Copyright (c) 2014-present Stephen J. Collings, Matthew Honnibal, Pieter Vanderwerff

■i18next

This product uses i18next which is licensed by MIT.

The copyright and license notice of i18next is shown below.

Version 19.4.2
MIT License
Copyright (c) 2017 i18next

■sweetalert2

This product uses sweetalert2 which is licensed by MIT.

The copyright and license notice of sweetalert2 is shown below.

Version 9.10.12
MIT License
Copyright (c) 2014 Tristan Edwards & Limon Monte

■fs-extra

This product uses fs-extra which is licensed by MIT.

The copyright and license notice of fs-extra is shown below.

Version: 9.0.0
The MIT License
Copyright (c) 2011-2017 JP Richardson.

■file-exists

This product uses file-exists which is licensed by MIT.

The copyright and license notice of file-exists is shown below.

```
Version 5.0.1
MIT License
Copyright (c) 2014 Scott Corgan
```

■babel

This product uses babel which is licensed by MIT.

The copyright and license notice of babel is shown below.

```
Version 7.9.0
MIT License
Copyright (c) 2014-present Sebastian McKenzie and other contributors
```

■history

This product uses history which is licensed by MIT.

The copyright and license notice of history is shown below.

```
Version 4.10.1
MIT License
Copyright (c) React Training 2016-2018
```

■immer

This product uses immer which is licensed by MIT.

The copyright and license notice of immer is shown below.

```
Version 6.0.3
MIT License
Copyright (c) 2017 Michel Weststrate
```

■jquery

This product uses jquery which is licensed by MIT.

The copyright and license notice of jquery is shown below.

```
Version 3.5.1
MIT License
Copyright OpenJS Foundation and other contributors, https://openjsf.org/
```

■popper.js

This product uses popper.js which is licensed by MIT.

The copyright and license notice of popper.js is shown below.

```
Version 1.16.0
MIT License
Copyright (c) 2019 Federico Zivolo
```

■prop-types

This product uses prop-types which is licensed by MIT.

The copyright and license notice of prop-types is shown below.

```
Version 15.7.2
MIT License
Copyright (c) 2013-present, Facebook, Inc.
```

■Json.NET

This product uses Json.NET which is licensed by MIT.

The copyright and license notice of Json.NET is shown below.

Version 12.0.3
MIT License
Copyright (c) 2007 James Newton-King.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

■lodash

This product uses lodash which is licensed by MIT.

The copyright and license notice of lodash is shown below.

Version 4.17.15
MIT License
Copyright JS Foundation and other contributors <https://js.foundation/>

Based on Underscore.js, copyright Jeremy Ashkenas, DocumentCloud and Investigative Reporters & Editors <http://underscorejs.org/>
This software consists of voluntary contributions made by many individuals. For exact contribution history, see the revision history available at https://github.com/lodash/lodash

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

■mxgraph-js

This product uses mxgraph-js which is licensed by Apache (version 2.0).

The copyright and license notice of mxgraph-js is shown below.

Version 1.0.1
Apache License 2.0
Copyright 2010-2013 Coda Hale and Yammer, Inc., 2014-2015 Dropwizard Team

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at

http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

■guid-typescript

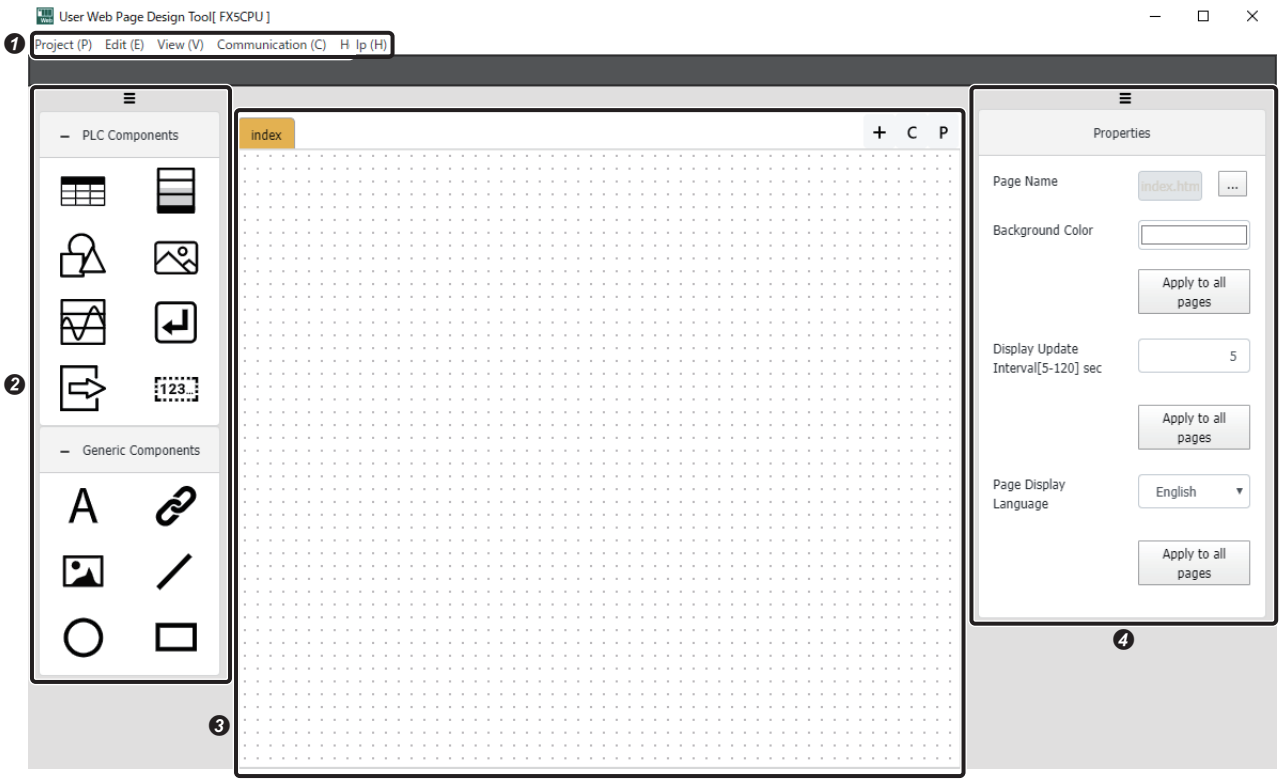
This product uses guid-typescript which is licensed by ISC.

The copyright and license notice of guid-typescript is shown below.

2 USER INTERFACE

2.1 Screen Structure

If a project is newly created or an existing one is opened, the following user interfaces will be displayed. When the design tool is started, it will be in a state where no project file is created, and only its menu bar will be displayed.



❶ Menu bar (☞ Page 14 Menu Bar)
❷ Component window (☞ Page 18 Component Window)
❸ Design window (☞ Page 28 Design Window)
❹ Property window (☞ Page 29 Property Window)

2.2 Shortcut

Shortcuts can be used for the design tool.

Shortcut	Description	Reference
Ctrl + N	Create Project	Page 14 Create Project
Ctrl + O	Open	Page 14 Open
Ctrl + S	Save	Page 14 Save
Ctrl + Shift + P	Preview	Page 15 Preview
Alt + F4	End Design Tool	Page 14 Exit
Delete	Delete Component Currently Selected	Page 28 Context menu

2.3 Menu Bar

The menu bar can be used to conduct edit and display operations. The items below are shown on the menu bar.

- Project (☞ Page 14 Project)
- Edit (☞ Page 15 Edit)
- View (☞ Page 15 View)
- Communication (☞ Page 16 Communication)
- Help (☞ Page 17 Help)

Project

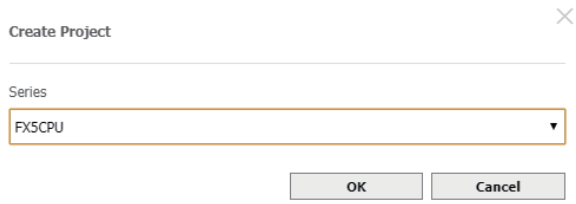
■Create Project

[Project]⇨[Create Project]

This is used to select a CPU module's series and newly create a project. If a project is opened which is not saved yet, after having performed an operation to save it, this will create a new one.

[Range]

- FX5CPU
- RCPU



■Open

[Project]⇨[Open]

This is used to read a project which is saved in a personal computer's hard disk, etc.

■Save

[Project]⇨[Save]

This is used to overwrite and save the project currently opened.

■Save As

[Project]⇨[Save As]

This is used to set a project's name and save it in a personal computer's hard disk, etc.

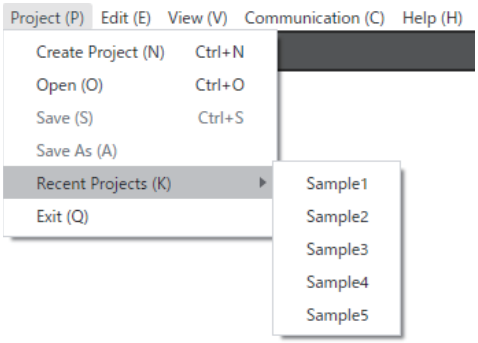
The maximum length of a project's name specifiable can be varied from 1 to 216 bytes, depending on its save location.

Prohibited characters (\, /, :, *, ?, ", <, >, |) cannot be used for a project name.

■Recent Projects

[Project]⇨[Recent Projects]

This is used to select one from projects shown on its submenu. The submenu displays projects which are opened recently. (Up to 5 projects)



■Exit

[Project]⇨[Exit]

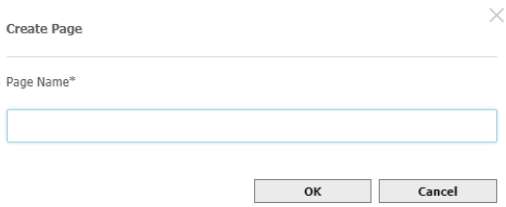
This is used to end the design tool. If a project is opened which is not saved yet, after having performed an operation to save it, this will end the design tool.

Edit

■Create Page

[Edit]⇨[Create Page]

This is used to set an HTML file's name and newly create it in a project in question. It is possible to create an HTML file that contains no more than 160 pages (including its index.html) in a project.



For a file name, only half-width alphanumeric characters, "-", and "_" can be used, and no more than 26 such characters must be entered. A file name can be changed from its property window. (☞ Page 29 Property Window)

View

■Preview

[View]⇨[Preview]

This is used to show the preview display of the currently displayed design window's contents in a Web browser.

■Show Gridlines

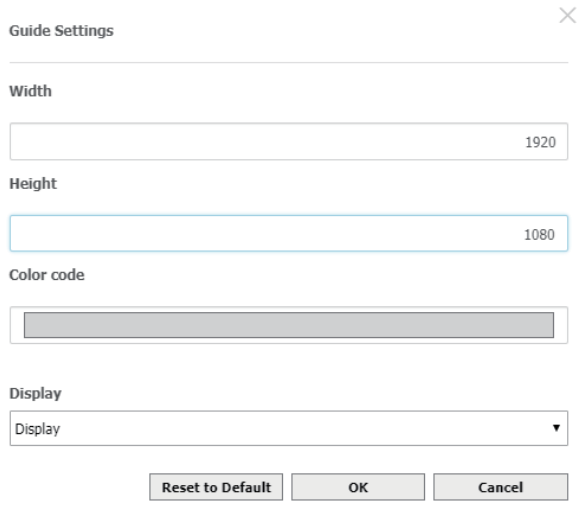
[View]⇨[Show Gridlines]

This can be used to display/not display gridlines in the design window. As far as a user doesn't change the display/not display of those gridlines, this situation will not be changed even if the design tool is restarted.

■Guide Setting

[View]⇨[Guide Setting]

This can be used to select the display/not display of the guide in the design window. This can be used to set the guide's size.



Such guide settings will be reflected in all pages within a project in question.

[Range]

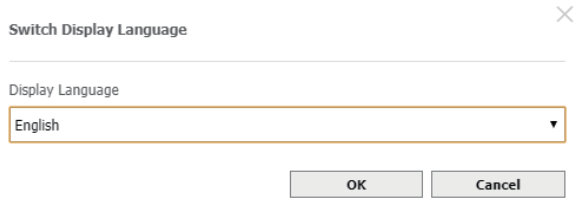
- Width: 1 to 3840
- Height: 1 to 2160
- Color code: This will be selected from the color palette.
- Display: Display/Not Display

These settings can be initialized using "Reset to Default."

■Switch Display Language

[View]⇨[Switch Display Language]

A display language used in the design tool (English, Japanese, and Chinese (simplified characters)) can be changed. As far as a user doesn't change a display language in question, it will not be changed even if the design tool is restarted.



Communication

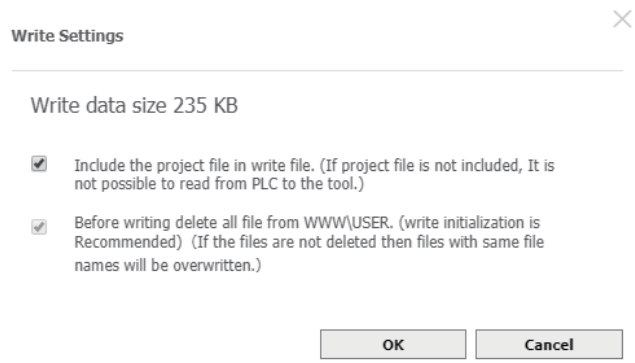
Only FX5CPU supports the design tool's communication.

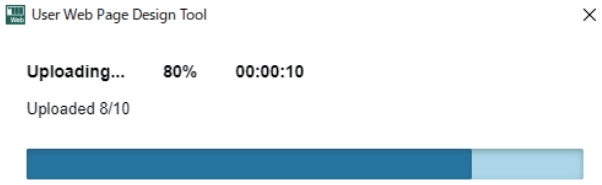
■File Write

[Communication]⇨[File Write]

This is used to write a project file, which is opened by the design tool, to an SD memory card attached to a CPU module. However, it is necessary to create a folder hierarchy for a user Web page in such an SD memory card beforehand. (☞ Page 42 File configuration)

After all files under a WWW folder in such an SD memory card are deleted, such a project file will be written to it.





■File Read

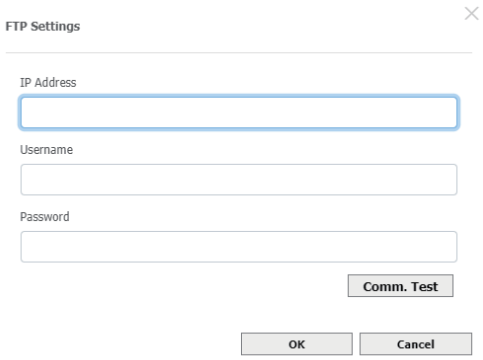
[Communication]⇨[File Read]

This is used to read a project file from an SD memory card attached to a CPU module.

■Communication Settings

[Communication]⇨[Communication Settings]

This is used to configure FTP communication with a CPU module.



Use the same IP address and FTP server settings of a CPU module with which communication is to be conducted. (📖MELSEC iQ-F FX5 User's Manual (Ethernet Communication))

[Range]

- IP Address: 0.0.0.1 to 223.255.255.254
- Username: 1 to 12 half-width characters (alphanumeric characters)
- Password: 1 to 32 half-width characters (alphanumeric characters)

Conduct a communication test to check if communication with a CPU module in question is possible.

Although writing to/reading from a file will also display communication settings, a communication test cannot be performed.

It is necessary to configure a CPU module's Web server settings to view a user Web page in a browser. (📖MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book)

Help

■Show Help

[Help]⇨[Show Help]

This is used to view the help file (in PDF format).

■Connection to MITSUBISHI ELECTRIC FA Global Website

[Help]⇨[Connection to MITSUBISHI ELECTRIC FA Global Website]

This is used to view the MITSUBISHI ELECTRIC FA Global Website in a Web browser. Different websites will be displayed, depending on selected languages.

- For a case where "English" or "Chinese" is selected in "Switch Display Language": MITSUBISHI ELECTRIC FA Global Website
- For a case where "Japanese" is selected in "Switch Display Language": MITSUBISHI ELECTRIC FA Website

■Version

[Help]⇨[Version]

This is used to view information items on a software version, etc.

■License

[Help]⇨[License]

This is used to view information items on the licenses of software items used by the design tool. (☞ Page 6 Software License)

2.4 Component Window

This is used to view components used to configure a user Web page. Drag an individual component to the design window so that it can be allocated. (☞ Page 28 Design Window) To configure an individual item's settings, use its property window. (☞ Page 29 Property Window)

Refer to the following documents for more information about individual components.

📖MELSEC iQ-R Ethernet User's Manual (Application)

📖MELSEC iQ-F FX5 User's Manual (Ethernet Communication)

PLC components

The followings can be used as PLC components.

Icon	Description	Reference
	[UserWebPage component - Data Block] This is used to display specified device data items in a tabular format. Multiple devices and their directions can also be specified.	Page 19 Data Block
	[UserWebPage component - Level Display] This is used to view the current value of a specified device as a level relative to its upper and lower limits. Different colors can be allocated to a level display component, depending on whether its current value is larger than its upper limit or smaller than its lower limit, and its direction can also be specified.	Page 20 Level Display
	[UserWebPage component - Graphic Display] This is used to display a figure in a specified color when the current value of a specified device is within a set range.	Page 20 Graphic Display
	[UserWebPage component - Image Display] This is used to display a specified image file when the current value of a specified device is within a set range.	Page 21 Image Display
	[UserWebPage component - Historic Graph] This is used to display the time series of a device's values in a line graph. A device's value is read at update intervals, and when the number of allowed records is reached, the oldest record will be deleted and the line graph will shift to the left.	Page 21 Historic Graph
	[UserWebPage component - Input Button] This is used to allocate a button to write a specified value to a specified device.	Page 22 Input Button
	[UserWebPage component - Logout Button] This is used to allocate a button for logging out. If a logout button is clicked, a user login page (Log-in_User.html) will appear.	Page 22 Logout Button
	[PLC component - Arbitrary value write Button] This is used to display a set of an input field and a write button to write an arbitrary value.	Page 22 Arbitrary value write Button

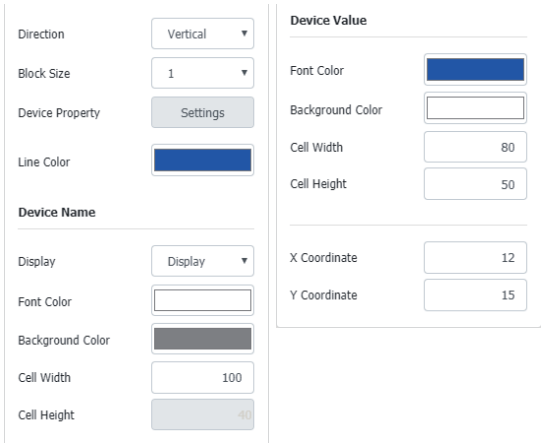
The current value of a device will be updated at regular intervals. (☞ Page 29 Display update interval [5-120] sec)

Up to 128 PLC components can be allocated to an HTML file page. However, for logout button components, only one can be used in an HTML file.

If the input button and arbitrary value write button components are used, set "Write Device" in "Web Server Account Settings" to "Enable". (📖MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book) For an account that does not write operations, such a setting is not necessary.

Data Block

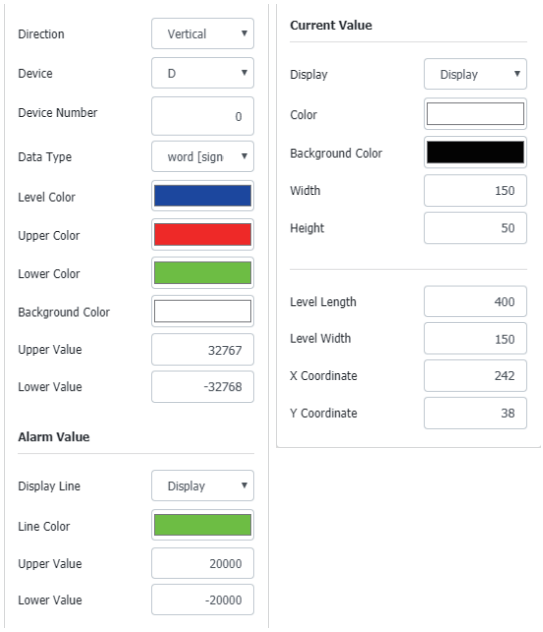
Below are setting items which will be displayed in its property window.

Property window	Properties		Settings
	Direction		Vertical, Horizontal
	Block Size		1 to 32
	Device Property[*1]	Display Label	No more than 100 characters
		Device	☞ Page 25 Device settings
		Data Type	
		Display Format	
		+	This is used to add a line to a displayed device.
		-	This is used to delete a line from a displayed device. (The second line or thereafter)
	Line Color		This will be selected from the color palette.
	Device Name	Display	Display, Not Display
		Font Color	This will be selected from the color palette.
		Background Color	
		Cell Width[*2]	10 to 1920
		Cell Height[*3]	10 to 1080
	Device Value	Font Color	This will be selected from the color palette.
		Background Color	
		Cell Width	10 to 1920
		Cell Height	10 to 1080
	X Coordinate		0 to 3840
	Y Coordinate		0 to 2160

*1 A device to be displayed in a data block can be registered. Up to 32 devices can be registered per data block.
*2 It can be edited when "Vertical" is selected as a direction.
*3 It can be edited when "Horizontal" is selected as a direction.

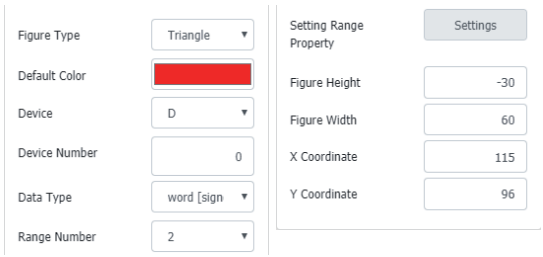
Level Display

Below are setting items which will be displayed in its property window.

Property window	Properties		Settings
	Direction		Vertical, Horizontal
	Device		☞ Page 25 Device settings
	Device Number		
	Data Type		
	Level Color		This will be selected from the color palette.
	Upper Color		
	Lower Color		
	Background Color		
	Upper Value		☞ Page 26 Settings (Decimal)
	Lower Value		
	Alarm Value	Display Line	Display, Not Display
		Line Color	This will be selected from the color palette.
		Upper Value	☞ Page 26 Settings (Decimal)
		Lower Value	
	Current Value	Display	Display, Not Display
		Color	This will be selected from the color palette.
		Background Color	
		Width	10 to 3840
		Height	10 to 2160
	Level Length		10 to 3840
	Level Width		10 to 2160
	X Coordinate		0 to 3840
	Y Coordinate		0 to 2160

Graphic Display

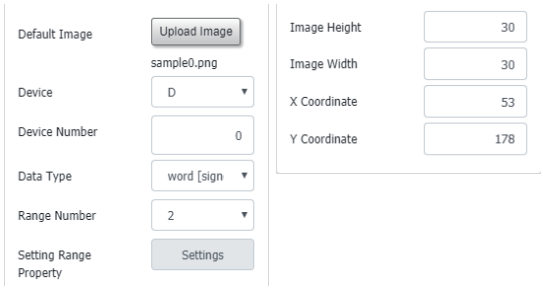
Below are setting items which will be displayed in its property window.

Property window	Properties		Settings
	Figure Type		Triangle, Rectangle, and Ellipse
	Default Color		This will be selected from the color palette.
	Device		☞ Page 25 Device settings
	Device Number		
	Data Type		
	Range Number		1 to 5
	Setting Range Property*1	Low	☞ Page 26 Settings (Decimal)
		High	
		Color	This will be selected from the color palette.
	Figure Height		-2160 to -1, 1 to 2160
	Figure Width		10 to 3840
	X Coordinate		0 to 3840
	Y Coordinate		0 to 2160

*1 A figure's upper and lower limits can be set to change its color. Depending on the number of ranges set, the number of settings will vary. If the "Figure Type" property is "Triangle," setting a negative number to the "Figure Height" property will result in a downward triangle.

Image Display

Below are setting items which will be displayed in its property window.

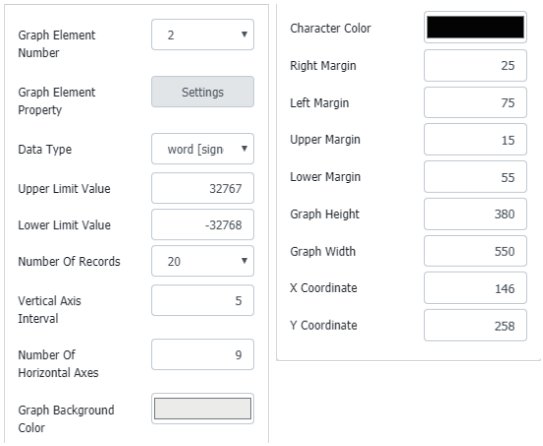
Property window	Properties		Settings
	Default Image*1		☞ Page 27 Image file
	Device		☞ Page 25 Device settings
	Device Number		
	Data Type		
	Range Number		1 to 5
	Setting Range Property*2	Low	☞ Page 26 Settings (Decimal)
		High	
		Image File	☞ Page 27 Image file
	Image Height		10 to 3840
	Image Width		10 to 2160
	X Coordinate		0 to 3840
	Y Coordinate		0 to 2160

*1 This is an image when the value of a device in question is out of a setting range in "Setting Range Property."

*2 Upper and lower limits can be set to change a displayed image. Depending on the number of ranges set, the number of settings will vary.

Historic Graph

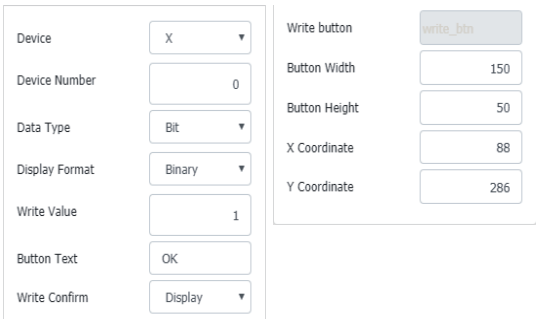
Below are setting items which will be displayed in its property window.

Property window	Properties		Settings
	Graph Element Number		1 to 32
	Graph Element Property*1	Device Name	☞ Page 25 Device settings
		Device Number	
		Line Color	This will be selected from the color palette.
	Data Type		☞ Page 25 Device settings
	Upper Limit Value		☞ Page 26 Settings (Decimal)
	Lower Limit Value		
	Number Of Records		5 to 100
	Vertical Axis Interval		0 to 99
	Number Of Horizontal Axes		0 to 99
	Graph Background Color		This will be selected from the color palette.
	Character Color		This will be selected from the color palette.
	Right Margin		1 to 3840
	Left Margin		1 to 3840
	Upper Margin		1 to 2160
	Lower Margin		1 to 2160
	Graph Height		10 to 2160
	Graph Width		10 to 3840
	X Coordinate		0 to 3840
	Y Coordinate		0 to 2160

*1 This is used to set a device whose graph will be displayed. Depending on the number of graph elements, the number of settings will vary.

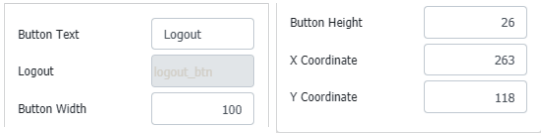
Input Button

Below are setting items which will be displayed in its property window.

Property window	Properties	Settings
	Device	☞ Page 25 Device settings
	Device Number	
	Data Type	
	Display Format	
	Write Value	☞ Page 26 Settings
	Button Text	No more than 100 characters
	Write Confirm	Display, Not Display
	Write Button	—
	Button Width	10 to 3840
	Button Height	10 to 2160
	X Coordinate	0 to 3840
	Y Coordinate	0 to 2160

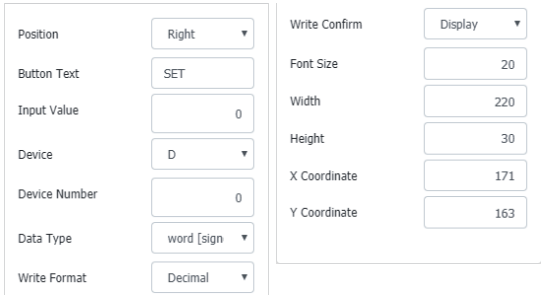
Logout Button

Below are setting items which will be displayed in its property window.

Property window	Properties	Settings
	Button Text	No more than 100 characters
	Logout	—
	Button Width	10 to 3840
	Button Height	10 to 2160
	X Coordinate	0 to 3840
	Y Coordinate	0 to 2160

Arbitrary value write Button

Below are setting items which will be displayed in its property window.

Property window	Properties	Settings
	Position	Left, Right, Top, and Bottom
	Button Text	No more than 100 characters
	Input Value	☞ Page 26 Settings
	Device	☞ Page 25 Device settings
	Device Number	
	Data Type	
	Write Format	
	Write Confirm	Display, Not Display
	Font Size	1 to 1500
	Width	10 to 3840
	Height	10 to 2160
	X Coordinate	0 to 3840
	Y Coordinate	0 to 2160

Generic components

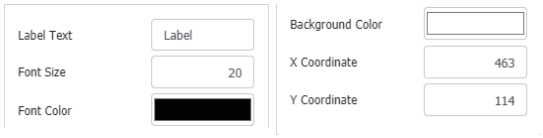
For generic components, the followings can be used.

Icon	Description	Reference
A	[Label] This is used to display a label.	Page 23 Label
	[Anchor Tag] This is used to display a label to which a link is set. Click the label to jump to the link destination. A link to an HTML page in a project file and one to an external URL can be set.	Page 23 Anchor Tag
	[Image Tag] This is used to display an image file.	Page 24 Image Tag
	[Line] This is used to display a line in a specified area.	Page 24 Line
	[Ellipse] This is used to display an ellipse.	Page 24 Ellipse
	[Rectangle] This is used to display a rectangle.	Page 24 Rectangle

Up to 256 generic components can be allocated to an HTML file page.

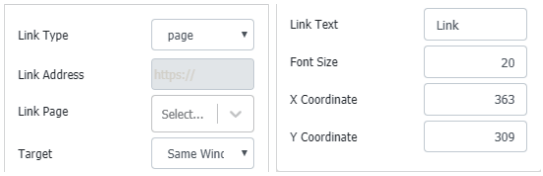
Label

Below are setting items which will be displayed in its property window.

Property window	Properties	Settings
	Label Text	No more than 1000 characters
	Font Size	1 to 1500
	Font Color	This will be selected from the color palette.
	Background Color	This will be selected from the color palette.
	X Coordinate	0 to 3840
	Y Coordinate	0 to 2160

Anchor Tag

Below are setting items which will be displayed in its property window.

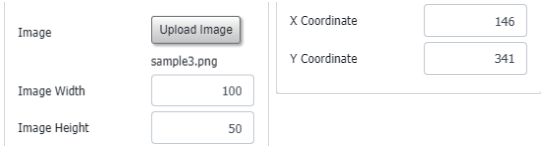
Property window	Properties	Settings
	Link Type	Page, URL
	Link Address	No more than 1000 characters*1
	Link Page	*2
	Target	Other window, Same window
	Link Text	1000 characters
	Font Size	1 to 1500
	X Coordinate	0 to 3840
	Y Coordinate	0 to 2160

*1 When "URL" is selected for the link type property, it can be edited.

*2 When "Page" is selected for the link type property, it can be edited.
This is used to select a page that is already created and other than the own page.

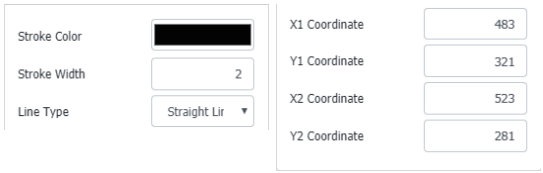
Image Tag

Below are setting items which will be displayed in its property window.

Property window	Properties	Settings
	Image	☞ Page 27 Image file
	Image Width	10 to 3840
	Image Height	10 to 2160
	X Coordinate	0 to 3840
	Y Coordinate	0 to 2160

Line

Below are setting items which will be displayed in its property window.

Property window	Properties	Settings
	Stroke Color	This will be selected from the color palette.
	Stroke Width	1 to 100
	Line Type	Straight line, dotted line 1 to 6
	X1 Coordinate*1*2	0 to 3840
	Y1 Coordinate*1*2	0 to 2160
	X2 Coordinate*2*3	0 to 3840
	Y2 Coordinate*2*3	0 to 2160

*1 Coordinate of line start point
*2 The same coordinate cannot be set to (X1, Y1) and (X2, Y2).
*3 Coordinate of line end point

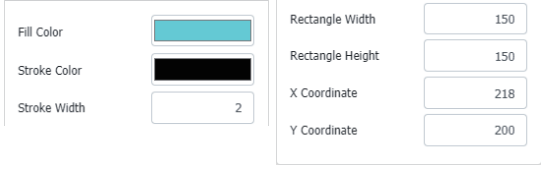
Ellipse

Below are setting items which will be displayed in its property window.

Property window	Properties	Settings
	Stroke Color	This will be selected from the color palette.
	Stroke Width	1 to 100
	Fill Color	This will be selected from the color palette.
	Ellipse Width	10 to 3840
	Ellipse Height	10 to 2160
	X Coordinate	0 to 3840
	Y Coordinate	0 to 2160

Rectangle

Below are setting items which will be displayed in its property window.

Property window	Properties	Settings
	Fill Color	This will be selected from the color palette.
	Stroke Color	
	Stroke Width	1 to 100
	Rectangle Width	10 to 3840
	Rectangle Height	10 to 2160
	X Coordinate	0 to 3840
	Y Coordinate	0 to 2160

Common items

This section shows items common to individual components.

Device settings

Consistency among a device, a data type, and a display format is required for device settings. Use the following combinations to perform device settings.

■RCPU

○: can be set, ×: cannot be set

Device[*1]		Data type[*2]				
		Word [signed/ unsigned]	Double word [signed/ unsigned]	Floating point real number	Double point real number	Bit
X	Input	×	×	×	×	○
Y	Output	×	×	×	×	○
M	Internal relay	×	×	×	×	○
L	Latch relay	×	×	×	×	○
B	Link relay	×	×	×	×	○
F	Annunciator	×	×	×	×	○
SB	Link special relay	×	×	×	×	○
V	Edge relay	×	×	×	×	○
T	Timer	○: K, H [unsigned]	×	×	×	×
ST	Retentive timer	○: K, H [unsigned]	×	×	×	×
LT	Long timer	×	○: K, H [unsigned]	×	×	×
LST	Long retentive timer	×	○: K, H [unsigned]	×	×	×
C	Counter	○: K, H [unsigned]	×	×	×	×
LC	Long counter	×	○: K, H [unsigned]	×	×	×
D	Data register	○: K, H	○: K, H	○: K	○: K	×
W	Link register	○: K, H	○: K, H	○: K	○: K	×
SW	Link special register	○: K, H	○: K, H	○: K	○: K	×
DX	Direct access input	×	×	×	×	○
DY	Direct access output	×	×	×	×	○
SM	Special relay	×	×	×	×	○
SD	Special register	○: K, H	○: K, H	○: K	○: K	×
J□\X	Link input	×	×	×	×	○
J□\Y	Link output	×	×	×	×	○
J□\B	Link relay	×	×	×	×	○
J□\SB	Link special relay	×	×	×	×	○
J□\W	Link register	○: K, H	○: K, H	○: H	○: H	×
J□\SW	Link special register	○: K, H	○: K, H	○: H	○: H	×
U□\G	Module access device	○: K, H	○: K, H	○: K	○: K	×
U3E□\G	CPU buffer memory	○: K, H	○: K, H	○: K	○: K	×
U3E□\HG		○: K, H	○: K, H	○: K	○: K	×
Z	Index register	○: K, H	○: K, H	○: K	○: K	×
LZ	Long index register	×	○: K, H	○: K	×	×
R	File register	○: K, H	○: K, H	○: K	○: K	×
ZR	File register	○: K, H	○: K, H	○: K	○: K	×
RD	Refresh data register	○: K, H	○: K, H	○: K	○: K	×
BL	SFC block device	×	×	×	×	○
BL□\S		×	×	×	×	○

*1 For a device number, refer to the user's manual of a CPU module used.

*2 K: Decimal, H: Hexadecimal

■FX5CPU

○: can be set, ×: cannot be set

Device[*1]			Data type[*2]			
			Word [signed/ unsigned]	Double word [signed/ unsigned]	Floating point real number	Bit
X	Input		×	×	×	○[*3]
Y	Output		×	×	×	○[*3]
M	Internal relay		×	×	×	○
L	Latch relay		×	×	×	○
B	Link relay		×	×	×	○
F	Annunciator		×	×	×	○
SB	Link special relay		×	×	×	○
S	Step relay		×	×	×	○
T	Timer	Contact: TS/Coil: TC	×	×	×	○
		Current value: TN	○: K, H	×	×	×
ST	Retentive timer	Contact: STS/Coil: STC	×	×	×	○
		Current value: STN	○: K, H	×	×	×
C	Counter	Contact: CS/Coil: CC	×	×	×	○
		Current value: CN	○: K, H	×	×	×
LC	Long counter	Contact: LCS/Coil: LCC	×	×	×	○
		Current value: LCN	×	○: K, H	×	×
D	Data register		○: K, H	○: K, H	○: K	×
W	Link register		○: K, H	○: K, H	○: K	×
SW	Link special register		○: K, H	○: K, H	○: K	×
SM	Special relay		×	×	×	○
SD	Special register		○: K, H	○: K, H	○: K	×
U□\G	Module access device		○: K, H	○: K, H	○: K	×
Z	Index register		○: K, H	○: K, H	○: K	×
LZ	Long index register		×	○: K, H	○: K	×
R	File register		○: K, H	○: K, H	○: K	×
BL	SFC block device		×	×	×	○
BL□\S			×	×	×	○

*1 For a device number, refer to the user's manual of a CPU module used.
*2 K: Decimal, H: Hexadecimal
*3 If X and Y are to be specified, specify them in octal numbers.

Settings

If individual components' upper/lower limits, etc. are to be set, their ranges will vary depending on their data types.

Data type	Range
Word [signed]	-32768 to +32767
Word [unsigned]	0 to 65535
Double word [signed]	-2147483648 to +2147483647
Double word [unsigned]	0 to 4294967295
Floating point real number	-3.402823e+38 to +3.402823e+38
Double point real number (only RCPU)	-1.797693e+308 to +1.797693e+308
Bit	0, 1

Coordinate

To define the design window's coordinate, its upper left corner is set as the origin, (0, 0), the X-axis is set along the horizontal direction from the origin, and the Y-axis is set along the vertical direction from the origin. Individual components' coordinates represent their upper left positions.

Image file

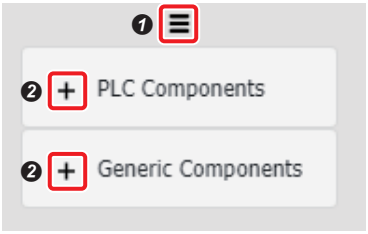
For an image file which the design tool can use, its file name consists of no more than 27 half-width characters of alphanumeric characters, "-", "_", and "." including its extension (.jpg, .gif, .jpeg, and .png). Aim for 100 KB or less as the total size of image files in one screen. (This also includes a case where an image display component uses multiple image files)
If an image file is specified, its copy will be stored in the img folder. (☞ Page 42 File configuration) If a file in the img folder is specified, its copy will not be created.
If an image is not specified, a default image will appear.

Ordered arrangement of components

The ordered arrangement of components is their allocated order in the design window. Only generic and arbitrary value write button components can optionally change their ordered arrangements to the forefront/backmost. (☞ Page 28 Context menu)

Window folding

A component window can be folded to make more space for the design window.



Click the symbol on the right side of ❶ to fold a component window in question. If a component window is folded, click such a symbol to unfold it.
Click the symbol on the right side of ❷ to fold a corresponding PLC/generic component's list. If such a list is folded, [-] will appear on the right side of ❷. Click [-] to unfold such a list in question.

2.5 Design Window

The design window can create/edit an HTML file which will allocate components and show them in a Web browser. This section describes how to operate the design window. The highest resolution of the design window (an HTML section) is 4K (3840 × 2160 pixels).

Select HTML file

This is used to display in the design window, an HTML file whose file name is selected.

Delete HTML file

This is used to delete an HTML file that is created in a project. However, index.html cannot be deleted.

Create new HTML file

+

This is used to set an HTML file's name and newly create it in a project in question. (☞ Page 15 Create Page)

Copy HTML file

C

This is used to set an HTML file name and make a copy of an HTML file currently displayed.

Preview

P

This is used to show the preview display of the currently displayed design window's contents in a Web browser. (☞ Page 15 Preview)

Context menu

If a component allocated in the design screen is selected and right-clicked, a context menu will appear. The following operations can be performed from the context menu.

Context menu	Description
Duplicate	This is used to make a duplicate of a selected component.
Delete	This is used to delete a selected component.
Bring to Front*1	This is used to bring a generic/arbitrary value write button component to the front. (The component will be brought to the front among all components which are allocated to and displayed in the design window)
Send to Back*1	This is used to send a generic/arbitrary value write button component to the back. (The component will be sent to the back among all components which are allocated to and displayed in the design window)

*1 This applies to a PLC component only if it is an arbitrary value write button component.

2.6 Property Window

If a component is allocated to the design window, its property and HTML file page settings can be conducted. If a component is selected in the design window, its component properties will be displayed, and if a component is not selected, its page properties will be displayed.

Component properties

If a component is selected in the design window, its component properties will be displayed. This section describes how to operate the design window. For individual components' properties which can be set, refer to ☞ Page 18 Component Window.

Delete component

This is used to delete a selected component. This is an operation common to all components.

Page properties

If an HTML file is displayed in the design screen, its page properties will be displayed. Those page properties which can be set are shown below.

Page name

If an HTML file is displayed on the design screen, its file name will be displayed and can be changed. However, the page names of index.html and Log-in_User.html cannot be changed. For file names, refer to ☞ Page 15 Create Page.

Background color

The background color of an HTML file can be set from the color palette.
If such a background color is set as "Reflect in all pages," it will be reflected in all HTML files in a project in question.

Display update interval [5-120] sec

This is used to set the display update interval of a PLC component allocated to an HTML file which is displayed in the design window. Setting range (120 to 5 (sec.))
If such a display update interval is set as "Reflect in all pages," the display update interval will be reflected in all HTML files in a project in question.

Page display language

This is used to set the display language of input button and arbitrary value write button components allocated to an HTML file which is displayed in the design window. (English, Japanese, and Chinese (simplified characters)) The default display language is one set in index.html.
If such a display language is set as "Reflect in all pages," the display language will be reflected in all HTML files in a project in question.

Common items

This section shows setting items common to all property windows.

Window folding

This is used to fold a property window to make more space for the design window. If a property window is folded, this is used to unfold the window.

3 TUTORIAL

This section describes the procedures, operations, and practical examples before using the user Web page.

3.1 Before Tutorial

To use this tutorial, it is necessary to obtain the design tool and become familiar with its operations. Check a system configuration to read/write a project file through FTP communication with an SD memory card attached to a CPU module.

How to obtain and start design tool

This section describes how to obtain and start the design tool and associated functions.

■How to Obtain

Please consult your local Mitsubishi representative.

■Installing and Uninstalling

To install, execute setup.exe and install the tool according to the message of the installer.

To uninstall, execute uninstall.exe and uninstall the tool according to the message.

■Start and End

To start it: [Start Menu]⇨[UserWebPageDesignTool]⇨[UserWebPageDesignTool]

To end it: [Project]⇨[Exit] (☞ Page 14 Exit)

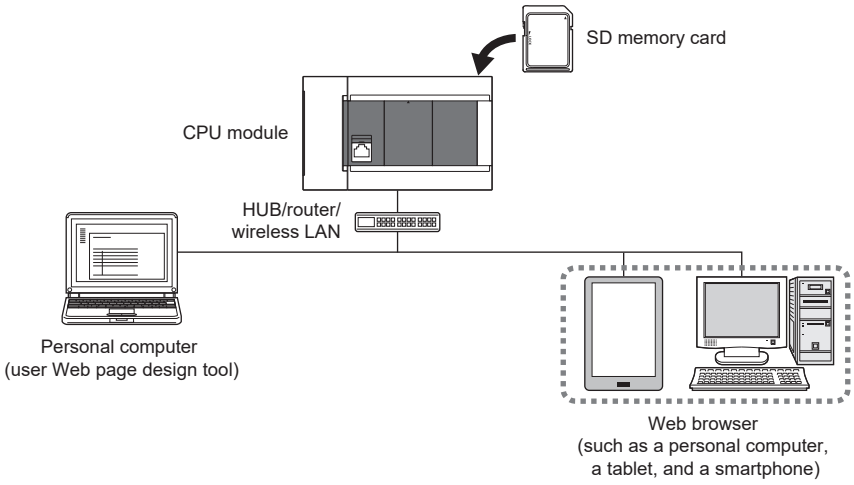
■Display Language Selection

[Display]⇨[Switch Display Language] (☞ Page 16 Switch Display Language)

FTP communication

If the design tool (installed on a personal computer) is connected to a CPU module through Ethernet, a project file can be read/written through FTP communication.

For more information about how to operate FTP communication, refer to ☞ Page 16 Communication.



Use a straight cable with either of the following specifications. If a personal computer is to be directly connected to a CPU module with an Ethernet cable, a cross cable whose specification is category 5e or less can be used.

[When 100BASE-TX connection is available]

Cable products compliant with the Ethernet standard whose specification is category 5 or better (STP cables)

[When 10BASE-T connection is available]

Cable products compliant with the Ethernet standard whose specification is category 3 or better (STP cables)

For the MELSEC iQ-F series, if the FTP server settings of a CPU module are already configured, the design tool can communicate with the CPU module through FTP communication. (MELSEC iQ-F FX5 User's Manual (Ethernet Communication))

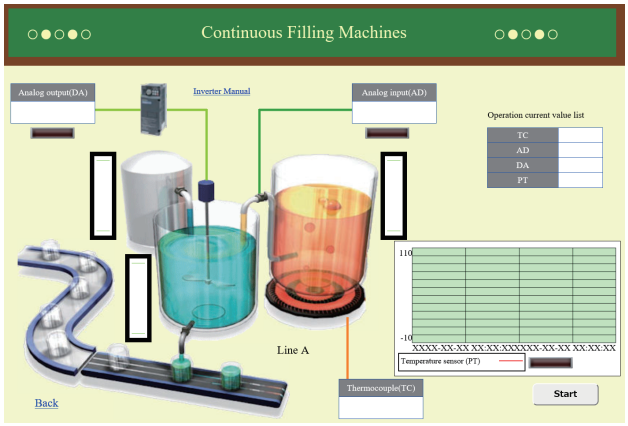
For the MELSEC iQ-R series, the design tool cannot support FTP communication with a CPU module, and therefore HTML and other files created by this tool must be stored directly to an SD memory card. (MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book)

3.2 Practical Examples

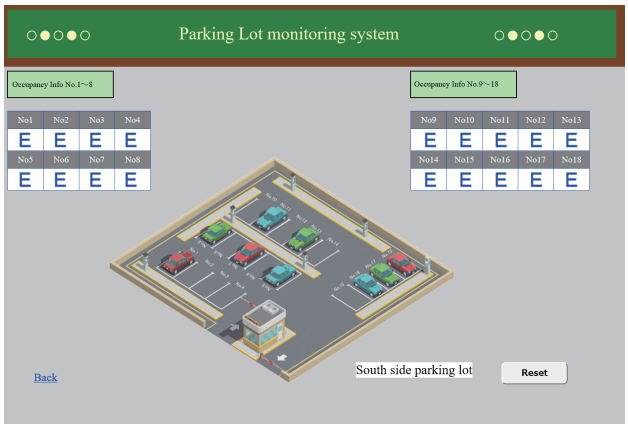
The practical examples of user Web pages are shown below.

Top page (index.html)

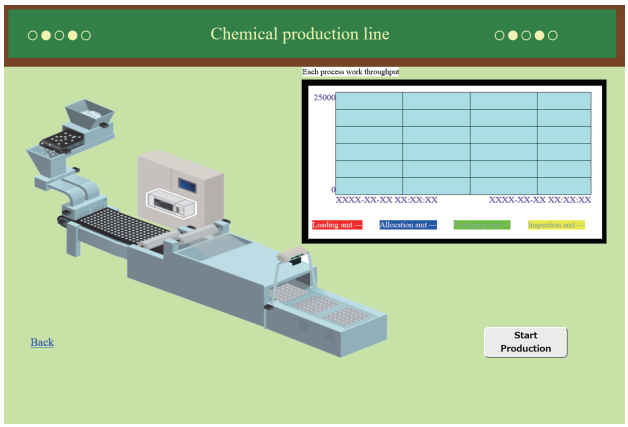
Continuous Filling Machines



Parking Lot monitoring system



Chemical production line



This section describes procedures to create a project with continuous filling machines as an example.
The "Continuous filling machines" example is about a user Web page to monitor the states and measurements of individual devices.

Creating a user Web page

This section describes procedures to create the HTML files of the continuous filling machines.

Creating a project

For a project, refer to ☞ Page 42 Project Management.

1. Newly Creating Project

After having installed the design tool, start the design tool, and perform the following operation to create a new project.
[Project]⇨[Create Project] (☞ Page 14 Create Project)

2. Creating HTML File

Perform the following operation to create an HTML file. For this example, its page name is "001."
[Edit]⇨[Create Page] (☞ Page 15 Create Page)

Editing HTML file

By allocating individual components, the continuous filling machines' user Web page will be created. The continuous filling machines consist of the following items.

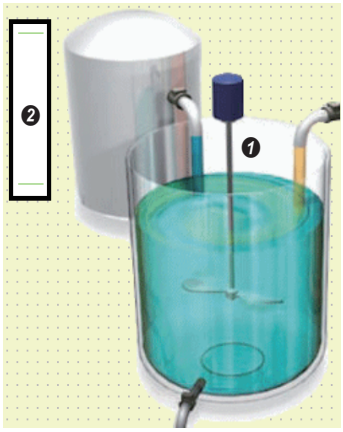
[Tank] This monitors water storage (R3) in the equipment's tank

[Liquid tank 1] This monitors the water level (R1) and analog output (D102) of the equipment's liquid tank.

[Liquid tank 2] This monitors the water level (R2), analog input (D101), and temperature (D100) of the equipment's liquid tank.

[Batch display section] This monitors the analog input/output (D101 and D102) and the temperatures (D100 and R100).

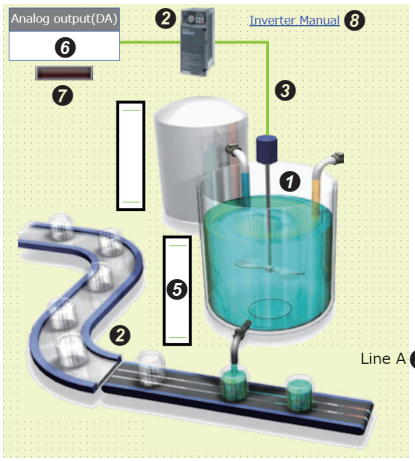
■Tank

Design window	Used components
	Allocate the following components from the component window. ❶ Image tag components In this example, the image files of "Tank" and "Liquid tank 1" are the same. ❷ Level display and rectangle components This shows the water storage (R3) using a level indication.

❷The following items are set for the level display component. (Property window)

Properties		Settings	Properties		Settings
Direction		Vertical	Current Value	Display	Not Display
Device		R		Color	Set this optionally.
Device Number		3		Background Color	
Data Type		word [signed]		Width	10
Level Color		Set this optionally.		Height	10
Upper Color			Level Length		160
Lower Color			Level Width		30
Background Color			X Coordinate		Set this optionally.
Upper Value		5000	Y Coordinate		
Lower Value		-10	—		
Alarm Value	Display Line	Display			
	Line Color	Set this optionally.			
	Upper Value	4999			
	Lower Value	-1			

■Liquid Tank 1

Design window	Used components
	Allocate the following components from the component window. ❶ Image tag components In this example, the image files of "Tank" and "Liquid tank 1" are the same. ❷ Image tag components Allocate an image file specific to "Liquid tank 1." ❸ Line components ❹ Label components ❺ Level display and rectangle components This shows a water level (R1) in the liquid tank using a level indication. The rectangular component has to be located so that it will overlap with the level display component. ❻ Data block components This shows the analog output (D102). ❼ Image display components This indicates whether the analog output is monitored. ❽ Anchor tag components

❺The following items are set for the level display component. (Property window)

Properties		Settings	Properties		Settings
Direction		Vertical	Current Value	Display	Not Display
Device		R		Color	Set this optionally.
Device Number		1		Background Color	
Data Type		word [signed]		Width	10
Level Color		Set this optionally.		Height	10
Upper Color			Level Length		160
Lower Color			Level Width		30
Background Color			X Coordinate		Set this optionally.
Upper Value		5000	Y Coordinate		
Lower Value		-10	—		
Alarm Value	Display Line	Display			
	Line Color	Set this optionally.			
	Upper Value	4999			
	Lower Value	-1			

❻ The following items are set for the data block component. (Property window)

Properties		Settings	Properties		Settings
Direction		Horizontal	Device Value	Font Color	Set this optionally.
Block Size		1		Background Color	
Device Property	Display Label	Analog output(DA)		Cell Width	190
	Device	D102		Cell Height	50
	Data Type	word [signed]	X Coordinate		Set this optionally.
	Display Format	Decimal	Y Coordinate		
Line Color		Set this optionally.	—		
Device Name	Display	Display			
	Font Color	Set this optionally.			
	Background Color				
	Cell Width	—			
	Cell Height	40			

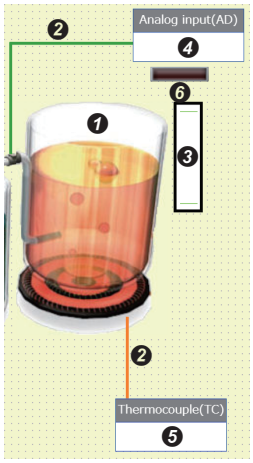
❼ The following items are set for the image display component. (Property window)

Properties	Settings	Properties		Settings
Default Image	An image file that will be displayed when OFF.	Setting Range Property	Low	1
Device	M		High	1
Device Number	202		Image File	An image file that will be displayed when ON.
Data Type	Bit	Image Height		25
Range Number	1	Image Width		100
—		X Coordinate		Set this optionally.
		Y Coordinate		

❽ The following items are set for the anchor tag component. (Property window)

Properties	Settings	Properties	Settings
Link Type	URL	Link Text	Inverter Manual
Link Address	An arbitrary address	Font Size	20
Link Page	—	X Coordinate	Set this optionally.
Target	Same Window	Y Coordinate	

■Liquid Tank 2

Design window	Used components
	Allocate the following components from the component window. ❶ Image tag components ❷ Line components ❸ Level display and rectangle components This shows a water level (R2) in the liquid tank using a level indication. The rectangular component has to be located so that it will overlap with the level display component. ❹ Data block component This displays the analog input value (D101). ❺ Data block components This shows the measured temperature of temperature (D100). ❻ Image display components This indicates whether the analog input value is monitored.

❸The following items are set for the level display component. (Property window)

Properties		Settings	Properties		Settings
Direction		Vertical	Current Value	Display	Not Display
Device		R		Color	Set this optionally.
Device Number		2		Background Color	
Data Type		word [signed]		Width	10
Level Color		Set this optionally.		Height	10
Upper Color			Level Length		160
Lower Color			Level Width		30
Background Color			X Coordinate		Set this optionally.
Upper Value		5000	Y Coordinate		
Lower Value		-10	—		
Alarm Value	Display Line	Display			
	Line Color	Set this optionally.			
	Upper Value	4999			
	Lower Value	-1			

❹ The following items are set for the data block component. (Property window)

Properties		Settings	Properties		Settings
Direction		Horizontal	Device Value	Font Color	Set this optionally.
Block Size		1		Background Color	
Device Property	Display Label	Analog input(AD)		Cell Width	190
	Device	D101		Cell Height	50
	Data Type	word [signed]	X Coordinate		Set this optionally.
	Display Format	Decimal	Y Coordinate		
Line Color		Set this optionally.	—		
Device Name	Display	Display			
	Font Color	Set this optionally.			
	Background Color				
	Cell Width	—			
	Cell Height	40			

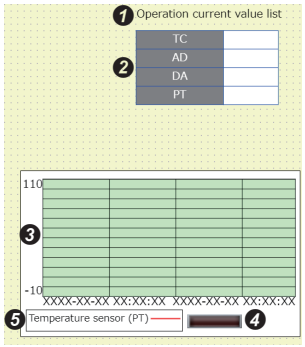
❺ The following items are set for the data block component. (Property window)

Properties		Settings	Properties		Settings
Direction		Horizontal	Device Value	Font Color	Set this optionally.
Block Size		1		Background Color	
Device Property	Display Label	Thermocouple(TC)		Cell Width	190
	Device	D100		Cell Height	50
	Data Type	word [signed]	X Coordinate		Set this optionally.
	Display Format	Decimal	Y Coordinate		
Line Color		Set this optionally.	—		
Device Name	Display	Display			
	Font Color	Set this optionally.			
	Background Color				
	Cell Width	—			
	Cell Height	40			

❻ The following items are set for the image display component. (Property window)

Properties	Settings	Properties		Settings
Default Image	An image file that will be displayed when OFF.	Setting Range Property	Low	1
Device	M		High	1
Device Number	201		Image File	An image file that will be displayed when ON.
Data Type	Bit	Image Height		25
Range Number	1	Image Width		100
—		X Coordinate		Set this optionally.
		Y Coordinate		

■Batch Display Section

Design window	Used components
	Allocate the following components from the component window. ❶ Label components ❷ Data block components This shows the analog input/output values (D101 and D102) and the temperatures (D100 and R100). ❸ Historic graph components This shows the temperature (R100) in a time series line graph. ❹ Image display components This shows whether the temperatures are monitored. ❺ Rectangle, label, and line components

❷ The following items are set for the data block component. (Property window)

Properties		Settings	Properties		Settings
Direction		Vertical	Device Value	Font Color	Set this optionally.
Block Size		4		Background Color	
Device Property		*1		Cell Width	100
Line Color		Set this optionally.		Cell Height	34
Device Name	Display	Display	X Coordinate		Set this optionally.
	Font Color	Set this optionally.	Y Coordinate		
	Background Color		—		
	Cell Width	160			
	Cell Height	—			

*1 The following items are set for individual lines. (Display label, device, data type, and display format)
First line: TC, D100, word [signed], and decimal number
Second line: AD, D101, word [signed], and decimal number
Third line: DA, D102, word [signed], and decimal number
Fourth line: PT, R100, word [signed], and decimal number

❸ The following items are set for the historic graph component. (Property window)

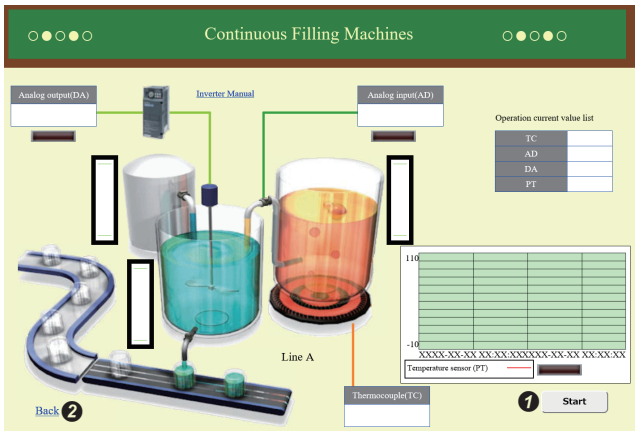
Properties		Settings	Properties	Settings
Graph Element Number		1	Graph Background Color	Set this optionally.
Graph Element Property	Device Name	R	Character Color	Set this optionally.
	Device Number	100	Right Margin	10
	Line Color	Set this optionally.	Left Margin	40
Data Type		word [signed]	Upper Margin	15
Upper Limit Value		110	Lower Margin	75
Lower Limit Value		-10	Graph Height	215
Number Of Records		20	Graph Width	462
Vertical Axis Interval		5	X Coordinate	Set this optionally.
Number Of Horizontal Axes		11	Y Coordinate	

❹ The following items are set for the image display component. (Property window)

Properties		Settings	Properties		Settings
Default Image		An image file that will be displayed when OFF.	Setting Range Property	Low	1
Device		M		High	1
Device Number		200		Image File	An image file that will be displayed when ON.
Data Type		Bit	Image Height		25
Range Number		1	Image Width		100
—			X Coordinate		Set this optionally.
			Y Coordinate		

■Start Button and Link

A button to start monitoring and a link to the top page will be allocated.

Design window	Used components
	Allocate the following components from the component window. ❶ Input button components A button (Y0) to start monitoring will be allocated. ❷ Anchor tag components A link to return to the top page will be allocated.

❶The following items are set for the input button component. (Property window)

Properties	Settings	Properties	Settings
Device	Y	Write Confirm	Not Display
Device Number	0	Write Button	—
Data Type	Bit	Button Width	150
Display Format	Binary	Button Height	50
Write Value	1	X Coordinate	Set this optionally.
Button Text	Start	Y Coordinate	

❷ The following items are set for the anchor tag component. (Property window)

Properties	Settings	Properties	Settings
Link Type	Page	Link Text	Back
Link Address	—	Font Size	26
Link Page	index.html	X Coordinate	Set this optionally.
Target	Same Window	Y Coordinate	

Writing the Project file

■FX5CPU

If a project file is created, save it to an SD memory card attached to a CPU module.

When writing the project file to the SD memory card, make sure that there are the css and img folders in the SD memory card. (☞ Page 42 File configuration) In addition, when the project file is written to the SD memory card, all files under the USER folder in the SD memory card will be deleted. Save files in the SD memory card, as appropriate.

1. Communication Settings

[Communication]⇨[Communication Settings]

Set an IP address, a user name, and a password from "Communication Settings." Make sure that these settings are the same as those settings which are written to the CPU module by GX Works3. (☞ Page 16 Communication Settings)

2. Uploading to SD Memory Card

[Communication]⇨[File Write]

Use "File Write" to write the project file, which is currently opened and already saved, to the SD memory card. (☞ Page 16 File Write)

■RCPU

Save the project file's HTML files and image data items under the USER folder in the SD memory card, and attach the SD memory card to the CPU module. (☞ Page 42 File configuration) Make sure that the SD memory card's file configuration is the same as that of the project file.

This write procedure is the same as that of a case where the design tool is not used. (📖MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book)

Access to user Web page

If the project file is written to the SD memory card which is attached to the CPU module, the project file's user Web page can be accessed from a Web browser. Refer to the following documents for more information about respective settings.

📖MELSEC iQ-R Ethernet User's Manual (Application)

📖MELSEC iQ-F FX5 User's Manual (Ethernet Communication)

📖MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book

1. Setting CPU Module Parameters

Use GX Works3 to set the CPU module's "IP Address" and "Web Server Settings". For "Authority for Window Display" in "Web Server Settings," select either "Permit Both Displays" or "User Web Page Only" to write the selection to the CPU module.

If the input button and arbitrary value write button components are used, set "Write Device" in "Web Server Account Settings" to "Enable".

2. Access to Login Page

Enter the following URL to a Web browser's address bar to access the user Web page.

http://[the IP address of the Web server (the CPU module)]/

For example, if the IP address of the CPU module is 192.168.3.39: http://192.168.3.39/

If the own station's port number is changed from its default value (80), enter the following.

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

For example, if the IP address of the CPU module is 192.168.3.39: http://192.168.3.39:8080/

3. Login Operations

On a login screen, enter the "Use Name" and "Password" set by "Web Server Settings" to log in to the user Web page.

4. Access to User Web Page

Access destinations after login may vary, depending on what is set for "Initial Display Window".

[When "System Web Page" is selected]

A system Web page will be accessed after login. If "User Web Page" is selected from its menu, the user Web page will be accessed.

[When "User Web Page" is selected]

The user Web page will be accessed after login.

4 NOTES

Notes are as shown below.

External editing

- If an HTML file is created externally, it cannot be processed by the design tool.
- If an HTML file was created by the design tool but is directly edited externally, it may not be processed by the design tool.

Project file's file configuration

If menuwdt.wsv is deleted from a project's USER folder, the design tool cannot read the project. (☞ Page 42 File configuration) In addition, if a project file doesn't have menuwdt.wsv, it cannot be read from an SD memory card attached to a CPU module through FTP communication.

Moving multiple components

If a mouse is operated to select multiple components and move them, it is not possible to move another multiple components. To move another multiple components again, deselect these currently selected, and select those another ones again.

Overlapping setting ranges

For a generic component or an image display component, if its setting ranges overlap each other, one with a smaller setting range number will be displayed. For example, if a device value is in both setting range 1 and setting range 2, it will be displayed in setting range 1.

Image file

Only one file with the same file name and extension can be used in a project. If there is a file in the img folder with the same file name and extension as those of a used image (specified by an image component), the file in the img folder will be overwritten with one specified later.

Line component

- When a line component is to be placed on another one, after having edited the line component in a blank area, place it on another one.
- If the placed line component is double-clicked, the design window's display area may change, but the current preview and HTML file will not be affected.

Preview

If there are problems in the property settings of PLC and generic components allocated to an HTML file displayed in the design window, their previews cannot be displayed. For a problematic component, an error message will be displayed and therefore deal with the problematic component. (Even if there are multiple problematic components, an error message for only one of the problematic components will be displayed)

Access to Web server

Communication in the Web server's functions doesn't support encrypted communication (SSL communication). Do not access the Web server via the Internet. When accessing the Web server, access it within its LAN. When it is accessed via the Internet, the communication may be intercepted.

Access to HTML file

After having logged in the Web server, do not access an individual user Web page by directly specifying its URL. If such a URL is specified, the screen will not be displayed correctly, and information cannot be collected from the Web server.

Device value of historic graph

If a heavy communication load state continues for a historic graph component, it may miss its device values.

FTP communication

If there are problems in the property settings of PLC and generic components, their project file cannot be written to FX5CPU's SD memory card through FTP communication. For a problematic component, an error message will be displayed and therefore deal with the problematic component. (Even if there are multiple problematic components, an error message for only one of the problematic components will be displayed)

Troubleshooting

If FTP communication fails, refer to the following document for troubleshooting.

MELSEC iQ-F FX5 User's Manual (Ethernet Communication)

Refer to the document MELSEC iQ-R/MELSEC iQ-F Web Server Function Guide Book for more information about the Web server functions.

APPENDIX

Appendix 1 Project Management

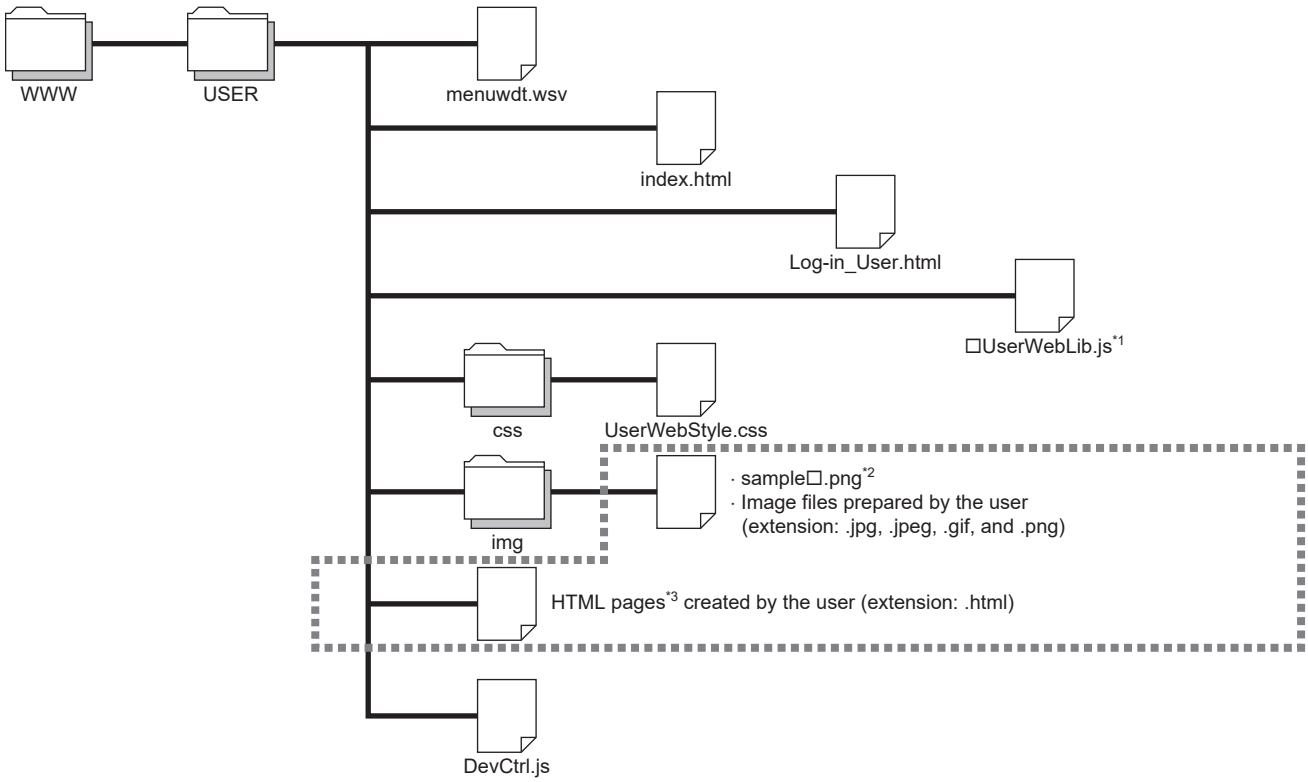
This section describes how to conduct the basic operations and management of a project.

Project file

The design tool treats an HTML file for user Web pages (up to 160 pages) for one CPU module as a project. A generated project is stored in a file and managed on a project basis.

File configuration

This section shows the file configuration of a project file created by the design tool.
Do not change the configurations of folders and files other than those encircled by the dotted lines. If a project file's file names and folder configuration are different from what are shown here, it cannot be written to a CPU module.



*1 Its file name varies, depending on a project's series.
FX5CPU: FUserWebLib.js
RCPU: RUserWebLib.js

*2 ☐: 0 to 3

*3 If an HTML file is created and edited by one other than the design tool and is read, it will not be displayed correctly.

■Configuration file list

File name	Description
menuwdt.wsv	This is the configuration file of a project file in question. If this file is stored in the WWW/USER folder, the design tool will recognize it as a project file.
index.html	This is an HTML file which will be displayed initially when a user Web page is logged in.*1
Log-in_User.html	This is an HTML file that will be displayed when the user Web page is logged out.*1
FUserWebLib.js	This is a JavaScript library file for the user Web page. This will be allocated only for an FX5CPU project.
RUserWebLib.js	This is a JavaScript library file for the user Web page. This will be allocated only for an RCPU project.
sample□.png*2	This is a default image file for image display and image components.
UserWebStyle.css	This is a style sheet for the User Web page.
DevCtrl.js	This is a JavaScript library file for an arbitrary value write button component. If no arbitrary value write button component is used, this will not be shown.

*1 It is possible to edit an HTML file.
*2 □: 0 to 3

MEMO

INDEX

MEMO

REVISIONS

Revision date	Revision	Description
October 2020	A	First Edition

TRADEMARKS

Microsoft, Windows, Microsoft Edge, and Internet Explorer are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.
Android and Google Chrome are either registered trademarks or trademarks of Google Inc.
Safari is a trademark of Apple Inc., registered in the U.S. and other countries.
IOS (iOS) is either a registered trademark or trademark of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries, and iOS is used under license by Apple Inc.
Intel is either registered trademarks or trademarks of Intel Corporation in the United States and/or other countries.
Oracle and JavaScript are registered trademarks of Oracle Corporation and/or its affiliates in the United States and other countries.
The company names, system names and product names mentioned in this manual are either registered trademarks or trademarks of their respective companies.
In some cases, trademark symbols such as '™' or '®' are not specified in this manual.

Manual number: SH(NA)-082315ENG-A

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE: TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN