

Upgrade Information of MPE720 Version 7.43 Lite

1. Added and Improved Functions

1.1 Version 7.43 Lite Upgrade Information

Items added and features improved from MPE720 version 7.42 Lite to version 7.43 Lite are as follows.

No.	Feature	Classification
1	Chinese language was supported.	New Function
2	Supported multiple register comment function.	New Function
3	Supported visual compare function.	New Function
4	Supported Easy Operation Wizard function.	New Function
5	Supported a base project package and a configuration definition package in the library function.	Functional Enhancement
6	The library function was improved.	Functional Enhancement
7	Supported monitor screen of maintenance monitor function.	Functional Enhancement
8	Display switch function in auto-complete list was supported.	Functional Enhancement
9	Supported the function that make auto-complete list transparent.	Functional Enhancement
10	Improved the display of auto-complete list which is at the time of register input.	Functional Enhancement
11	Improved so that Read Again can be performed during trace execution.	Functional Enhancement
12	Sampling and trigger setting screen were improved.	Improvement
13	Improved the contents of the error message when switching trace enable/disable.	Improvement
14	Improved selecting the target axis of sampling and trigger setting.	Improvement
15	Improved the switching operation of "Real time display" mode.	Improvement
16	Improved the transfer processing of remote connecting.	Improvement
17	Improved comment out processing of motion program.	Improvement
18	Improved displaying current value of Expression instruction.	Improvement
19	The Compile Programs Being Edited function was added.	Improvement
20	Lock displayed positions of registers function was added to the watch function.	Improvement
21	Improved the processing at the time of copy operation of watch function.	Improvement
22	Improved the password input display.	Improvement

1.2 Past Upgrade Information

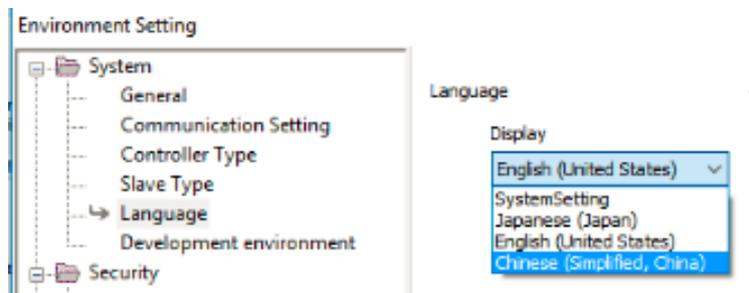
No.	Upgrade Information	Remarks
1	MPE720 version 7.42 Lite upgrade information	version 7.41→version 7.42

2. Description

No. 1 Chinese language was supported.

MPE720 Ver.7 supports Chinese language. (Simplified, China)

You can select Chinese from Language page of Environment Setting.



When choosing Chinese in WindowsPC of Chinese OS, a language is switched over to Chinese after MPE720Ver.7 restart.

When choosing Chinese in WindowsPC besides Chinese OS, there is a possibility that garble forms.

【Support Version】

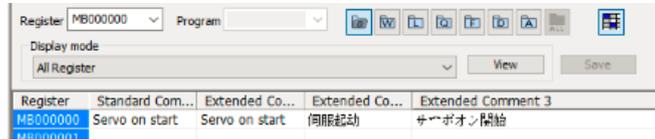
○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 2 Supported multiple register comment function.

"Expansion comment" of 3 (total of 4) as well as the register comment could be established now. It's possible to display/edit expansion comment same as "standard comment".

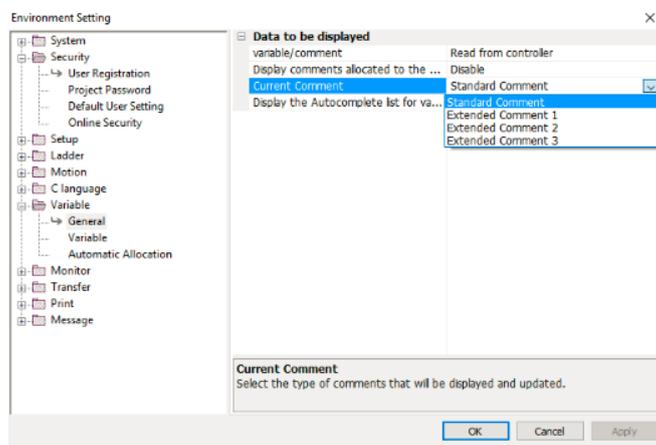
(1) 4 comments could be edited now by a comment list.



It's possible to display/edit expansion comment by MPE720 Ver.7's setting language (Japanese, English and Chinese) besides the OS language.

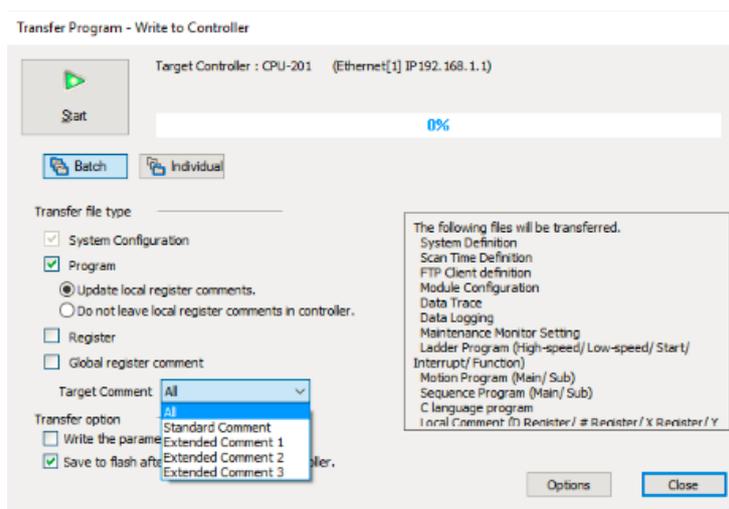
When displaying a comment (example for rudder program), there is a possibility that a language besides the OS language turns into garble.

(2) Added the item from which the current comment is chosen in the page of "variable" - "general" of Environment Setting.

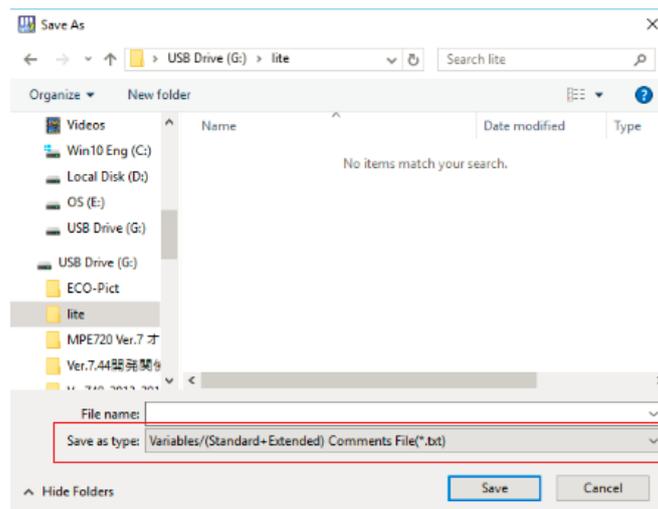


(3) Added the item setting which comment is transferred to the transfer/compare dialog.

(In case of both of a local register comment and global register comments, Only the comment chosen is transferred.)



(4) Added the function that import/export four kinds of comment together.



【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 3 Supported visual compare function.

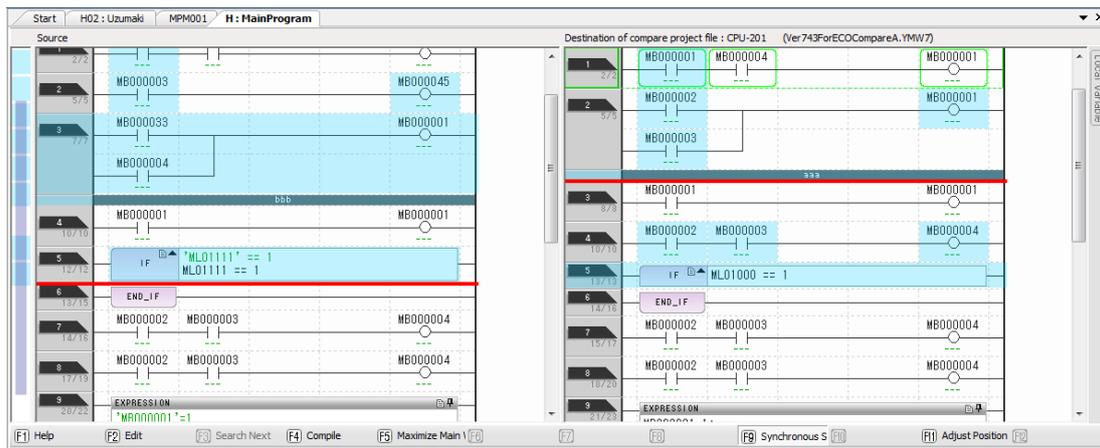
When the compare function of "transfer" was executed, and there was differences in a program, compare windows is displayed when a result of comparison was double-clicked.

(1) Compare windows which line up source program and destination program can be displayed.
Different point could be indicated with the color.

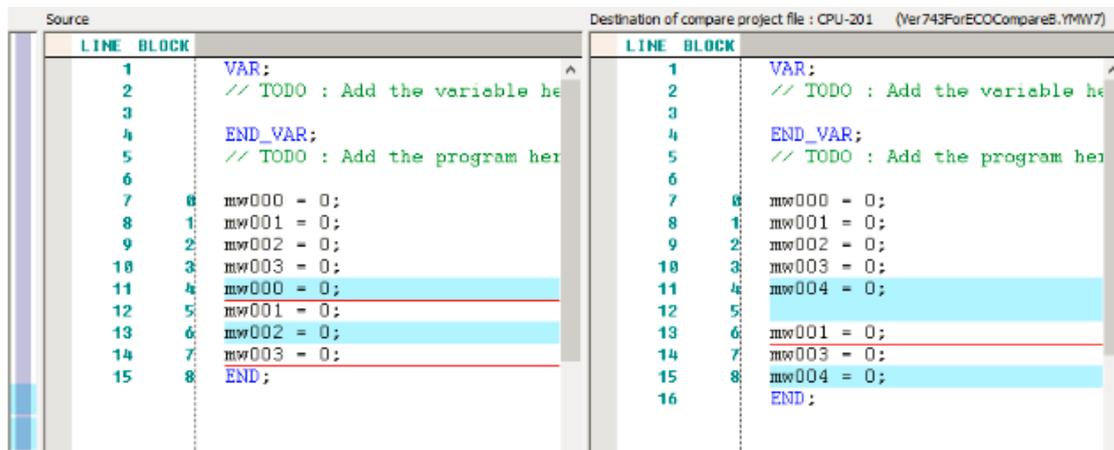
* Adding and changing: light blue (default).

* Deleting: red (default).

○Ladder Program Comparison Window.



○Motion Program Comparison Window.



(2)When a compare window was opened, the following operations are possible.

1. Simultaneous scrolling (F9 key)

Scroll the source and the destination at the same time.

2. Maximization of the main window (F5 key)

It's possible to maximize a main window in the mainframe and see a result of comparison widely.

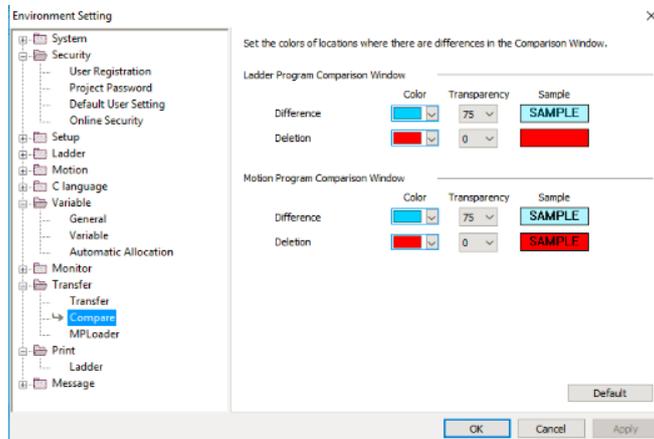
3. Justification (F11 key)

Display the line of the other side program next to the line of the operation side program.

(3) When a compare window was opened, source program can be edited.

Destination program can't be edited.

(4) The compare difference color can be changed by Environment Setting in a page of "transfer" - "compare".



【Support Version】

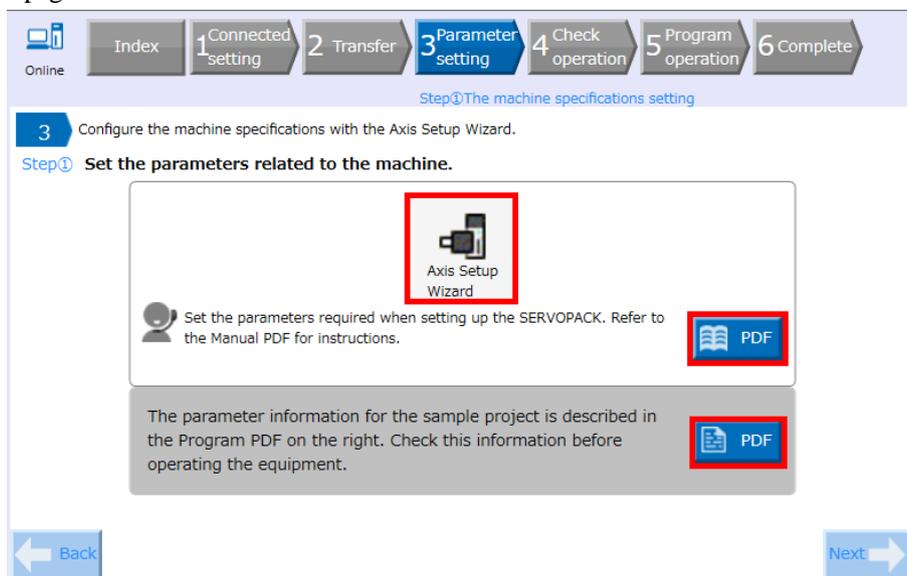
○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 4 Supported Easy Operation Wizard function.

Supported Easy operation wizard function to navigate device setup. The Easy operation wizard function is a function assuming to use a dedicated sample project. Assist the setup of the device by displaying the PDF included in the dedicated sample project in conjunction.

(1) The necessary work for setup is shown in the flowchart. Pages are divided for each step of work so that manuals with necessary functions and operation methods are described in each step. Function call buttons and PDF buttons may or may not exist depending on the page.



○ Function call button

When it select the button, it can call up the corresponding function.



○ Manual PDF button

Display the operation manual of the function that requires operation on the corresponding page.

Note) PDF can only be opened in Japanese OS.



○ Program PDF button

Information on dedicated sample projects is displayed. It can be opened only when a dedicated sample project is expanded.



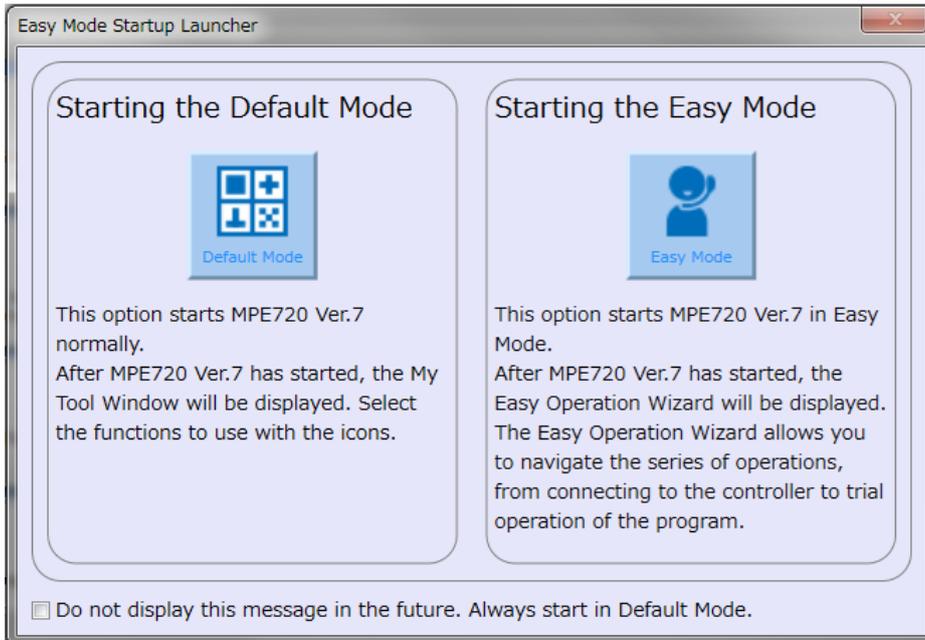
(2) The Easy Operation Wizard function can be started in the following way.

- Start from project file

When it open the project file, "Easy Mode Startup Launcher" is displayed. When it select "Easy Mode", the Easy Operation Wizard function will be activated.

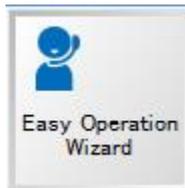
Note 1) "Easy Mode Startup Launcher" is not displayed when creating new project file or direct connection.

Note 2) When "Default mode" is selected, the operation is the same as the normal startup.



- Function call icon

Easy Operation Wizard function can be started by clicking "Easy Operation Wizard" icon from the My Tool screen.



(3) When using the Easy Operation Wizard function, it need to pay attention to the following points.

1. Please use a dedicated sample project. In the case of other project files, it is not possible to open the procedure manual or program PDF.

Note 1) Refer to the page of MPE720Ver.7 Lite of YASKAWA's e-mechatronics site for the method of obtaining exclusive sample project.

Note 2) The dedicated sample project is only available in Japanese. For languages other than Japanese, we plan to respond in the future.

2. Manual PDF is only available in Japanese. If the language of MPE720Ver.7 is other than Japanese, PDF will not be displayed.

Note) For languages other than Japanese, we plan to respond in the future.

【Support Version】

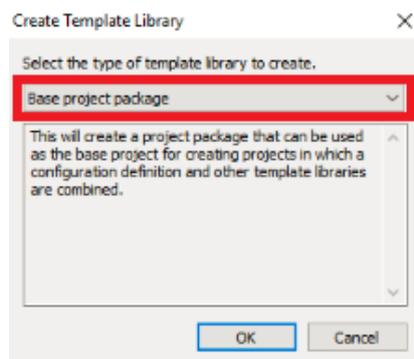
○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 5 Supported a base project package and a configuration definition package in the library function.

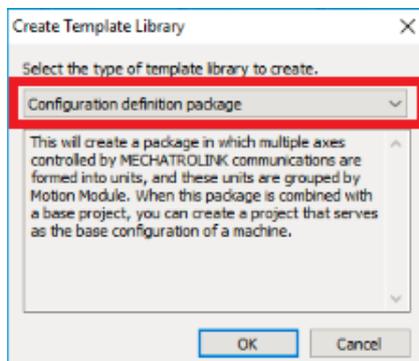
(1) The following 2 kinds were added to the package of the library function.

○Base project package



When a base project package is chosen, make target project to a library so that even other ones can use as a template.

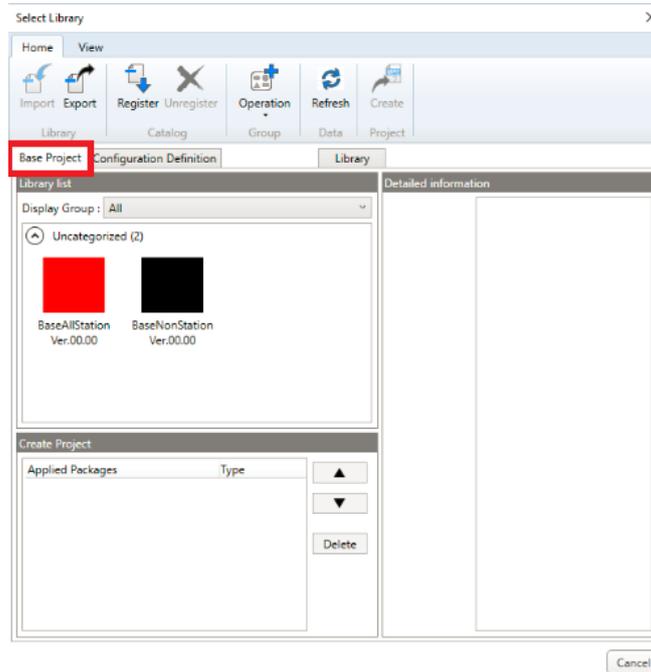
○Configuration definition package



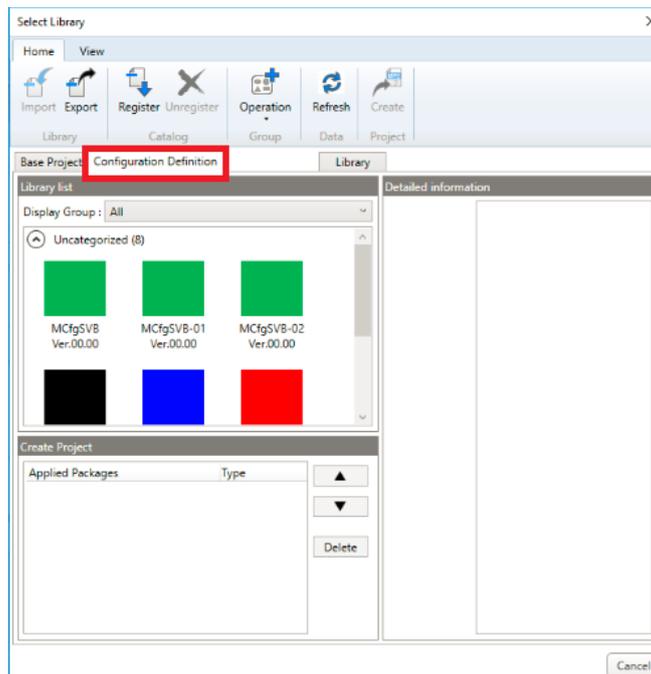
When a configuration definition package is chosen, using module assignment information in the target project, arbitrary servo module assignment is modularized and a library is made.

(2) Base project package and configuration definition package can be selected in a library select window of a library catalog.

○Base project package



○Configuration definition package

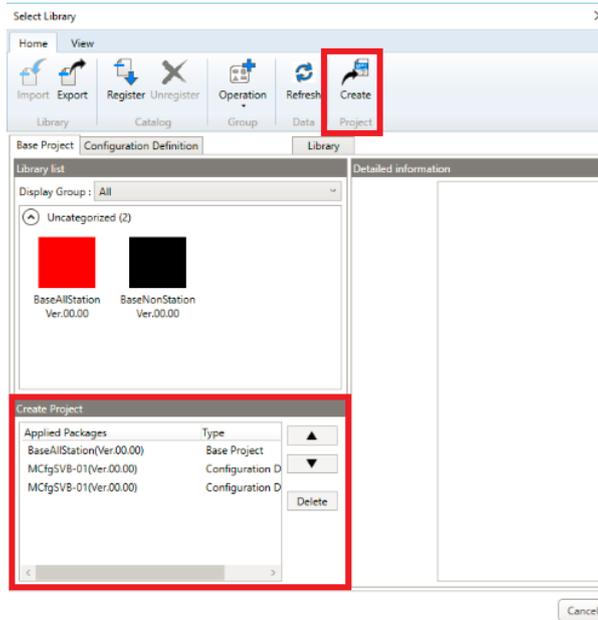


(3) Supported the function which can create a project file with doing the following operation in a library select window of a library catalog.

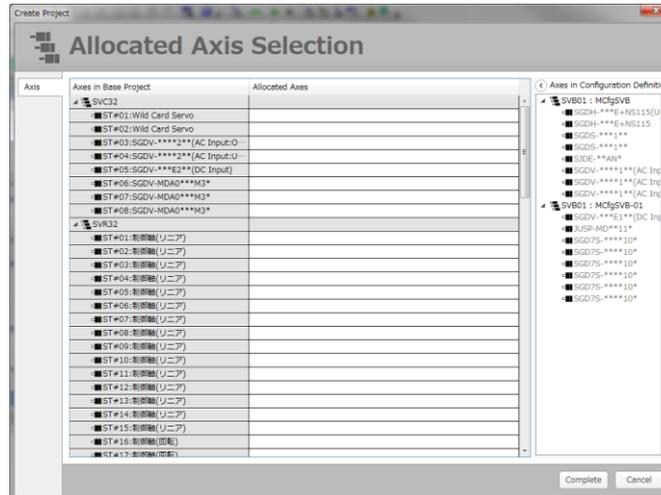
[Procedure]

1. 1 base project package is chosen and it's added to the project creating area by drag and drop.
2. Some configuration definition packages are chosen and it's added to the project creating area by drag and drop.
3. The "Create" on the home menu of the library select window is chosen.
4. Project creating Wizards starts, so axis information on a configuration definition is assigned to an axis of a base project.
5. A project file is created.

○Create Project



○Create Project Wizard



【Support Version】

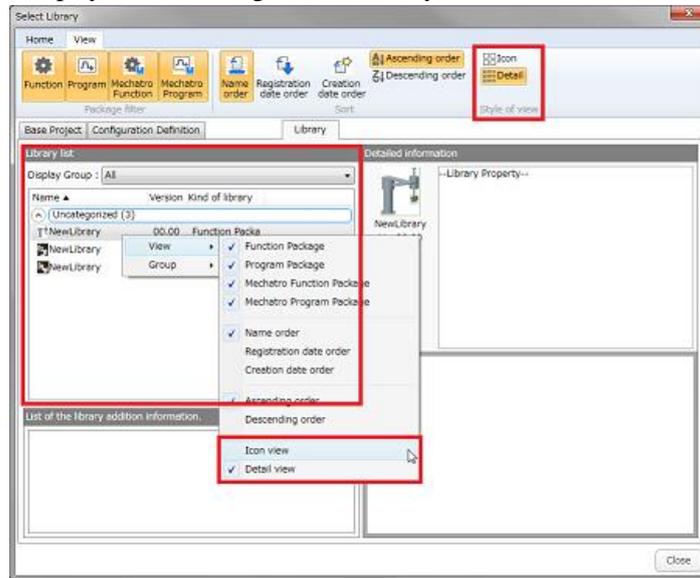
○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

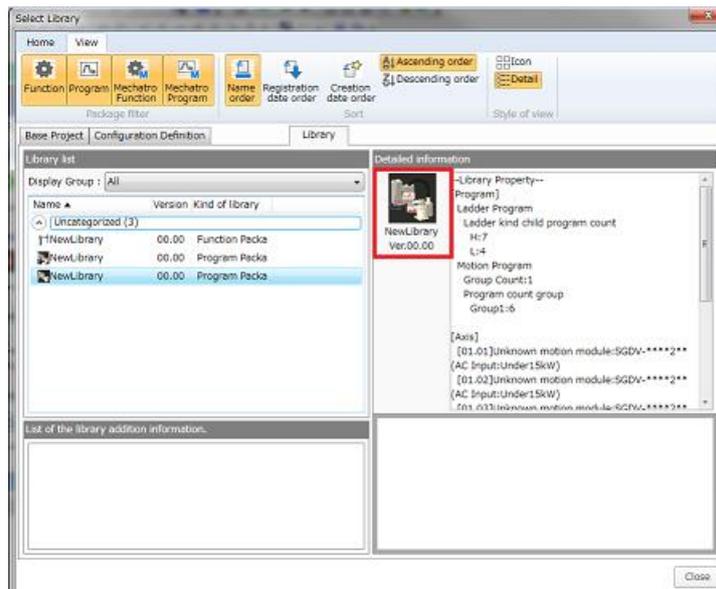
No. 6 The library function was improved.

Improved the following 3 functions in the library function.

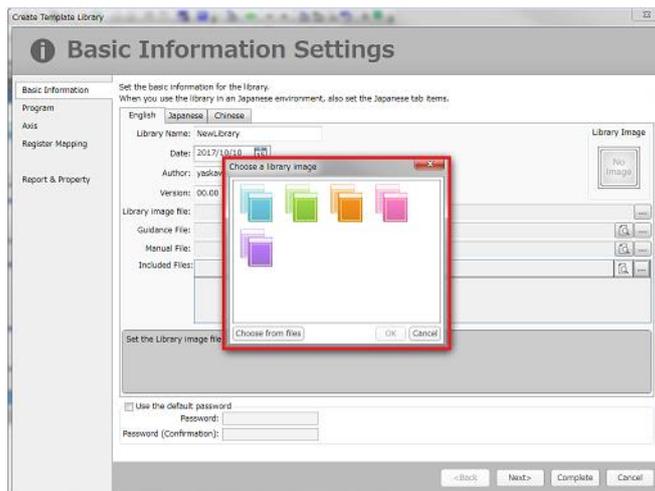
(1) It became possible to choose display format in a registration Library from an icon and detail.



(2) Library image of a chosen library is also displayed in detail definition area besides property informations.



(3) It became possible to choose a library image from images of a system offer.



【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 7 Supported monitor screen of maintenance monitor function.

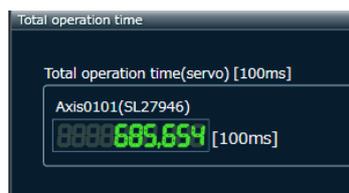
After assigned the monitor function informations of servo pac to system registers, the screen can monitor the information.

○Monitoring screen of maintenance monitor function

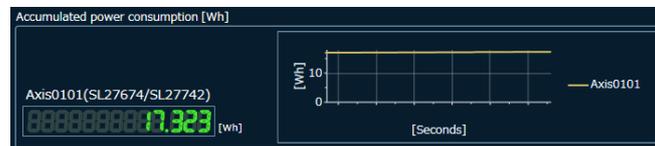


Supported visual display like a chart and an indicator as well as digital numeric display.

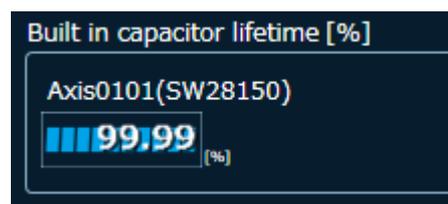
○digital numeric display



○digital numeric display + chart



○indicator



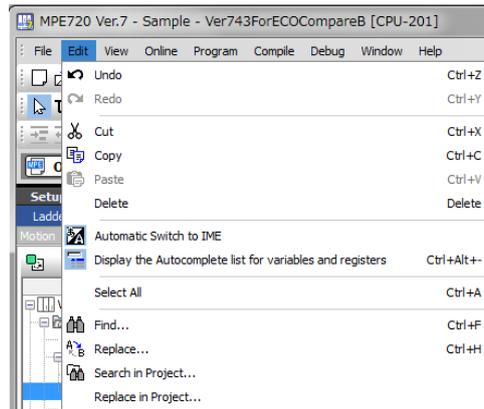
【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	Ver.1.00 or later.
MP2400	MP2000 series is not applicable.

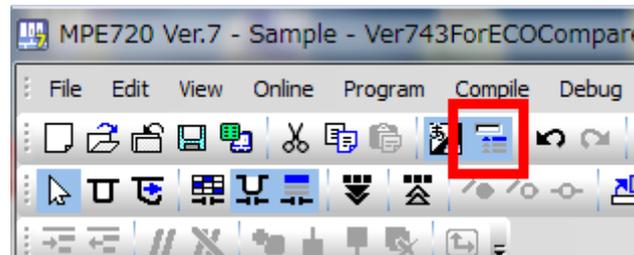
No. 8 Display switch function in auto-complete list was supported.

1. "Edit" menu, "Display the Autocomplete list for variables and registers."

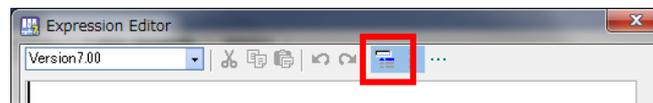


2. Short-cut Key "Ctrl + Alt + ="

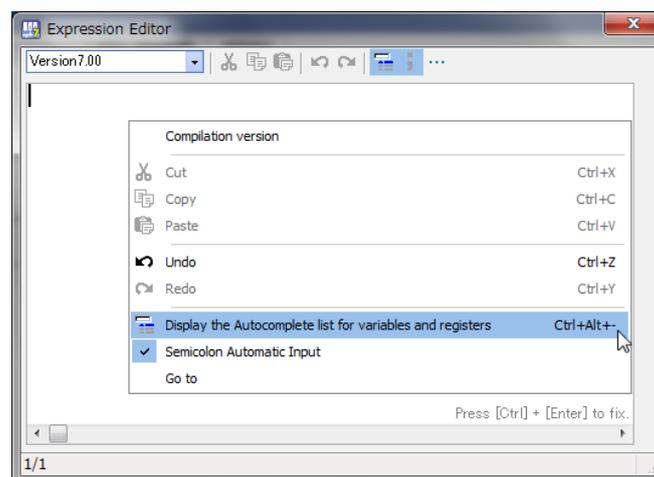
3. Icon of a standard tool bar



4. Tool bar of a Expression editor



5. Of a pop-up menu of an Expression editor, "Display the Autocomplete list for variables and registers."



【Support Version】

○Controller

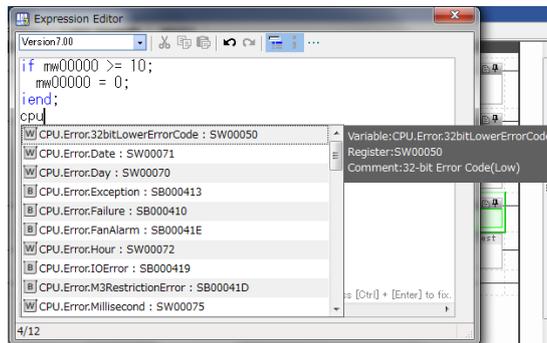
Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 9 Supported the function that make auto-complete list transparent.

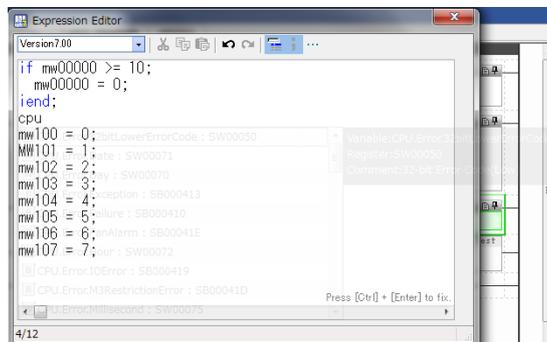
When a "Ctrl" key was pushed down when variable/register auto-complete list was displayed, the function makes the list transparent.

The list can be made transparent in operand input of a rudder device and expression editor.

○at the time of "Ctrl" key non-push down.



○at the time of "Ctrl" key push down.



【Support Version】

○Controller

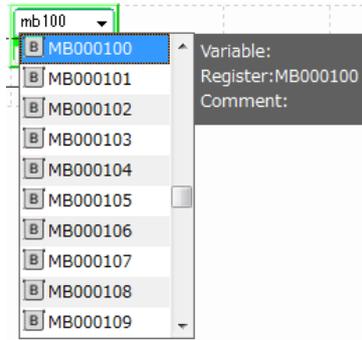
Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 10 Improved the display of auto-complete list which is at the time of register input.

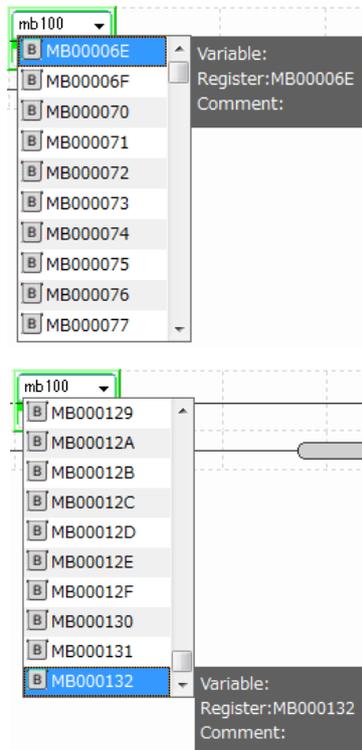
When a register was input in a variable/register auto-complete, added the item of 50 addresses (50 bits) of context.

Ex. 1) MB100 was input.

a. MB000100 is chosen.

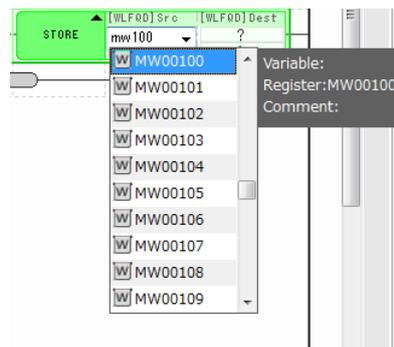


b. MB00006E-MB000132 is registered with a list.

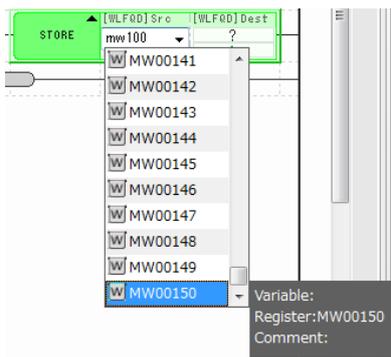
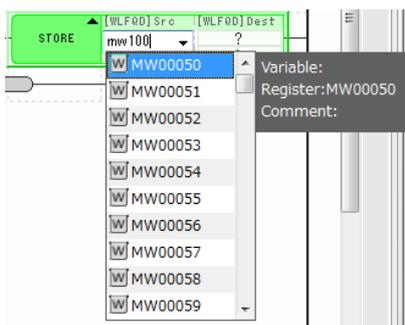


Ex. 2) MW100 was input.

a. MW00100 is chosen.



b. MW00050-MW00150 is registered with a list.



No. 11 Improved so that Trace Again can be performed during trace execution.

It is able to push down a Read Again button in real time trace or XY trace execution.

It's possible to check the contents of the trace data with executing Read Again.

* When the Read Again is executed in the trace execution, a real time display mode becomes automatic off.

【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 12 Sampling and trigger setting screen were improved.

The "No. of Delays" value of real time trace and XY trace wasn't sometimes restored correct.

So, it was improved so that the "No. of Delays" value might be restored just as it is.

【Support Version】

○Controller

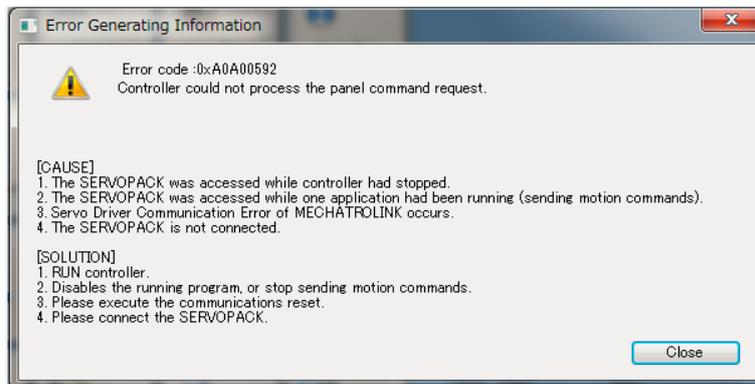
Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 13 Improved the contents of the error message when switching trace enable/disable.

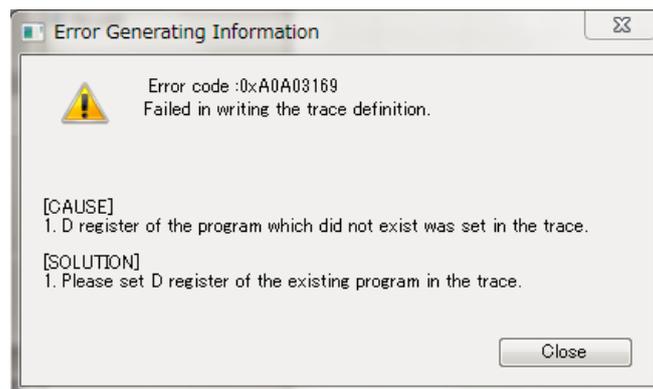
When enabling trace definition at the following condition, error message couldn't present the information which leads to its error cause. So, we improved.

【Conditions】

- * A local register of the program which doesn't exist is included in trace setting.
- * Trace definition disable state.



When enabling trace definition at the previously described conditions, it was improved that error message present the information which leads to its error cause.



【Support Version】

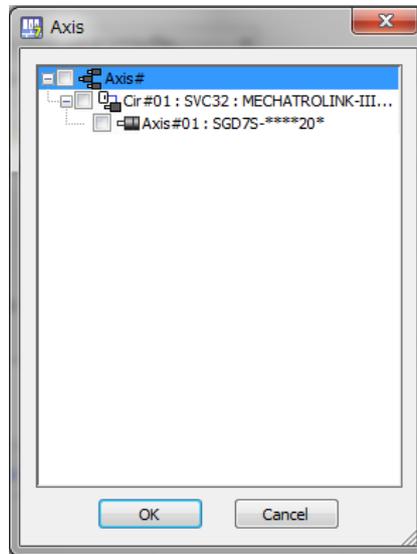
○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 14 Improved selecting the target axis of sampling and trigger setting.

OK button was disabled when no axis was selected in select target axis screen.

So, we improved so that OK button is enable when no axis was selected in select target axis screen.



【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 15 Improved the switching operation of "Real time display" mode.

When real time trace or XY trace was opened during trace manager screen indication, "Real time display" mode couldn't be changed.

So, we improved so that real time trace or XY trace was opened during trace manager screen indication, "Real time display" mode can be changed.

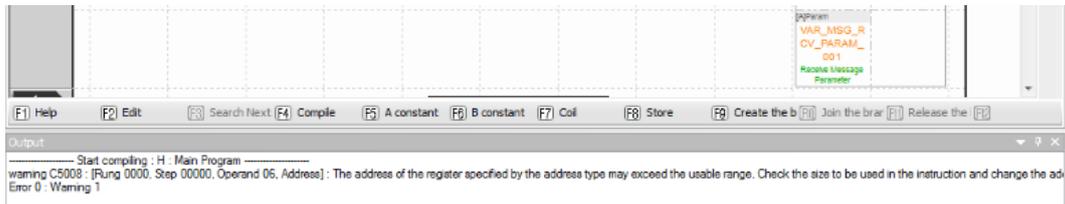
【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 16 Improved the transfer processing of remote connecting.

There was a phenomenon that fails in transfer when a global register comment was written in at the time of a remote connection. So, we improved the transfer processing of remote connecting.



【Support Version】

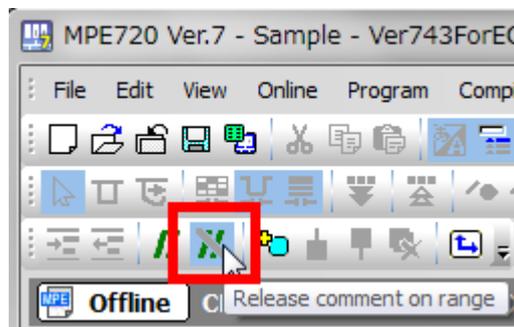
○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

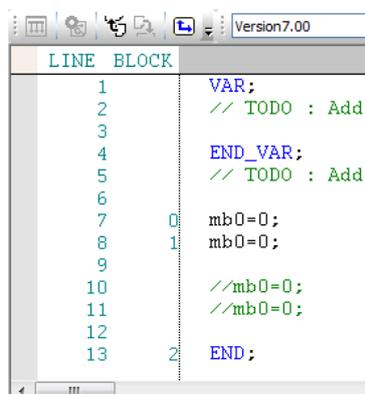
No. 17 Improved comment out processing of motion program.

There was a phenomenon that the comment was not released using in a case with "Release Comment on Range" button in a motion program. So, we improved.

○"Release Comment on Range" button



○Executed compile after comment out.



○Executed compile after using "Release Comment on Range" button.

LINE	BLOCK	Code
1		VAR;
2		// TODO : Add
3		
4		END_VAR;
5		// TODO : Add
6		
7	0	mb0=0;
8	1	mb0=0;
9		
10		mb0=0;
11		mb0=0;
12		
13	2	END;

So, we improved that comment is released after using "Release Comment on Range" button.

○Executed compile after using "Release Comment on Range" button.

LINE	BLOCK	Code
1		VAR;
2		// TODO : Add
3		
4		END_VAR;
5		// TODO : Add
6		
7	0	mb0=0;
8	1	mb0=0;
9		
10	2	mb0=0;
11	3	mb0=0;
12		
13		
14	4	END;

【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 18 Improved displaying current value of Expression instruction.

(1) In case of the following condition in a Expression instruction of the rudder program, there was an error which can't confirm the current value because it's displayed "!" with the reversed numerical value.

【Conditions】

- Online connection.
- When expression of logical negation (!) was used.

```
EXPRESSION
'DB000000'='!'DB000001'
DB000000='!DB000001;
!='!
```

(2) In case of the following condition, there was an error which current value was displayed outside of "()". (It should be displayed inside)

【The condition】

- Online connection.
- Using the condition with "!" in Expression instruction.

```
EXPRESSION
if !('MB000000'==true)
if !(MB000000==true);
if 0!=(==true)
'MB000000'=0
MB000000=0;
0=0
end;
```

We improved (1), (2) above as follows.

Improved so that the current value can be confirmed also under the previous described conditions in a Expression instruction of the ladder program.

```
EXPRESSION
'DB000000'='!'DB000001'
DB000000='!DB000001;
!='!0
```

Improved so that the current value of the register is displayed normally also under the previous described conditions.

```
EXPRESSION
if !('MB000000'==true)
if !(MB000000==true);
if !(0==(true)
'MB000000'=0
MB000000=0;
0=0
end;
```

【Support Version】

○Controller

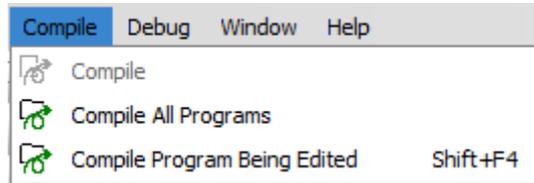
Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 19 The Compile Programs Being Edited function was added.

"Compile Programs Being Edited" function was added to the menu.

"Shift + F4" was assigned as a Short-cut Key.

This function is the off-line limitation function.



【Support Version】

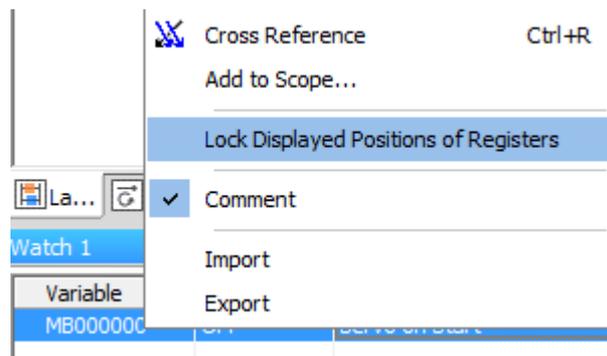
○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 20 Lock displayed positions of registers function was added to the watch function.

The menu "Lock displayed positions of registers" was added to the pop-up menu of a watch screen.

When this setting was effective, the location of the variable and register can't be changed by drag and drop on the watch.



【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 21 Improved the processing at the time of copy operation of watch function.

When drag and drop or copy and paste was executed in different watch, in the same watch, and in automatic watch, display style couldn't be inherited. So, we improved so that can be inherited the display style when drag and drop or copy and paste was executed in different watch, in the same watch, and in automatic watch.

【Support Version】

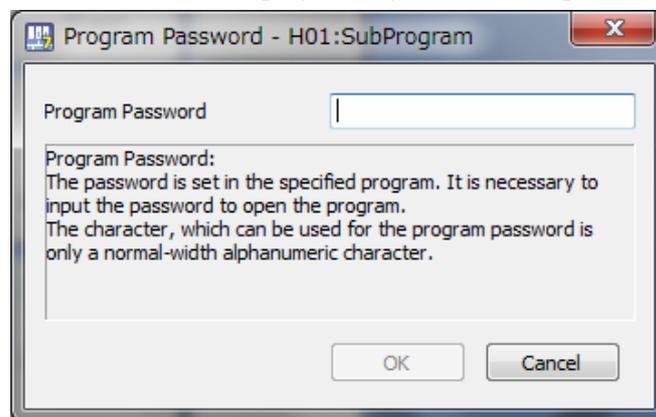
○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

No. 22 Improved the password input display.

There was no information of the number and the name of the program in password input screen.

So, we improved so that the number and the name of the program might be shown in password input screen.



【Support Version】

○Controller

Controller	Support Firmware Version
Σ-7C	It is not dependent on the version.
MP2400	It is not dependent on the version.

