# Upgrade Information of MPE720 Version 7.43

## **1. Added and Improved Functions**

#### 1.1 Version 7.43 Upgrade Information

Items added and features improved from MPE720 version 7.42 to version 7.43 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 a base project package and a configuration definition package in the library function.	Functional Enhancement
5	The library function was improved.	Functional Enhancement
6	Supported monitor screen of maintenance monitor function.	Functional Enhancement
7	Display switch function in auto-complete list was supported.	Functional Enhancement
8	Supported the function that make auto-complete list transparent.	Functional Enhancement
9	Improved the display of auto-complete list which is at the time of register input.	Functional Enhancement
10	Improved so that Read Again can be performed during trace execution.	Functional Enhancement
11	Sampling and trigger setting screen were improved.	Improvement
12	Improved the contents of the error message when switching trace enable/disable.	Improvement
13	Improved selecting the target axis of sampling and trigger setting.	Improvement
14	Improved the switching operation of "Real time display" mode.	Improvement
15	Improved the transfer processing of remote connecting.	Improvement
16	Improved comment out processing of motion program.	Improvement
17	Improved displaying current value of Expression instruction.	Improvement
18	The Compile Programs Being Edited function was added.	Improvement
19	Lock displayed positions of registers function was added to the watch function.	Improvement
20	Improved the processing at the time of copy operation of watch function.	Improvement
21	Improved the password input display.	Improvement

(\*): When MPE720 Ver.7 before MPE720 Ver.7.11 is already installed in Windows Vista and Windows 7, it may not operate for the newest information of the servo model addition by the axial setup wizard function (the newest information added into the database) updated by after MPE720 Ver.7.13.

Please refer to the following page for operating procedures.

# [About the restriction matter when using MPE720 Ver.7 in Windows Vista and Windows 7]

When MPE720 Ver.7 is used in Windows Vista and Windows 7, the following phenomena might be generated.

#### <Phenomena>

When MPE720 Ver.7 before MPE720 Ver.7.11 is already installed in Windows Vista and Windows 7, it may not operate for the newest information of the servo model addition by the axial setup wizard function (the newest information added into the database) updated by after MPE720 Ver.7.13.

#### <Measures>

Using a batch file, the following folder is deleted. (\*1) C:¥Users¥UserName(\*2)¥AppData¥Local¥VirtualStore¥Program Files(\*3)¥YASKAWA¥MPE720 Ver7

#### Procedure

1. The batch file enclosed by MPE720 Ver.7 installer is copied to a desktop.

[Download Version] MPE720Ver7\_xxx(\*4)¥Tools¥CleanUp¥MPE720Ver7\_x86.bat (32bitOS) MPE720Ver7\_xxx(\*4)¥Tools¥CleanUp¥MPE720Ver7\_x64.bat (64bitOS) [DVD Media Version] D(\*5):¥Tools¥CleanUp¥MPE720Ver7\_x86.bat (32bitOS) D(\*5):¥Tools¥CleanUp¥MPE720Ver7\_x64.bat (64bitOS)

2. The copied batch file is performed.

MPE720Ver7\_x86.bat (32bitOS) MPE720Ver7\_x64.bat (64bitOS)



3. "y" is inputted on a command prompt and the Enter button is pushed.



4. The Enter button is pushed on a command prompt after deletion.



- (\*1): When multi-user is using one set of PC, please operate it by each user.
- (\*2): The user account name that logs in enters.
- (\*3): The path changes by OS.

32bitOS: Program Files

64bitOS: Program Files (x86)

- (\*4): The path changes by version.
- (\*5): The path changes by DVD drive.
- (\*6): When an installation path is changed at the time of MPE720 Ver.7 installation, please delete the "MPE720 Ver7" folder which a folder subordinate has below manually according to the installed path.

C:\Users\UserName(\*2)\UserSuppData\Local\VirtualStore

# [About compile of the parallel circuit]

In the Ladder program of MPE720 Ver7 before MPE720 Ver7.23, when the parallel circuit is used, the following phenomena may occur.

#### <Phenomena>

When the circuit containing the following pattern was created, there was a phenomenon of operating without receiving the condition that the circuit below the OR circuit of  $1^{st}$  class must operate essentially in response to the conditional instruction before the OR circuit of  $1^{st}$  class.

#### <Measures>

When a phenomenon occurs, please carry out re-compile about the Ladder program in MPE720 Ver7 after MPE720 Ver7.24. Or please carry out again "Compile All Programs" of "Compile" menu.



The OR circuit of 1st class: The OR circuit branched from the bus-bar of langue. The OR circuit of 2nd class: The OR circuit branched out of the OR circuit of 1st class. The OR circuit of 3rd class: The OR circuit branched out of the OR circuit of 2nd class.

□(Conditional instruction): NO Contact, NC Contact, Coil, instruction(==, !=, >, <), power line (------) etc. ☆(Output instruction): Coil, Block instruction(Expression, STORE, COPYW) etc ※However, when all ☆ is coil commands, a phenomenon does not occur. △(Output instruction): Coil, Block instruction(Expression, STORE, COPYW)etc

## <Pattern>

Symbol	Instruction
][	NO Contact
STORE	STORE instruction
()	Coil

<NG Pattern>





# 1.2 Past Upgrade Information

No.	Upgrade Information	Remarks
1	MPE720 version 7.11 upgrade information	version 7.10 $\rightarrow$ version 7.11
2	MPE720 version 7.13 upgrade information	version 7.11 $\rightarrow$ version 7.13
3	MPE720 version 7.14 upgrade information	version 7.13 $\rightarrow$ version 7.14
4	MPE720 version 7.20 upgrade information	version 7.14 $\rightarrow$ version 7.20
5	MPE720 version 7.21 upgrade information	version 7.20→version 7.21
6	MPE720 version 7.23 upgrade information	version 7.21 $\rightarrow$ version 7.23
7	MPE720 version 7.24 upgrade information	version 7.23→version 7.24
8	MPE720 version 7.26 upgrade information	version 7.24→version 7.26
9	MPE720 version 7.27 upgrade information	version 7.26→version 7.27
10	MPE720 version 7.28 upgrade information	version 7.27→version 7.28
11	MPE720 version 7.29 upgrade information	version 7.28→version 7.29
12	MPE720 version 7.30 upgrade information	version 7.29→version 7.30
13	MPE720 version 7.31 upgrade information	version 7.30→version 7.31
14	MPE720 version 7.33 upgrade information	version 7.31 $\rightarrow$ version 7.33
15	MPE720 version 7.34 upgrade information	version 7.33→version 7.34
16	MPE720 version 7.35 upgrade information	version 7.34 $\rightarrow$ version 7.35
17	MPE720 version 7.36 upgrade information	version 7.35→version 7.36
18	MPE720 version 7.37 upgrade information	version 7.36→version 7.37
19	MPE720 version 7.38 upgrade information	version 7.37→version 7.38
20	MPE720 version 7.39 upgrade information	version 7.38→version 7.39
21	MPE720 version 7.40 upgrade information	version 7.39→version 7.40
22	MPE720 version 7.41 upgrade information	version 7.40→version 7.41
23	MPE720 version 7.42 upgrade information	version 7.41 $\rightarrow$ 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.

Environment Setting		
	Language Display English (United States) SystemSetting Japanese (Japan) English (United States) Chrinese (Simplified, China)	_

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	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	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.

Register MB		gram	× 📾 🔯	
Display mo All Regist				View Save
Register	Standard Com	Extended Co	Extended Co	Extended Comment 3
MB000000	Servo on start	Servo on start	伺服起动	サーボオン開始
10000001				

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.)

Transfer Program - Write to Controller					
Þ	1] IP 192. 168. 1. 1)				
Start	0%				
Batch Reinduidual					
System Configuration System Configuration On not leave local register comments. Do not leave local register comments in controller. Register Global register comment Target Comment Al Transfer option Standard Comment 1 Write the parametextended Comment 2 Fixtended C	The following files will be transferred. System Definition FIP Client definition Part Definition Data Trace Data Logging Maintenance Monitor Setting Ladder Program (Hgin-speed/Low-speed/Start/ Interrupt/Function) Motion Program (Main/Sub) Sequence Program (Main/Sub) Clanguage program Local Comment (D Redister/ # Redister/X Redister/Y Options Close				

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

👪 Save As				×
← → × ↑ 📘	> USB Drive (G:) > lit	te võ	Search lite	م
Organize 💌 N	ew folder			)iii 🔹 🕜
<ul> <li>Videos</li> <li>Win10 Eng (0</li> <li>Local Disk (D</li> <li>OS (E:)</li> <li>USB Drive (G</li> <li>USB Drive (G:)</li> </ul>	);) ;)	A No items matcl	Date modifi	ied Type
ECO-Pict lite MPE720 Ver. Ver.7.44開発	開合			>
File name				~
Save as type:	Variables/(Standard+Ex	tended) Comments File(*.	bit)	~
A Hide Folders			Save	Cancel

# [Support Version]

Controller	Support Firmware Version	
MP3000 Series	It is not dependent on the version.	
$\Sigma$ -7 Series	It is not dependent on the version.	
MP2000 Series	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).

oLadder Program Comparison Window.



OMotion Program Comparison Window.

1	Source		Destination of con	npare pro	oject file : CPU-201 (Ver743ForECOCompare8.YMW7)
	LINE BLOCK		LINE BL	OCK	
	1	VAR: ^	1		VAR:
	2	// TODO : Add the variable he	2		// TODO : Add the variable he
	3		3		
	4	END_VAR;	4		END_VAR;
	5	// TODO : Add the program her	5		// TODO : Add the program hei
	6		6		
	7 8	mw000 = 0;	7	8	mw000 = 0;
	8 1	mw001 = 0;	8	1	mw001 = 0;
	9 2	mw002 = 0;	9	2	mw002 = 0;
	10 3	mw003 = 0;	10	3	mw003 = 0;
	11 4	mw000 = 0;	11	4	mw004 = 0;
	12 5	mw001 = 0;	12	5	
	13 6	mw002 = 0;	13	ő	mw001 = 0;
	14 7	mw003 = 0;	14	7	mw003 - 0;
	15 8	END;	15	8	mw004 = 0;
			16		END;

(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	Support Firmware Version	
MP3000 Series	It is not dependent on the version.	
$\Sigma$ -7 Series	It is not dependent on the version.	
MP2000 Series	It is not dependent on the version.	

#### No. 4 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

Create Template Library	$\times$
Select the type of template library to create.	
Base project package	$\sim$
This will create a project package that can be use as the base project for creating projects in which configuration definition and other template libraria are combined.	a
OK Ca	ncel

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

oConfiguration definition package

Create Template Library	×
Select the type of template library to create.	
Configuration definition package	$\sim$
This will create a package in which multiple axes controlled by MECHATROLINK communications are formed into units, and these units are grouped by Motion Module. When this package is combined with a base project, you can create a project that serves as the base configuration of a machine.	< >
OK Cance	sl

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

					)
Register Unregiste	operation	Refresh C	Treate		
		_	roject		
All rized (2) n BaseNonStation Ver.00.00	, ,	v	Detailed inform	ation	
ges	Туре	▲ ▼ Delete			
	Register Unregiste Catalog onfiguration Definition rized (2) on BaseNonStation Ver.00.00	All BaseNonStation Ver.00.00	All Library Library	Register Unregister Operation Group Data Create Cre	Register Unregister     Operation Group     Refresh Data     Create Project       antiguration Definition     Library       All       rized (2)       BaseNonStation Ver.00.00

#### °Configuration definition package

ielect Li	ibrary							 
Home	View							
f	Export	Register Unregister	Operation	Ç Refresh	Create			
Lib	rary	Catalog	Group	Data	Project			
Base Pr	oject Cor	figuration Definition		Librar	1			
Library	list				Detaile	d informa	ition	
Display	Group :	All		2				
ه (	Jncategori;	zed (8)		^				
	ACfgSVB /er.00.00	MCfgSVB-01 Ver.00.00	MCfgSVB-02 Ver.00.00					
Create I	Project							
Applie	ed Package	5	Туре	▲ ▼ Delete				
								Can

(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.

**OCreate Project** 



#### OCreate Project Wizard



[Support Version]

Controller	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

# No. 5 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.

unction Program Me Fu Package	filter	Name order Registration date order Sort	Al Ascending order Zi Descending order er	Detail	
ase Project Configu	aration Definition	Ubrary	Detailed information		
Display Group : Al			and the second se	ry Property	
			12-8		
Name 🔺	Version Kind of	abrary	*		
Uncategorized (     T <sup>†</sup> NewLibrary	3) 00.00 Functi	on Darica	NewLibrary		
NewLibrary	View +	<ul> <li>Function Package</li> </ul>			
NewLibrary	Group +	Program Package			
Photocock	1	Mechatro Function Packa	10		
		Mechatro Program Packa			
			-		
		Vame order			
		Registration date order			
		Creation date order			
		Assenting order			
List of the Ibrary add	tion information				
and an are reliary as a	oon monitoring	Descending order	42		
		Icon view	D		
		<ul> <li>Detail view</li> </ul>	6		
1		1	E		_

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

ielect Library		-	10.00 M		×
Home View Function Program Me Function Program Me Functore Base Project Configu	fiter	gistration the order stee order Sort	GLAscending o GLDescending r		
Library list			Detailed informe	ition	
Displey Group : All hame A () Uncatoproad () () Uncatoproad () () NewLibrary NewLibrary NewLibrary	00.00 Function Packa 00.00 Program Packa 00.00 Program Packa			-Library Property Program) Ladder Program Ladder Program Ladder Program (adder Program) Lidder Kind child program count H:7 Group Count: 1 Program count group Group 1:5 [101:01]Unkinson motion module:5GE (AC Exput:Linder 15WV) [101:02]Unkinson motion module:5GE (AC Exput:Linder 15WV) [101:03]Unkinson	
List of the library add					Close

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

lasic Information	Set the basic information for the library. When you use the library in an Japanese environment, also set the Japanese tab items. Broteh Japanese Chinese	
ois Legister Mepping Leport & Property	Library Name: News-Drary Dete: 2017/1020_000 Author: yaska Crosse a Brary mage Wersam: Cool Library image fite: Guidence Fite: Manuel Fite: Included Fite: Set the Library image fite: Choose from fites OK Cancel	
	Use the default password Peseword: P	

# [Support Version]

Controller	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

#### No. 6 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.



Maintenance Monitor Setting	Time Unit Selection Display Method Selection Displayed Monitors Selection Displayed Axes Selection
Total operation time	Power consumption per unit time
Total operation time(serve) [100ms] Ass0101(5127946) 078916655,9594 [100ms]	Accumulated power consumption [Wh]         [Seconds]           Accumulated power consumption [Wh]
- Define	Intallation environment International Intern
	-
Built in fan lifetme (%)         Image: Comparison of	SERVGPACK installation environment (%)
rit (1999)27. <sub>[N]</sub>	Motor installation environment (%)

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



[Support Version]

Controller	Support Firmware Version
MP3000 Series	Ver.1.12 or later.
$\Sigma$ -7 Series	Ver.1.00 or later.
MP2000 Series	MP2000 series is not applicable.

#### No. 7 Display switch function in auto-complete list was supported.

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

File E	Edit	View	Online	Program	Compile	Debug	Window	Help
	n	Undo						Ctrl+Z
• ۲ 🕄	ы	Redo						Ctrl+Y
	X,	Cut						Ctrl+X
	D	Сору						Ctrl+C
	ì	Paste						Ctrl+V
Setu Ladde		Delete						Delete
	A	Automa	tic Switch	to IME				
•		Display	the Autoo	complete list	for variabl	es and re	gisters	Ctrl+Alt+-
		Select A	1					Ctrl+A
	ю	Find						Ctrl+F
Ą	в	Replace						Ctrl+H
1	òò	Search i	n Project					
		Replace	in Projec	t				

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

3. Icon of a standard tool bar

🛄 MP	E720 \	Ver.7 -	Sample	e - Ver74	3ForEC0	OCompare
				Program		
	36	8	ل & ا	<b>1</b> : C 🛛		<b>1</b> 0 0
i 🕞 1	छ ए	<b>=</b>	¥ 🚏	▼ &	1.10	2
: ; → <u></u> (	= <i>1</i>	X	10 di		€,	

4. Tool bar of a Expression editor

Expression Editor	_	_	×
Version7.00	- % 🖻 🖨 🗠 🖂		

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

Expression I	Edito	pr	X
Version7.00		-   🔏 🗊 🕼   🗠 🗠   🔚 🖥 …	
1			
		Compilation version	
	አ	Cut	Ctrl+X
	Ð	Сору	Ctrl+C
	ß	Paste	Ctrl+V
	ю	Undo	Ctrl+Z
	ы	Redo	Ctrl+Y
	=	Display the Autocomplete list for variables and registers	Ctrl+Alt+-
	~	Semicolon Automatic Input	13
		Go to	
		Press [Ctr	] + [Enter] to fix.
•			4
1/1			

[Support Version]

°Controller

Controller	Support Firmware Version	
MP3000 Series	It is not dependent on the version.	
$\Sigma$ -7 Series	It is not dependent on the version.	
MP2000 Series	It is not dependent on the version.	

## No. 8 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.

oat the time of "Ctrl" key non-push down.



oat the time of "Ctrl" key push down.

Version7.00 💽 🕹 🖏 👘 🖛 🖂 🔚	;	
if mw00000 >= 10; mw00000 = 0; iend:		<u>e 9</u>
cpu		64
mw100 = 0:2bitLowerErrorCode : SW00050	Variable:CPU.Error.32bi	
MW101 Fro1; ate : SW00071		
mw102 = 3; mw103 = 3; mw103 = 3; w104 = 3;		bite (Law)
mw103 = 3; mw104 = 4; *ception : SB000413		
mw105 = 5;alure : SB000410		E P.
mw106 = 6;anAlarm : SB00041E		
mw107.=		est
	Press [Ctrl] + [Enter] to fix.	
PU.Error.Millisecond : SW00075	Fices Lond + [Enter] to fix.	

[Support Version]

Controller	Support Firmware Version	
MP3000 Series	It is not dependent on the version.	
$\Sigma$ -7 Series	It is not dependent on the version.	
MP2000 Series	It is not dependent on the version.	

#### No. 9 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. 10 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]

oController

Controller	Support Firmware Version	
MP3000 Series	It is not dependent on the version.	
$\Sigma$ -7 Series	It is not dependent on the version.	
MP2000 Series	It is not dependent on the version.	

### No. 11 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]

 $\circ$ Controller

Controller	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

### No. 12 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	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

### No. 13 Improved selecting the target axis of sampling and trigger setting.

OK button was disable 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]

 $\circ$ Controller

Controller	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

### No. 14 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	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

### No. 15 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
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

#### No. 16 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.

o"Release Comment on Range" button



•Executed compile after comment out.



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

<b>    %</b>   <b>%</b> <u> </u> (	Version 7.00
LINE BLOCK	
1 2	VAR; // TODO : Add
3 4 5	END_VAR; // TODO : Add
6 7 0 8 1	mb0=0; mb0=0:
9	mb0=0; mb0=0;
11 12	mbO=0;
13 2 • • • •	END;

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

 $\circ Executed$  compile after using "Release Comment on Range" button.

· 🔟 🕲 🔞 🔁 🛛	Version7.00
LINE BLOCK	
1	VAR;
2	// TODO : Add
3	
4	END_VAR;
5	// TODO : Add
6	
7 0	
8 1	mb0=0;
9	
10 2	
11 3	mb0=0;
12	
13	
14 4	END;
4 []	
•	

[Support Version]

 $\circ$ Controller

Controller	Support Firmware Version	
MP3000 Series	It is not dependent on the version.	
$\Sigma$ -7 Series	It is not dependent on the version.	
MP2000 Series	It is not dependent on the version.	

### No. 17 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		<b>₽</b>
'DB000000'=!'DB00 DB000000=!DB00000		
1=!1		

(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	E <b>₽</b>
if !('MB000000'==true) if !(MB000000==true); if O!(==true) 'MB000000'=0 MB000000=0; 0=0 iend;	

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.



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 iend;	
if !(O==true) 'MB000000'=0 MB000000=0; O=0	

[Support Version]

•Controller	
Controller	Support Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

### No. 18 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.

Compile	Debug	Window	Help		
🗟 Com	pile				
😪 Compile All Programs					
Compile Program Being Edited Shift+F4					

#### [Support Version]

<ul> <li>Controller</li> </ul>	
Controller	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

#### No. 19 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]

 $\circ$ Controller

Controller	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

## No. 20 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]
o Construction

<ul> <li>Controller</li> </ul>	
Controller	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

#### No. 21 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.

Program Password	- H01:SubProgram
Program Password	
input the password to op	n be used for the program password is
	OK Cancel

[Support Version]

Controller	Support Firmware Version
MP3000 Series	It is not dependent on the version.
$\Sigma$ -7 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.