

# Upgrade Information of MPE720 Version 7.23

## 1.Added and Improved Functions

### 1.1 Ver.7.23Upgrade Information

Items added and features improved from MPE720 version 7.21 to version 7.23 are as follows.

No.	Feature	Classification
1	CPU-202 and CPU-202 (SUB) were added to the CPU unit of MP3200 series.	Add function
2	The MECHATROLINK-III Communications Reference $\Sigma - V$ Series For Use with Large-Capacity Models was added.	Add function
3	The MECHATROLINK- III Communications Reference INVERTER (1000 Series INVERTER) was added.	Add function
4	The HLS communication module (MPHLS-01) was added to the option module with which MP2000 series can be equipped.	Add function
5	Distributed I/O module MTD2330 was added.	Add function
6	MBU-B03 (three slots) was added to the extended unit that can be assigned to MP3200 series.	Add function
7	The extend import command (IMPORTL) and the extend export command (EXPORTL) were added to the command that can be used in Ladder program.	Add function
8	In the Motion Program of MP3200 series, the interpolation feed speed unit setting instruction (FUT) and the interpolation acceleration/deceleration unit setting instruction (IUT) command were added.	Add function
9	The display mode of Position Monitor has been improved.	Improvement
10	The title bar display of Engineering Builder has been improved.	Improvement
11	The tool bar of Engineering Builder has been improved.	Improvement
12	The contents of message displayed when ID_READ command issue (when SERVOPACK parameters reading or writing) have been improved.	Improvement
13	The termination processing of the monitor when it closes Ladder program and Motion program has been improved.	Improvement
14	The operation of the parallel circuit of Ladder program has been improved.	Improvement
15	The processing of a current value display of the Ladder circuit in Ladder program has been improved. Part 1	Improvement
16	The processing of a current value display of the Ladder circuit in Ladder program has been improved. Part 2	Improvement
17	The processing of a current value display of the Ladder circuit in Ladder program has been improved. Part 3	Improvement
18	The display of the specific rudder program has improved the phenomenon that will be in an edit state.	Improvement
19	The shortcut of Ladder program instruction has been improved.	Improvement
20	The copy processing of Motion sub program and Sequence sub program has been improved.	Improvement
21	The current value monitor processing of the AutoWatch function in Motion program has been improved.	Improvement
22	The processing of the replace function in Motion program has been improved.	Improvement
23	Comment registration operation of User structure and Constant Variable has been improved.	Improvement
24	The display update process of the speed unit of Real-Time Trace has been improved.	Improvement

25	It has improved about "Save to Flash" operation in the edit state of a Module Configuration.	Improvement
26	The editing operation in Module MC-Configurator has been improved.	Improvement
27	The propriety judging of size edit of the I/O register of IO slave (input-and-output slave) has been improved.	Improvement
28	The servo parameter name of the MECHATROLINK-II Communications Reference $\Sigma - V$ Series For Use with Large-Capacity Models has been improved.	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)

#### 【CD Media Version】

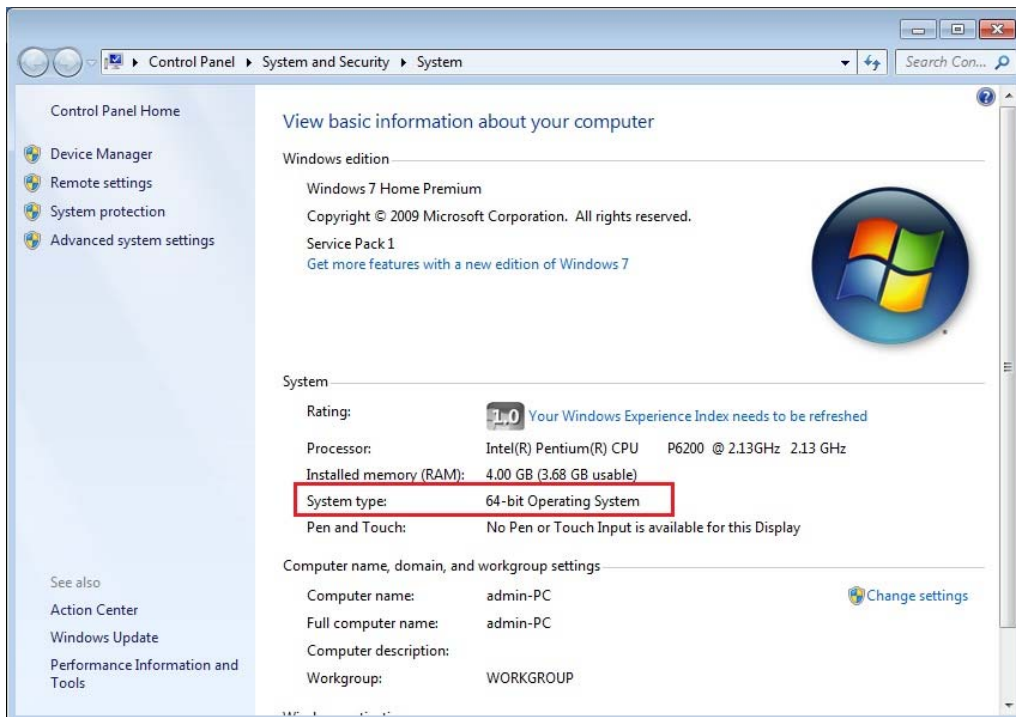
D(\*5)\Tools\CleanUp\MPE720Ver7\_x86.bat (32bitOS)

D(\*5)\Tools\CleanUp\MPE720Ver7\_x64.bat (64bitOS)

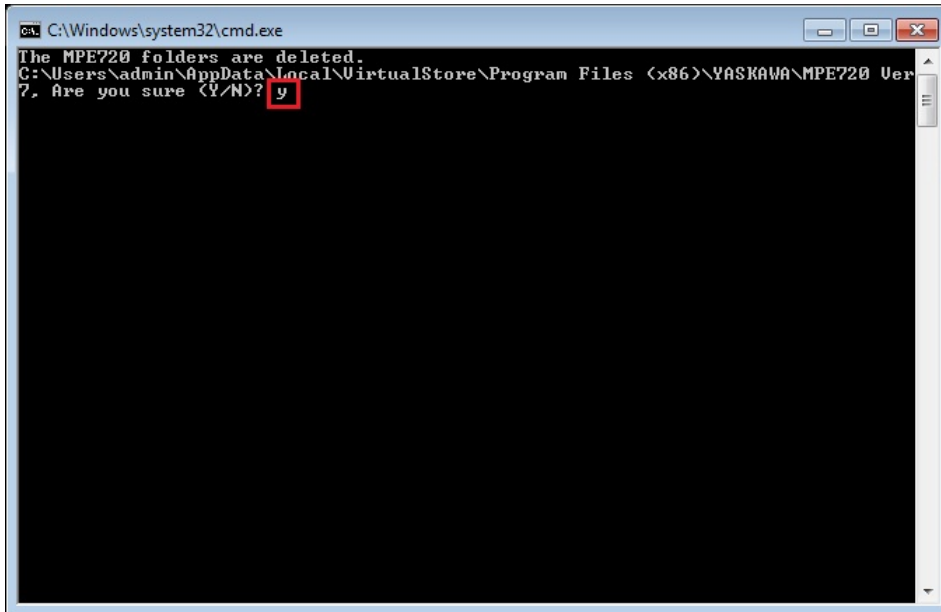
2.The copied batch file is performed.

MPE720Ver7\_x86.bat (32bitOS)

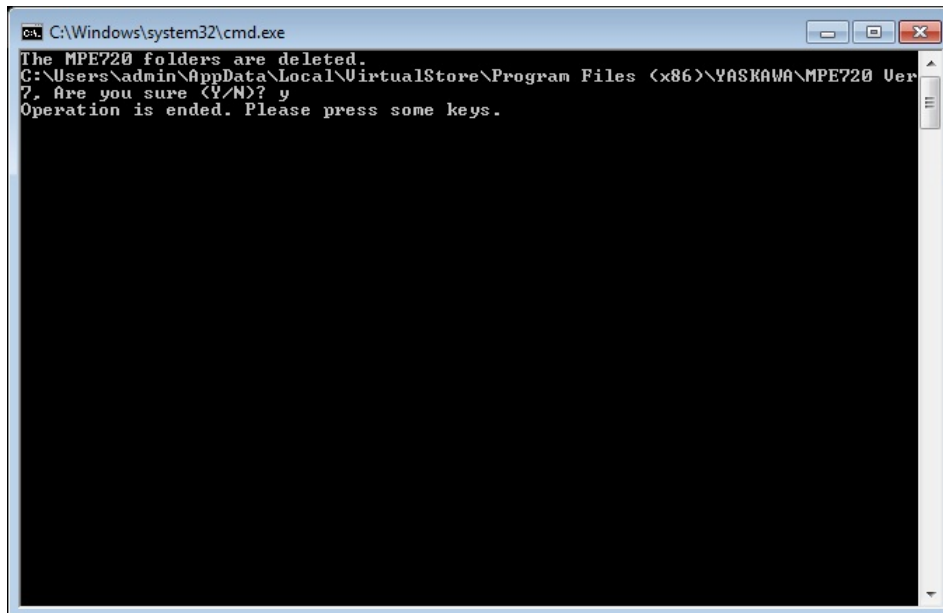
MPE720Ver7\_x64.bat (64bitOS)



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 CD/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)\AppData¥Local¥VirtualStore

## 1.2 Past Upgrade Information

No.	Upgrade Information	Remarks
1	<a href="#">MPE720 version 7.11 upgrade information</a>	version 7.10→version 7.11
2	<a href="#">MPE720 version 7.13 upgrade information</a>	version 7.11→version 7.13
3	<a href="#">MPE720 version 7.14 upgrade information</a>	version 7.13→version 7.14
4	<a href="#">MPE720 version 7.20 upgrade information</a>	version 7.14→version 7.20
5	<a href="#">MPE720 version 7.21 upgrade information</a>	version 7.20→version 7.21

## 2. Description

No. 1 CPU-202 and CPU-202 (SUB) were added to the CPU unit of MP3200 series.

New model CPU-202 and CPU-202 (SUB) unit was added to MP3200 series.

The "125 $\mu$ s EX" mode was added to the communication cycle of built-in SVC32 module.

The communication cycle of the instructions paid out on MECHATROLINK can pay out with the cycle of "125 $\mu$ s".

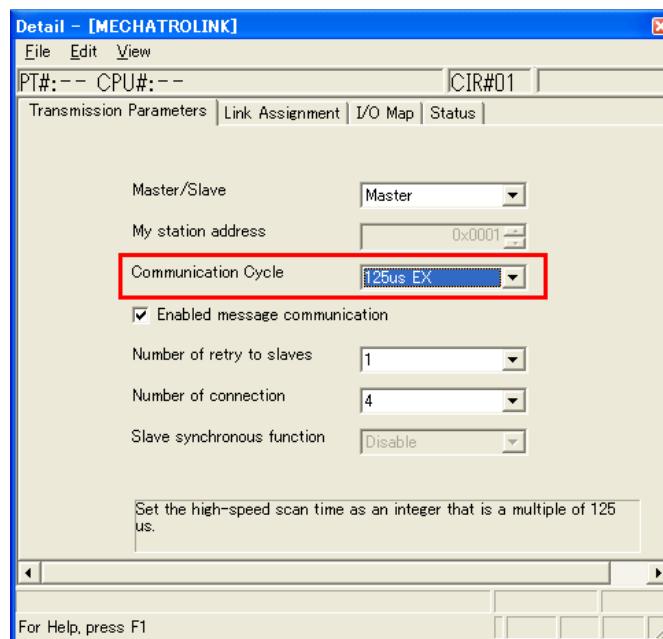
The operation (locus) that followed instructions at high speed and with high precision is realizable.

It can be made to operate communication cycle "125 $\mu$ s" by choosing "125 $\mu$ s EX" as the communication cycle of detailed definition.

Combination with the following servo pack is required.

【 SERVOPACK Model 】

$\Sigma$ -V-EX series:SGDV-□□□□□□□□□EX001



【 Support Version 】

Controller		Support Version
MP3200 Series	CPU-202	Ver1.08 or later
	CPU-202 (SUB)	Ver1.08 or later
MP2000 Series		Unsupported

## No. 2 The MECHATROLINK-III Communications Reference $\Sigma$ -V Series For Use with Large-Capacity

### Models was added.

#### 1. Module Configuration

In the Module Configuration, it changed so that the MECHATROLINK-III Communications Reference  $\Sigma$ -V Series For Use with Large-Capacity Models (SGDV-\*\*\*\*21\* AC Input:Over22kW) could be assigned.

#### 2. Fixed, Setting, Monitor Parameter

The screen for carrying out a detailed setup of Fixed parameters, Setting Parameters and Monitor Parameters of the MECHATROLINK-III Communications Reference  $\Sigma$ -V Series For Use with Large-Capacity Models was added.

#### 3. Servo Parameter, Servo Monitor

The screen for carrying out a detailed setup of Servo Parameter and Servo Monitor of the MECHATROLINK-III Communications Reference  $\Sigma$ -V Series For Use with Large-Capacity Models was added.

Address	Circuit#01 Axis#01 SGDV-****21* (AC Inp... Ver 0x0000 Axis0101	Circuit#01 Axis#02 SGDV-****21* (AC Inp... Ver 0x0000 Axis0102
	<input type="checkbox"/> Select All(All)	<input type="checkbox"/> Select All(All)
0000 : Basic Function Select Switch 0	Pn.000 <input type="checkbox"/> 0000[H]	<input type="checkbox"/> 0000[H]
0001 : Application Function Select Swit...	Pn.001 <input type="checkbox"/> 0000[H]	<input type="checkbox"/> 0000[H]
0002 : Application Function Select Swit...	Pn.002 <input type="checkbox"/> 0011[H]	<input type="checkbox"/> 0011[H]
0006 : Application Function Select Swit...	Pn.006 <input type="checkbox"/> 0002[H]	<input type="checkbox"/> 0002[H]
0007 : Application Function Select Swit...	Pn.007 <input type="checkbox"/> 0000[H]	<input type="checkbox"/> 0000[H]
0008 : Application Function Select Swit...	Pn.008 <input type="checkbox"/> 4000[H]	<input type="checkbox"/> 4000[H]
0009 : Application Function Select Swit...	Pn.009 <input type="checkbox"/> 0010[H]	<input type="checkbox"/> 0010[H]
000B : Application Function Select Swit...	Pn.00B <input type="checkbox"/> 0000[H]	<input type="checkbox"/> 0000[H]
000C : Application Function Select Swit...	Pn.00C <input type="checkbox"/> 0000[H]	<input type="checkbox"/> 0000[H]
000D : Application Function Select Swit...	Pn.00D <input type="checkbox"/> 0000[H]	<input type="checkbox"/> 0000[H]
0010 : Reserved (Do not change.)	Pn.010 <input type="checkbox"/> 0001[H]	<input type="checkbox"/> 0001[H]
0080 : Reserved (Do not change.)	Pn.080 <input type="checkbox"/> 0000[H]	<input type="checkbox"/> 0000[H]
0081 : Application Function Select Swit...	Pn.081 <input type="checkbox"/> 0000[H]	<input type="checkbox"/> 0000[H]
0100 : Speed Loop Gain	Pn.100 <input type="checkbox"/> 400[0.1Hz]	<input type="checkbox"/> 400[0.1Hz]
0101 : Speed Loop Integral Time Constant	Pn.101 <input type="checkbox"/> 2000[0.01ms]	<input type="checkbox"/> 2000[0.01ms]
0102 : Position Loop Gain	Pn.102 <input type="checkbox"/> 400[0.1/s]	<input type="checkbox"/> 400[0.1/s]
0103 : Moment of Inertia Ratio	Pn.103 <input type="checkbox"/> 100[%]	<input type="checkbox"/> 100[%]
0104 : 2nd Speed Loop Gain	Pn.104 <input type="checkbox"/> 400[0.1Hz]	<input type="checkbox"/> 400[0.1Hz]
0105 : 2nd Speed Loop Integral Time Co...	Pn.105 <input type="checkbox"/> 2000[0.01ms]	<input type="checkbox"/> 2000[0.01ms]
0106 : 2nd Position Loop Gain	Pn.106 <input type="checkbox"/> 400[0.1/s]	<input type="checkbox"/> 400[0.1/s]
0109 : Feed Forward Gain	Pn.109 <input type="checkbox"/> 0[%]	<input type="checkbox"/> 0[%]

### 【 Support Version 】

#### Controller

Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

#### Option Module

Module	Support Version
SVC-01	It is not dependent on the version.

**No. 3 The MECHATROLINK-III Communications Reference INVERTER (1000 Series INVERTER) was added.**

**1. Module Configuration**

In the Module Configuration, it changed so that the MECHATROLINK-III INVERTER (1000 Series INVERTER) could be assigned.

**2. Fixed, Setting, Monitor Parameter**

The screen for carrying out a detailed setup of Fixed parameters, Setting Parameters and Monitor Parameters of the MECHATROLINK-III INVERTER was added.

	Address	Circuit#01 Axis#01 1000Series INVERTER Axis0101	Circuit#01 Axis#02 1000Series INVERTER Axis0102
0 : Run command setting	0W8000	0000[H]	0000[H]
1 : Mode Settings 1	0W8001	0000[H]	0000[H]
8 : Command	0W8008	0 : No Command	0 : No Command
10 : Sub Command	0W800A	0 : No Command	0 : No Command
12 : Output Data Option Selection	0W800C	0000[H]	0000[H]
13 : Input Data Option Selection	0W800D	0000[H]	0000[H]
14 : Auxiliary Output Data Option Selection	0W800E	0000[H]	0000[H]
15 : Auxiliary Input Data Option Selection	0W800F	0000[H]	0000[H]
16 : Input Command	0W8010	0000[H]	0000[H]
17 : Speed Reference	0W8011	0[Unit in drive]	0[Unit in drive]
18 : Torque Reference	0W8012	0[0.1%]	0[0.1%]
19 : Torque Compensation(option)	0W8013	0[0.1%]	0[0.1%]
20 : Analog Output Terminal 1 Output	0W8014	0[10V/4000H]	0[10V/4000H]
21 : Analog Output Terminal 2 Output	0W8015	0[10V/4000H]	0[10V/4000H]
22 : Terminal Output	0W8016	0000[H]	0000[H]
23 : PID Target	0W8017	0[0.01%]	0[0.01%]
24 : Pulse Train Output	0W8018	0[Hz]	0[Hz]
25 : V/f Gain	0W8019	1000[0.1%]	1000[0.1%]
27 : Command Selection	0W801B	0	0
50 : Inverter Alarm Monitor Number	0W8032	0	0

**【 Support Version 】**

**Controller**

Controller	Support Version
MP3200 Series	Unsupported (it is due to correspond by future upgrade.)
MP2000 Series	Ver2.84 or later

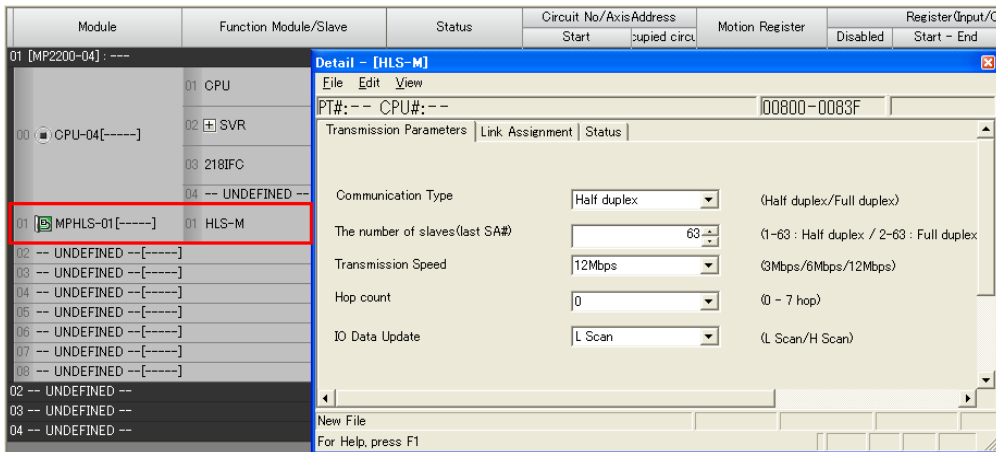
**Option Module**

Module	Support Version
SVC-01	Ver1.09 or later



No. 4 The HLS communication module (MPHLS-01) was added to the option module with which MP2000 series can be equipped.

The HLS communication module (MPHLS-01) was added to the option module of MP2000 series.

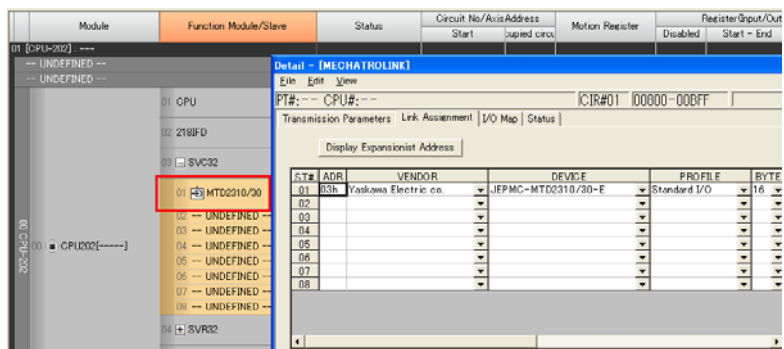


【 Support Version 】

Controller	Support Version
MP3200 Series	Unsupported (it is due to correspond by future upgrade.)
MP2000 Series	Ver2.84 or later

No. 5 Distributed I/O module MTD2330 was added.

Distributed I/O module MTD2330 was added to the slave apparatus that can be assigned to SVC module.



【 Support Version 】

Controller

Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

Option Module

Module	Support Version
SVC-01	It is not dependent on the version.

**No. 6 MBU-B03 (three slots) was added to the extended unit that can be assigned to MP3200 series.**

MBU-B03 that can equip three option modules was added to the expansion slot of MP3200.

Module	Function Module/Slave	Status	Circuit No./AxisAddress		Motion Register
			Start	Supplied circuit	
01 [CPU-201] :----					
-- UNDEFINED --					
-- UNDEFINED --					
102-1140-00	01 CPU	----	----	----	----
	02 2181FD	----	□□ Circuit No1	1	----
	03 ⊕ SVC32	----	◀ Circuit No1	2	8000 - 8FFF[H]
	04 ⊕ SVR32	----	◀ Circuit No3	2	9000 - 9FFF[H]
	05 M-EXECUTOR	----	----	----	----
	06 -- UNDEFINED --	----			
80B-1184-10	01 2171F	----	□□□ Circuit No1	1	----
	02 2181FB	----	□□ Circuit No2	1	----
	01 ⊕ SVB01	----	◀ Circuit No5	1	A000 - A7FF[H]
03 ⊕ LIO-04[-----]	01 LIO32	----	----	1	----

**【 Support Version 】**

Controller	Support Version
MP3200 Series	Ver1.08 or later
MP2000 Series	Unsupported

**No. 7 The extend import command (IMPORTL) and the extend export command (EXPORTL) were added to the command that can be used in Ladder program.**

The import (extend) command (IMPORTL) and the export (extend) command (EXPORTL) were added to the Ladder program.

This command is commands that extended the import command (IMPORT) and the export (EXPORT) command. And it is the commands that extended the access range of registers "32767" word to "2147483647" word.

**【 Support Version 】**

Controller	Support Version
MP3200 Series	Ver1.08 or later
MP2000 Series	Unsupported

**No. 8 In the Motion Program of MP3200 series, the interpolation feed speed unit setting instruction (FUT) and the interpolation acceleration/deceleration unit setting instruction (IUT) command were added.**

In the Motion Program, the interpolation feed speed unit setting instruction (FUT) and the interpolation acceleration/deceleration unit setting instruction (IUT) command were added.

**【 The interpolation feed speed unit setting instruction (FUT) 】**

When executing interpolation instructions, "Reference units/min" and "Reference units/s" can be chosen as the interpolation feed speed unit.

Item	Unit	Setting Range
Unit number	-	0:Reference units/min (Default)
		1:Reference units/s

**【 The interpolation acceleration/deceleration unit setting instruction (IUT) 】**

When executing interpolation instructions, "ms" and "Reference units/s<sup>2</sup>" can be chosen as interpolation acceleration/deceleration unit.

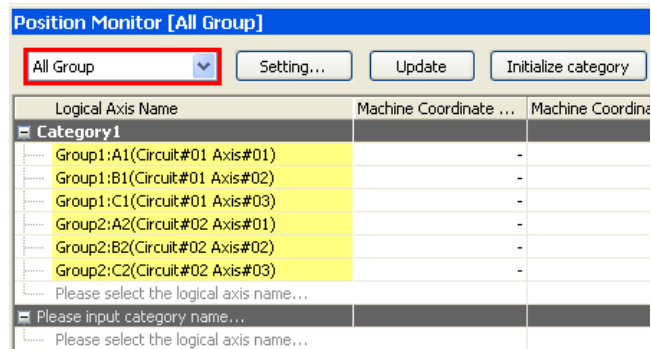
Item	Unit	Setting Range
Unit number	-	0:ms (Default)
		1:Reference units/s <sup>2</sup>

**【 Support Version 】**

Controller	Support Version
MP3200 Series	Ver1.08 or later
MP2000 Series	Unsupported

## No. 9 The display mode of Position Monitor has been improved.

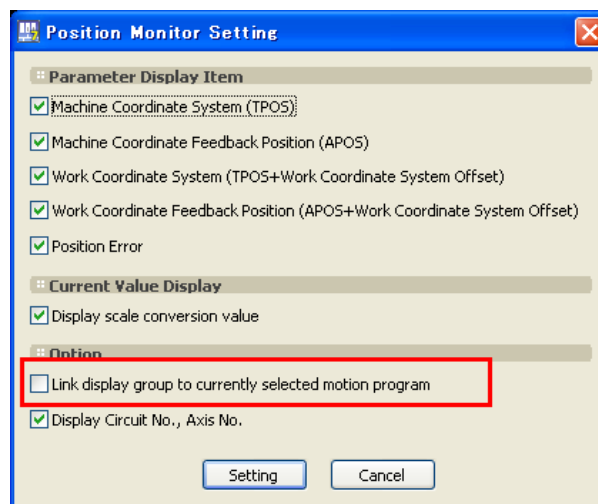
“All group” display mode was added to the combo box of Position Monitor.



### 【Operating procedure】

Carrying out the following operating procedure can choose “All group” display mode.

1. Select “Setting” button of Position Monitor window.
2. The check of “Link display group to currently selected motion program” in “Position Monitor Setting” dialog is removed.
3. The combo box of “All group” display mode can be chosen by carrying out Procedures 1 and 2.



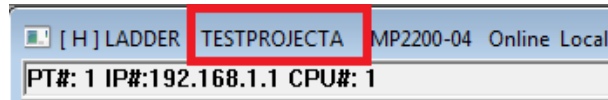
### 【 Support Version 】

Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

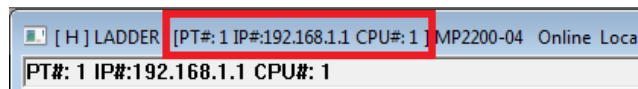
**No. 10 The title bar display of Engineering Builder has been improved.**

Two following improvements were carried out in the title bar of Engineering Builder.

1. While carrying out online connection to the controller in project link, it has improved so that project file name may be displayed on the title bar of Engineering Builder.



2. While carrying out online connection to the controller in direct, it has improved so that the information on the communication port linked to controller may be displayed on the title bar of Engineering Builder.

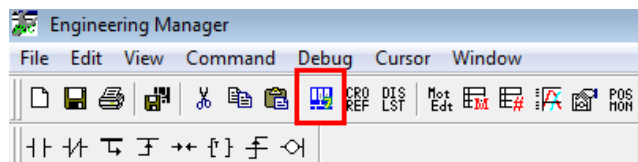


**【 Support Version 】**

Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

**No. 11 The tool bar of Engineering Builder has been improved.**

The button that calls MPE720 (Programmer) to the tool bar of Engineering Builder was added.

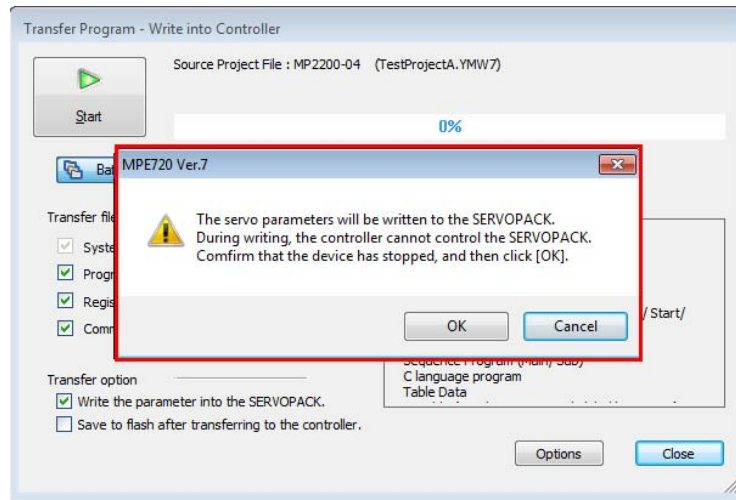


**【 Support Version 】**

Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

**No. 12 The contents of message displayed when ID\_READ command issue (when SERVOPACK parameters reading or writing) have been improved.**

The contents of message displayed at the time of SERVOPACK parameters reading or writing in Module Configuration and a check is put into the SERVOPACK parameter transfer option of Transfer function have been improved.



**【 Support Version 】**

Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

**No. 13 The termination processing of the monitor when it closes Ladder program and Motion program has been improved.**

When the drawing that opened Ladder program and Motion program in two or more drawings and it was closed, there was a phenomenon frozen by MPE720. So, this has been improved.

**【 Cause 】**

Since the termination processing of the monitor carried out when closing each drawing in the AutoWatch function supported newly in MPE720 Ver7.20 was not carried out normally, the phenomenon had occurred.

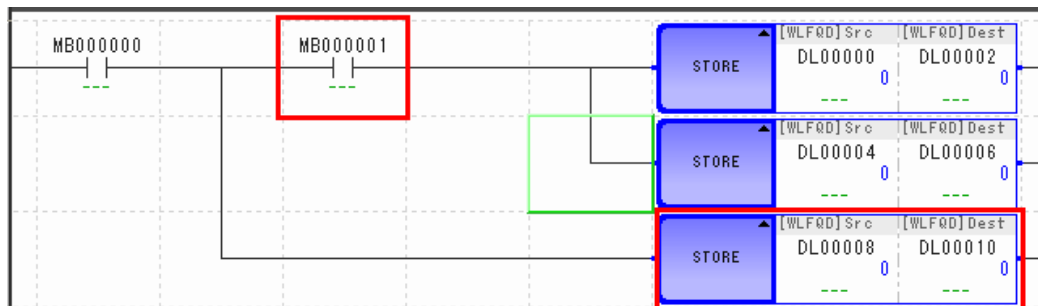
**【 Support Version 】**

Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

**No. 14 The operation of the parallel circuit of Ladder program has been improved.**

In Ladder program, when the following parallel circuits were created, there was a case where it did not operate correctly. So, this has been improved.

In the conditions of NO Contact (MB000001) of the 1st line, the STORE command (DL00008=>DL00010) of the 3rd line was operating.



**【 Support Version 】**

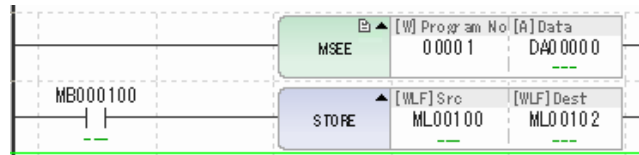
Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

**No. 15 The processing of a current value display of the Ladder circuit in Ladder program has been improved.**

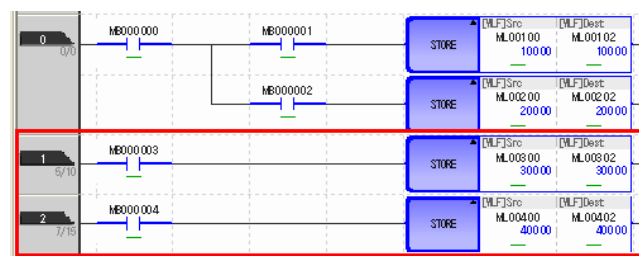
**Part 1**

In Ladder program, when as follows, there was a case where the current value display on Ladder circuit was not displayed correctly. So, this has been improved.

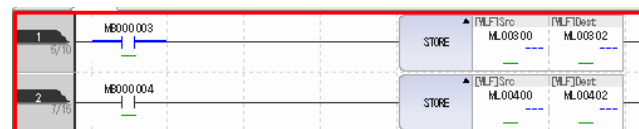
1. In Ladder program, When MSEE command is used and different block commands (STORE command etc.) are exist in the lower langue of MSEE command.



2. In Ladder program, when parallel circuit of block commands (STORE command etc.) is used and different block commands are exist in the lower langue of the block command, and it is scrolled head on display.



↓  
↓ The screen is scrolled.  
↓



**【 Support Version 】**

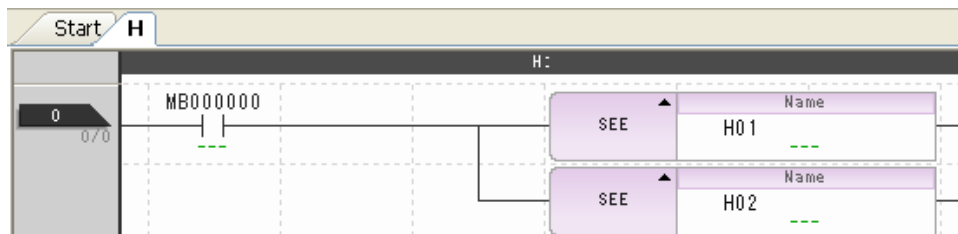
Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.



No. 16 The processing of a current value display of the Ladder circuit in Ladder program has been improved.

## Part 2

In Ladder program, since there was a case where the processing of a command of another circuit was not performed correctly when the SEE command had been arranged to one side of a parallel circuit. So, this has been improved.



### 【 Support Version 】

Controller	Support Version
MP3200 Series	It is not dependent on the version.
MP2000 Series	It is not dependent on the version.

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