

MPE720 Ver. 4.31B to Ver. 5.31b

- 1) New servo architecture development with improved functionality.

The access method to the servo amplifier has been changed to allow type and version identification and display control.

[Outline of Features]

1. The servo amplifier parameters displayed are matched to the current version of the amplifier firmware.
 2. The parameters that cannot be used are displayed in gray, and the current value is displayed as “---”.
 3. READ-ONLY parameters are displayed in gray. Grayed parameters cannot be written.
 4. When a servo amplifier with a different firmware version is connected and the parameters are saved, a warning dialog appears and the screen color is changed to gray.
- 2) Improved coordination between applications when FileManager ends.

The file manager can be closed when the engineering manager and new ladder editor are activated in MPE720 Ver4.41i or earlier.

The file manager now monitors the engineering manager, ladder editor, and other screens so that they all must be closed before the file manager is closed.

This change affects all controller models (MP2000 and MP900 series)

- 3) New cam curves are added in the cam tool.
 - **Torapect** curve
 - Former curve
 - Restoration curve
- 4) The symbol manager's maximum character length has been updated according to the following table.

All the characters can be displayed in quick reference.

	Symbol Manager	Quick Reference
Symbol	64Byte	64Byte
Comment	100Byte	100Byte

- 5) The selection for the search and replace functions were changed. The option are now:

Exact phrase
Match case
All open programs
Program name
Current selection
Current active program

- 6) In the MP900 series, the linear servomotor and SGDH-NS100 combination was added.

The linear motor SGDH-NS100 combination can be used in the MP920, and MP920-02. The selection for switching between a linear and rotary motor, is made in the motor type combo box.

- 7) In the MP900 series, the SGDH renewal type servo was added.

The parameter set for the SGDH renewal version servo amplifier has been added for the MP900 series. The version is detected automatically and correct parameters displayed for either the renewal or standard version.

The following versions are available

1. "Standard version"
2. "Version for DD motor"

- 8) Support for the linear servomotor SGDS-***15 in the MP2000 series
Enabled by:

1. Allocating the SGDS-**** through the Mechatrolink connection.
2. Setting the motor type to "Linear" in the fixed parameter.

- 9) Added JEPCM-PL2900 module

Applicable Model: (MP2300/MP2100/MP2200)

- 10) Added OMRON protocol to the communication modules of MP2000 series controllers.

Selection of the OMRON protocol is allowed for the following modules of the MP2000 series.

Applicable Model: MP2300

- 217IF-01 RS-232C, RS-422/485
- 218IF-01 RS-232C
- 260IF-01 RS-232C
- 261IF-01 RS-232C

OMRON protocol specifications
Master/slave: Master or slave
Device address 0: Master and 1to 63:Slave
Serial IF: RS-232

Transmission mode: None fixation
Data length: 7or 8bit
Parity bit: none, odd, even
Stop bit: 1 or 2
Baud rate: It is the same as each IF.

The transmission delay and automatic reception are the same as before.

11) New products added: MP2200/ MP2100M.

MP2200 and two MP2100M models were added to the MP2000 Series.

12) Debugging operations were added to the Motion Program in the MP2000 Series.

Various debugging functions added: Task Manager to control the execution of the Motion Program, Step-In/Step-Over, Run, Forced Break

13) Motion Program Monitor Function Improvements to the MP2000 Series

The following improvements were made in regards to the Motion Function:

- For the Motion Program's "block number display" row.

The Display was changed to show both the column number and the block number.

- Simple Monitor Control Added

A function was added so that monitor operations can be executed simply by indicating the main program number when the online monitor for the motion sub-program is activated.

14) New standard commands added to the Motion Program in the MP2000 Series.

VCR, VCS, TCR, TCS, SNGD, and SNGE commands were all added as motion commands for the MP2000 Series.

15) Motion commands (MSEE) specifications were changed in the MP2000 Series.

Changes were made to the MSEE format for the MP2000 Series so that it is not possible to indicate the number of times the program should run and the address.

16) Upgrade and improvements to data trace functions.

Pre-existing data trace functions have been re-examined from all sides and a new trace manager was installed.

17) Parameter added to detect SGDS magnetic polarity.

Parameter Pn48F was added to the linear version of SGDS.

Parameter No. : Pn48f

Name : Magnetic Polarity Detection Operation Distance/ Magnetic Pole Detection Verification Moving Distance.

Default Value : 50

Upper/Lower Limit Value : 1~10000

Display Type : Dec (only a positive value can be input)

Unit : Um

Resolution: 1

18) Fixed and setting parameters were added and changed in the MP2000.

The following parameters were added among fixed parameters and setting parameters:

① Fixed Parameter No.42

Name : “During Feedback Speed Movement Average”

Default Value : 10

Input Range : 0~32 (no negative values can be entered)

Unit : ms

Resolution Width : 1

Display Attributes: Dec

② Setting Parameter No.22

Name : “2nd Speed Compensation”

Default Value : 0

Input Range : -21474836.48~21474836.47

Unit : %

Resolution Width : 0.01

Display Attributes: Dec

③ Setting Parameter No.3,

“Function Setting 1” (bit display location)

< Speed Unit Selection Combo-Display >

< Torque Unit Selection >

19) Mechatrolink- II Distributed IO Module Added

JEPMC-IO2320 was added for Mechatrolink- I and Mechatrolink- II (both 17 and 32 byte).

20) FD Transfer Control: accelerated to high-speed

Improvements implemented for speed when transferring data from the MPE720 to external media (for both the all and individual file transfer).

A mode has been added to allow the data to be compressed and transferred as a *.mal file.

21) C-Language upload function added for the MP2000.

A function has been installed to allow for import/export of C programs that were created in an external IDE to the MPE720 environment and also transferred to the controller.

22) MINK-SVW coefficient added (formerly only in ladder).

Servo parameter writing coefficient "MLNK-SVW" added so that it can be used in old ladder programming.

23) Default IP Address Setting when 218IF is Connected

The default IP address 192.168.1.1 has been set when 218IF has been selected as a comm. port.

24) SVB-01 Module added.

Option SVB Module (SVB-01) was added.

25) Anywire Module Added

Anywire Module (AFMP-01) was added.

26) CSIF Module Added

CSIF Module (CSIF -01) was added.

27) Mechatrolink-II Module (MYVIS) added

MIVIS Module (YV250) was added for use with Mechatrolink-I and Mechatrolink-II in the MP2000 series.

28) The fixed parameter tables for SVA and SVB can be selected depending on a switch for the type of motor (linear or rotary).

Setting method for motor classification was changed (MP200 series only)

Although fixed parameter no. 29 was used when using the motor-type switch in the MP2000 Series, this was changed so that it would be the same as the MP900 series, with a motor-type selection combo.

29) Support printing SVA/SVB fixed parameter of Liner motor.

Support printing fixed parameter of selected Rotary/Liner parameter screen.

30) Change in SVA/SVB/SVR parameter range.

The following parameters range has been changed.

(1) Setup Parameter OLxx1E: Positioning complete width.

Applied Module: SVA-01, SVB-01, embedded SVB, SVR

Before: 0 to 65535 -> After: 0 to $2^{31} - 1$

(2) Setup Parameter OLxx20: Positioning complete width 2.

Applied Module: SVA-01, SVB-01, embedded SVB, SVR

Before: 0~65535 -> After: 0~2^31 - 1

31) Mechatrolink-II Inverter drives supported

V7 series M-II Inverter Drives were added to the M-II device list.

32) MP2100 PCI reset function supported

MP2100/MP2100M PCI reset function option was added to the System Definition screen.

33) MP2000 series SVA module supported

SVA-01 module was added to the MP2000 series module selection list.

34) MP2000 series LIO-04 module supported

LIO-04 module was added to the module selection list.

35) MP2000 series LIO-05 module supported

LIO-05 module was added to the module selection list.

36) The Communication Process was upgraded to 3.68B.

The change is as follows.

Duplicated Buffer size 32 to 128

Available number of user 300 to 75

37) Change in SVR Fixed Parameter attribute.

The SVR Fixed parameter #42, “Speed feedback moving averaging constant” was changed to be usable.

38) Xxxxxxxregister\

39) Xxxxxxxregister\

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40) New M-II communication cycle.

The embedded SVB card in the MP2300 now supports 1.5ms communication.

41) Clearing D registers

The D registers can now be cleared automatically at power up with a setting in the system configuration.

42) SLAU Instruction improvement

The SLAU instruction now allows the use of a long integer.

43) Increased 217IF-01 communication speed.

The 217IF-01 communication module now allows a 4800bps communication speed.

44) New module DO-01 supported

The digital output module DO-01 was added to the module selection list.

45) The default was changed to use the new style data trace manager

46) "c" language programming (with special compiler) is now supported.

47) Added new system function to call "c" program.

48) Motion parameter help was added for MP2000 controllers.

49) An additional parameter (Pn1B5) for the SGDS servo was added.

50) MLINK-SVW function added. A system function to write servopack parameters to the network servos was added.

51) Function added to import/export table data to a CSV file.

52) A function was added to truncate or round a real number cast into an integer.