

May 31, 2018

Motor Business Unit,  
Electromechanical Control Business Division,  
Automotive & Industrial Systems Company,  
Panasonic Corporation

# **Software Upgrade Notice** **for AC Servo Driver (MINAS A6NE/A6NF Series)**

Thank you for your daily support and efforts to our business.  
As described below, we will upgrade the software version for MINAS A6NE and A6NF series.  
We would appreciate your understanding and cooperation with this matter.

■ Affected Models:

Servo drivers of all MINAS A6NE and A6NF series  
(Part number) M\*DL\*\*\*N\*  
Starting with M, with DL as the 3rd and 4th characters, and N as the 8th character from the left.

■ Description of the Change and Reason:

The software version will be upgraded from Ver1.22 to Ver1.23 for functionality improvement purposes.

No.	Function	Now	After the Change
		Ver1.22	Ver1.23
1	Function extension of latch mode with stop function	Trigger signal selection EXT1/EXT2/EXT3	Trigger signal selection EXT1/EXT2/EXT3/TLC TLC: Torque in-limit signal output
		Not usable with an unlimited rotation shaft	Usable with an unlimited rotation shaft
2	Retreat operation function	Not supported	Supported
3	Virtual full-closed control mode function	Not supported	Supported
4	Torque control under two-degrees-of-freedom control	Not supported	Supported
5	Extension of Pr5.09 (Main power supply off detection period) setup range	Range of setting 70-2000 [ms]	Range of setting 20-2000 [ms]
6	Extension of Pr6.35 (Hybrid vibration suppression filter) setup range	Range of suppression 0-6400 [0.01 ms]	Range of suppression 0-32000 [0.01 ms]
7	Alarm change at return to origin command cancellation	Generated alarm Err27.7 (Impossible to clear)	Generated alarm Err91.3 (Possible to clear)

\* Refer to the next page for the detail of changed content.

[Detail of Changed Content]

**No. 1) Function extension of latch mode with stop function (Pr7.111)**

Functional expansion of the latch mode with stopping function of RTEX origin-return command has been added with torque in-limit signal output (TLC). By setting the TLC with stopping trigger, the system stops at the TLC detected position by disregarding the command from higher-level equipment. This function is effective when the system needs to be stopped immediately upon detection of the TLC.

In addition, the range of specification has been expanded for enabling this shaft function to continuously rotate unlimitedly in one direction.

By expanding the existing specification, using this function in the previous range of specification can be done without any changes.

**No. 2) Retreat operation function (Pr6.85, Pr6.86, Pr7.23, Pr7.112, Pr8.17, Pr8.18)**

The added evacuation function enables the driver to automatically move, with a motion, distance and speed, set in advance by a trigger of an external input signal, communication abnormality detection, or main power loss by disregarding a command from higher-level equipment. This function is effective when the vertical axis needs to be evacuated upward.

**No. 3) Virtual full-closed control mode function (Pr3.32, Pr6.98, Pr7.23, Pr7.110, Pr7.112)**

The added function temporarily achieves virtually full-closed control without using external scale data. This function is effective when full-closed system cannot be constructed within the motor operation range, and a semi-closed control motion is temporarily required.

**No. 4) Torque control under two-degrees-of-freedom control**

When a cyclic torque control (CT) is received with two-degrees-of-freedom control (Pr6.47 bit0=1), this function switches to a torque control without generating Err91.1 (RTEX command unusual protection). This function is effective when using two-degrees-of-freedom position control or two-degrees-of-freedom speed control is switched to torque control.

When torque control is not used with two-degrees-of-freedom control, the existing function can be used as usual.

**No. 5) Extension of Pr5.09 (Main power supply off detection period) setup range (Pr5.09)**

This function expands the range of setting for main power off detection time. This function is effective when the detection of the power off needs to be faster. However, when the system is used with a smaller value than the value set at shipping, matching with the user's power source needs to be confirmed.

Due to the expansion of the existing specification, use of this function within the previous range of specification can be achieved without any changes.

**No. 6) Extension of Pr6.35 (Hybrid vibration suppression filter) setup range (Pr6.35)**

Expansion of the range of setting for the hybrid vibration suppression filter. This function is effective when the vibration generated by acceleration/deceleration of a change to the hybrid deviation needs to be reduced.

Due to the expansion of the existing specification, use of this function within the previous range of specification can be achieved without any changes.

**No. 7) Alarm change at return to origin command cancellation**

When an origin-return command is canceled between the origin detection and origin return completion, an alarm (Err.27.7) that could not be cleared was generated. The alarm generation condition has been changed to generate an alarm possible to clear.

This change no longer requires reactivation of power even if an alarm is generated by canceling the origin-return command, and the alarm can be cleared by the RTEX alarm command.

- Refer to SX-DSV03077: "MINAS A6N Series Technical Reference - Functional Specification -" and SX-DSV03078: "MINAS A6N Series Technical Reference - RTEX Communication Specification -" for more detail.

Q RTEX related reference download page

[https://www3.panasonic.biz/ac/e/dl/manual/index.jsp?series\\_cd=3555](https://www3.panasonic.biz/ac/e/dl/manual/index.jsp?series_cd=3555)

- Setup support software (PANATERM) for Ver1.23 will be available from Ver6.0.1.10 onward.
- Previously offered functions can be used by setting up the previous parameter file for the driver.

- Timing: The change will be made from the production lot in May 2018.

We apologize for the delayed preparation.

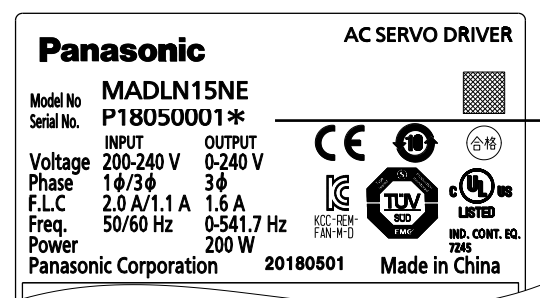
- Method of checking:

- Method involving checking the software version

The software version can be checked by using the setup support software (PANATERM), or by checking from the RTEX communication command.

- Method of checking the year and month of manufacturing from the manufacturing code (serial number)

The manufacturing code (serial number) shown on the name plate located on the side of the product conforms to the following rule.



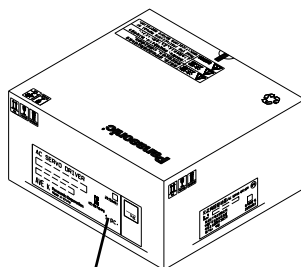
Manufacturing code (Serial number)

Ex. **P18050001\***

T T T Serial number  
 |  
 Month of manufacturing  
 |  
 Year of manufacturing  
 (last 2 digits of the calendar year)

Check the year and month of manufacturing.

The manufacturing code (serial number) shown on the label attached to the front surface of the package box follows the following rule.



Number is not included in this label.



Manufacturing code (Serial number)

Ex. **P18050001\***

T T T Serial number  
 |  
 Month of manufacturing  
 |  
 Year of manufacturing  
 (last 2 digits of the calendar year)

Check the year and month of manufacturing.