August 31, 2016

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

AC Servo Driver MINAS-A6NE Series Software Upgrade Notification

Thank you for your continuous cooperation and support.
We hereby notify you regarding the software upgrade for MINAS-A6NE Series.
We would appreciate your understanding and cooperation with this matter.

■ Affected model: MINAS A6NE series Servo Driver (without “safety function” or “full-close” function)
(Part No.) : M***DLN****NE**
Part number starting with M and the 3rd, 4th, and 5th characters are DLN, and 8th and 9th are NE.

■ Description of the Change: Software Ver. 1.05 is upgraded to Ver. 1.20.

■ Reason for the change: Product functions improvement

■ Change details:

	Functions	Ver. 1.05	Ver1.20
1	Predictive maintenance function	Not available	Available
2	Slow-stop function	Not available	Available
3	Dynamic brake (DB) operation function by I/O signals	Not available	Available
4	Battery refresh function	Not available	Available
5	Functional expansion of protection settings for the motor's movement range	Not available	Available
6	Use of electronic gears for one absolute rotation and unlimited absolute rotation function	Not available	Available
7	Pause function of profile operation	Not available	Available
8	Functional expansion of RTEX alarm command	Not available	Available
9	Expansion of electronic gear setting range	1/1000 to **1000** times	1/1000 to **8000** times
10	Functional expansion of PANATERM command during established RTEX communication	Restrictions are applied to some functions during establishment of RTEX communication	Usage restrictions are eased during establishment of RTEX communication: 5 functions added
11	Data expansion of RTEX monitor command	36 types	57 types
12	Data expansion of front panel display	6 types	7 types
13	Functional expansion of Home position	4 types	5 types
14	Data expansion of monitor signal output function	21 types	23 types

[Change Content Details]

1) Predictive Maintenance function
Estimates the changes in characteristics of the motor and connected devices, and can notify the predictive maintenance warning to the upper controller.

2) Slow stop function
This function can stop the motor smoothly by keeping the Servo On active and in case of a sudden stop

3) Dynamic brake(DB) operation function by I/O signal
The dynamic braking (DB) ON/OFF function can be switched by I/O input signal.

4) Battery refresh function
By using the setup support software (PANATERM), the encoder battery can be forcedly discharged.

5) Functional expansion of protection settings for the motor's movement range
The detect condition can be expanded for the protection settings of the motor's movement range

6) Use of electronic gears for one absolute rotation and unlimited absolute rotation function
The electronic gear ratio can be set by one absolute rotation and unlimited absolute rotation function.

7) Pause function of profiling operation
The profiling operation can be temporarily stopped while in profiling control mode.

8) Functional expansion of RTEX alarm command
By using the RTEX alarm command, multiple occurrence alarm and warning information, as well as alarm-related information can be acquired.

9) Expansion of electronic gear setting range
The maximum electronic gear ratio can be set in the range of 1000 to 8000 times

10) Functional expansion of PANATERM command during established RTEX communication
The following functions of the setup support software (PANATERM) can be used during RTEX communication is activated (in previous ver., the following functions were not able to use unless RTEX communication is shut off.)
[Additional Functions] 5 functions can be used.
- Jog operation, • Frequency characteristics analysis (FFT function),
- Pin (on interface) assign setup function • Z-Phase search function, • “Fit-gain” function

11) Data expansion of RTEX monitor command
The following data is available by using the RTEX communication monitor command.
[Additional Data] In addition to the previous 36 types of data, 21 new types are available and in total 57types are available..
- Speed control command, • Speed of Position command, • Speed deviation, • Speed limit value,
- Positive direction torque limit value, • Negative direction torque limit value,
- Encoder status, • Gain exchange flag,
- Deterioration diagnosis status,
- Average value for Torque command deterioration diagnosis
- Torque command standard value for deterioration diagnosis,
- Estimated inertia value for deterioration diagnosis
- Estimated load unbalance value for deterioration diagnosis,
- Estimated dynamic friction value for deterioration diagnosis
- Estimated viscous friction value for deterioration diagnosis,
- Motor power consumption rate, • Motor power consumption amount,
- Accumulated motor power consumption value,
- Multiple occurrence alarm /warning information
- Total count of RTEX Update Counter fault
- Total count of RTEX communication timeout fault

12) Data expansion of front panel display
Overload load rate (hexadecimal number) can be displayed in the front panel.

13) Functional expansion of profile origin return
After starting a reverse motion by detecting the limit sensor (POT/NOT) in the Home position direction, a new Home position motion can be made by using the Home point based on the first Z-phase position since no more limit sensors are detected.

14) Data expansion of monitor signal output function
The positioning complete status and alarm status can be output in the monitor signal.

• The setup support software (PANAERM) corresponding to Ver. 1.20 will be Ver. 6.0.0.9 and later.
• Previous functions can be used by changing settings in the Servo Driver’s previous parameter file.

■ Timing: The change will be implemented from the September 2016 production lot.

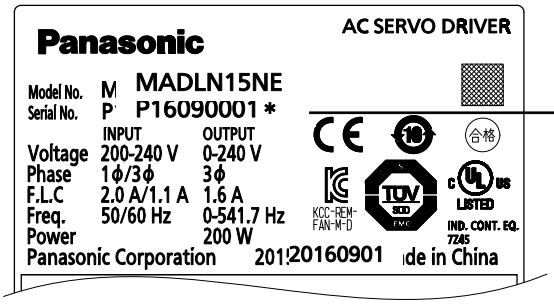
■ Method of checking:

• Checking from the software version

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

• Checking from the Serial number (year and month manufactured)

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

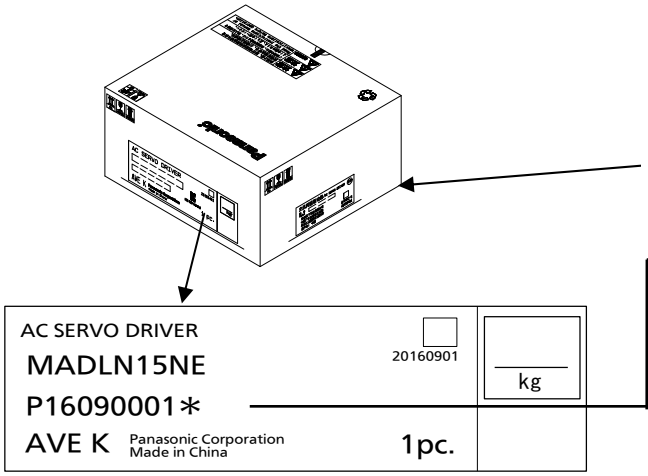


Serial number
E.g. **P16090001***

TTC Serial number
Month of manufacturing
Year of manufacturing (last 2 digits of the year)

Check the year and month of manufacturing .

The 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.

Serial No.
Ex. **P16090001***

TTC Serial number
Month of manufacturing
Year of manufacturing (last 2 digits of the year)

Check the year and month of manufacturing.

END