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Announcement of New Product Release - AC Servo Driver "MINAS-A5II" Series

As mentioned in the title, we would like to inform you about our New Product Release in April.
The performance of AC servo motors and AC servo drivers are requested to be further enhanced. namely with respect to fine processing in semiconductor manufacturing equipment and high-speed mounting of electronic components mounting machines. We will release the AC Servo Driver MINAS-A5II Series for which a higher response, high-accuracy positioning, and positioning follow-up control were achieved by significantly enhancing and upgrading our conventional product performances.
"Fit gain" and PANATERM" functions have been enhanced by introducing Two-Degree of Freedom Control System to the servo driver. As a result, the adjustment operations for using the servo motor driver will be reduced and it will become easier to use when compared to the converntional A5 series.
With respect to motors, you can use the conventional A5 series motors.
Your continued support and cooperation in our products sales promotion will be greatly appreciated.

■ Release date: April 24, 2013 (Accepting orders from: April 17)

■ Output range: 50 W through 15 kW, Voltage 100 V, 200 V, 400V
* For 400 V, please contact our sales representatives.

■ Product features
1) The introduction of Two-Degree of Freedom Control System has enabled smooth operations, high response and follow-up performance and also improved the processing accuracy and productivity.
2) The setup support software "PANATERM," which provides the automatic adjustment function "Fit gain," reduces the adjustment time.
3) 2.3 kHz frequency response
4) A5 II series covers position, velocity, torque, full-closed operation control.
A5 IIE series is dedicated to positioning control only.

■ For the type and model number, please see page 3/4 through 4/4.
* With respect to the model number, "K" is assigned to the fourth position from the left of a driver model number. (e.g.) MAD**K**T1505
Please contact our sales representatives for pricing.
Applicable motors: Conventional A5 series motors.

■ Others
1) Setup support software "PANATERM"
• Please download it from our website.
• The software version supporting A5 II series (Ver. 5.0.3.0 or later) can also be used for the A5 series.
2) Dimensions and features
• The size is the same as for the conventional A5 series driver. Therefore, it can be replaced easily.
• The speed after combining motor and torque characteristics will not change.
3) Changes in appearance
The color of the safety function connector was changed to black. The function will not change.
* Conventional products (A5 series) are grey.

■ Features in details

1. The introduction of the Two-Degree of Freedom Control System, which is unique to Panasonic, achieves smooth operations, high response and follow-up performance and also improves the processing accuracy and productivity.

In order to achieve the high performance of AC servo motors, the functions and performance supporting sensitive control are required of the AC servo driver. There are two types of servo motor control. One is the feed forward control (hereinafter referred to as FF control) improving command response characteristics, and the other is feedback control (hereinafter referred to as FB control) improving disturbance attenuation characteristics. Through the development of unique analysis technology and a new algorithm to balance the command response characteristics with the disturbance attenuation characteristics of a motor, our specific Two-Degree of Freedom Control System has been introduced in these products. As a result, FF control and FB control are completely separated and controlled and the motor command response and disturbance attenuation can be adjusted separately and faster, therefore leading to more accurate motor control. For example, in the electronic components mounting machines, high-speed mounting tact to reduce the vibration of the component mounting head is possible. Also in metal processing machines, the impact of friction and viscosity can be reduced and you can achieve high-accuracy processing such as smoothly cut surface.

2. Panasonic's unique setup support software “PANATERM” to provide the automatic adjustment function “Fit gain” reduces the adjustment time.

In order to improve the performance of equipment and devices, it is important to tune (adjust) the AC servo motors and AC servo drivers to achieve optimum gain (speed, position, and torque). This time, our unique algorithm was adopted for AC servo drivers and Panasonic's unique setup support software “PANATERM” to provide the automatic adjustment function “Fit gain,” which allows you to automatically set and adjust various gains suited to a device. Comparing with the conventional auto-tuning screen on which gains are adjusted and set, "PANATERM" is upgraded and considered more convenient software, in which a "Fit gain" screen is adopted, and various optimum gains are automatically adjusted. In addition, it has an adaptive notch filter to reduce vibrations that occur when the machine stiffness is low due to the light weight of the device. Compared to conventional products, it became significantly easier to adjust various gains. With these functions, the shortening of the time required for setting and adjustment by customers and reducing the equipment and devices development lead time can all be achieved.

A5 II Series Driver　A-frame

■ MINAS-A5II Series Driver

(1) MINAS-A5II Series Driver (Position, Velocity, Torque, Full-closed type)

• AC 100V Input Specifications

Model No	Output (W)	Input Voltage (V)
MADKT1105	50	Single phase, 100
MADKT1107	100	Single phase, 100
MBDKT2110	200	Single phase, 100
MCDKT3120	400	Single phase, 100

• AC 200V Input Specifications

Model No	Output (W)	Input Voltage (V)
MADKT1505	50 - 100	Single/3-phase, 200
MADKT1507	200	Single/3-phase, 200
MBDKT2510	400	Single/3-phase, 200
MCDKT3520	750	Single/3-phase, 200
MDDKT3530	1.0 k	Single/3-phase, 200
MDDKT5540	0.9 k - 1.5 k	Single/3-phase, 200
MEDKT7364	2.0 k	3-phase, 200
MFDKTA390	2.0 k - 3.0 k	3-phase, 200
MFDKTB3A2	3.0 k - 5.0 k	3-phase, 200
MGDKTC3B4	6.0 k - 7.5 k	3-phase, 200
MHDKTC3B4	11.0 k - 15.0 k	3-phase, 200

(2) MINAS-A5II E Series (Only for position control type)

• AC 100V Input Specifications

Model No	Output (W)	Input Voltage (V)
MADKT1105E	50	Single phase, 100
MADKT1107E	100	Single phase, 100
MBDKT2110E	200	Single phase, 100
MCDKT3120E	400	Single phase, 100

• AC 200V Input Specifications

Model No	Output (W)	Input Voltage (V)
MADKT1505E	50 - 100	Single/3-phase, 200
MADKT1507E	200	Single/3-phase, 200
MBDKT2510E	400	Single/3-phase, 200
MCDKT3520E	750	Single/3-phase, 200
MDDKT3530E	1.0 k	Single/3-phase, 200
MDDKT5540E	0.9 k - 1.5 k	Single/3-phase, 200
MEDKT7364E	2.0 k	3-phase, 200
MFDKTA390E	2.0 k - 3.0 k	3-phase, 200
MFDKTB3A2E	3.0 k - 5.0 k	3-phase, 200

* MINAS-A5II E Series do not have G- and H-frames.