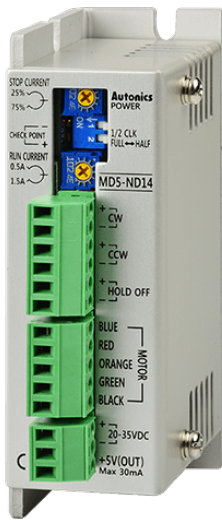


5-phase Stepper Motor Driver



MD5-ND14 Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Bipolar constant current pentagon drive method
- Various built-in functions including auto current down and self-diagnosis
- Isolated photocoupler input design minimizes influence from electrical noise



Product Components

- Product
- Instruction manual

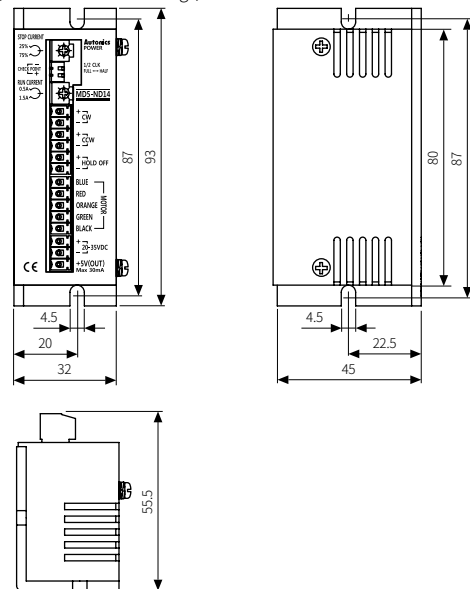
Specifications

Model	MD5-ND14
Power supply ⁰¹⁾	20 - 35 VDC \pm 10%
Max. current consumption	3 A (based on ambient temp. 25°C, ambient humi. 55%RH)
RUN current ⁰²⁾	0.5 - 1.5 A / Phase
Stop current	25 to 75% of RUN current (set by STOP current setting rotary switch)
RUN method	Bipolar constant current pentagon drive
Basic step angle	0.72° / Step
Resolution	1 division (0.72° / Step), 2 division (0.36° / Step)
Pulse width	\geq 10 μ s (CW / CCW), 1 ms (HOLD OFF)
Duty rate	50% (CW / CCW)
Rise, Fall time	\leq 130 ns (CW / CCW)
Pulse input voltage	[H]: 4 - 8 VDC \pm , [L]: 0 - 0.5 VDC \pm
Pulse input current	7.5 - 14 mA (CW / CCW), 10 - 16 mA (HOLD OFF)
Max. input pulse freq.	\leq 50 kHz (CW / CCW)
Input resistance	390 Ω (CW/CCW, HOLD OFF)
Insulation resistance	Between all terminal and case: \geq 100 M Ω (500 VDC \pm megger)
Dielectric strength	Between all terminal and case: 1,000 VAC \sim 50 / 60 Hz for 1 minute
Noise immunity	\pm 500 VDC \pm square wave noise (pulse width: 1 μ s) by the noise simulator
Vibration	1.5 mm double amplitude at frequency 5 to 60 Hz (for 1 minute) in each X, Y, Z direction for 2 hours
Vibration (malfunction)	1.5 mm double amplitude at frequency 5 to 60 Hz (for 1 minute) in each X, Y, Z direction for 10 minutes
Ambient temp.	0 to 40°C, storage: -10 to 60°C (no freezing or condensation)
Ambient humi.	35 to 85% RH, storage: 35 to 85% RH (no freezing or condensation)
Approval	CE ENEC
Unit weight (packaged)	\approx 130 g (\approx 183 g)

01) If a power supply is over 30 VDC \pm , the torque characteristics in the high speed range will improve, but the driver's temperature will increase as well. Install the unit in well-ventilated area. The torque may vary depending on power supply.
02) RUN current varies depending on the RUN frequency, and the max. instantaneous RUN current varies depending on load.

Dimensions

• Unit: mm, For the detailed drawings, follow the Autonics website.



Unit Descriptions

