

MDrive[®] Plus² MDI•34AC

NEMA 34 (85mm) CANopen integrated 1.8°
2-phase stepper motor & control electronics

CE  REACH IP54



PRODUCT OVERVIEW

MDrive[®] Plus² 34ac CANopen products integrate 1.8° 2-phase stepper motor, motion controller, drive electronics, power supply and optional encoder. Products support CiA DS301 and DSP402 Device Profile for Drives and Motion Control.

Firmware is provided for setup and testing MDrive Plus² CANopen products. CANopen Tester software and communication dongle (MD-CC500-000) are also available.

MDrive Plus² products deliver reliable performance for new and existing motion control applications. Satisfying the requirements for a wide range of machine builders.

Simplify your machine design and reduce cabinet size by replacing multiple components with a single compact integrated motor. Fewer individual system components eliminates multiple potential failure points, and lowers risk of electrical noise by eliminating cabling between motor and drive.

These compact, powerful and cost effective motion control solutions deliver exceptional smoothness and performance that can reduce system cost, design and assembly time for a large range of 2-phase stepper motor applications.

FEATURES AND BENEFITS

- Integrated microstepping drive, motion controller, NEMA34 1.8° 2-phase stepper motor, and AC power supply
- Advanced current control for exceptional performance and smoothness
- Single supply: 120 or 240 VAC
- 20 microstep resolutions up to 51,200 steps per rev, including: Degrees, Metric, & Arc Minutes
- IP54 protection rating
- Auxiliary logic power supply input
- 0 to 5 MHz step clock rate selectable in 0.59 Hz increments
- Up to eight I/O lines and one 10-bit selectable analog input
- Thermal temp & over voltage/current warning
- Programmable motor run/hold current
- Available options include:
 - Encoder
 - Multiple motor stack lengths
 - Rear control knob for manual positioning
- Single, double, & triple motor stack lengths available
- Graphical user interface provided for quick and easy parameter setup



Additional setup, quick reference information, and supporting documents are available for download from the Novanta IMS download website <https://novantaims.com/dloads/>

Three-dimensional depictions of this product are available for download from <https://novantaims.com/dloads/3d-product-models/>



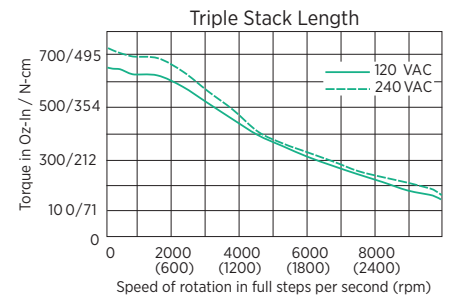
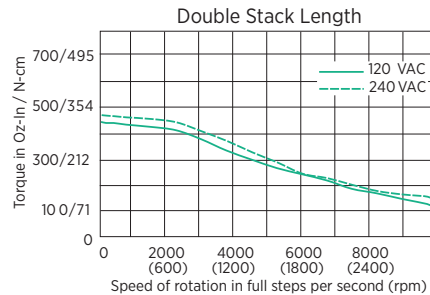
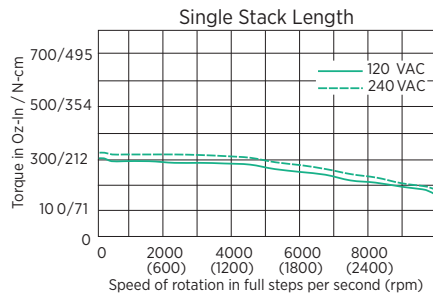
To select from the available features and build the LMD integrated stepper motor to fit your needs, use the Novanta IMS part number builder, available online at <https://novantaims.com/resources/part-number-builders/>

MDrive Plus² MDI•34AC CANopen

Motor Performance

Motor	Stack length	MDrive 34AC		
		Single	Double	Triple
Holding torque	oz-in	330	500	750
	N-cm	233	353	529
Detent torque	oz-in	10.9	14.16	19.83
	N-cm	7.7	10.0	14.0
Rotor inertia	oz-in-sec ²	0.01416	0.02266	0.04815
	kg-cm ²	1.0	1.6	3.4
Weight (motor+driver)	oz	6.4	7.7	11.0
	g	2.9	3.5	5.0

Motor Speed Torque



Test conditions: 100% current with damper simulating load.

Accessories

Description	Length feet (m)	Part Number
Communication Converters		
Electrically isolated, in-line converter pre-wired with mating connector to conveniently set/program communication parameters for a single MDrive Plus via a PC's USB port.		
Interface cable for all CANopen products. Requires mating connector adapter for M12 industrial connector. Requires power supply, not supplied.	12.0 (3.6)	MD-CC500-000
Prototype Development Cables		
Speed test/development with pre-wired mating connector with other cable end open.		
Mates to 19-pin male M23 industrial connector with straight termination for I/O, communication and optional encoder	13.0 (4.0)	MD-CS100-000
Mates to 19-pin male M23 industrial connector with right angle termination for I/O, communication and optional encoder	13.0 (4.0)	MD-CS101-000
Mates to 3-pin male Euro AC industrial connector with straight termination for power	13.0 (4.0)	MD-CS200-000
Mates to 3-pin male Euro AC industrial connector with right angle termination for power	13.0 (4.0)	MD-CS201-000