

MSE570M 4.0 A Microstepping Bipolar Stepper Motor Drive

Mclennan's MSE570M is a low-cost high-performance Eurocard sized bi-polar microstepping drive ideally suited for use with NEMA size 17, 23 & 34 stepper motors. With up to 4.0 A per phase available the drive offers smooth motion and low resonance for a wide range of applications where step and direction control and flexibility is required.

The drive features DIP-switch selectable full/half/microstep resolution (up to 51,200 steps/rev), current control (from 0.25 to 4 A per phase), standstill current (0 to 100% in four stages), thermal protection settings, direction and drive disable.

Further flexibility is offered with switchable signal level input and output settings (5V or 12V logic) with the drive configurable for use with step and direction signals that include CMOS, TTL open collector, opto isolated or switch type inputs. Four surface mounted status LEDs indicate power, drive disabled, over-temperature and overload faults.



Key features:

- Microstepping resolution to 51200 steps/rev (DIP switch selectable)
- Bi-polar drive with pre-set drive currents up to 4 Amps per phase
- Operates from 48V DC regulated supply (up to 42 V DC unregulated).
- Suitable for size 17, 23 & 34 frame size hybrid stepper motors
- Automatic current reduction at standstill (optional with DIP switch)
- Configuration by DIP-switches - no computer required

MSE570M Specification

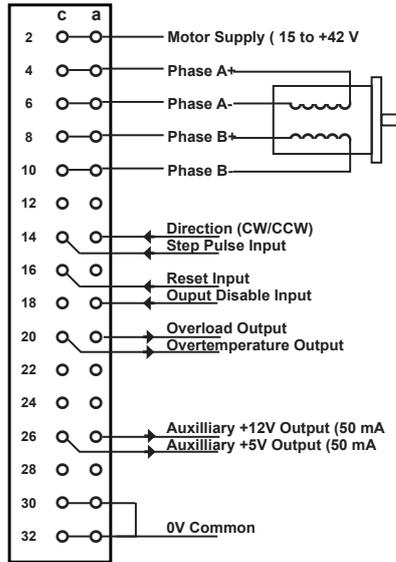
Microstepping stepper motor drive with optional automatic current reduction at standstill. Basic pin compatibility with Classic (Mk 1) and EV02 versions (without onboard oscillator).	
Electrical	
Supply:	+15V to +42V smoothed DC unregulated, or 48V regulated supply
Auxiliary outputs (available for external circuitry):	+12V regulated 50mA maximum and +5V regulated 50mA maximum
Motor drive output:	Bipolar chopped constant current with overload protection. Suitable for driving hybrid or permanent magnet stepper motors with 4, 6 or 8 leads.
Maximum output current:	4.0A "peak of sine" per phase Output current set by on-board DIP switches.
Control inputs: CMOS schmitt trigger inputs operating at +12V with 10 kΩ pull-up resistors and diode isolation	Logic 0 (low)- 0V to +2V or contact closure to 0V Logic 1 (high)- +9V to +30V maximum or open circuit An onboard switch allows selection to use 5V signals
Monitor outputs: Open collector NPN transistor, referenced to 0V	Low level - +1V maximum at 30mA maximum High level - open circuit +24V maximum
Mechanical and physical:	
Card size:	Eurocard format 160 mm long x 100 mm high x 36 mm wide.
Weight:	100g approximately.
Connector:	32 way a & c DIN41612 type D.
Operating temperature range:	0°C to 40°C maximum ambient



MSE570M External Connections

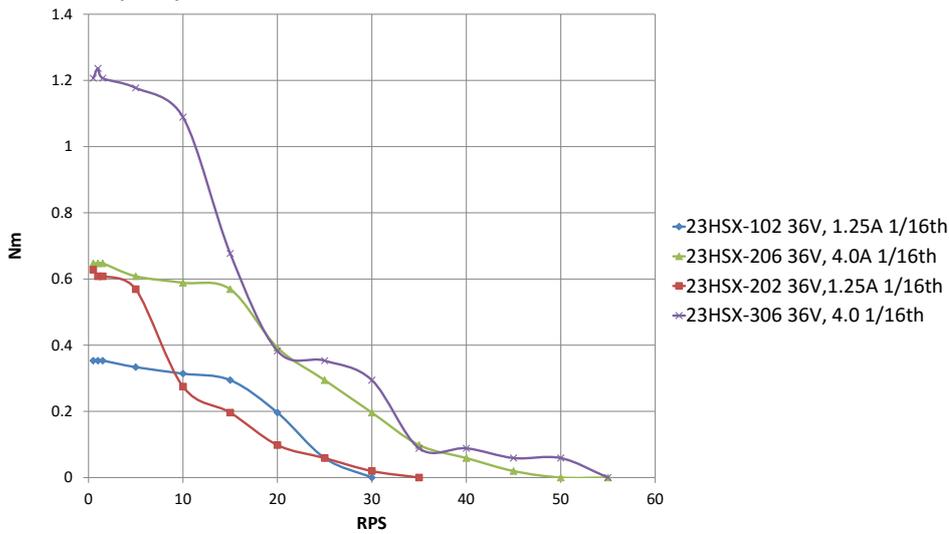
External connections are made via a 32 way a & c DIN41612 type D connector.

Motherboard/backplane MSB630 is available to facilitate easy installation and wiring connection in 3U Eurorack.



MSE570M Performance

Torque - Speed curves 23HSX series - MSE570M 1/16th STEP



Torque - Speed curves 23HT18 series - MSE570M at 1/16th STEP

