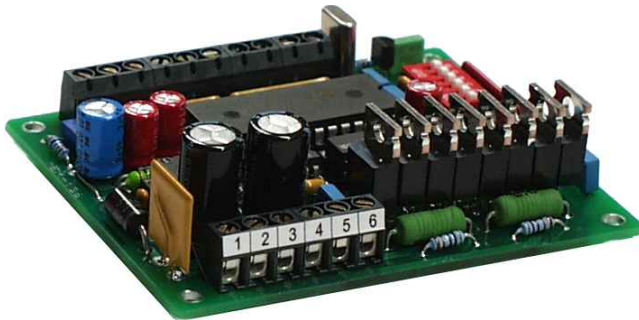


Stepper-Motor Microstepping Controller 12-45V 0,5-4A



FEATURES:

- Bipolar chopper
- Wide supply voltage range
- Full-, half-, quarter-, and 1/8-step operation
- 8-programmable phase currents
- Auxiliary oscillator
- Acceleration- and braking ramp
- Self recovery fuse
- Very high efficiency
- Low heat dissipation
- Rail mounting base available

EM-136 is bipolar-chopper type stepper motor controller. Bipolar operation suits most stepper motors and provides the best torque. The microstepping feature gives high performance also at low rpm. The power stage is mosfet-type so it runs with very high efficiency.

There are four stepping modes: full, half, quarter and 1/8. Desired mode is set with two control inputs. The phase current (current limit) can be set in eight different levels using dip-switches. A wide phase current set range makes it possible to use the device with several different motors.

The controller features an auxiliary oscillator, which has 7 preprogrammed frequencies. The frequency is set with three control inputs. Auxiliary oscillator in EM-136 has also an acceleration ramp feature, which can be used to change frequencies flexibly, so that the motor will start up reliably even at high frequencies. The acceleration ramp time is set with a trim.

The inputs operate with so called positive logic, in other words the inputs are activated with connecting the input to positive voltage. The inputs also work with TTL-logic level control.

The power state of EM-136 has self recovery fuse that protects the controller from over current and reversed input voltage polarity.

TECHNICAL DATA:

Operating voltage	12-45Vdc
Idle current	approx. 25mA (enable "0")
Current set	0.5; 1.0; 1.5; 2.0; 2.5; 3.0; 3.5 and 4.0A
Voltage loss	1V when $I_m=1A$
Fuse	4A self recovery.
Aux. osc. freq.	200, 500, 1000, 2000 Hz 3000, 5000, 8000 Hz
Ramp speed	0,2...3s (0...8000 Hz)
Aux. freq. precision	better than 0,5%
Digital control	"on" when $U_{in} 4 - 30V$ "off" when $U_{in} 0-1V$
Step freq.	max. 15 kHz
Operating temp.	0-50°C
Dimensions	87x73x35mm
Weight	approx. 90g

