

DR-4M and DR-4MPS 4 AMP/PHASE MICROSTEPPING DRIVERS

OVERVIEW

The **DR-4M** is a high performance, microstepping driver designed to meet O.E.M. requirements for reliable, cost effective operation. The **DR-4MPS** provides the next level of user integration with a built in 40 volt power supply.

Both drivers offer eight resolution settings, from 1/2 step to 1/256 step. They are short circuit, over temperature and under voltage protected for extended service life. Features include:

- *Low cost - small size*
- *Heatsinked enclosure*
- *1 Mhz step clock*
- *Integral power supply (DR-4MPS)*
- *Step resolution to 50k steps/rev.*
- *4 amp output current (Peak)*
- *Auto current reduction/boost*
- *Phase to phase/ground, over temp. and under voltage protected*
- *Fault and diagnostic indicators*
- *Mating connectors included*

CONTROL INPUT

The essential input signals include a step pulse and direction control and three resolution select lines to permit remote setting of microstep size. Inputs are TTL/CMOS compatible with current limiting circuitry capable of withstanding temporary over voltages.

A miniature eight contact RJ-45 connector is provided for convenient interface of user control signals to the driver. Available resolution settings include from 400 to 51,200 steps per revolution.

OUTPUT CURRENT

The DR-4M and DR-4MPS will automatically increase and decrease the current in the motor windings after the completion of a move. A convenient dip-switch, located on the front panel, is used to set the hold and run currents in 14% increments, between 0 and the maximum setting. On power up, the drivers are disabled. On application of step pulses, the programmed run current value is set.

POWER SUPPLY

The DR-4M driver can be operated from a single unregulated DC power supply. Maximum input voltage is 45 volts. Multiple drivers can also be connected to a single power supply source.

The DR-4MPS integrates a 40 volt (80 volt/amp) toroidal power supply for maximum performance and reliability. A convenient AC power entry connector and cord make installation simple and quick.



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COMPATIBLE "AM" SERIES STEPPING MOTORS

Model #	Description
AM14-8-1	Motor 8 oz-in, Frame Size 14
AM17-35-3	Motor 35 oz-in, Frame Size 17
AM23-72-1	Motor 72 oz-in, Frame Size 23
AM23-150-2	Motor 150 oz-in, Frame Size 23
AM23-210-3	Motor 210 oz-in, Frame Size 23

RELATED PRODUCTS

Model #	Description
MAX-410	4 Amp/Phase, 40 Volt, Microstepping Controller/Driver/Power Supply Module
MAX-2000	5 Amp/Phase, 80 Volt, Microstepping Controller/Driver/Power Supply Module
MAX-2200	10 Amp/Phase, 80 Volt, Microstepping Controller/Driver/Power Supply Module

SPECIFICATIONS

Electrical

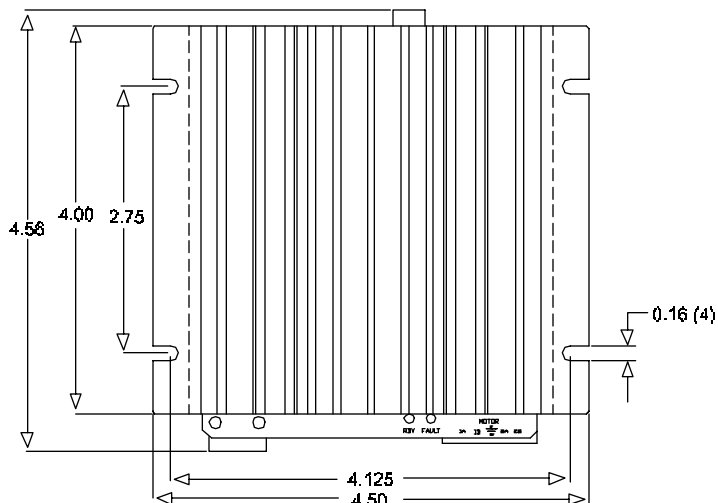
Parameter	Min	Typ	Max	Unit
Motor Voltage	28		45	Vdc
Logic Voltage	12		24	Vdc
RMS Motor Current			3	A/Ø
Active Power Dissipation			10	W
Motor Chop Frequency		28		Khz
Quiescent Current		170		mAdc
Input Logic Current			1.5	mAdc
Input Logic High	3.5			Vdc
Input Logic Low			1.5	Vdc

Thermal

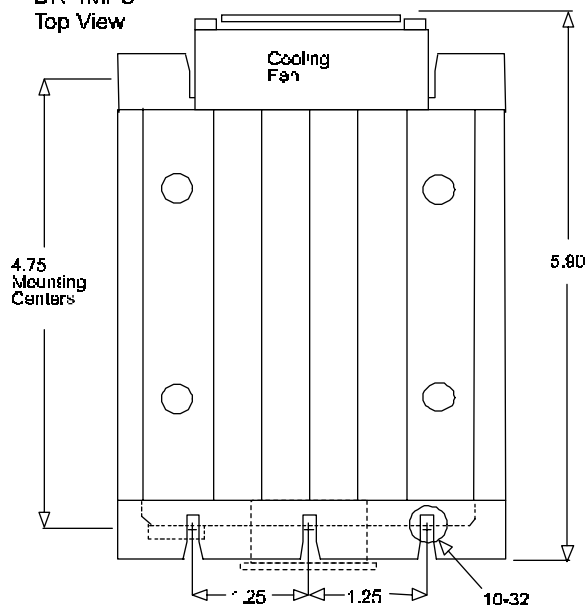
Operating Temperature: 0 to +50° C
Storage Temperature: -40 to +125° C

MOUNTING DIMENSIONS

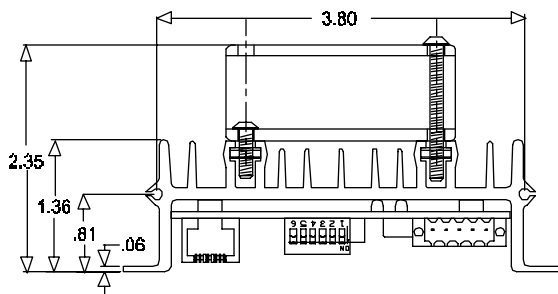
DR-4M
Top View



DR-4MPS
Top View



DR-4M
Front View (with optional cooling fan)



DR-4MPS
Front View

