

DR-4M AND DR-4MPS 4 AMP 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.

AMS
 2 Townsend West
 Nashua, NH 03063
<http://ams2000.com>
 (800)-234-2001

COMPATIBLE “AM” SERIES STEPPING MOTORS

| Model # | Description |
|------------|--------------------------------|
| AM17-32-1 | Motor 32 oz-in, Frame Size 17 |
| AM17-60-2 | Motor 60 oz-in, Frame Size 17 |
| AM17-75-3 | Motor 75 oz-in, Frame Size 17 |
| AM23-90-1 | Motor, 90 oz-in, Frame Size 23 |
| AM23-144-2 | Motor 144 oz-in, Frame Size 23 |
| AM23-239-3 | Motor 239 oz-in, Frame Size 23 |

RELATED PRODUCTS

| Model # | Description |
|----------|---|
| CDR-4MPS | “CE” Certified 4 Amp/Phase, 40 Volt, Microstepping Controller/Driver/Power Supply |
| CDR-8MPS | “CE” Certified 8 Amp/Phase, 80/160 Volt, Microstepping Controller/Driver/Power Supply |

SPECIFICATIONS

Electrical

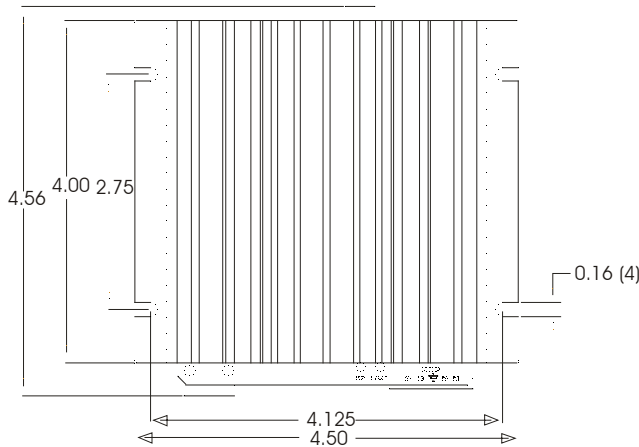
| Parameter | Min | Typ | Max | Unit |
|--------------------------|-----|-----|-----|------|
| Motor Voltage | 28 | | 45 | Vdc |
| Logic Voltage | 12 | | 24 | Vdc |
| RMS Motor Current | | | 3 | A/Ø |
| Active Power Dissipation | | | 10 | W |
| Motor Chop Frequency | | 28 | | Khz |
| Quiescent Current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

Thermal

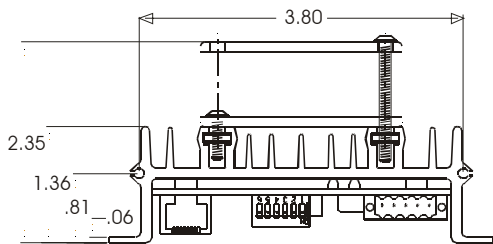
Operating Temperature: 0 to +50° C
 Storage Temperature: -40 to +125° C

MOUNTING DIMENSIONS

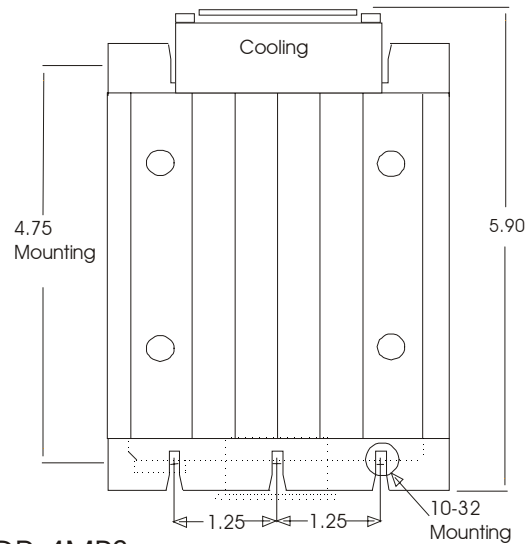
DR-4M
Top View



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



DR-4MPS
Top View



DR-4MPS
Front View

