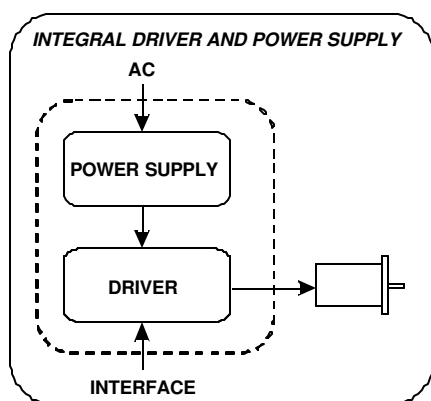


# CDR-4MPS

AND

# CDR-8MPS

“CE” CERTIFIED  
 MICROSTEPPING  
 DRIVERS



## OVERVIEW

The CDR-4MPS (4A/40V) and CDR-8MPS (8A/64V) are high performance microstepping drivers with integral power supply, designed to operate two phase bi-polar stepping motors. **Both models are CE certified to meet EMC Directive 89/336/EEC and Low Voltage/Safety Directive IEC 61010.**

The CDR-4MPS will operate NEMA 23 and single stack 34 frame size motors. Typical applications include plotting, medical instrumentation, coil winding, labeling, scanning and metering.

The CDR-8MPS will drive the larger 34 and 42 frame size motors for industrial applications such as cutting, welding, drilling, grinding, materials handling and packaging machines. For higher torque, higher speed applications an 80 or 160Vdc option is also available.

Both models are short circuit, over temperature and under voltage protected for extended service life.

## FEATURES

- *Low cost - small size*
- *Heatsinked enclosure*
- *1 Mhz step clock*
- *Switch selectable phase currents*
- *Integral power supply*
- *Step resolution to 50k steps/rev.*
- *Output currents of 4 and 8 amps*
- *Auto current reduction/boost*
- *Phase to phase/ground, over temp. and under voltage protected*
- *Fault and diagnostic indicators*

## OUTPUT CURRENT

A convenient dip switch on the front panel is used to set the Hold and Run currents. The current to the motor windings will automatically increase to one of seven Run current values, from 1 amp to the maximum rated current output of the driver (in 14% increments) on receipt of a step pulse. The current will then decrease to one of eight Hold current values upon completion of a move.

## 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. Available resolution settings include from 400 to 51,200 steps per revolution.

## FAULT PROTECTION

The CDR units are internally protected against phase to phase and phase to ground short circuits, over temperature and under voltage. Two LEDs on the front panel indicate operating conditions and status.

Each unit is packaged in a specially designed heat-sink with cooling fan to help avoid over temperature conditions. Should an over temperature condition occur however (between 60° C and 70° C), the driver will automatically shut down.

If the DC voltage to the driver drops below the minimum specification, the drivers output stage will be disabled. For added safety, the driver must be reset to enable the outputs when the proper voltage and/or temperature condition is restored.

The short circuit protection consists of phase to phase, phase to ground, and +V to phase. If a phase short to ground fault is detected, the outputs will be disabled and can not be re-enabled without resetting or powering down the driver.



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### THE CE MARK

Today, all industrial electronic apparatus entering the European Union (EU) must be tested to the standards defined by the EMC and Low Voltage / Safety Directives. At the end-user level, displaying a CE (Certificate European) Mark on the equipment indicates compliance with these Directives.

Both CDR models have undergone extensive development and test to comply with EU Directives 89/336/EEC for Electromagnetic Compatibility and IEC Directive 61010-1 (edition2)- Conformance Testing to Standards for Safety of Electrical Equipment. In addition to the marketing advantages associated with this process, CE approved designs ensure maximum power surge protection, noise immunity and safety features for dependable operation in all environments.

### RELATED MICROSTEPPING PRODUCTS

Model #	Description
CMAx-410	4 Amp Controller/Driver/PS (CE Certified)
CMAx-810	8 Amp Controller/Driver/PS (CE Certified)

### SPECIFICATIONS

#### Electrical

Parameter	Min	Typ	CDR-		Unit
			4MPS	8MPS	
Output Current			4 Peak	8 Peak	Amp
Power Supply			40	64*	Vdc
Power Supply			80	180	VA
Motor Chop Frequency		28			Khz
Input Logic Current			1.5	1.5	mAdc
Input Logic High	3.5				Vdc
Input Logic Low			1.5	1.5	Vdc
Input Step Rate			1.0	1.0	Mhz

\*80 and 160Vdc option available.

Input Voltage: 100 to 125 Vac, 60 Hz or 200 to 250 Vac, 50Hz  
 Microsteps Per Full Step: 2, 4, 8, 16, 32, 64, 128, 256

#### Thermal

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

#### Physical

Weight:

- CDR-4MPS: 5.2lbs (2.4kg)
- CDR-8MPS: 9.4lbs (4.3kg.)

Size in inches (mm):

- CDR-4MPS: 4.00 (101.60) x 5.00 (127.00) x 8.12 (206.25)
- CDR-8MPS: 4.00 (101.60) x 5.00 (127.00) x 11.62 (295.15)

