

# SERIES M14

**Dynapar™ brand**

## Miniature Encoder

### Key Features

- Ideal Economical Choice for Stepper and Servo Motor Feedback
- Short .678" Mounting Depth and 1.5" Diameter
- Up to 1024PPR Resolution with Index



## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS

**Code:** Incremental, Optical

**Resolution:** Incremental pulses per revolution; 200 to 1024

**Phasing:** 90° ±18° electrical

**Symmetry:** 180° ±18° electrical

**Index Pulse Width:** 90° ±36° electrical

### ELECTRICAL

**Supply Voltage:** 5 VDC ±10%

**Supply Current:** 10 mA, typ.

**Output Signals:** 2.5 V min. high ( $V_{OH}$ ); 0.5 V max. low ( $V_{OL}$ ). 6 mA sink/source (25°C), 4 mA (100°C)

**Frequency Response:** 200 kHz

**Termination:** 5 pin connector (accessory connector w/12" wires, part no. CA0060012)

**Recommended Mating Connector:**  
Amp Part Number 103969-4

### MECHANICAL

**Weight:** 0.22 oz (6.2 g)

**Moment of Inertia:**  $0.16 \times 10^{-5}$  oz-in-sec<sup>2</sup> (0.13 gm-cm<sup>2</sup>)

**Hub Bore:** 3.0, to 8.0 mm; 0.125, to 0.375 inch

**Hub Dia. Tolerance:** +0.0004"/-0.0000" (+0.010 mm/-0.000 mm)

**Mating Shaft Length:** 0.525" (13.3 mm) max.; 0.436" (11.07 mm) min.

**Mating Shaft Runout:** 0.001 TIR

**Mating Shaft Endplay:** >512 ppr: ±0.003" (±0.076mm); 500, 512 ppr: +0.005/-0.003" (+0.127/-0.076mm); <500 ppr: +0.007/-0.003" (+0.178/-0.076mm)

### ENVIRONMENTAL

**Operating Temperature:** -20° to 100°C

**Storage Temperature:** -50° to 125°C

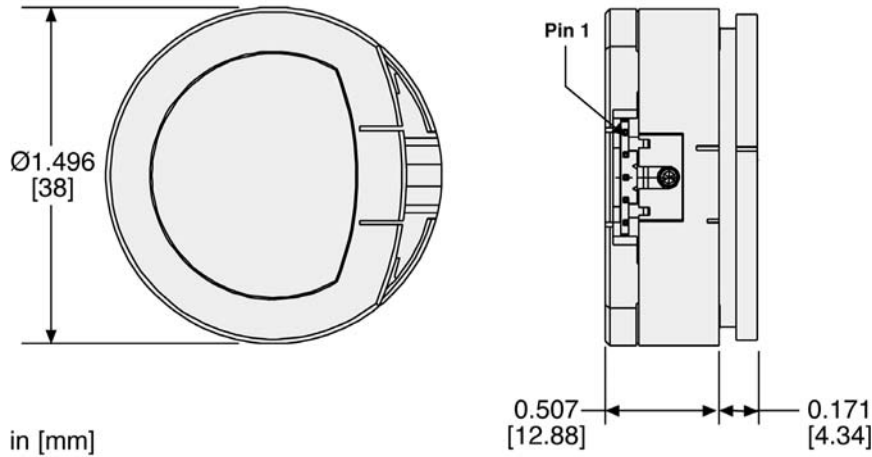
**Relative Humidity:** 90% non-condensing

### OUTPUT WAVEFORM AND CONNECTIONS

5	GND		BLACK
4	CH Z		BLUE
3	CH A		WHITE
2	Vcc		RED
1	CH B		BROWN

Direction: CCW viewing encoder cover

**Dimensions/Installation**



**Ordering Information**

To order, complete the model number with code numbers from the table below:

Code 1: Model	Code 2: PPR	Code 3: Mounting Description	Code 4: Hub Bore Description
<b>M14</b>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> /0	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Ordering Information			
<b>M14</b>	1.5" Diameter Incremental Modular Encoder	<b>0500/0</b> <b>0512/0</b> Special Order Consult Factory for Lead Time & Price <b>0200/0</b> <b>0400/0</b> <b>1000/0</b> <b>1024/0</b>	<b>0</b> No mounting base <b>A</b> 2x #2-56 on 1.28" BC <b>B</b> 3x #0-80 on 0.823" BC <b>C</b> 2x #2-56 on 0.75" BC <b>3.0</b> 3.0 mm <b>4.0</b> 4.0 mm <b>5.0</b> 5.0 mm <b>6.0</b> 6.0 mm <b>8.0</b> 8.0 mm <b>125</b> 0.1248 in <b>187</b> 0.1873 in <b>249</b> 0.2498 in <b>250</b> 0.2501 in <b>312</b> 0.3123 in <b>374</b> 0.3748 in <b>375</b> 0.3750 in

**IMPORTANT:** To properly install Series M14, a specialized mounting kit must be purchased. Only one kit is required to install any number of encoders with the same hub bore size.

Kit Part Number: MK M14  Code 4 (from Models Table, above) designating Hub Bore requirement.

Example: Kit for installing encoders with 0.1248" hub Bore= **MK M14 125**



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