

# SERIES E12

**Dynapar™ brand**

## Miniature Encoder

### Key Features

- Rugged Metal Housing
- Sub-Compact 1.2” Diameter
- Up to 1024PPR with Optional Index



## SPECIFICATIONS

### STANDARD OPERATING CHARACTERISTICS

**Code:** Incremental

**Resolution:** 100 to 1024 PPR (pulses/ revolution)

**Format:** Two channel quadrature (AB)with optional Index (Z) outputs

**Phase Sense:** A leads B for CW shaft rotation as viewed from the shaft end of the encoder

**Accuracy:**  $\pm 3 \times (360^\circ \div \text{PPR})$  or  $\pm 2.5$  arc-min worst case pulse to any other pulse, whichever is less

**Quadrature Phasing:**  $90^\circ \pm 36^\circ$  electrical

**Symmetry:**  $180^\circ \pm 18^\circ$  electrical

**Index:**  $90^\circ \pm 25^\circ$  (gated with A and B high)

**Waveforms:** Squarewave with rise and fall times less than 1 microsecond into a load capacitance of 1000 pf

### ELECTRICAL

**Input Power:** 5 VDC  $\pm 5\%$  at 80 mA max.; 12 or 15 VDC  $\pm 10\%$  at 80 mA max.; not including output loads

**Outputs:** 7272 line driver (or equivalent), 40 mA sink and source

**Frequency Response:** 100 kHz min.

### ENVIRONMENTAL

**Operating Temperature:** 0 to +70 °C

**Storage Temperature:** -25 to +70 °C

**Humidity:** to 98% without condensation

**Enclosure Rating:** NEMA12/IP54 (dirt tight, splashproof)

### Electrical Connections

Function (If Used)	Wire Color Code
Supply	Red
Common	Black
Signal A	White
Signal B	Green
Signal Z	Orange
Floating	Shield

### MECHANICAL

**Mechanical Bearing Life:**  $16 \times 10^6$  revolutions at max. load

**Shaft Loading:** 1 lb. radial, 1 lb. axial max.

**Shaft Speed:** 5,000 RPM max.

#### Starting Torque:

Shielded Bearing: 0.1 oz-in max. at 25 °C  
Sealed Bearing: 0.3 oz-in max. at 25 °C

#### Running Torque:

Shielded Bearing: 0.08 oz-in max. at 25 °C;  
Sealed Bearing: 0.2 oz-in max. at 25 °C

**Moment of Inertia:**  $1.13 \times 10^{-5}$  oz –in –sec<sup>2</sup>

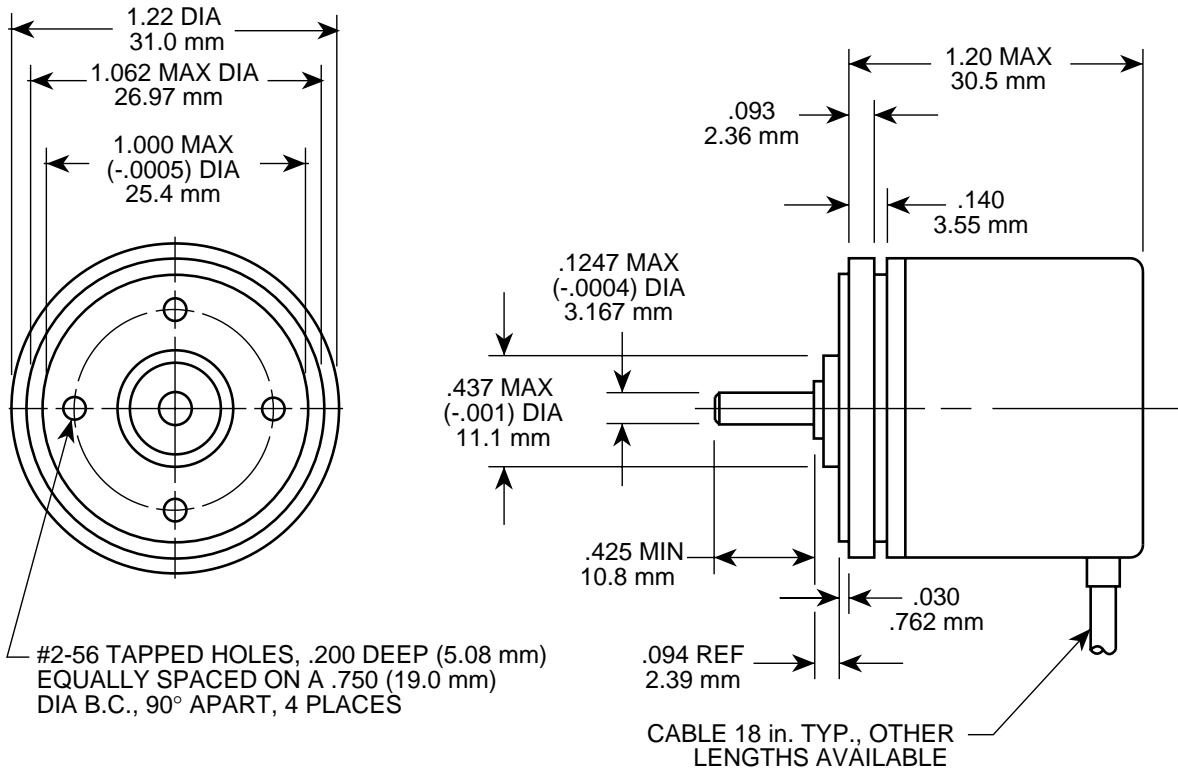
**Weight:** 3.0 oz. max.

**Ordering Information**

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

Code 1: Model	Code 2: Pulses/Rev	Code 3: Mechanical	Code 4: Output	Code 5: Voltage	Code 6: Termination
<b>E12</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>E12</b> Size 12, Light Duty Enclosed	<b>0100</b> <b>0250</b> <b>0256</b> <b>0360</b> <b>0500</b> <b>0600</b> <b>1000</b> <b>1024</b>	<b>0</b> Sealed Bearing <b>1</b> Shielded Bearing	<b>0</b> Unidirectional <b>2</b> Bidirectional, no Index <b>3</b> Bidirectional, with Index	<b>0</b> 5 VDC <b>1</b> 12 VDC <b>2</b> 15 VDC	<b>0</b> 18' Cable <b>1</b> 3' Cable <b>2</b> 6' Cable <b>3</b> 10' Cable <b>4</b> 15' Cable

**Dimensions (inches/mm)**



**Satellite Locations:**

- **North America:** North Carolina, South Carolina, Connecticut, Massachusetts, New York, Canada, British Virgin Islands
- **West Indies:** St. Kitts • **Europe:** United Kingdom, Italy, France, Germany, Spain, Slovakia
- **South America:** Brazil • **Asia:** China, Japan, Korea, Singapore

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