

SERIES E12

Dynapar™ brand

Miniature Encoder

Key Features

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



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Optical
Resolution: 250 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 ± 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 Push-Pull: 40mA, sink or source
 7272 Differential Line Driver: 40 mA, sink or source
Frequency Response: 100 kHz min.
Termination: Cable
Cable: PVC Jacket, 105°C rated, overall foil shielded; 28 AWG wires

MECHANICAL

Shaft Size: 1/8”
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
Mechanical Bearing Life: 16×10^6 revolutions at max. load
Moment of Inertia: 1.13×10^{-5} oz –in –sec²
Housing and Cover: Aluminum
Shaft Material: Stainless Steel
Disc Material: Glass
Weight: 3.0 oz.max.

Electrical Connections

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

ENVIRONMENTAL

Operating Temperature: 0 to +70 °C
Storage Temperature: –25 to +70 °C
Humidity: Up to 98% (non-condensing)
Enclosure Rating: NEMA12/IP54 (dirt tight, splashproof)

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
E12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E12 Size 12, Light Duty Enclosed	0250 0256 0360 0500 0600 1000 1024	0 Sealed Bearing 1 Shielded Bearing	0 Unidirectional 2 Bidirectional, no Index 3 Bidirectional, with Index	0 5 VDC 1 12 VDC 2 15 VDC	0 18" Cable 1 3' Cable 2 6' Cable 3 10' Cable 4 15' Cable

Dimensions (inches/mm)

