

SERIES E14H

Dynapar™ brand

Miniature Encoder

Key Features

- Hubshaft with flex tether for simplified installation
- Up to 2540PPR with optional index
- Rugged metal housing



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental

Resolution: 100 to 2540 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 line driver (or equivalent), 40 mA sink and source

Frequency Response: 100 kHz min.

MECHANICAL

Bearing Life: $(16 \times 10^6 \div \text{RPM})$ hours at max. load

Shaft Speed: 5,000 RPM max.

Hub Dia. Tolerance: nominal -0/+0.0005" (0.013mm)

Mating Shaft Length: 0.25" (6 mm) min.; 0.50" (12 mm) max.

Mating Shaft Runout: 0.008" (0.2 mm) max. TIR

Mating Shaft Endplay: $\pm 0.010"$ (0.25 mm) max.

Starting Torque: 0.9 oz-in max. at 25 °C

Running Torque: 0.8 oz-in max. at 25 °C

Moment of Inertia:

6 to 10 mm hub: 6.03×10^{-5} oz-in-sec²
12 mm to 5/8" hub: 2.4×10^{-4} oz-in-sec²

Weight:

6 to 10 mm hub: 3.5 oz. max.
12 mm to 5/8" hub: 4.5 oz. max.

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

Wire Color Code	Function		
	Single-Ended Outputs	Differential Outputs	
		Unidirectional	Bidirectional
Red	Power Source	Power Source	Power Source
Black	Common	Common	Common
White	Signal A	Signal A	Signal A
Green	Signal B (if used)	Signal \bar{A}	Signal B
Orange	Signal Z (if used)	No Connection	Signal \bar{B}
Blue	No Connection	No Connection	Signal \bar{A}
Shield	Floating	Floating	Floating
White/Black	—	—	Signal Z (if used)
Red/Black	—	—	Signal \bar{Z} (if used)



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Ordering Information

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

Code 1: Model	Code 2: Pulses/Rev	Code 3: Mounting	Code 4: Mechanical	Code 5: Output	Code 6: Electrical	Code 7: Termination
E14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E14 Size 14, Hub Shaft	0100 1000 0200 1024 0240 1250 0250 1500 0256 2000 0300 2048 0360 2500 0400 2540 0500 0600 0720 0750 0900	0 Size E14	Hub I.D. D 6 mm E 1/4" F 5/16" G 3/8" H 10 mm J 12 mm K 1/2" L 14 mm M 5/8" N 8 mm	0 Single Ended, Unidirectional 2 Single Ended, Bidirectional, no Index 3 Single Ended, Bidirectional, with Index 4 Differential, Unidirectional 6 Differential, Bidirectional, no Index 7 Differential, 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)

Code 4: Mechanical

