

SERIES E14

Dynapar™ brand

Miniature Encoder

Key Features

- Rugged Metal Housing
- Optional Differential Line Driver Outputs
- Up to 2540 PPR with Optional Index



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Optical

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 Connections

Wire Color Code	Function		
	Standard Outputs 5, 12, or 15 VDC	w/ Line Driver 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)

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

MECHANICAL

Shaft Sizes: 1/8" or 1/4"

Shaft Loading: 5 lb. radial, 3 lb. axial max.

Shaft Speed: 5,000 RPM max.

Starting Torque:

Shielded Bearing: 0.1 oz-in max. at 25 °C
Sealed Bearing: 0.43 oz-in max. at 25 °C

Running Torque:

Shielded Bearing: 0.08 oz-in max. at 25 °C
Sealed Bearing: 0.42 oz-in max. at 25 °C

Moment of Inertia: 3.8×10^{-5} oz-in-sec²

Housing and Cover: Aluminum

Shaft Material: Stainless Steel

Disc Material: Glass

Weight: 3.0 oz. max.

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)

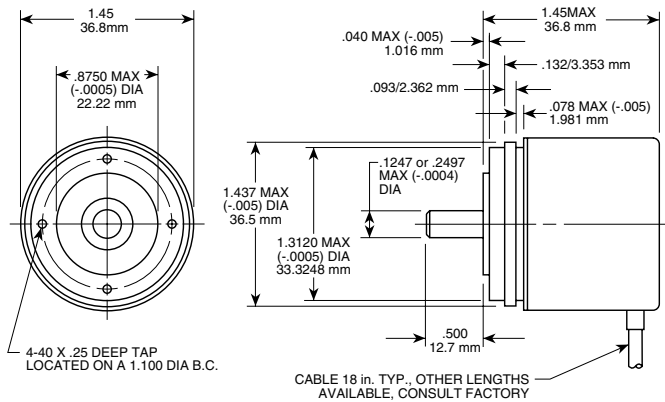
Ordering Information

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

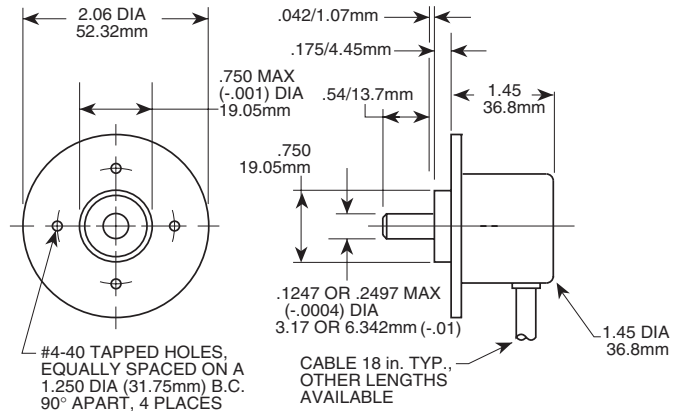
Code 1: Model	Code 2: Pulses/Rev	Code 3: Mounting	Code 4: Mechanical	Code 5: Output	Code 6: Electrical	Code 7: Termination
E14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E14 Size 14, Light Duty Enclosed	0100 0750 0200 0900 0250 1000 0256 1024 0300 1250 0400 1500 0500 2000 0600 2048 0720 2500 2540	0 Size E14 1 Size E20 Servo 2 Size E20 Flange Available when code 4 is 2 3 Size EC80 Flange	0 1/4" Shaft, Sealed Bearing 1 1/8" Shaft, Sealed Bearing 2 1/4" Shaft, Shielded Bearing 3 1/8" Shaft, Shielded Bearing	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)

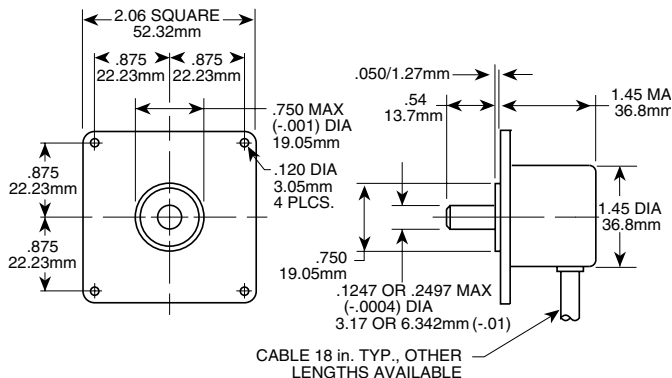
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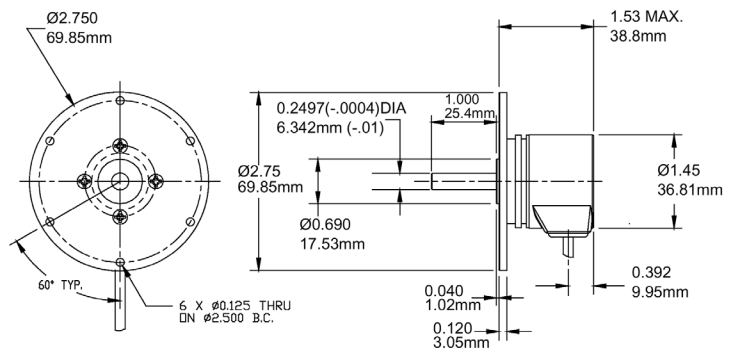
Code 3: 1



Code 3: 2



Code 3: 3



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