

SERIES E14IC

Dynapar™ brand

Miniature Encoder

Key Features

- Integrated coupling and “top-hat” for simple installation
- Compatible with NEMA size 23 and 24 motors
- Optional differential line driver outputs



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; Reverse phasing available, see Ordering Information

Accuracy: $\pm 3^\circ$ ($360^\circ \div$ 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 min.

Shaft Speed: 5,000 RPM max.

Starting Torque: 0.1 oz-in max. at 25 °C

Running Torque: 0.08 oz-in max. at 25 °C

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

Weight: 7.0 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			DB 25 Connector Pin Number
	Single Ended Outputs	Differential Outputs		
		Unidirectional	Bidirectional	
Red	Power Source	Power Source	Power Source	23
Black	Common	Common	Common	14
White	Signal A	Signal A	Signal A	1
Green	Signal B (if used)	Signal A	Signal B	3
Orange	Signal Z (if used)	No Connection	Signal B	4
Blue	No Connection	No Connection	Signal A	2
Shield	Floating	Floating	Floating	8
White/Black	—	—	Signal Z (if used)	5
Red/Black	—	—	Signal Z (if used)	6

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 checked="" type="checkbox"/> 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E14 Size 14, with Integral Shaft Coupling	0100 1000 0200 1024 0240 1250 0250 1500 0256 2000 0300 2048 0360 2500 0400 2540 0500 0600 0720 0750 0900	0 Size E14	A NEMA Size 23 Flange Mount with 1/4" Motor Shaft Coupling B NEMA Size 23 Flange Mount with 3/8" Motor Shaft Coupling C NEMA Size 34 Flange Mount with 3/8" Motor Shaft Coupling	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 8 Differential, Bidirectional, with Index, Reversed Phasing	0 5 VDC 1 12 VDC 2 15 VDC	0 18" Cable 1 3' Cable 2 6' Cable 3 10' Cable 4 15' Cable available when Code 5 = 7 or 8: 5 10' Cable, DB25 Connector 7 25' Cable, DB25 Connector

Flange Adapter Ordering Codes

Factory Option Code	Motor Frame Size	Motor Shaft Diameter	Model No. of Coupling Only
A	23	1/4"	605106-1
B	23	3/8"	605106-3
C	34	3/8"	605106-3

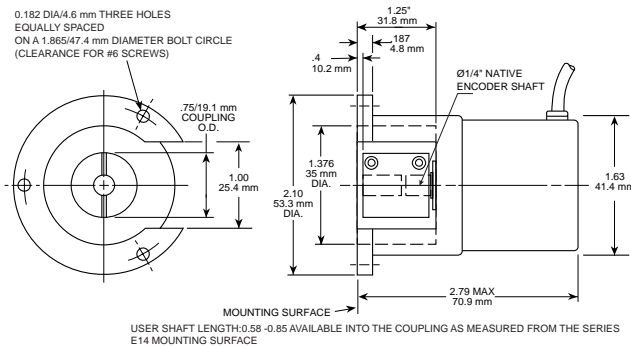
Field Installed Kit:

Field installed kits are available by ordering either Model No. E14-N1 (integral housing and mounting hardware for NEMA size 23 motors) or Model No. E14-N2 (integral housing & mounting hardware for NEMA size 34 motors), and the appropriate coupling listed in the table left.

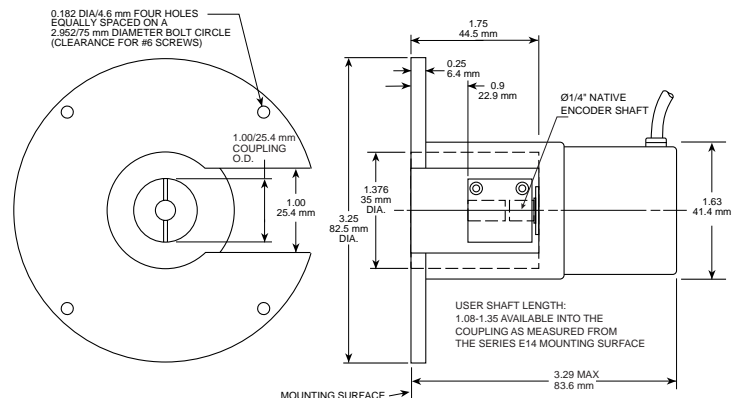
Other couplings available; consult factory.

Dimensions (inches/mm)

E14 for NEMA Size 23 Motors



E14 for NEMA Size 34 Motors



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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