

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: ($16 \times 10^6 \div$ 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 type="checkbox"/> | <input type="checkbox"/> | |
| E14 Size 14, with Integral Shaft Coupling | 0100 0200 0240 0250 0256 0300 0360 0400 0500 0600 0720 0750 0900 | 1000 1024 1250 1500 2000 2048 2500 2540 | 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 |

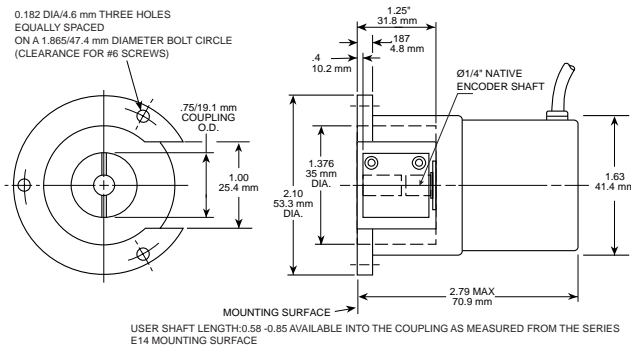
Field Installed Kit:

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.

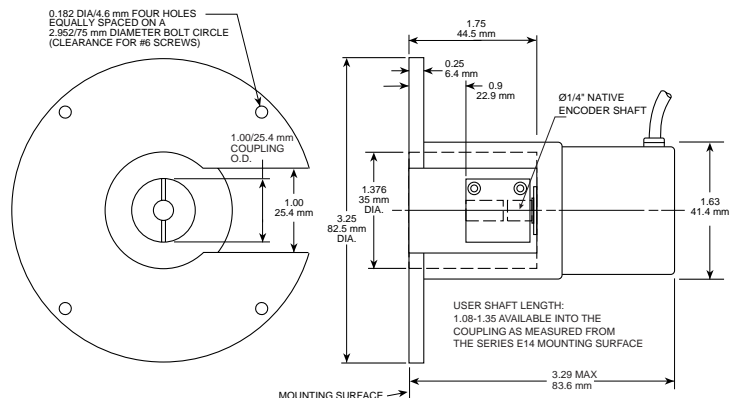
Other couplings available; consult factory.

Dimensions (inches/mm)

E14 for NEMA Size 23 Motors



E14 for NEMA Size 34 Motors



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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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