

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: $\pm 3 \times (360^\circ \div \text{PPR})$ 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 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 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 |

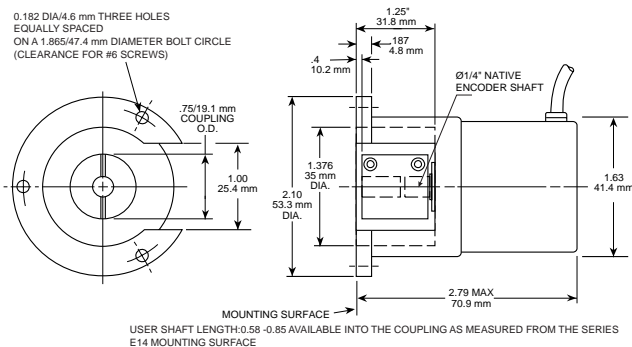
Field Installed Kit:

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

