

SERIES HA725

Dynapar™ brand

Shafted Encoder

Key Features

- High, direct-read resolutions up to 10,000PPR
- Industry Standard size 25 (2.5")
- IP66 Sealing



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental

Resolution: 8192 to 10,000 PPR (pulses/revolution)

Accuracy:

Any edge to any like edge of the same channel:

±10.8°/PPR (±3.9 arc-sec at 10,000 PPR)

Any edge to any edge of the opposite channel:

±40°/PPR (±14 arc-sec at 10,000 PPR)

Format: Two channel quadrature (AB) with optional Index (Z) and complementary outputs

Phase Sense: A leads B for CCW shaft rotation as viewed from the shaft end of the encoder

Quadrature Phasing: 90° ± 25° electrical

Symmetry: 180° ± 25° electrical

Index: 90° ± 25° electrical (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: (not including output loads)

Push-pull: 10 min. to 30 VDC max. at 60 mA max.

Line driver: 5 VDC ±10% at 40 mA max.

Outputs:

Push-pull: ±30 mA, short circuit protected

Line Driver: ±20 mA

Frequency Response:

Push-pull: 200 kHz min

Line Driver: 300 kHz min.

Noise Immunity: Tested to EN61326 (Industrial) for Electro Static Discharge, Radio Frequency Interference, Electrical Fast Transients, Conducted

and Magnetic Interference

CONNECTIONS

Mating Connector:

7 pin, style MS3106A-16S-1S (MCN-N5);

10 pin, style MS3106A-18-1S (MCN-N6)

MECHANICAL

Shaft Loading: 35 lbs. radial, 24 lbs. axial

Shaft Speed: 10,000 RPM max.mechanical

Bearing Life:

10⁹ revolutions at 35% of rated load

10⁸ revolutions at 75% of rated load

10⁷ revolutions at 100% of rated load

Moment of Inertia: 2.83 x 10⁻⁴ oz-in-sec²

ENVIRONMENTAL

Operating Temperature: 0 to +70 °C;

Storage Temperature: -25 to +90 °C

Shock: 50 G's for 11 milliseconds duration

Vibration: 5 to 2000 Hz at 2 G's

Humidity: to 98% without condensation

Enclosure Rating: NEMA4/IP66 (dust proof, washdown)

ELECTRICAL CONNECTIONS

*Mating connector/cable assembly wire color information is provided here for reference.

| Encoder Function | Cable #108595-* 7 Pin Single Ended | | Cable #1400635-* 10 Pin Dif Line Drv w/Inx | |
|------------------|---------------------------------------|------------|---|------------|
| | Pin | Wire Color | Pin | Wire Color |
| Sig. A | A | BRN | A | BRN |
| Sig. B | B | ORG | B | ORG |
| Sig. Z | C | YEL | C | YEL |
| Power +V | D | RED | D | RED |
| Com | F | BLK | F | BLK |
| Case | G | GRN | G | GRN |
| N/C | E | — | E | — |
| Sig. A̅ | — | — | H | BRN/WHT |
| Sig. B̅ | — | — | I | ORG/WHT |
| Sig. Z̅ | — | — | J | YEL/WHT |

Ordering Information

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

| Code 1: Model | Code 2: PPR | Code 3: Mechanical | Code 4: Output | Code 5: Electrical | Code 6: Termination |
|---------------------------------------|--|-----------------------------------|--|--|---|
| HA725 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| HA725 Size 25, High Resolution | 08192 09000 10000 | 0 Flange Mount, 3/8" Shaft | 0 Single Ended 2 Differential | Available when Code 4 = 0: 0 10-30V in; 10-30V Push-Pull out | 0 Connector, End Mount 1 Connector, Side Mount |
| | | | | Available when Code 4 = 2: 4 5V in; 5V Line Driver out | |

10 foot Cable Assemblies with MS Connector

108595-0010 7 Pin MS, Cable Assy. For Use with Single Ended w/Index Outputs

1400635-0010 10 Pin MS, Cable Assy. For Use with Differential Line Driver with Index Outputs

DIMENSIONS

