

SERIES HA725

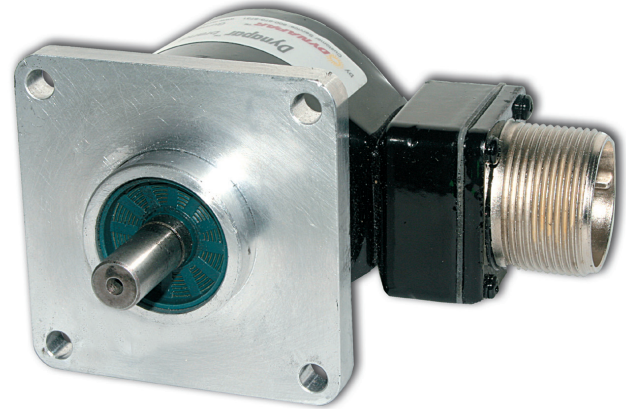
Dynapar™ brand

Shafted Encoder

Key Features

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

IND
Industrial Duty



CE
EN 61326-1



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Optical

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 EN61326-1

Electrical Immunity: Reverse polarity and short circuit protected

Termination: MS Connector

Mating Connector:

7 pin, style MS3106A-16S-1S (MCN-N5);
10 pin, style MS3106A-18-1S (MCN-N6)
10 pin, NEMA4 style (MCN-N6N4)

MECHANICAL

Shaft Size: 3/8"

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

Shaft Speed: 10,000 RPM max.mechanical

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

Housing and Cover: Aluminum

Shaft Material: Stainless Steel

Disc Material: Glass

Weight: 1.5 lbs

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: Up to 98% (non-condensing)

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

ELECTRICAL CONNECTIONS

Encoder Function	Cable #108595-XXXX 7 Pin Single Ended		**Cable # 109209-XXXX or 1400635XXXX 10 Pin Dif Line Driver w/ Index	
	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	E	BLK	F	BLK
Case	F	GRN	G	GRN
N/C - Shield	G	—	E	—
Sig. \bar{A}	—	—	H	BRN/WHT
Sig. \bar{B}	—	—	I	ORG/WHT
Sig. \bar{Z}	—	—	J	YEL/WHT

Notes:

- 1) Cable Configuration: PVC jacket, 105 °C rated, overall foil shield; 3 twisted pairs 24 AWG (output signals), plus 2 twisted pairs 22 AWG (input power)
- 2) Standard cable length is 10 feet but may be ordered in any length in 5 foot increments. For example, for a 20 foot cable, replace -XXXX with -0020
- 3) **For watertight applications, use NEMA4 10 pin cable & connector 109209-XXXX
- 4) "MS" Type mating connectors and pre-build cables are rated NEMA 12

Ordering Information

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

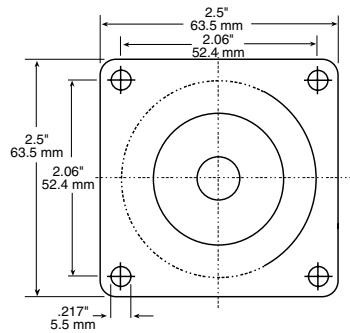
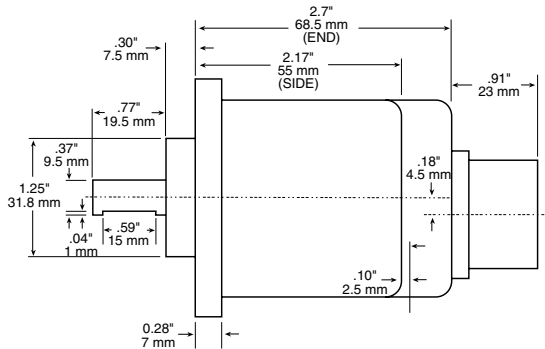
Code 1: Model	Code 2: PPR	Code 3: Mechanical	Code 4: Output	Code 5: Electrical	Code 6: Termination
HA725	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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	

Cable Assemblies with MS Connector*

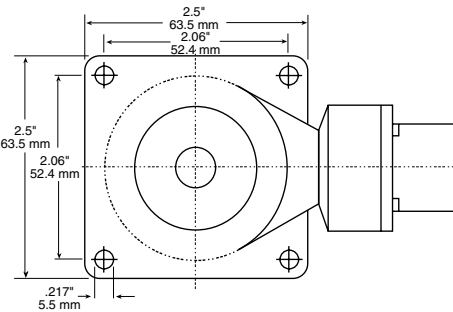
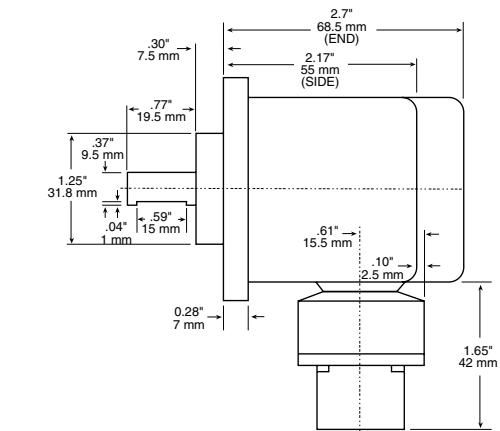
- 108595-XXXX** 7 Pin MS, Cable Assy. For Use with Single Ended w/Index Outputs
- 1400635XXXX** 10 Pin MS, Cable Assy. For Use with Differential Line Driver with Index Outputs
- 109209-XXXX** NEMA4 10 pin MS, Cable Assy. For Use with Differential Line Driver with Index

*Note: Standard cable length is 10 feet but may be ordered in any length in 5 foot increment. For example, for a 20 foot cable, replace XXXX with -0020.

DIMENSIONS



Code 6: Termination: 0



Code 6: Termination: 1



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