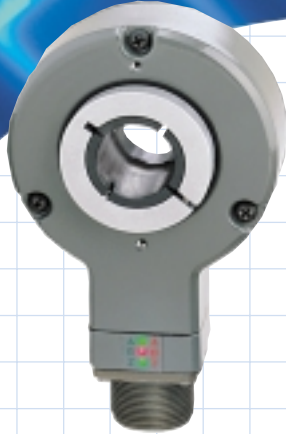


Series HS35 Sealed Hollow Shaft



Dual Isolated Outputs Model



Single Output model shown with LED Output Indicators

- **Hollowshaft design eliminates mounting bracket, flexible shaft coupling, and installation labor**
- **Direct shaft mount eliminates shaft alignment procedures**
- **Flexible tether minimizes bearing load**
- **Unbreakable disk**
- **Robust metal hubshaft**
- **Electrically isolated**
- **Thermally insulated**

The Dynapar brand Series HS35 Sealed Hollowshaft encoder is designed for easy installation on motor or machine shafts. Its hollowshaft design eliminates the need for a flexible shaft coupling, mounting bracket, flower pot, or flange adapter. This not only reduces the installation depth, but also lowers total cost.

The Series HS35 Sealed Hollowshaft is equipped with an unbreakable disk that meets the demands of the most severe shock and vibration generating processes. Its floating shaft mount and spring tether eliminate bearing loads and flexible shaft couplings to eliminate wear and maintenance.

Series HS35 has complete electrical protection from overvoltage, reverse voltage, and output short circuits. In addition, the Series HS35 is not only electrically & thermally isolated, but also environmentally sealed with shaft seals at both ends.

Mechanical and Environmental Features

- Unbreakable code disk
- Flexible mounting
- Eliminated bearing loads
- Shaft seals at both ends of hollowshaft
- Sealed connector or cable exit
- Insulated from motor housing/shaft temperatures to 125°C

Electrical Features

- Overvoltage, reverse voltage, & output short circuit protection
- Noise immunity to EN50082-2
- Electrically isolated

SPECIFICATIONS

Electrical

Code: Incremental

Resolution: 1 to 2500 PPR (pulses/revolution)

Accuracy: (worst case any edge to any other edge) ±7.5 arc-min.

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

Phase Sense: A leads B for CW shaft rotation

viewing the shaft clamp end of the encoder

Quadrature Phasing: 90° ± 22.5° electrical

Symmetry: 180° ± 18° electrical

Index: 180° ± 18° electrical (gated with B low)

Waveforms: Squarewave with rise and fall times less than 1 microsecond into a load capacitance of 1000 pf

Input Power: (each output) 4.5 min. to 26 VDC max. at 100 mA max., not including output loads

Outputs:
7273 Open Collector: 30 VDC max., 40 mA sink max.
7272 Push-Pull and Differential Line Driver: 40 mA sink or source
4469 Differential Line Driver: 100 mA sink or source

Frequency Response: 100 kHz min.
Electrical Protection: Overvoltage, reverse voltage and output short circuit protected
Noise Immunity: Tested to EN50082-2 (Heavy Industrial) for Electro Static Discharge, Radio Frequency Interference, Electrical Fast Transients, Conducted and Magnetic Interference

Mechanical

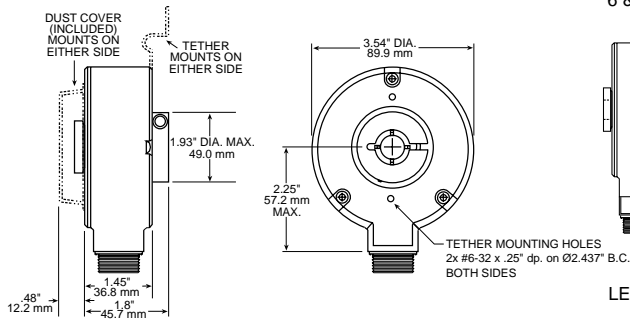
Bearing Life: 80,000 hours at 3600 RPM; 128,000 hours at 1800 RPM
Shaft Loading: 40 lbs. radial, 30 lbs. axial
Shaft Speed: 3600 RPM max. (*Important: see Operating Temperature derating for >1800 RPM*)

Electrical Connections

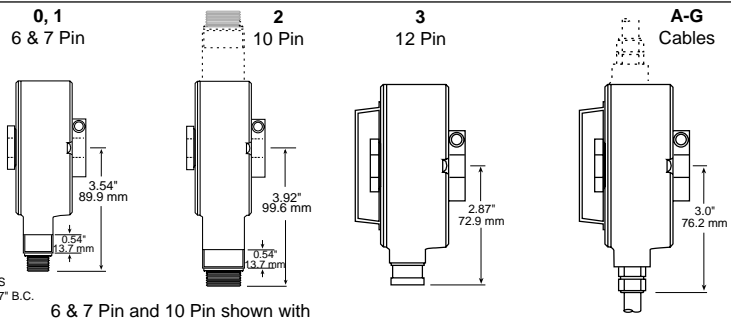
*Mating connector/cable assembly wire color information is provided here for reference.

Encoder Function	Cable #108594-* 6 Pin Single Ended		Cable #112123-* 6 Pin Dif Line Drv w/o Idx		Cable #108596-* 7 Pin Dif Line Drv w/o Idx		Cable #108595-* 7 Pin (If Used)		Cable #1400635-* 10 Pin (If Used)		Cable #108615-* 12 Pin CCW (If Used)	
	Pin	Wire Color	Pin	Wire Color	Pin	Wire Color	Pin	Wire Color	Pin	Wire Color	Pin	Wire Color
Sig. A	E	BRN	E	BRN	A	BRN	A	BRN	A	BRN	5	BRN
Sig. B	D	ORN	D	ORN	B	ORN	B	ORN	B	ORN	8	ORN
Sig. Z	C	YEL	—	—	—	—	C	YEL	C	YEL	3	YEL
Power +V	B	RED	B	RED	D	RED	D	RED	D	RED	12	RED
N/C	F	—	—	—	—	—	E	—	E	—	7	—
Com	A	BLK	A	BLK	F	BLK	F	BLK	F	BLK	10	BLK
Case	—	—	—	—	G	GRN	G	GRN	G	GRN	9	—
Sig. A	—	—	C	BRN/WHT	C	BRN/WHT	—	H	BRN/WHT	6	BRN/WHT	
Sig. B	—	—	F	ORN/WHT	E	ORN/WHT	—	I	ORN/WHT	1	ORN/WHT	
Sig. Z	—	—	—	—	—	—	—	J	YEL/WHT	4	YEL/WHT	
0V Sense	—	—	—	—	—	—	—	—	—	—	2	GRN
5V Sense	—	—	—	—	—	—	—	—	—	—	11	BLK/WHT

Dimensions

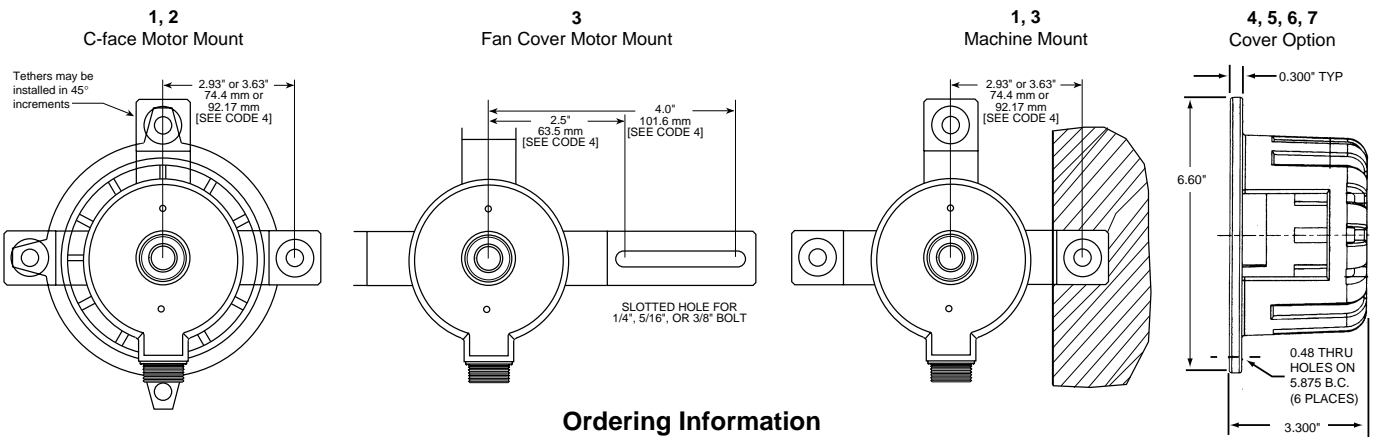


Code 7: Termination



6 & 7 Pin and 10 Pin shown with LED Output Indicator Option - Code 8: PS

Code 4: Fixing



Ordering Information

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

Code 1: Model	Code 2: PPR	Code 3: Bore Size	Code 4: Fixing	Code 5: Format	Code 6: Output	Code 7: Termination	Code 8: Options
HS35	<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"/>	<input type="checkbox"/> <input type="checkbox"/>

Ordering Information								
HS35	Size 35 heavy-duty, sealed hollowshaft encoder	0001 0512 0003 0600 0010 0900 0012 1000 0050 1024 0060 1200 0064 1270 0100 1500 0120 1800 0240 2000 0250 2048 0300 *2400 0360 *2500 0500 * Glass Code Disk	0 6 mm 1 1/4" 2 5/16" 3 8 mm 4 3/8" 5 10 mm 6 12 mm 7 1/2" 8 5/8" 9 15 mm A 16 mm B 19 mm C 3/4" D 20 mm E 7/8" F 24 mm G 1" H 1-1/8"	0 None - customer supplied 1 Clearance hole for 3/8" bolt on 5.88" dia. bolt circle (to fit 4-1/2" NEMA C-face) 2 Clearance hole for 1/2" bolt on 7.25" dia. bolt circle (to fit 8-1/2" NEMA C-face) 3 Slotted hole for bolt on 2.5" to 4.0" radius (to fit standard AC motor fan cover slots) 4 Same as '1', w/ cover kit 5 Same as '3', w/ cover kit 6 Same as '1' w/ dual cover kit 7 Same as '3' w/ dual cover kit	0 single ended, unidirectional (A) 1 single ended, bidirectional (AB) 2 single ended, bidirectional with index (ABZ) available when Code 6 is 3, 4, A or B: 3 differential, bidirectional (AA BB) available when Code 6 is 3, 4, A or B and code 7 is 2, 3, or 7 - G: 4 differential, bidirectional with index (AA BB ZZ) available when Code 6 is 3, 4, A or B, and Code 7 is 2, 7 or A-G: 5 Dual isolated differential, bi-directional w/index (AA BB ZZ)	0 5-26V in, 5-26V open collector out 1 5-26V in, 5-26V open collector out w/ 2.2kΩ pullups 2 5-26V in, 5-26V push-pull out available when Code 5 is 3, 4 or 5: 3 5-26V in, 5V line driver out (7272) 4 5-26V in, 5-26V line driver out (7272) 5 5-26V in, 5V Differential Line Driver out (4469) 6 5-15V in, 5-15V Differential Line Driver out (4469) A same as '3' with high temp. to 100°C B same as '4' with high temp. to 100°C	0 6 pin connector 1 7 pin connector 2 10 pin connector 3 12 pin connector 5 6 pin connector, plus mating connector 6 7 pin connector, plus mating connector 7 10 pin connector, plus mating connector 8 12 pin connector, plus mating connector A 18" (.5m) cable B 36" (1m) cable C 72" (2m) cable D 10' (3m) cable F 13' (.3m) cable with 10 pin connector plus mating connector G 13' (.3m) cable	available when Code 5 is 0-4 and Code 7 is 0-2 or 5-7: PS LED Output Indicator

109473-0001	Tether kit (clearance hole for 3/8" bolt on 5.88" dia. bolt circle)	110533-0001	Cover Kit, 56C face
109473-0002	Tether kit (clearance hole for 1/2" bolt on 7.25" dia. bolt circle)	110533-0002	Cover Kit, fan cover
109473-0003	Tether kit (slotted hole for bolt on 2.5" to 4.0" radius)	110533-0003	Dual Cover Kit, 56C face
112121-0001	Spare Hub Clamp (Bore size Code 3: 0 - 9)	110533-0004	Dual Cover Kit, fan cover
112121-0002	Spare Hub Clamp (Bore size Code 3: A - H)		