

Encoder Technology's ET35 Extreme Duty Industrial Hollow Shaft Encoder: This rugged hollow shaft encoder replaces the older generation of the HS35 Hollow Shaft Encoder and operates reliably from -40 to +100°C. The Hard Anodized finish encoder exceeds IP66/IP67 and NEMA 6 enclosure requirements. The proprietary design and manufacturing capabilities of Encoder Technology coupled with a unique labyrinth double-sealed housing enable the Encoder to be operated when regulatory washdown and high pressure steam is required. Utilization of an advanced Opto ASIC with innovative packaging techniques enables the encoder to operate in high shock and vibration environments. The ET35 is ideally suited for use in harsh environment applications such as Food Processing, Paper Mill, Oil Field, Mining, Material Handling and Packaging Equipment.

Technical Specifications

Mechanical

Shaft Inside Diameter	See Page 2
Bore runout	±0.0005 TIR at midpoint
Shaft	6061-T6 Aluminum
Starting torque at 25°C	4.0 in-oz. maximum
Running Torque	3.0 in-oz at ambient
Bearings	61806-ZZ
Bearing life	5 x 10 ⁵ revs at rated shaft loading, 5 x 10 ¹¹ revs at 10% of rated shaft loading. (manufacturers' specs)
Frame	Clear Chem Film
Cover	Black Powder Coat over Hard Anodized Aluminum.
Disc material	Metal or mylar (unbreakable)
Weight	26 ounces, typical
Rated Speed	6000rpm Max

Electrical

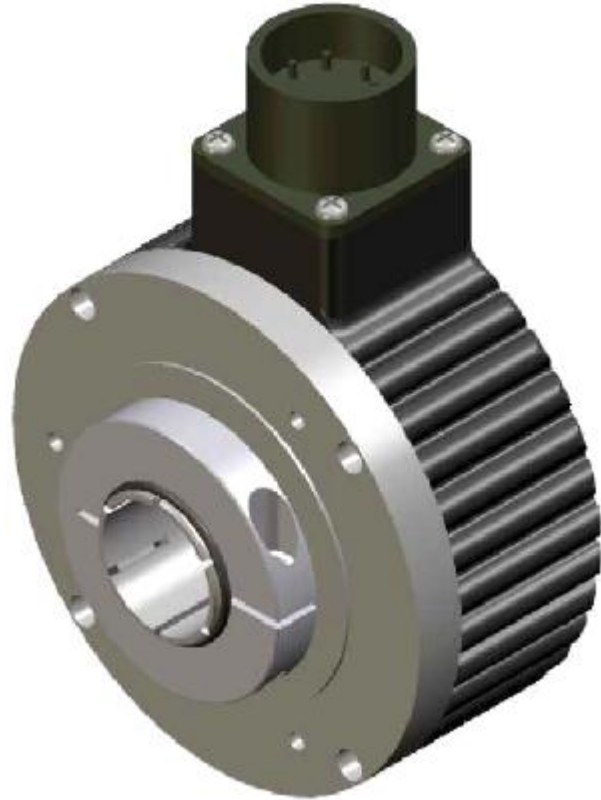
Code	Incremental
Cycles per Revolution	See "Current Resolutions" list
Supply voltage	See ordering information
Current requirements	<50 mA Maximum (no load condition)
Insulation Resistance	100 Megohm @500VDC between any wire & ground
Output format	Channels A and B in Quadrature ± 15° electrical, Symmetry 50% +/-10%
Output format options	Index and complementary outputs
Output IC Options	ET7272 or ET7273 Open Collector Output
Illumination	LED
Frequency response	125 kHz (data and index)
Output termination	See Table 1 - pinouts
	See Table 6 - ordering information
Circuit Protection	Reverse over voltage and output short circuit

Environmental

Operating temperature	-40 to +100°C
Storage temperature	-40 to +100°C
Shock	50G's for 11msec duration
Vibration	5 to 2000Hz @ 20 G's
Humidity	100%
NEMA	NEMA 4X, 6, IP66, IP67
	NEMA 6P upon request

The above specifications are subject to change without notice.
Dimensions shown in inches.

ET35 Hollow Shaft Encoder



Ordering Information

ET35 – Hollow Shaft Encoder

Example part numbers:

ET35	-	75	-	500	-	ABC	-	72	-	SCS18	-	28
1.		2.		3.		4.		5.		6.		7.

1. Model

Extreme Duty Hollow Shaft..... ET35

2. Shaft Configuration

1" (standard)	1.0
*0.875 (7/8")	87
*0.750 (3/4")	75
*0.625 (5/8")	62
*0.501 (1/2")	50
Metric sizes – Consult the factory	
*Supplied with insulated inserts	
Spare inserts may be ordered separately. Consult the factory	

3. Standard Resolutions

See "Current Resolutions" list. Others by special order. Consult the factory

4. Output Channels

Single Channel	A
Dual Quadrature	AB
Dual with Complements	ABC
Dual with Index	ABZ
Dual with Index & Complements	ABZC

5. Output Driver

Differential line drivers	
ET7272 (5 to 28V)	72
ET7273 open collector (5 to 28V)	73

6. Output Termination see table 1 pinouts

MS3102R14S-6P (6 pin)	S14
MS3102R16S-1P (7pin)	S16
MS3102E18-1P (10 pin)	S18
Side Cable with seal (18" std)	SCS18
Eurofast FSFD 4.5-0.5(5 pin)	F5
Eurofast FSFD 8-0.5(8 pin)	F8

7. Voltage Standard

5Vdc in; 5Vdc out	5
5 to 28Vdc In/Out	28
5 to 28Vdc in, 5Vdc out (ET7272 only)	28/5

Optional Accessories

Tethers

See Tether Data Sheet



Headquarters: 1675 Delany Road • Gurnee, IL 60031-1282 • USA
Phone: +1 847.662.2666 • Fax: +1 847.662.6633

Customer Service:

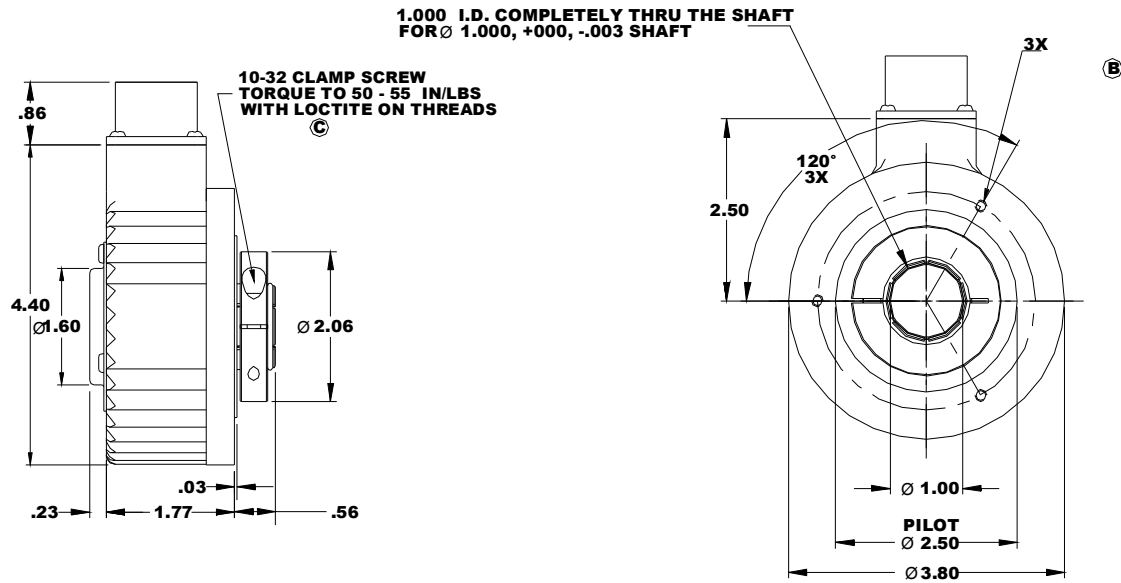
Tel.: +1.800.873.8731
Fax: +1.847.662.4150
custserv@dynapar.com

Technical Support

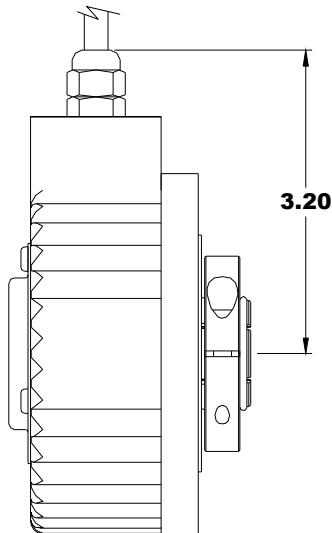
Tel.: +1.800.234.8731
Fax: +1.847.782.5277
dynapar.techsupport@dynapar.com



Outline Dimensions



Optional Cable Output



Without Rear Shaft Cover

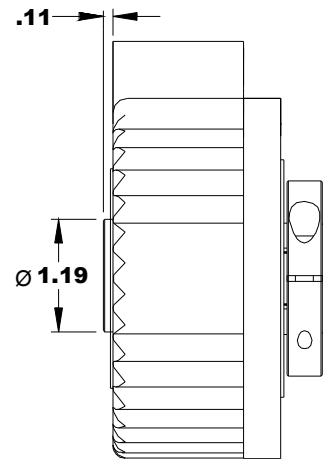
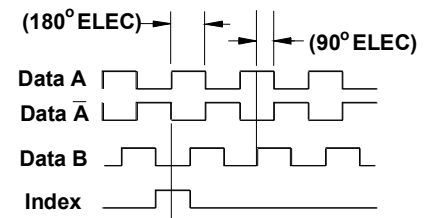


Table 1: Output Terminations (Pinout)

Connector Pins					Output Channels			Cable Termination	
M14	M16	M18	F5	F8	ABZ	ABC	ABZC	Wire Color	Function
E	A	A	4	1	A	A	A	Green	A
D	B	B	2	4	B	B	B	Blue	B
C	C	C	5	6	Z	A ^{Bar}	Z	Orange	Z
B	D	D	1	2	+V	+V	+V	Red	+Vdc
F	E	E			N/C	B ^{Bar}	N/C	Black	Ground
A	F	F	3	7	Circuit Ground			Violet	A ^{Bar}
	G	G			Case Ground			Brown	B ^{Bar}
		H		3	N/C	N/C	A ^{Bar}	Yellow	Z ^{Bar}
		I		5	N/C	N/C	B ^{Bar}	White	Case Gnd
		J		8	N/C	N/C	Z ^{Bar}		

Output Format

DATA AND INDEX
Not all complements shown.
A shown for reference.



A leads B, CCW (From Clamp End)