

Encoder Technology's ET23 Industrial Grade Hollow Shaft Encoder for cost competitive applications accepts up to 0.75" diameter shafts 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 in rugged industrial environments. Utilization of an advanced Opto ASIC with innovative packaging techniques enables the encoder to operate in high shock and vibration environments. The ET23 is also available in an Intrinsically Safe version certified to ATEX EEx ia IIB T4 when used with the appropriate IS barrier. The ET23 is often mounted on the back of servomotors and is used in harsh environment applications where Encoder feedback is needed, such as Factory Automation, Packaging and Material Handling Equipment

ET23 Hollow Shaft Encoder

Also available in an intrinsically safe version
Certified to ATEX EEx ia IIB T4



Mechanical

Shaft Inside Diameter	See Table 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. maximum
Bearings	61805-ZZ
Bearing life	5 x 10 ⁸ 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 (unbreachable)
Weight	20 ounces, typical

Electrical

Code	Incremental
Cycles per Revolution	See "Current Resolutions" list
Supply voltage	See ordering information
Current requirements	<50 mA Maximum (no load condition)
Output format	Channels A and B in Quadrature ± 15° electrical, Symmetry 50% +/-10%
Output format options	Index and complementary outputs
Output IC Options	ET7272, ET7273
Illumination	LED
Frequency response	125 kHz (data and index)
Output termination	See Table 1 – pinouts
Circuit Protection	See Table 6 – ordering info.
	Reverse over voltage and output short circuit

Environmental

Operating temp	-40 to 100°C
Operating temp ATEX	-40 to 80°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.

Ordering Information

ET23 – Hollow Shaft Encoder IS23 - ATEX EEx ia IIB T4 Certified Version

Example part numbers:

ET23	-	75	-	500	-	ABC	-	72	-	SCS18	-	28
1.		2.		3.		4.		5.		6.		7.

1. Model

Extreme Heavy Duty	ET23
Atex EEx ia IIB T4 Certified	IS23

2. Shaft Configuration

0.750" (standard)	75
*0.3760 (3/8")	37
*0.501 (1/2")	50
*0.626 (5/8")	62
Metric Sizes – Consult the factory	

***Supplied with insulated inserts**
Spare inserts may be ordered separately. Consult the factory

3. Standard Resolutions

Many resolutions from 1 to 3600. See "Current Resolutions" list. Others by special order. Consult the factory.

4. Output Channels

Single	A
Dual quadrature	AB
Dual with Complements	ABC
Dual with index	ABZ
Dual with Index & Complements	ABZC

5. Output ICs

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 (8 pin)	F8

7. Voltage - Standard

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

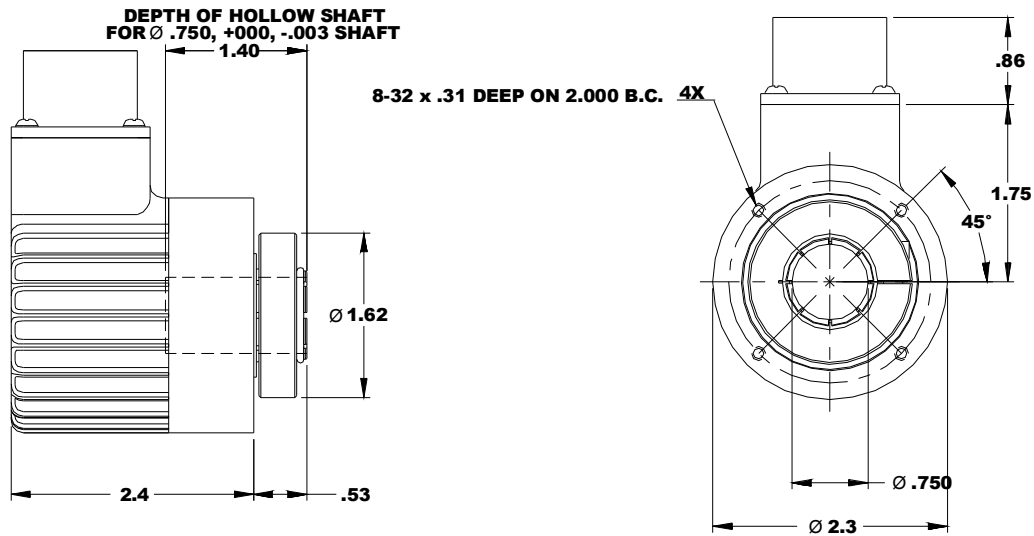
Voltage - ATEX

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

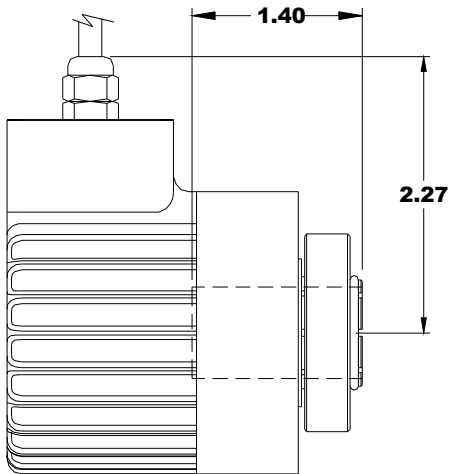
Optional Accessories

Tethers
 See Tether Data Sheet

Outline Dimensions

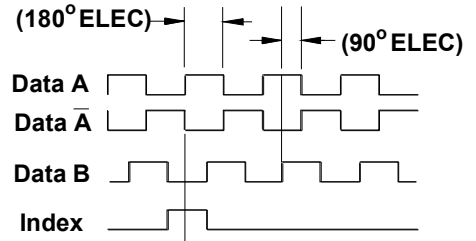


Optional Cable Output



Output Format

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



A leads B, CCW (From Clamp End)

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}		

Case Ground not available on ATEX Certified Units



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

