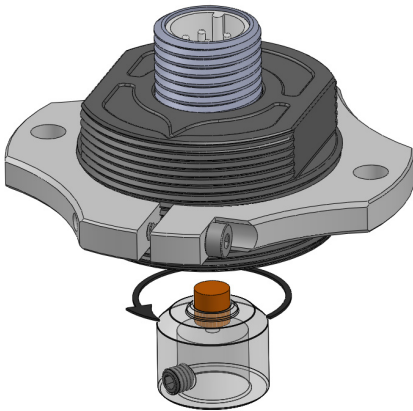


MODEL 30MT – INCREMENTAL ENCODER MODULE



Ø30 mm/1.181"

FEATURES

- Large Air Gap and Tolerance to Misalignment
- Resolutions of 1 to 1024 CPR (4096 PPR with Quadrature Counting)
- Sealing Options to IP69K
- Operating Temperature Range -40° to 120° C
- Easy Alignment and Installation

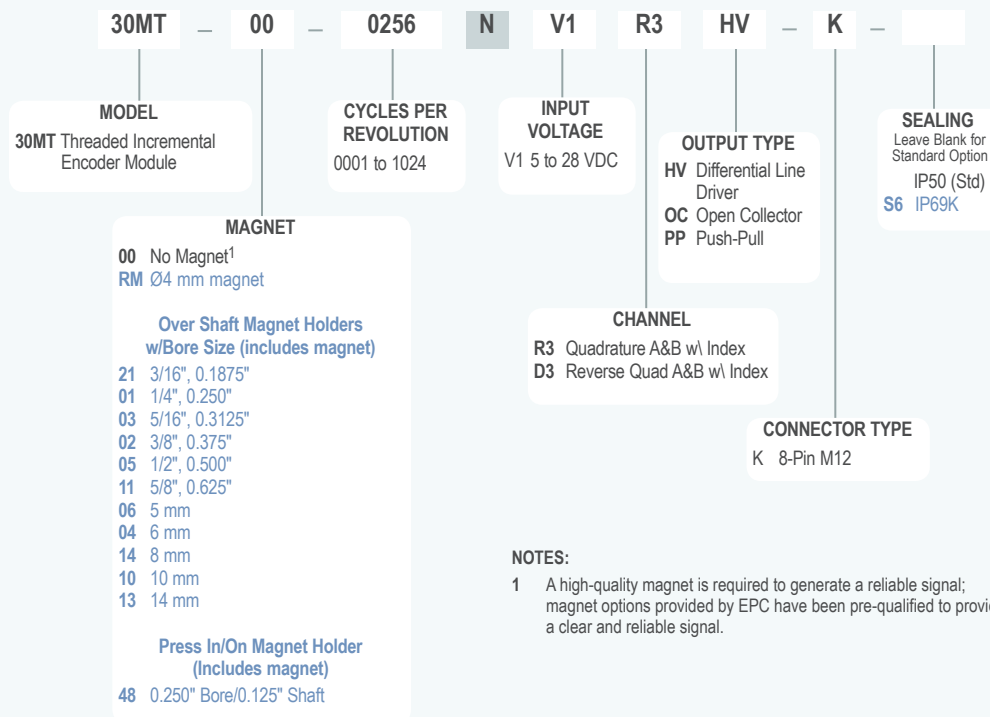
The Model 30MT Accu-Coder™ is a compact, incremental encoder module with advanced magnetic sensing and signal processing technology. With a built-in alignment feature, the threaded housing allows for quick, accurate air-gap setting. Featuring resolutions from 1 to 1024 CPR, several output types, and a wide range for supply voltage, it can be configured for a variety of industrial, commercial and consumer feedback applications. The non-contact magnetic sensor and optional sealing up to IP69K allows the Model 30MT to be applied in environments where dirt, dust and liquids are present.

COMMON APPLICATIONS

Motor Feedback, Mobile Equipment Speed and Steering Sensing, Timber Processing Machinery, Studio Lighting and Stage Equipment Control, Rotary Valve Position Monitoring and Control, Solar Panel Positioning, Vending Machines, Punch Presses, Tank Level Monitoring, Robotics

MODEL 30MT ORDERING GUIDE

Blue type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.



NOTES:

- 1 A high-quality magnet is required to generate a reliable signal; magnet options provided by EPC have been pre-qualified to provide a clear and reliable signal.

MODEL 30MT SPECIFICATIONS

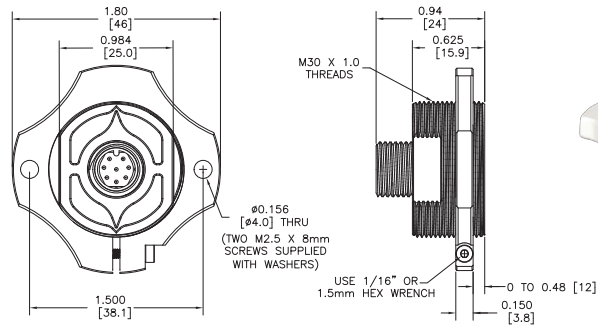
ELECTRICAL

Input Voltage..... 4.5 to 28 VDC (4.5 to 20 VDC over 105°C)
 Input Current 80 mA max, 50 mA or less typical with no output load
 Output Format Two square waves in quadrature with channel A leading B for clockwise magnet rotation as viewed from the encoder mounting face. Index gated to A and B.
 Output Types..... Open Collector
 Open Collector with Differential Outputs
 Differential Line Driver (Meets RS422 at 5 VDC)
 Push-Pull
 All outputs 20 mA max per channel
 Max Frequency 350 kHz
 Electrical Protection .. Reverse voltage and output short circuit protected.
 Min Edge Sep 20° electrical typical @ 25° C
 Accuracy Typically within ±0.7° mechanical from true position. Accuracy improves at nominal air gap with minimized magnet runout, offset and endplay.

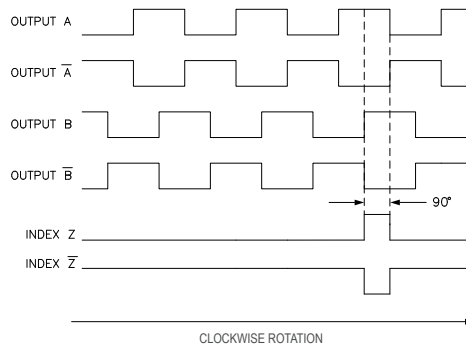
MECHANICAL/ENVIRONMENTAL

Operating Temp -40° C to 120° C; reduced to 110° C max above 200 KHz with 20V input and 20mA/channel output
 Air Gap 0.022" nominal recommended
 User Shaft Tolerances
 Axial Endplay..... ±0.020" max
 Radial Runout 0.008" max
 Axial Offset..... 0.008" max
 Mounting Bolts Two m2.5 x 8mm screws with washers provided
 Housing Material High Temp, Toughened Nylon Composite
 Weight..... 0.7 oz typical or less (with clamping nut)
 Humidity..... 98% RH non-condensing
 Vibration..... 20 g @ 10 to 2000 Hz (MIL-STD-202G Method 204D)
 Shock..... 100 g @ 11 ms duration (MIL-STD-202G Method 213B)
 Sealing..... IP50 standard; IP69K available

MECHANICAL DRAWING



WAVEFORM DIAGRAMS



NOTE: ALL DEGREE REFERENCES ARE ELECTRICAL DEGREES. WAVEFORM SHOWN WITH OPTIONAL COMPLEMENTARY SIGNALS A, B, Z FOR HV OUTPUT ONLY.

WIRING TABLE

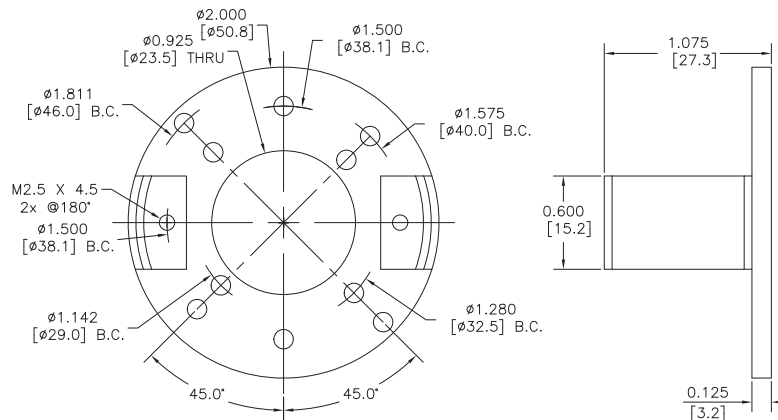
For EPC-supplied mating cables, refer to wiring table provided with cable. Trim back and insulate unused wires.

Function	8-pin M12
Com	7
+VDC	2
A	1
A'	3
B	4
B'	5
Z	6
Z'	8

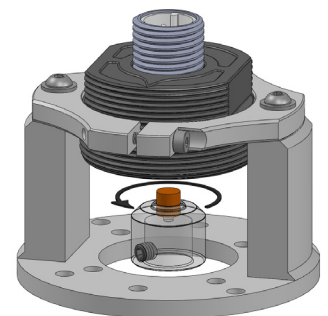
UNIVERSAL MOUNTING ADAPTOR Stock #176672

Provides the following mounting patterns, 2x @ 180°:

- Ø1.142 [Ø29.0] B.C.
- Ø1.280 [Ø32.5] B.C.
- Ø1.500 [Ø38.1] B.C.
- Ø1.575 [Ø40.0] B.C.
- Ø1.811 [Ø46.0] B.C.

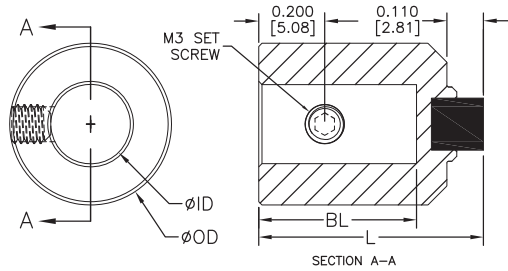


NOTE: ALL HOLES ARE Ø0.125 [Ø3.2] THRU, 2x @ 180°.



OVER SHAFT MAGNET HOLDERS

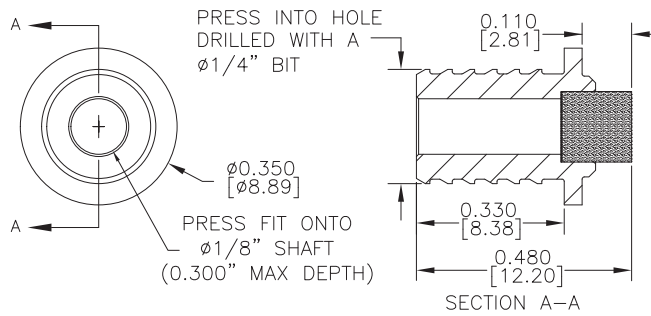
STOCK #	∅ID	∅OD	BL	L
176596-01	3/16" (0.1875")	0.365	0.375	0.580
176597-01	5mm (0.1969")	0.365	0.375	0.580
176598-01	6mm (0.2362")	0.490	0.375	0.580
176599-01	1/4" (0.2500")	0.490	0.375	0.580
176600-01	5/16" (0.3125")	0.490	0.475	0.680
176601-01	8mm (0.3150")	0.490	0.475	0.680
176602-01	3/8" (0.3750")	0.615	0.475	0.680
176603-01	10mm (0.3937")	0.615	0.475	0.680
176604-01	1/2" (0.5000")	0.740	0.750	0.955
176605-01	14mm (0.5512")	0.740	0.750	0.955
176606-01	5/8" (0.6250")	0.865	0.750	0.955



Over Shaft
Magnet Holder

PRESS IN/ON MAGNET HOLDER

Stock # 176607-01



Press In/On
Magnet Holder

MATING CABLES/CORDSETS

M12 Mating Cordsets	
Stock #	Description
075100	8-Pin M12 Mating Cordset, 0.5 Meters
075101	8-Pin M12 Mating Cordset, 2 Meters
075102	8-Pin M12 Mating Cordset, 4 Meters
075103	8-Pin M12 Mating Cordset, 6 Meters
075104	8-Pin M12 Mating Cordset, 10 Meters