

MR 332 Absolute Encoder



Features

- ➔ 100% passive sensing design - no electronics
- ➔ Absolute 0.025° (14-bit) single-turn resolution
- ➔ Controller can also track up to 4096 (12-bit) turns
- ➔ Immune to high voltages
- ➔ Immune to EMI and RFI for safe use in and around medical equipment and “noisy” industrial environments

Product Description

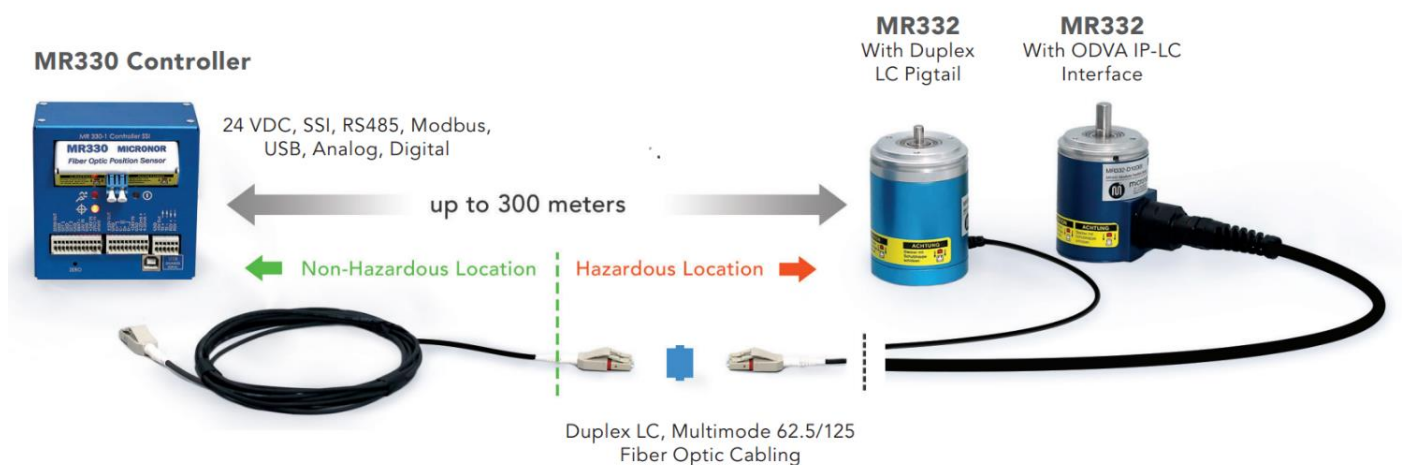
The MR332 Series Fiber Optic Absolute Position Sensor measures absolute angular position from 0° to 360° with 0.025° resolution.

This innovative sensor system outdistances conventional absolute encoders and resolvers – transmitting interference-free up to 300 meters! The system consists of a passive optical sensor and active controller linked via industry standard 62.5/125µm multimode fiber. Interconnect options include commercial Duplex LC or industrial grade ODVA IP-LC Duplex

The MR330-1 Controller Module is the active optical and electrical interface for the MR330 series Fiber Optic Absolute Position Sensor System. The module incorporates multiple built-in interfaces for compatibility with PLCs, motor drives and other motion control systems.

ZapFREE[®] software is used for data acquisition.

System Planning



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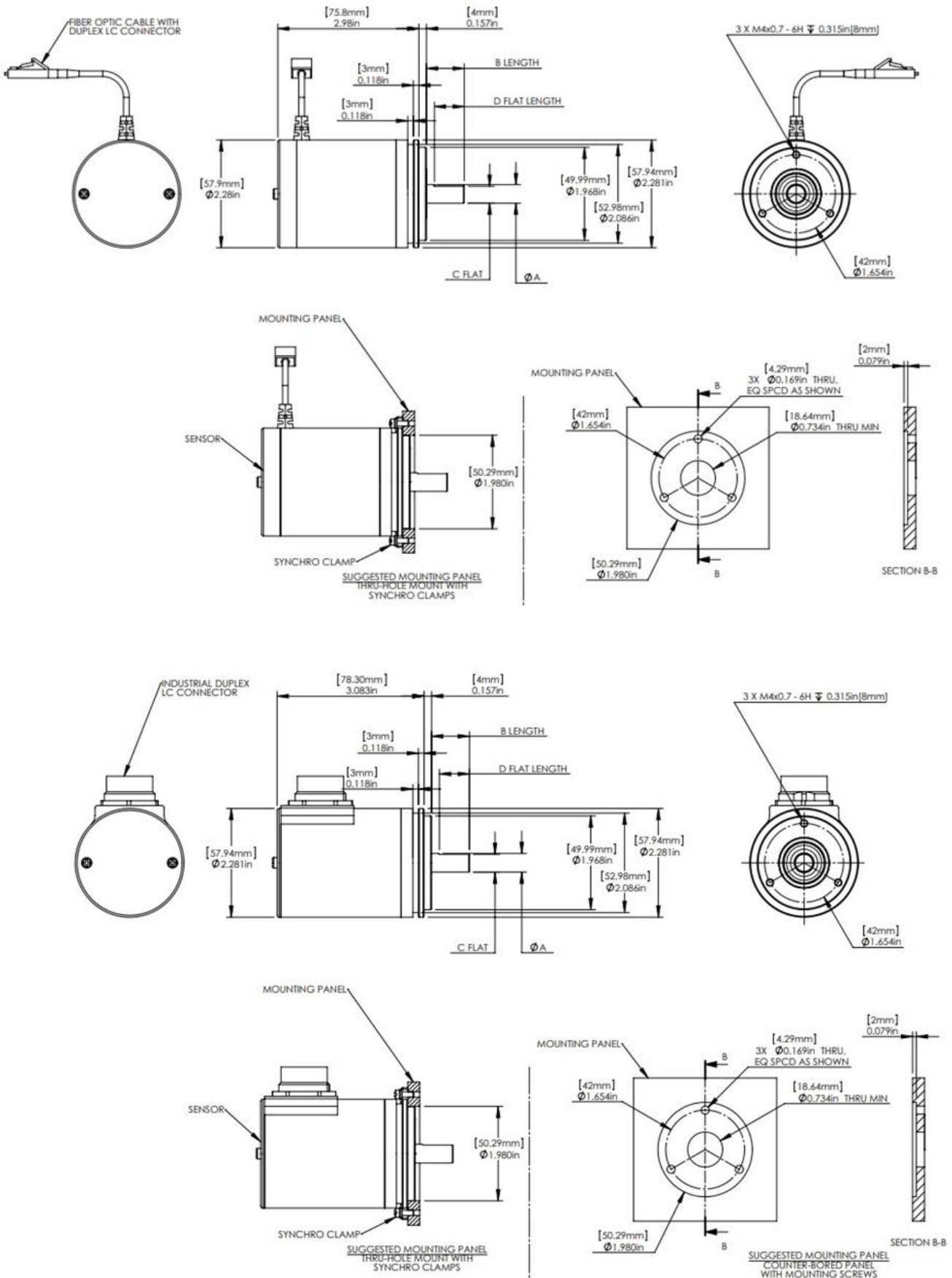
Specifications

Measurement Parameters	
Measurement Range	0° to 360° (continuous)
Resolution	13 bits (8192), 14 bits (13950)
Maximum RPM	Maximum 2,500 rpm for position reading; Mechanical limit is 6,500 rpm
Mechanical Performance	
Moment of Inertia	2.88E-06 kg*m ² (4.08E-04 oz*in*s ²)
Starting Torque	< 0.02 N*m with Shaft Seal
Max Shaft Loads	Axial 40 N (9 lbf), Radial 80 N (18 lbf)
System MTBF (ISO Method)	L10 bearing life at 100% of max radial/axial load at 2500 rpm: 4.650E+04 hours L10 bearing life at 10% of max radial/axial load at 2500 rpm: 1.988E+06 hours
Optical Interface	
Optical Interface	LC Duplex, 62.5/125µm Graded Index Fiber, 0.275NA, Type OM1
Link Length	Up to 300 meters with MR330 Controller
Environmental Performance	
Temperature/Humidity	Operating: -40° C to +80° C, Storage: -40° C to +80° C; 0%-95% RH (non-condensing)
Ingress Protection	Shaft Seal Option with D00 Industrial LC Connector = IP66/IP67 Shaft Seal Option with Duplex LC Pigtail = IP65, Shield Only Option = IP40
Physical Attributes	
Housing Dimension	∅ 58mm x 80mm L (industry standard 58mm servo mount housing)
Unit Weight	500g (18 oz)
Materials	Body: Anodized Aluminum; Shaft and Bearings: Stainless Steel

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Drawing Inch [mm]



Subject to errors and changes Date: 23.05.2023

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Order Code

9700.01.400	MR332-Y-06-C15	Duplex LC Pigtail with 1.5m length
9700.01.401	MR332-Y-06-C03	Duplex LC Pigtail with 3m length
9700.01.402	MR332-Y-06-C05	Duplex LC Pigtail with 5m length
9700.01.403	MR332-Y-06-D00	ODVA IP-LC connector

Related Products

MR338 MRI Safe Encoder Metalfree Encoder \varnothing 58mm

973XX Fiberoptic Extension Cable