MICRONOR®
optical sensors

MR 342 Incremental Encoder

Features

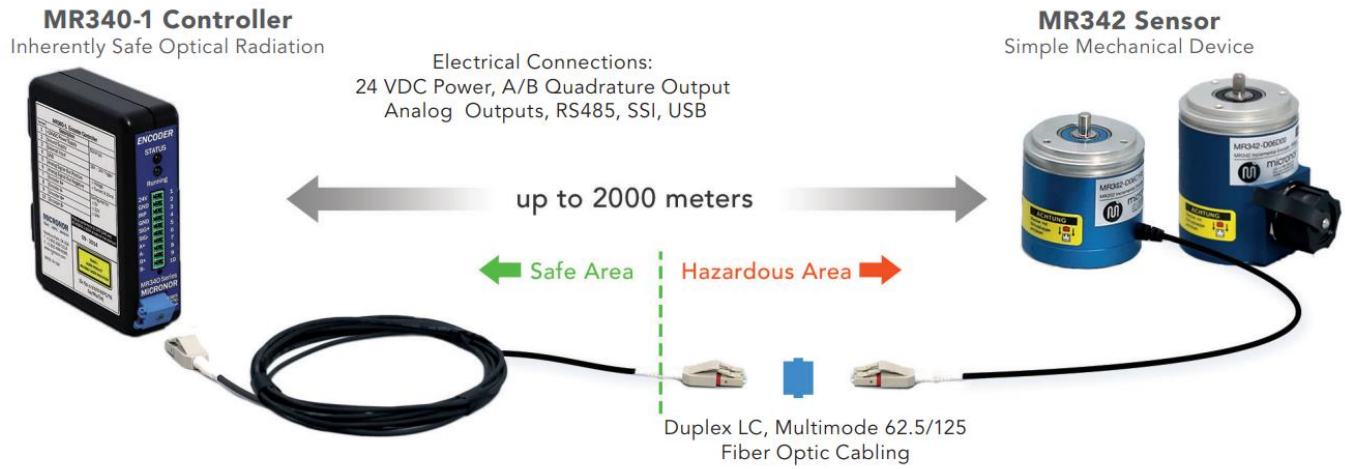
- 100% passive sensing design - no electronics
- Sensor can be installed in all manner of hazardous and potentially explosive atmospheres - mines, gas and dust
- Immune to EMI and RFI for safe use in and around medical equipment and “noisy” industrial environments
- Immune to high voltages
- Link lengths to 2000 meters

Product Description

The MR342 Fiber Optic Incremental Sensor is an entirely passive, intrinsically safe, fiber optic incremental rotary encoder – ideal for a wide range of harsh and hazardous environmental applications. The passive, all-optical Sensor connects to the remote Controller via a standard duplex 62.5/125 multimode optical fiber link.
ZapFREE® software is used for data acquisition.

The remote MR340 Controller Module transmits and converts optical signals to/from the Sensor. The Controller’s multiple built-in interfaces insure compatibility with industry standard motor drives, PLCs, quadrature counters, and motion control systems.

System Planning



1. Verify cabling and junction boxes compatible with the operating environment.
2. Verify that the optical link loss is within Controller’s Maximum Loss Budget.
3. Consult Application Note AN118 for more information, examples, and guidance on loss budget.

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Specifications

Measurement Parameters	
Resolution	360ppr (Consult Micronor for special requirements)
Max Speed	8,000 RPM continuous
Mechanical Parameters	
Moment of Inertia	1.0585E-6 kg*m^2
Starting Torque	1.28E-5 N*m
Max Shaft Loads	Radial = 80 N (18 lbf), Axial = 40 N (9 lbf)
System MTBF	L10 Bearing life calculated at 50% of max radial and axial load at 2500 RPM: 1.78E+05 hours (20.3 years)
Optical Interface	
Optical Interface	LC Duplex, 62.5/125µm Graded Index Fiber, 0.275NA, Type OM1 oder ODVA
Link Length	Up to 2000 meters (6560 ft) with MR340 Controller
Environmental Attributes	
Temperature/Humidity	-40°C to +80°C, 0%-95% RH (non-condensing)
Ingress Protection	IP64 (splash proof)
Physical Attributes	
Dimension	Ø58mm x 58mm
Unit Weight	210 g (7.25 oz)
Materials	Body: Anodized Aluminum; Shaft and Bearings: Stainless Steel

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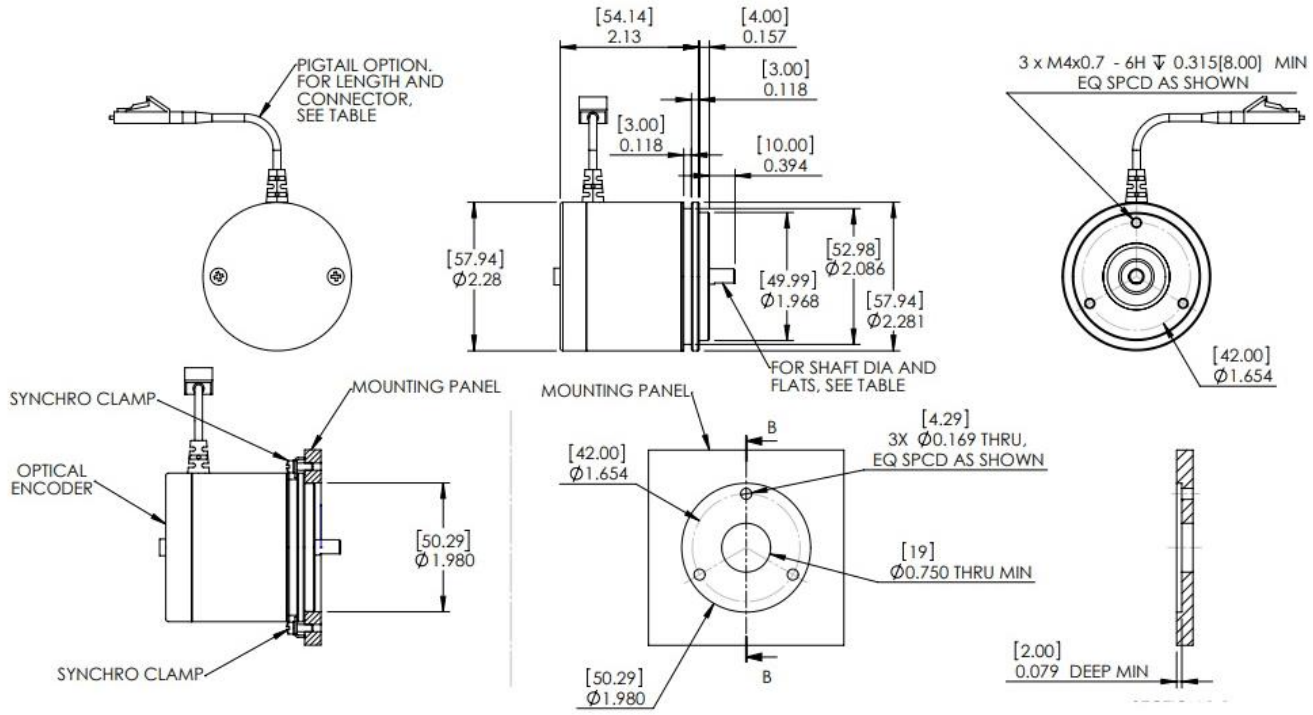
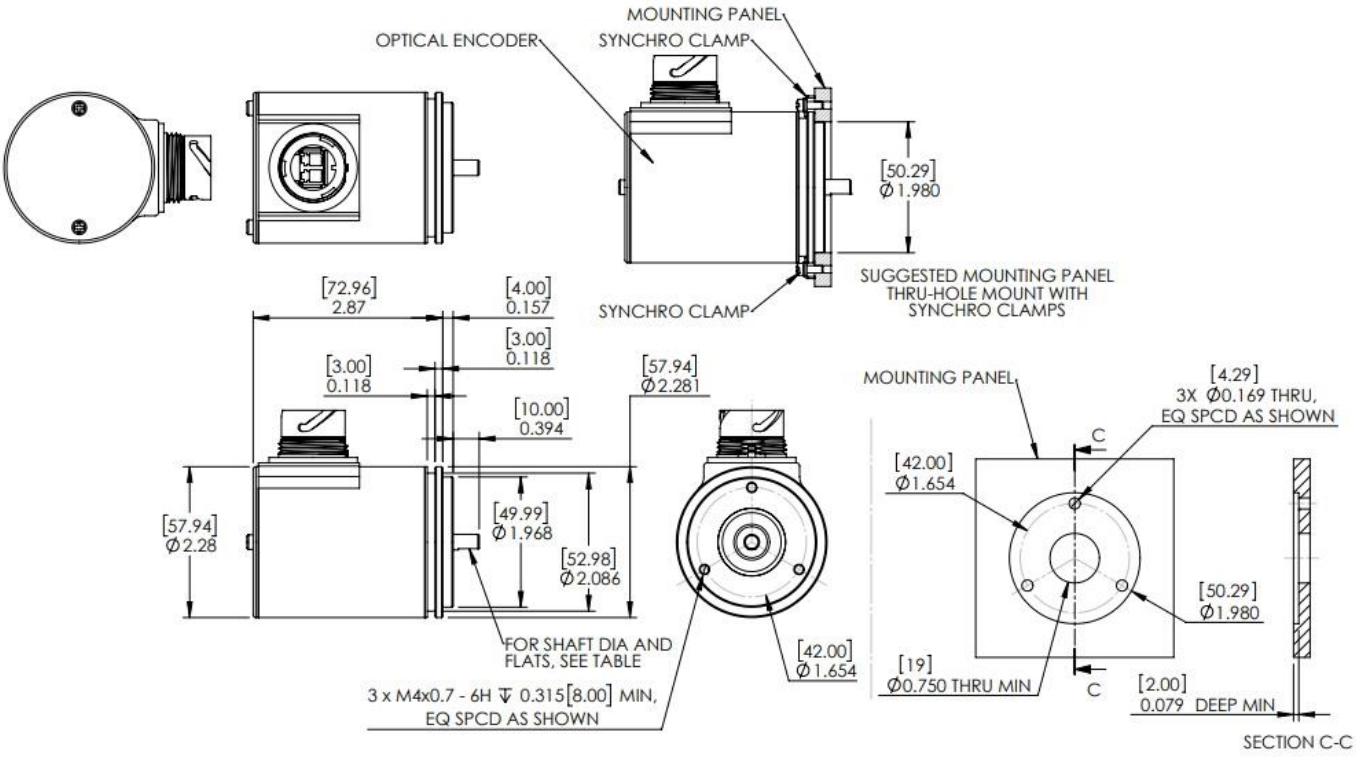
Drawing Inch [mm]





Subject to errors and changes Date: 20.04.2023

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Order Code

9700.01.026	MR342-D-06-C1R5	Rotary sensor	1.5m duplex LC pigtail
9700.01.027	MR342-D-06-C03	Rotary sensor	3m duplex LC pigtail
9700.01.028	MR342-D-06-C05	Rotary sensor	5m duplex LC pigtail
9700.01.029	MR342-D-06-D00	Rotary sensor	ODVA IP-LC Connector

Related Products

MR340-1	Controller for Fiber Optic Incremental Encoder Series MR340
MR343	Linear Encoder
MR344	Hollow Shaft Encoder
MR346	Heavy Duty Rotary Encoder
MR348	MRI Safe Rotary Encoder Ø58mm Metalfree
972XX.XX.XXX	Fiberoptic Extension Cable
974XX.XX.XXX	Fiberoptic Extension Cable

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