

FIBER OPTIC INCREMENTAL ENCODER

MR342 ZapFREE® Size 58mm Fiber Optic Incremental Encoder

The MR342 series ZapFree® 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.



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.



U.S. Patent 7,196,320
Inherently Safe, Simple Mechanical Device
EPL Mb/Gb/Gc/Db/Dc

MR340-1 Controller

Inherently Safe Optical Radiation



Electrical Connections:
24 VDC Power, A/B Quadrature Output
Analog Outputs, RS485, SSI, USB

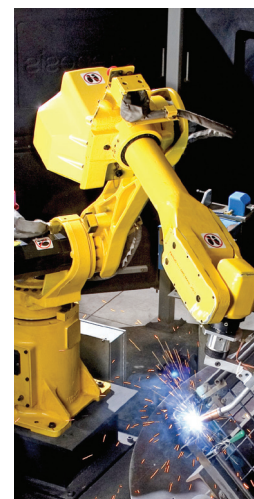
MR342 Sensor

Simple Mechanical Device



Features

- 100% passive sensing design - no electronics whatsoever
- 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 lightning and high voltages
- Outdistances copper, link lengths to 2000 meters
- Operates over -40°C to +80°C
- Special versions can be engineered for radiation and vacuum environments
- DIN Rail Mount and OEM PCB controllers available



Sensor Specifications

Measurement Parameters	
Resolution	100, 128, 256, 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
Link Length	Up to 2000 meters (6560 ft) with MR340 Controller
Explosive Atmospheres	Inherently Safe, Simple Mechanical Device
EX Classification	Inherently safe, simple mechanical device when used with a MR340 Controller
ATEX	EPL Mb/Gb/Gc/Db/Dc
IEC Ex	EPL Mb/Gb/Gc/Db/Dc
Environmental Attributes	
Temperature/Humidity	-40°C to +80°C, 0%-95% RH (non-condensing)
Ingress Protection	IP64 (splash proof)
Physical Attributes	
Housing Dimension	Ø 58mm x 58mm
Unit Weight	210 g (7.25 oz)
Materials	Body: Anodized Aluminum; Shaft and Bearings: Stainless Steel

Specifications subject to change without notice

Ordering Info

M R 3 4 2 - D 0 6 C 1 R 5

Resolution

B 128ppr
C 256ppr
D 360ppr

Shaft Size

06 6mm OD

Termination Option

C1R5 Duplex LC Pigtail, 1.5m
C03 Duplex LC Pigtail, 3m
C05 Duplex LC Pigtail, 5m
D00 ODVA IP-LC receptacle

Quick Ship Configurations:

MR342-D06C1R5 Sensor, 360ppr, Duplex LC Pigtail=1.5m
MR342-D06D00 Sensor, 360ppr, ODVA IP-LC Connector Receptacle

MR340-0 OEM Controller
MR340-1 DIN Rail Mount Controller

MICRONOR INC, 900 Calle Plano, Suite K,
Camarillo, CA 93012 USA
T +1 805 389 6600 F +1 805 389 6605
sales@micronor.com www.micronor.com

MICRONOR AG, Pumpwerkstrasse 32,
CH-8105 Regensdorf, Switzerland
T +41 44 843 4020 F +41 44 843 4039
sales@micronor.ch www.micronor.com