

FIBER OPTIC INCREMENTAL ENCODER

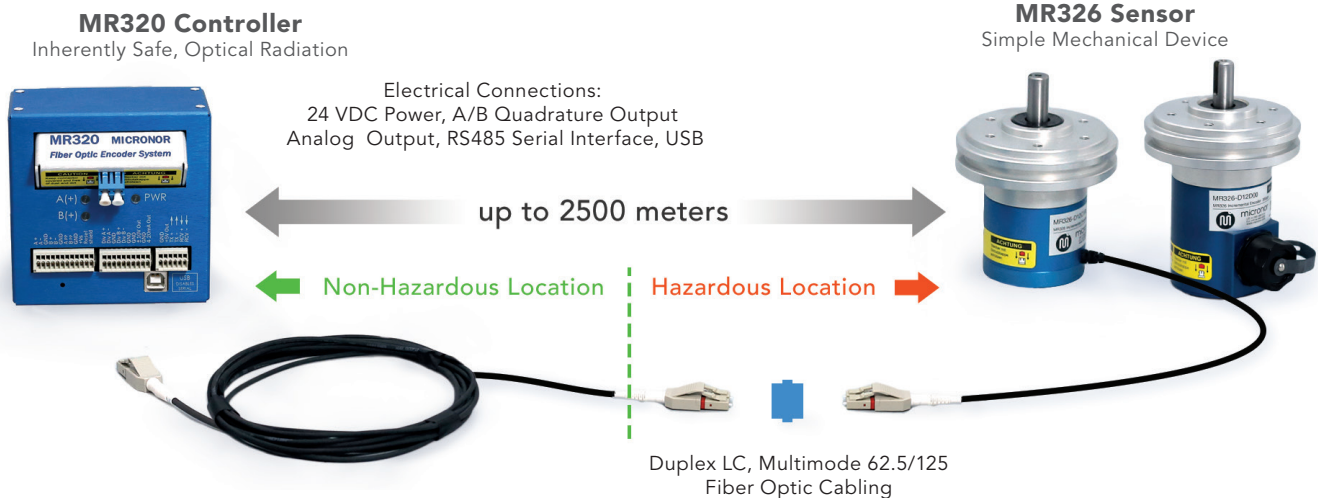
MR326 ZapFREE® Size 90mm Fiber Optic Incremental Encoder

The MR326 ZapFREE® Fiber Optic Incremental Sensor is purposely designed for the the most challenging environments where electronics-based encoders and resolvers cannot perform. The all-optical, passive sensor provides immunity to EMI, RFI, lightning, high voltage and ground loops. The sensor's inherently safe design allows safe use in all manner of hazardous locations.



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

Robust IP66 construction together with the optical and mechanical simplicity of the sensor's design offers exceptional reliability in the most physical demanding indoor and out door applications, including cable cars, electric trains, steel mills, bridges, oil rigs, and mines.



Features

- 100% passive, all-optical sensing design
- IP66 ingress protection - dust sealed and temporary submersion
- Sensor can be installed in all manner of hazardous locations and explosive atmospheres - gas, dust and mines
- Immune to EMI and RFI for safe use in and around medical equipment and "noisy" industrial environments
- Immune to lightning and high voltage that "zap" conventional electronics-based encoders
- Interference-free transmission up to 2500 meters
- Standard temperature range -40°C to +80°C
- Extended Temperature option: -60°C to +150°C
- Special versions can be engineered for radiation and thermal-vac environments



Specifications

Measurement Parameters	
Resolution	100, 128, 256 and 360ppr (Consult Micronor for special requirements)
Max Speed	8,000 RPM continuous Note: De-rate maximum speed by 100 RPM per degree Celsius when operating above 60°C for maintaining shaft seal integrity..
Mechanical Parameters	
Moment of Inertia	2.5095E-6 kg*mm ²
Starting Torque	1.012E-3 N*m
Max Shaft Loads	Radial = 140 N (31 lbf), Axial = 70 N (15 lbf)
System MTBF	L10 Bearing life calculated at 50% of max radial and axial load at 2500 RPM: 8.96E+05 hours (102.3 years)
Optical Interface	
Optical Interface	LC Duplex Pigtail or ODVA IP-LC Connector Receptacle 62.5/125µm Graded Index Fiber, 0.275NA, Type OM1
Link Length	Up to 2500m (8300 ft) with MR320 Controller
Explosive Atmospheres	
EX Classification	Inherently safe, simple mechanical device when used with MR320 Controller IECEX Test Report (ExTR) GB/CML/ExTR 16.0039/00
ATEX	EPL Mb/Gb/Gc/Db/Dc
IEC Ex	EPL Mb/Gb/Gc/Db/Dc
NEC	Exempt
Environmental Attributes	
Temperature/Humidity	Standard: -40°C to +80°C, 0%-95% RH (non-condensing) Extended: -60°C to +150°C, 0%-95% RH (non-condensing)
Ingress Protection	IP66 (strong water jets and temporary immersion)
Physical Attributes	
Housing Dimension	Ø90 mm x 82.5 mm
Unit Weight	615 g (21.5 oz)
Materials	Body: Anodized Aluminum, Shaft and Bearings: Stainless Steel

Specifications subject to change without notice

Ordering Info

MR326 - [D] [12] [C03] []

Resolution Options

- A** 100ppr
- B** 128ppr
- C** 256ppr
- D** 360ppr

Shaft Size

- 12** 12mm OD

Temperature Range

- Blank** Standard
- E** Extended (Not available with D00)

Termination Option

- C1R5** Duplex LC Pigtail, 1.5m
- C035** Duplex LC Pigtail, 3m
- D00** ODVA IP-LC receptacle

Quick Ship Configurations:

- MR326-D12C03** Sensor, 360ppr, 12mm Shaft, Duplex LC Pigtail 3m
- MR326-D12D00** Sensor, 360ppr, 12mm Shaft, ODVA IP-LC Connector Receptacle
- MR320** Controller

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