M06 INDUSTRIAL GRADE FIBER OPTIC CABLE
MR320 ST-PC FIBER OPTIC CABLE ASSEMBLIES

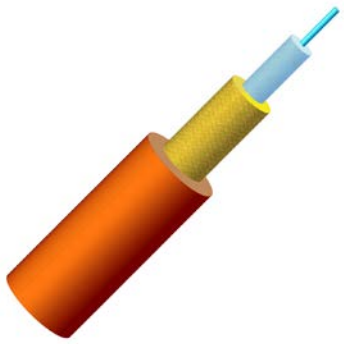
MICRONOR
automation components

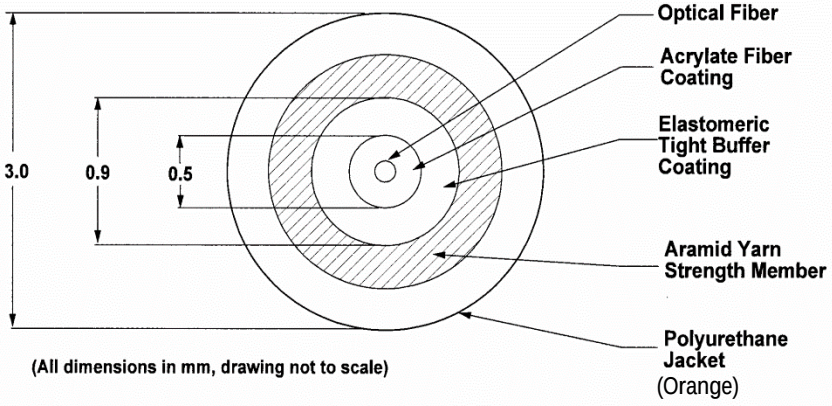
Product

Micronor's M06 optical cable is a proven rugged and robust optical link solution for deploying the ZapFREE® Fiber Optic Rotary Encoder System in a broad range of industrial and outdoor applications. It is an extremely strong, lightweight, rugged tight-buffered cable designed originally for military tactical field use.

The cable is designed to be crush resistant, resilient, and offers exceptional mechanical protection for the internal optical fiber. It is extremely flexible and can withstand repetitive flexing and motion found in elevator and robotic applications.

The polyurethane jacket offers exceptional abrasion, cut, chemical and UV resistance. The cable can be deployed in traditional cable tracks and raceways but is rugged enough to be clamped directly to equipment surfaces. Temperature range is -70°C to +85°C.





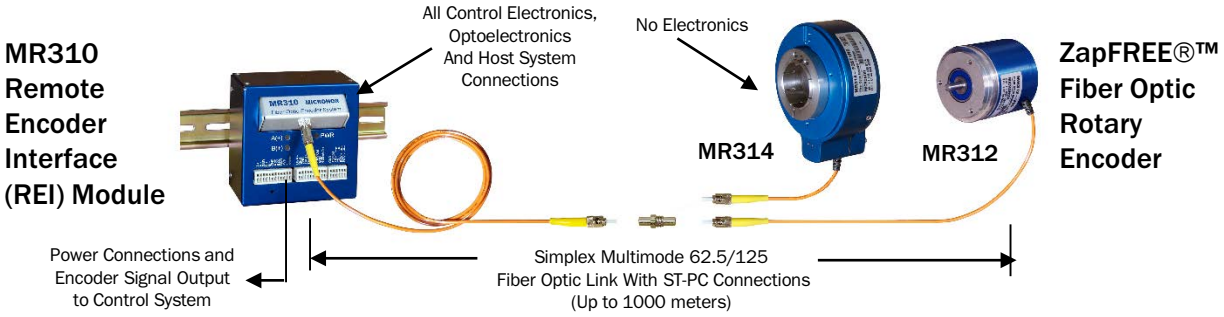
Cable Properties:

- Duct installation
- Fungus resistant
- UV resistant
- Water resistant
- Direct burial
- Aerial
- High flex life
- Soft and flexible
- Accommodates tight bends
- Mechanical resistant
- Low Friction
- Petrochemical resistant
- Severe chemical environments

Specifications

Fiber Type		Multimode	
Core/Cladding Diameter		62.5µm / 125 µm	
Primary Coating Diameter		500µm (uv cured acrylate)	
Secondary Coating Diameter		900µm (hard elastomeric)	
Numerical Aperture		0.275	
Proof Test Level		100 kpsi	
Wavelength		850nm	1310nm
Attenuation		3.0 dB/km	1.0 dB/km
Laser bandwidth (MHz-km RML)		220	500
LED Bandwidth		200	500
Cable Weight		8.4 kg/km	
Installation	Max Tensile Load	600 N	
	Min Bend Radius	4.8 cm	
Operating	Max Tensile Load	350 N	
	Min Bend Radius	2.4 cm	
Impact Resistance		200 impacts (EIA/TIA-455-25 Military Requirement)	
Crush Resistance		440 N/cm (TIA/EIA-455-41 Military Requirement)	
Temperature	Operating	-55°C to +85 °C	
	Storage	-70°C to +85 °C	

Planning and Installation



Integrating the ZapFREE® Fiber Optic Rotary Encoder into your motion control system couldn't be simpler:

1. First, verify your link loss design. The standard ZapFREE® Encoder System has a two-way optical loss margin of 6.5 dB. For a typical installation with up to 4 interconnections (at the ST-PC interfaces of the MR310 module and MR312/MR314 encoders plus 2 additional inline breaks) and up to 400 meters end-to-end length, you are already within the optical loss budget. For other combinations of link length and number of interconnections, consult the MR310 ZapFREE® Encoder System User Guide.
2. Mount MR312 rotary encoder to the external equipment. Conventional mounting techniques via standard synchro clamps (also available as Micronor P/N 609920651) or direct panel mounting are shown on the following page. Always use a flexible coupling to connect the encoder's shaft to the equipment's shaft.
3. Locate MR310 REI Module along with other control system's electronics via 35mm DIN rail mount.
4. Make electrical connections (power, ground, quadrature signals, serial interface, etc.) to J1/J2/J3 via the three WAGO Quick-Connect plugs (supplied with the MR310).
5. Connect MR312 Encoder to MR310 REI Module via an ST-PC to ST-PC optical cable assembly.
6. The ZapFREE ® Fiber Optic Encoder System is now ready to operate!

Ordering Information

To order industrial-grade cable assembly terminated with ST-PC connectors on both ends for ZapFREE® Encoder System:

MR320 - M 0 6 L 5

Cable Type

M06 Mil/Ind Grade

Cable Assembly Length
(Tip to Tip in Meters)
(R = Decimal Point)
5 = 5.0 meters
5R5 = 5.5 meters

MR320A ST Bulkhead Adapter

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