Fiber Optic Rotary Joint

Model 228

Focal Technologies Corporation, a Moog Inc. company, has over 30 years of expertise in supplying standard and custom marine products for harsh environment applications and is a leading manufacturer of high performance and high quality fiber optic rotary joints. Contact Focal for any assistance in selecting the best solution for your requirements.

The FO228, a single-channel multimode fiber optic rotary joint (FORJ), is passive and bidirectional, and maintain the benefits of fiber optics (such as high bandwidth and EMI immunity) in systems with a rotational interface.

This cost-efficient FORJ model is designed for applications having moderate demands for optical performance and life. Due to its lens-less design, it can operate at any wavelength supported by the fiber used in the assembly.

The FORJ can be combined with our electrical and fluid slip rings, giving a single, compact package for optical signals, electrical power and fluid transfer.

Features

- Provides rotary coupling for a multimode fiber link
- Can be combined with our electrical slips and fluid unions
- Alternative drive coupling and mounting arrangements are available (consult factory for specification details)
- Connectorized interfaces, for easy fiber cable replacement
- Can be integrated into existing slip ring designs
- Aluminum or anodized aluminum housing
- Ruggedized design
  - MIL-STD-167-1 ship vibration
  - MIL-STD-810 functional shock (40 g)

Benefits

- Low cost
- Integration capabilities
- Passive bidirectional optical transmission
- Compact size
- Long-life high channel-count device

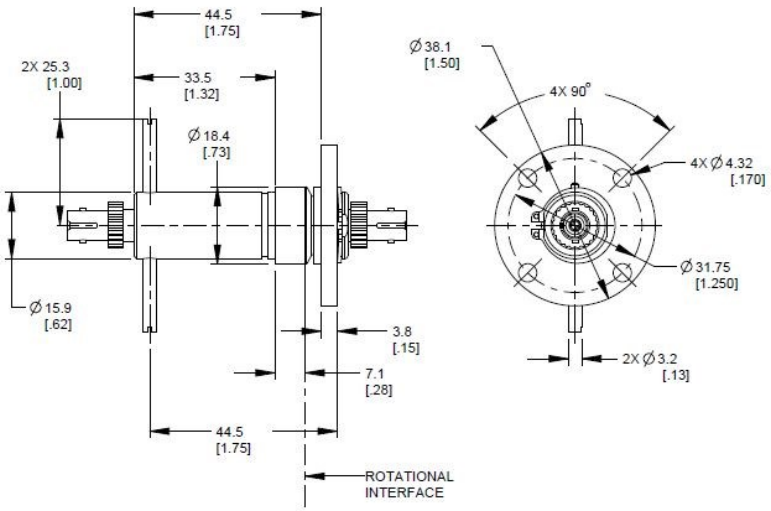
Applications

- Remote I/O in industrial machinery
- Video surveillance systems
- Material handling systems
- Indexing tables
- Cable reels
- Robotics
- Turrets

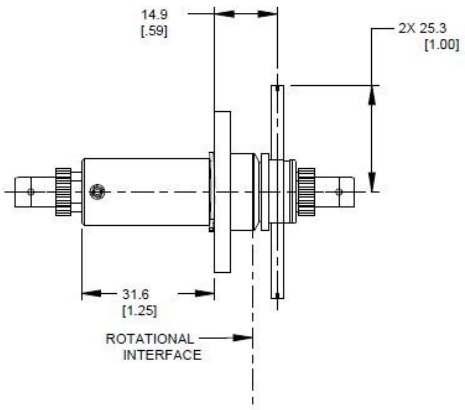
Specifications

FO228 Specifications	
Fiber Size (Microns)	50/125 or 62.5/125 (consult factory for other sizes)
Insertion Loss	Typical < 2.5 dB, Maximum <4.0 dB
Rotation Variation	Typical < 0.5 dB, Maximum <1.0 dB
Wavelength	Wavelength is fiber dependent. 850/1300/1550nm available
Rotational Speeds	To 100 rpm. Higher rotational speeds should be discussed with the factory
Temperature	-40 to +75 deg C. Consult factory for extended range
Life	500,000 revolutions
Exterior Surfaces	Aluminum or anodized aluminum
Vibration	Per MIL-STD-167-1A (ships)
Shock	40 g / 11 ms sawtooth per MIL-STD-810 Method 516
Terminations	Standard with ST or FC connector receptacles. Can be pigtailed with cable and connectors to meet customer's requirements
Pigtail Length	As required
Options	Hybrid units combined with electrical and fluid slip rings, available with or without mounting flange. Consult factory for details

SHAFT MOUNTING ARRANGEMENT



BODY MOUNTING ARRANGEMENT



All specifications and information are subject to change without notice. Please contact Focal for the latest updates.

Dimensions in inches [mm].