

Fiber Optic Rotary Joint

Model 319

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 to your requirement.



The FO319 is a non-gearred, singlemode, compact 2-channel fiber optic rotary joint (FORJ). It is a passive and bidirectional device which can be used as a standalone device or easily integrated into a rotary assembly, enabling transfer of high data rate optical signals across a rotating interface.

Features

- Provides rotary coupling for two singlemode fiber links
- Passive bidirectional device
- Alternative drive coupling and mounting arrangements are available (consult factory for specification details)
- Stainless steel housing
- Ruggedized design
 - MIL-STD-167-1 ship vibration
 - MIL-STD-810 functional shock (40g)
 - Operating temperature of -46°C to $+71^{\circ}\text{C}$
- Junction Box version available

Benefits

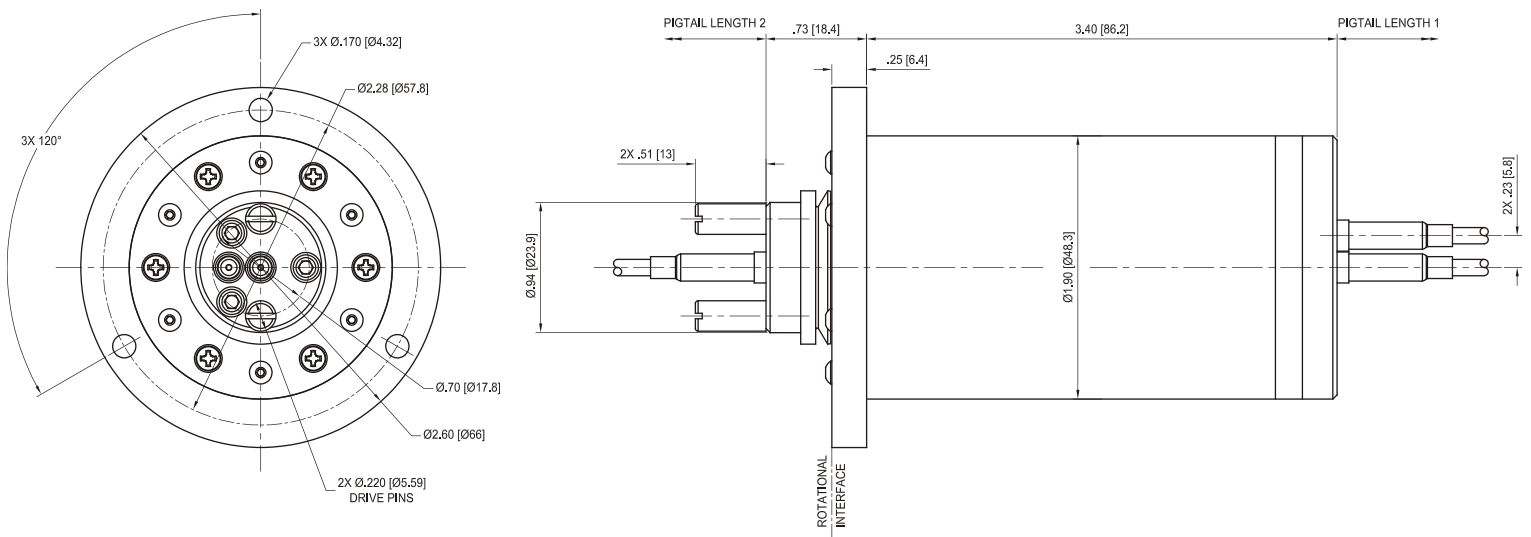
- Can easily be integrated with Focal standard Electrical Slip Rings, including Hazloc Slip Rings
- Redundant channel for single channel applications
- Two independent bi-directional fiber paths
- Compact
- Long life
- No difference in the insertion loss or return loss of either channel

Applications

- Remotely Operated Vehicle (ROV) and other marine equipment winches
- Industrial automation
- Video surveillance
- Ground, air, and naval radar
- Electro-optic (EO) pods
- Turrets and rotating pedestals
- High bandwidth cable reels

Specifications

FO319 Specifications	
Fiber Size (Microns)	9/125 SMF-28. Consult factory for other SM fiber types
Wavelengths	1270-1620nm (standard test wavelengths 1310nm and/or 1550nm). Consult factory for other wavelengths such as 900-1100nm band (tested at 1060nm)
Standard Connectors	FC or ST, consult factory for others
Integration Capabilities	Model 180, 180-X, 176, 176-X, 159, 129
OPTICAL PERFORMANCE	
Maximum Insertion Loss Over Full Rotation (Includes Rotational Variation)	≤3.5 dB
Insertion Loss Variations	≤1.5 dB
Return Loss	≥20 dB typical. Consult factory for extended
MECHANICAL	
Rotational Speed	100 rpm standard, consult factory for extended
Service Life	> 30 Million revolutions
Fiber Jacket and Bend Radius	25 mm bend radius standard
Pigtail Length	Up to 3 meters standard. Consult factory for longer lengths
ENVIRONMENTAL	
Operating Temperature	-46°C to +71°C
Shock	40 g/ 11 ms sawtooth per MIL-STD-810 Method 516
Vibration	Per MIL-STD-167-1A, and 7.7 g _{rms} , 20 to 2000 Hz per MIL-STD-810 Method 514 E-1
IP Rating	Up to IP65



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

Dimensions in inches [mm].