

# Fiber Optic Rotary Joint

Model 197S

**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 FO197S is a sealed single-channel multimode fiber optic rotary joint (FORJ) which is passive and bidirectional, and allows the transfer of analog or digital optical signals across rotational interfaces. The FO197S is specially designed for durable, corrosion free use when exposed to harsh outdoor environments.

The FO197S FORJ is constructed of all 316 stainless steel components and is environmentally sealed to an ingress protection rating of IP67. It can be combined with our electrical and/or fluid slip rings, providing a single, complete package for optical signals, electrical power, and fluid transfer over a rotating interface.

The FORJ can be assembled with pigtail lengths tailored to the customer's application or installed with connector bushings (ST or FC). Housing, mounting flange and drive features can also be customized to meet the customer's requirements.

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## Features

- Passive bidirectional optical transmission
- Bulkhead connector and Pigtailed versions available
- Low optical insertion loss options for common sensor wavelengths
- High return loss (i.e. low back reflection) available
- Can be combined with Moog electrical slip rings and fluid unions
- Can be integrated into existing slip ring designs
- Ruggedized design
  - MIL-STD-167-1 ship vibration
  - MIL-STD-810 functional shock (40 g)

## Benefits

- Environmentally sealed design allows for long-life in rugged installations and reduces maintenance costs
- Low back reflection and insertion losses allow for FORJ integration with very sensitive optical sensor measurements systems

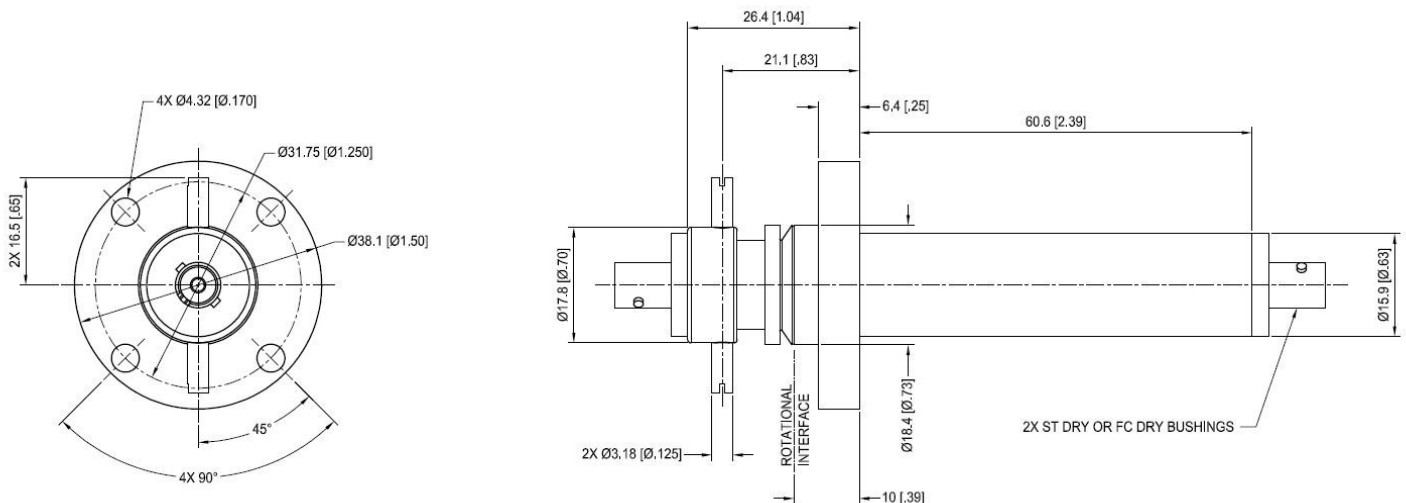
## Applications

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

# FOCAL™

# Specifications

FO197 Specifications	
Fiber Size (Microns)	62.5 / 125 multimode standard, 50/125 option available
Insertion Loss	Maximum <3.0 dB (typical 1.5 dB) Low loss option: maximum 1.5 dB (typical 1.0 dB)
Rotation Variation	Maximum 1.0 dB (typical 0.5 dB)
Back Reflection	Minimum 18 dB (typical 22 dB) Extended option: minimum 30 dB (typical 32 dB)
Wavelengths	Suitable for operation in 850nm and 1300nm multimode bands or 1300nm and 1550nm multimode bands. Consult factory for other wavelengths such as 900-1100nm band (tested at 1060nm)
Rotational Speeds	100 rpm. For other requirements contact factory
Temperature	-40°C to +85°C
Exterior Surfaces	316 Stainless steel
Ingress Protection	IP67
Vibration	Per MIL-STD-167-1A
Shock	40 g / 11 ms sawtooth per MIL-STD-810 Method 516
Terminations	Bulkhead ST standard ST or FC connector receptacles or pigtailed with cable and connectors to meet customer's requirements. Consult factory for other connectors.
Pigtail Length	Up to 3 meters standard. Consult factory for longer lengths



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

Dimensions in millimeters [inches]

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