

# Fiber Optic Rotary Joint

Model 190

**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 Model 190 is a multipass fiber optic rotary joint (FORJ) for 2 to 17 multimode fibers. It is passive and bidirectional and allows the transfer of data, video and other signals on separate fibers across rotational interfaces.

The FO190 can be combined with our electrical and / or fluid slip rings, giving a single, compact package for optical signals, electrical power and fluid transfer.

Other options include fluid-filling for pressure compensation permitting operation at any ocean depth, and the combination of the Model 190 to include up to 5 singlemode passes.

## Features

- 2 to 9 singlemode channels
- Lightweight aluminum construction
- Can be combined with our electrical slips, fluid unions and the model 242 singlemode fiber optic rotary joint
- Alternative drive coupling arrangements are available (consult factory for specification details)
- Tested to 10,000 psi (69,000 kPa) when fluid-filled
- Connectorized interfaces, for easy fiber cable replacement
- Rugged design
  - MIL-STD-167-1 ship vibration
  - MIL-STD-810 functional shock (40 g)
  - MIL-S-901D heavy shock (65 g)

## Benefits

- Can be integrated into existing slip ring designs
- Passive bidirectional optical transmission
- Can be combined with our electrical slips and fluid unions
- Long life

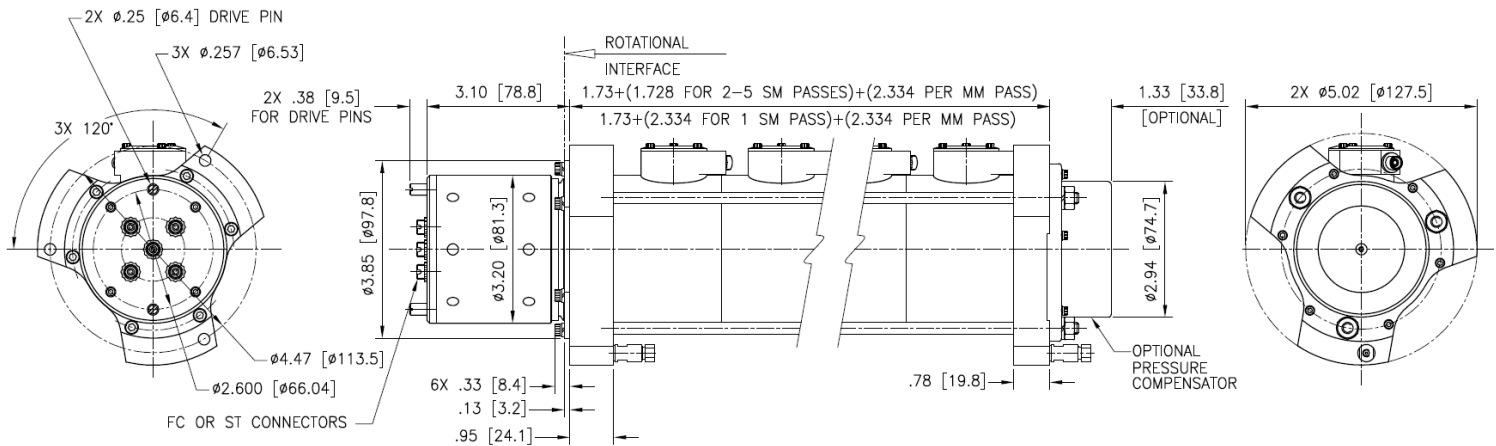
## Applications

- Winches and cable reels for ROV's
- Remote I / O in industrial machinery
- Towed arrays and dipping sonar
- Material handling systems
- Surveillance systems
- Cranes

# Specifications

FO190 Specifications	
Fiber Size (Microns)	50 / 125 (OM1) or 62.5 / 125 (OM2)
Insertion Loss	< 6.5 dB (50 / 125 fiber), < 5.5 dB (62.5 / 125 fiber)
Rotation Variation	< 1.5 dB
Wavelengths	Suitable for operation in 850nm and 1300 nm multimode bands or 1300nm and 1550nm multimode
Rotational Speeds	To 100 rpm dry and 60 rmp fluid-filled . For higher rotational speeds please contact the factory
Temperature	-40 to +60 °C (dry and wet version). Consult factory for extended range
Back Reflection	> 18dB
Vibration	Per MIL-STD-167-1 (ships)
Shock	40 g / 11 ms sawtooth per MIL-STD-810 Method 516 65 g / 11ms sawtooth per MIL-S-901D
Connectors	FC / PC connector bushings standard (ST connector bushings optional)

Note: Optical values given are based on use with LED sources



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

Dimensions in inches [mm].

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