

## FO228 / FO282

### *Fiber optic rotary joint*

#### **Description**

The FO228 (single-pass multimode) and the FO282 (single-pass singlemode) are passive and bidirectional, and maintain the benefits of fiber optics (such as high bandwidth and EMI immunity) in systems with a rotational interface.

These cost efficient FORJ models are designed for applications having moderate demands for optical performance and life. Due to their lens-less design, they can operate at any wavelength supported by the fiber used in the assembly.

Both models 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 or singlemode fiber link
- Passive bidirectional device
- Low cost
- 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
- Rugged design
  - MIL-STD-167-1 ship vibration
  - MIL-STD-810D functional shock (40 g)



#### **Typical Applications**

- Cable reelers used in EOD robots
- Material handling systems
- Security cameras

# Fiber Optic Rotary Joints (FORJ)

Specifications				
	FO228 (Multimode)		FO282 (Singlemode)	
Fiber Size (Microns)	50/125 or 62.5/125 (consult factory for other sizes)		9/125 SMF-28 (consult factory for other sizes)	
Insertion Loss	Typical < 2.5 dB	Maximum < 4.0 dB	Typical < 2.5 dB	Maximum < 4.0 dB
Rotation Variation	Typical < 0.5 dB	Maximum < 1.0 dB	Typical < 0.5 dB	Maximum < 1.5 dB
Wavelength	Broadband (fiber dependant)			
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	Tested to MIL-STD-167-1 (ships)			
Shock	Tested to MIL-STD-810D			
Terminations	Standard with ST or FC connector receptacles. Can be pigtailed with cable and connectors to meet customer's requirements.			
Pigtail Length	As required			

## Hybrid Units

Can be combined with electrical and fluid slip rings

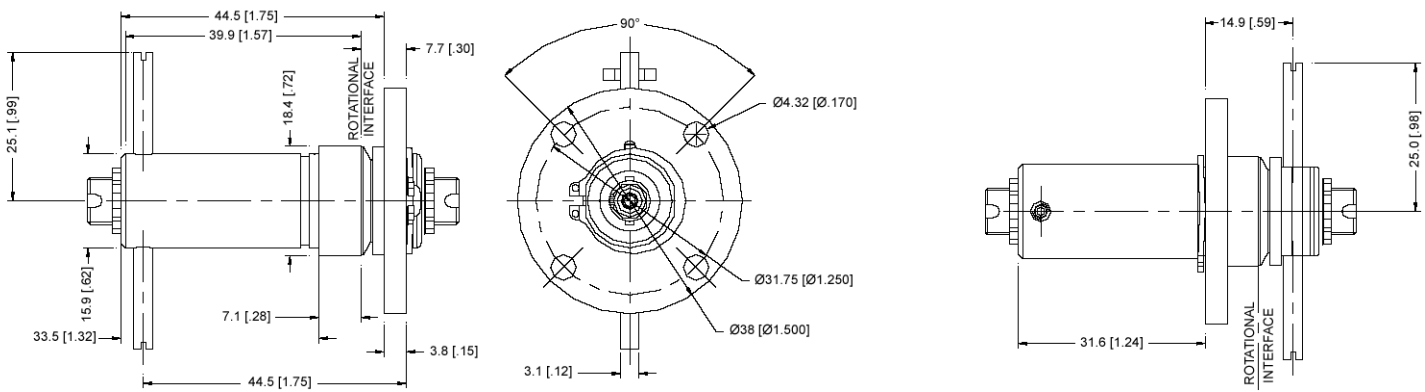
## Mounting Options

Available with or without mounting flange (consult factory for details)

## Terminations

Built-in FC or ST connector receptacles

## FO228 and FO282 Dimensions



Shaft Mounting Arrangement

Body Mounting Arrangement

Dimensions in inches [millimeters]