

FO300

Fiber optic rotary joint

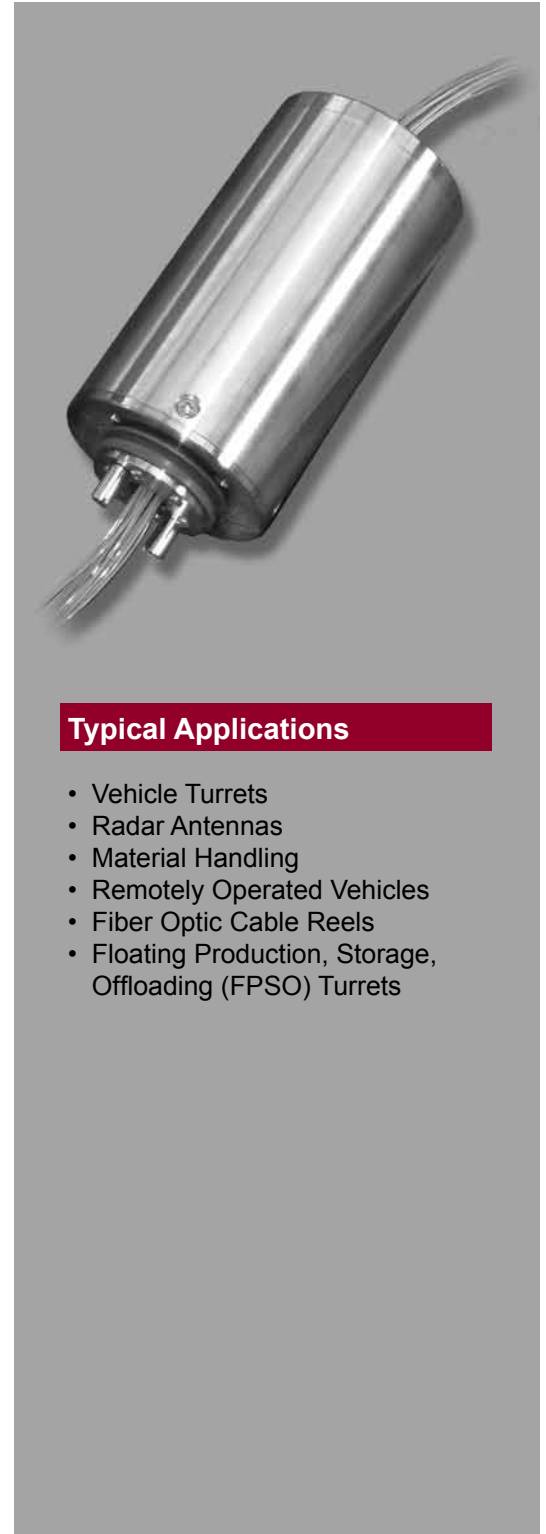
Description

The FO300 is a multi-pass fiber optic rotary joint (FORJ). It allows the transfer of optical signals across a rotational interface and is passive and bidirectional. The smaller version "A" accommodates up to 17 separate singlemode or multimode optical fibers. Version "B" supports up to 31 separate channels. The largest version "C" supports up to 52 separate channels. Pressure compensation is available for use in subsea applications, with slightly increased length and diameter.

The FO300 can be combined with electrical and / or fluid slip rings, providing a single package for optical signals, electrical power and fluid transfer.

Features

- Up to 52 fiber optic channels in a very small form factor
- The smaller version "A" accommodates up to 17 separate singlemode or multimode optical fibers, version "B" accommodates up to 31 separate channels and the largest version "C" supports up to 52 separate channels
- Can be combined with electrical slip rings and fluid rotary unions
- Stainless steel construction
- Rugged design



Typical Applications

- Vehicle Turrets
- Radar Antennas
- Material Handling
- Remotely Operated Vehicles
- Fiber Optic Cable Reels
- Floating Production, Storage, Offloading (FPSO) Turrets

Fiber Optic Rotary Joints (FORJ)

FO300 Specifications			
Fiber Type	9 / 125 Singlemode		50 / 125 or 62.5 / 125 Multimode
Wavelength	1310 nm or 1550 nm	1310 nm and 1550 nm	850 nm and 1300 nm
Version "A" (≤ 17 Channels)			
Maximum Insertion Loss Over Rotation	< 4.0 dB		< 4.0 dB
Insertion Loss Variation Over Rotation	< 1.5 dB	< 2.5 dB	< 1.5 dB
Version "B" (≤ 31 Channels)			
Maximum Insertion Loss Over Rotation	< 4.5 dB		< 5.0 dB
Insertion Loss Variation Over Rotation	< 1.5 dB	< 2.5 dB	< 1.5 dB
Version "C" (≤ 52 Channels)			
Maximum Insertion Loss Over Rotation	< 5.0 dB		< 6.0 dB
Insertion Loss Variation Over Rotation	< 2.0 dB	< 3.0 dB	< 2.0 dB
All Versions			
Minimum Return Loss Over Rotation	18 dB, consult factory for higher return loss		
Rotation Speed	To 100 rpm, consult factory for extended range		
Temperature	-40° C to +60° C, consult factory for extended range		
Exterior Surfaces	Stainless steel		
Vibration	Tested to MIL-STD-167-1 (ships) / MIL-STD-810G 514.6		
Shock	Tested to MIL-STD-810G 514.6		
Connectors	As requested		
Pigtail Length	As requested		

- Consult factory for higher channel count
- Consult factory for different fiber types
- Pigtailed FORJ; measured from outside ends of FORJ flanges, does not include shaft torque pins, strain relief, or pigtails
- Mounting holes for Version "C" are 8X #10-24 UNC-2B, .31 [7.9] minimum thread depth

Dimensions Inches [mm]	Version "A"	Version "B"	Version "C"
DIM "1"	Ø2.35 [59.7]	Ø2.72 [69.1]	Ø3.72 [94.5]
DIM "2"	4.22 [107.2]	5.76 [146.2]	6.79 [172.5]
DIM "3"	Ø1.800 [45.72]	Ø2.100 [53.34]	Ø3.100 [78.74]
DIM "4"	Ø.90 [22.9]	Ø1.06 [26.92]	Ø1.56 [39.6]
DIM "5"	Ø1.30 [33]	Ø1.55 [39.4]	Ø2.05 [52.1]
DIM "6"	.31 [8.1]	.32 [8.1]	.32 [8.1]
DIM "7"	Ø.90 [22.9]	Ø1.24 [31.5]	Ø1.48 [37.6]
DIM "8"	.38 [9.6]	.38 [9.6]	.38 [9.6]
DIM "9"	Ø1.650 [41.91]	Ø1.800 [45.72]	Ø2.720 [69.09]

FO300 Dimensions

