Fiber Optic Rotary Joint Slip Ring

1265–1650 nm (SM), 650–1310 nm (MM)

DATASHEET

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Fiber Optic Rotary Joints (FORJs), also known as fiber optic slip rings, provide a continuous optical connection between stationary and rotating optical fibers while allowing unrestricted 360° rotation. They are designed for applications requiring the transmission of optical data, communication signals, or laser power between static and rotating platforms during continuous or intermittent rotation. Our FORJs are engineered for low insertion loss, low insertion loss variation, low back reflection, high rotational reliability, and high-speed optical transmission. Available in single-channel and multi-channel configurations, they support both single-mode and multimode fibers for demanding applications.

Features

- Resistance to electromagnetic interference
- No contact transmission, no wear and tear
- Long life, can be up to 100 million
- Low
- Suitable inflammable and explosive environment

Specifications

Parameter		Min	Typical	Max	Unit
Wavelength	SM 9/125µm	1260		1650	nm
	MM 62.5/125µm, 50/125µm	650		1310	
Power Handing			23		dBm
Maximum Speed			2000		rpm
Insertion Loss			< 1.5		dB
Insertion Loss Variation			< 0.25		dB
Return Loss			> 45		dB
Operating Temperature		-40		75	°C
Durability			$8x10^8$ rotations		
Channel Count			1		
Fiber Type			SM 9/125µm, MM 62.5/125µm, 50/125µm		
Connector Type			FC, SC, ST, LC		

Applications

- Robot
- Material transfer system
- Rotating turret on vehicle
- Remote control system
- Radar signal
- Marine equipment and ship system
- Medical system
- Video monitoring system

RoHS COMPLIANT

Rev 07/02/26

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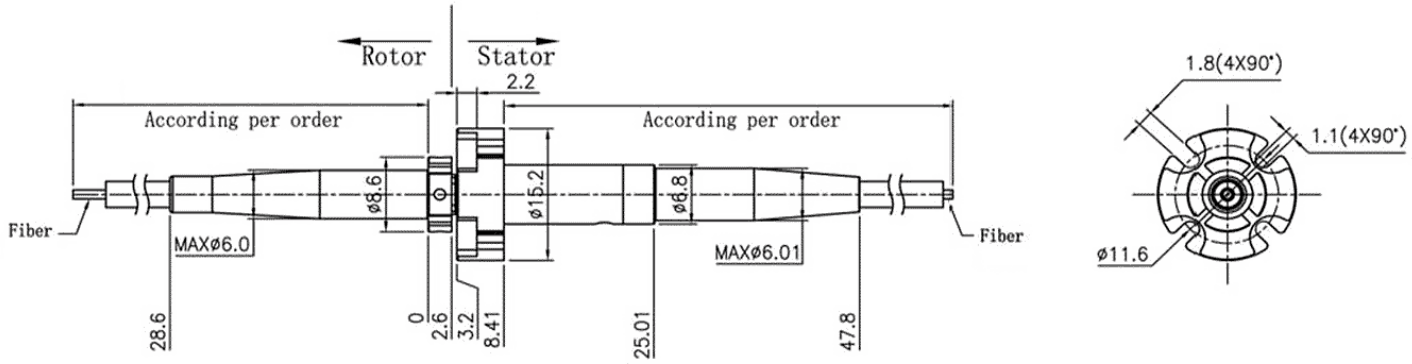
Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

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Ordering Information (Part Number)

	FF	☐	☐☐	☐	☐	☐
Prefix	**Configuration**	**Wavelength**	**Fiber Type**	**Fiber Cover**	**Fiber Length**	**Connector [1]**
FORJ-	Special = 00	1250-1650nm = S 650-1400nm = M Special = 0	SM28 = 01 50/125 = 05 62.5/125 = 06 105/125 = 0A Special = 00	3mm tube = 3 0.9mm tube = 2 Special = 0	0.5m = 2 1.0m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/UPC = U Special = 0

[1]. The default connector configuration uses fiber with 0.9 mm buffer protection. The connector cannot be installed directly onto bare fiber because the bare fiber is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer may remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SMF-28 fiber and decreases further for smaller-core fibers.