

Fiber Optic Rotary Joint Slip Ring — Single

1265–1650 nm (SM), 750–1310 nm (MM)



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Features

- Low insertion loss, high rotation speed
- Non-contact, zero friction, long working life, 1 channel can achieve one hundred million revolutions
- Small size, light weight, high sealing class
- Fiber optic transmitting signal, no electromagnetic interference, long-distance transmission

Applications

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



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Rev 07/30/26

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.

Specifications

Parameter		Min	Typical	Max	Unit
Wavelength	SM	1310/1550			nm
	MM	850/1310			
Insertion Loss (@23°C)				≤ 1.5	dB
Insertion Loss Ripple			≤ 0.7dB / (±0.35dB)		dB
Return Loss	SM	≥ 50 (APC), ≥ 40 (PC)			dB
	MM	≥ 30(PC)			dB
Power				23	dBm
Rotating Speed				2000	rpm
Working Life			> 100 million revs		
Rotating Torque			≤ 0.01		N.m
Working Temperature		-20 (-40)		+60 (+85)	°C
Storage Temperature		-45		+85	°C
Weight		15			g
Protection Grade		IP60 (IP65, IP67 optional)			

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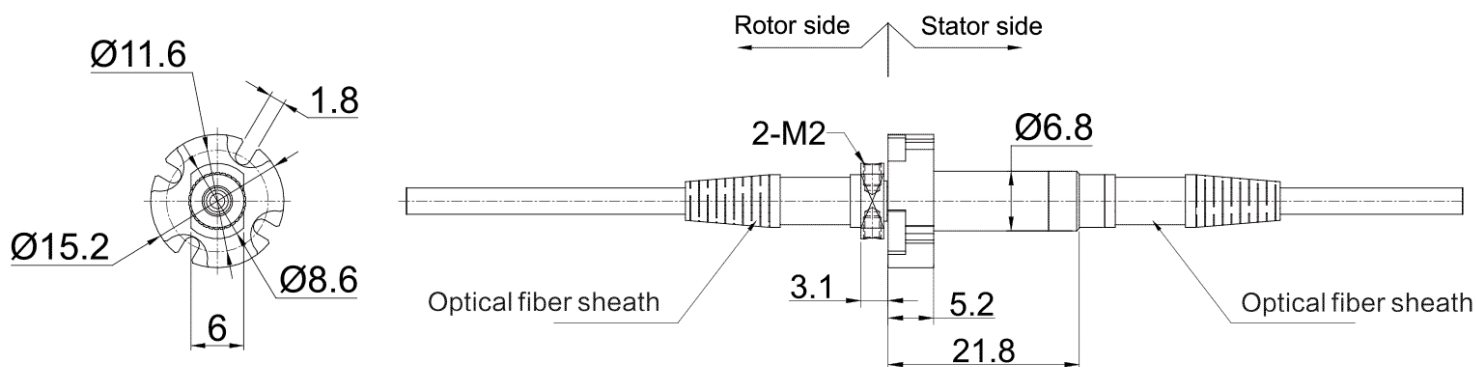
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Mechanical Dimensions (mm)



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

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Ordering Information (Part Number)

	FF	1	☐	☐ ☐	☐	☐	☐
Prefix	Configuration	# Channel	Wavelength	Fiber Type	Fiber Cover	Fiber Length	Connector
FORJ-	Fiber = FF	1 = 1	1310/1550nm = S 850/1310nm = 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