Fiber Optic Rotary Joint Slip Ring — Single

1310/1550 nm (SM), 850/1310 nm (MM)

DATASHEET

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MFO100C fiber optic slip ring support 1 channel fiber optic (SM/MM). It can perfectly transmit data on 360° rotating. It is also especially suitable for occasion where it needs to transmit large volume data/signal from permanent position to rotation position under unlimited, continuous or discontinuous rotating, which can improve mechanical property, simplify system operation and avoid the rotating of turning joints destroying fiber optics.

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

Specifications

Parameter		Min	Typical	Max	Unit
Wavewidth	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)		

RoHS COMPLIANT

Rev 07/29/26

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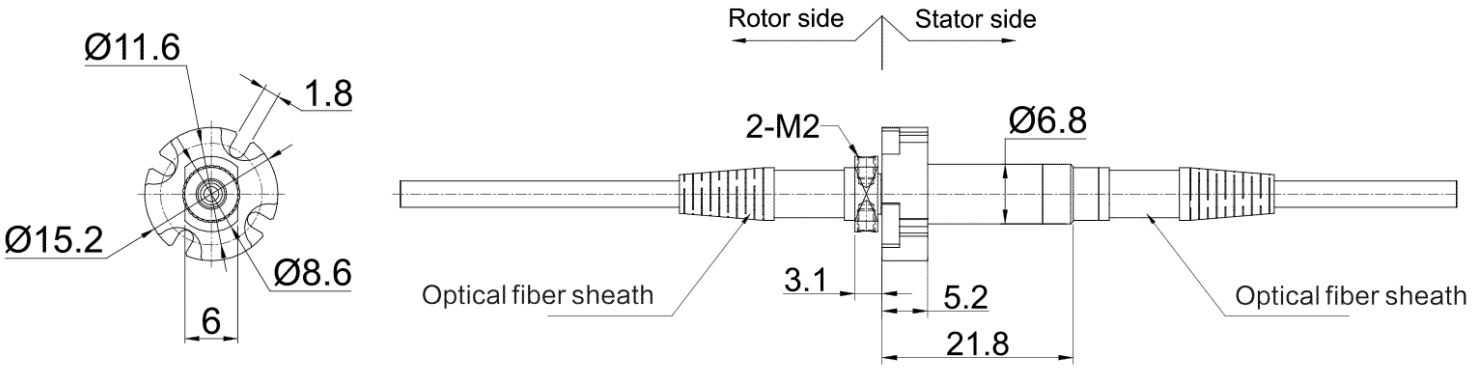
Mechanical Dimensions (mm)



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

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Ordering Information (Part Number)

	SF	☐	☐☐	☐	☐	☐
Prefix	**Configuration**	**Wavelength**	**Fiber Type**	**Fiber Cover**	**Fiber Length**	**Connector [1]**
FORJ-	Singe Fiber = SF	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

[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.