



# Multi-channel Fiber Optic Rotary Joint



[www.princetel.com](http://www.princetel.com)

Princetel, Inc.  
4 Princess Rd Ste 209  
Lawrenceville, NJ 08648  
609.895.9890  
fax 609.895.9552  
[info@princetel.com](mailto:info@princetel.com)



# Multi-channel Fiber Optic Rotary Joint

## Description

Fiber optic Rotary Joint (FORJ) is the optical equivalent of the electrical slip ring. It allows uninterrupted transmission of optical signal while rotating along the fiber axis. FORJs are widely used in telemetry, guidance systems, robotic systems, medical equipment, oil drilling systems, sensing systems, and many other field applications where a twist-free fiber cable is essential.

Multiple channel FORJs require high precision gear system to provide accurate and stable rotation. Princetel's multi-channel FORJs are also equipped with an unique optical system to ensure stable transmission and high return loss (low reflection). All multi-channel FORJs are sealed for harsh environment applications. Use Princetel's small format multi-channel connectors for reliable and flexible field connection.

## Specification

Wavelength range available	850-1650 (See code for choices)
Total number of channels	5-10 (MJn series for 4 channels )
Insertion loss	<5 dB
Insertion loss variation	<+/-2 dB
Return loss (singlemode)	>45 dB (Typical: 55 dB)
Maximum speed	100 rpm
Optical power handling	25 dBm
Operating temperature	0 to 65 C
Storage temperature	-20 to 85 C
Pressure compensation	3000 psi (optional)

## Physical Properties

Package type	Multi-fiber pigtailed
Package Material	Stainless steel
Fiber type	Singlemode, multimode, or both
Jacket type	3 mm Kevlar reinforced cable*
Connector type	FC, SC, ST, LC, or PT**
Dimensions	98 (dia.) x 163 (length) mm
Weight	3.4 kg

\* Call for more heavy duty cabling.

\*\* Princetel's small format multi-fiber connector suitable for harsh environment. 8-mm Kevlar reinforced cable is used with this connector.

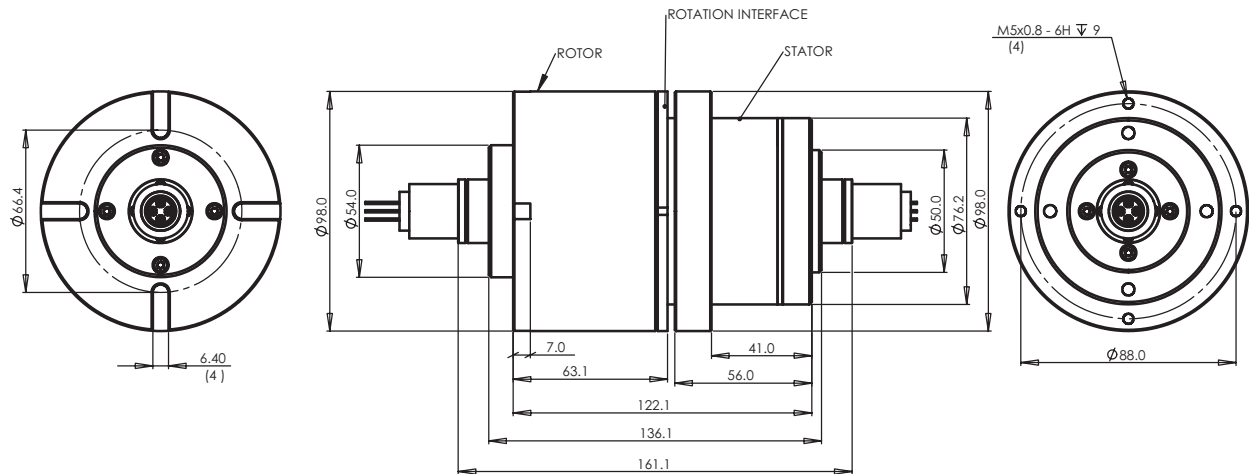
www.princetel.com

**Princetel, Inc.**  
4 Princess Rd Ste 209  
Lawrenceville, NJ 08648  
609.895.9890  
fax 609.895.9552  
info@princetel.com

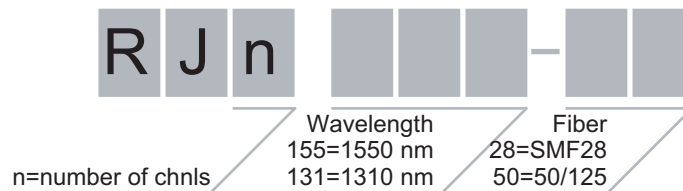


# Multi-channel Fiber Optic Rotary Joint

## Mechanical



## Part Number



ADD "PC" after "MJn" for pressure compensation

## Wavelength and Fiber Code

Wavelength	Fiber
165=1650 nm	28=CorningSMF28 (1290=1650 nm)
162=1625 nm	13=Fujikura SM13 PANDA fiber
159=1590 nm	15=Fujikura SM15 PANDA fiber
155=1550 nm	56=3M FS-SN5624 (980 nm)
153=1530 nm	42=3M FS-SN4224 (850 nm)
148=1480 nm	32=3M FS-SN3224 (635 nm)
131=1310 nm	50=50/125 multimode
980=980 nm	62=62.5/125 multimode
850=850 nm	10=100/125 multimode
780=780 nm	20=200/240 multimode
670=670 nm	40=400/425 multimode
650=650 nm	60=600/630 multimode
635=635 nm	01=1000 um Mitsubishi plastic