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FORJ: Multi-channel fibre optic rotary joint (MRn series, SM & MM)



MR24-155-28

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Product selection guide](#)

MRn series multi-pass Fibre optic Rotary Joints (FORJs) carry the largest channel count in Princetel's FORJ line up. 20-50 independent fibre channels are offered as standard options. The most common is 24-channel version. Loss and back reflection are uniform across all channels. There is no channel "drop off" or "blind spot" during rotation. They also feature low crosstalk performance (<-60 dB) for both single and multi-mode fibres.

Like our other multi-channel FORJs, all channels can accommodate either singlemode or multimode fibres. It is also possible to combine the two types of fibres in one device across three optical windows (850, 1310, and 1550 nm). As a rule of thumb, always consider lower channel count first for smaller size, lower cost, faster delivery, and easier handling. However, if massive channel count is necessary, Princetel's MRn series FORJs offer the best solution.

SPECIFICATIONS

PARAMETERS	VALUES
Wavelength	1270-1610 nm for SM; 850 and 1310 nm for MM
Insertion loss	<6 dB (typical: 2-3 dB)
Insertion loss ripple	~+/-0.5 to 1 dB
Return loss	45 dB
Crosstalk	>50 dB (typical: 63 dB)
Chromatic dispersion	<0.01 ps/nm
Polarization mode dispersion	<0.01 ps
Maximum speed	200 rpm
Pulling strength	10 N
Start up torque	<1 Nm
Estimated life cycle	100 million revolutions
Optical power handling	23 dBm
Working temperature	-20 to 65 C
Storage temperature	-25 to 75 C
Package style	Pigtails
Housing material	Stainless steel
Fibre types	SM or MM w/3 mm jacket, 1 m (Kevlar/PVC or armor)
Connector types	FC, SC, ST, SMA, LC or /APCs
Dimensions	67 mm dia. x 221 mm length
Weight	3.5 kg
Vibration	MIL-STD-167-1
Mechanical shock	MIL-STD-810F
IP rating	Up to IP 65

CREATE YOUR PART NUMBER

MRn- wavelength code- fiber code- connector code

DOCUMENTS DOWNLOAD

- [Download PDF drawing for MRn](#)
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