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



MR24-155-28
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[FORJ catalog 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](#)
- [Download Solidworks 3-D drawing for MRn](#)