Atomix International Ltd.

Telecast Fiber Systems, Inc.

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MX™

Mini-eXpanded Beam Optical Connectors

Features

- *Expanded beam technology*
- *High reliability design*
- *Small and lightweight*
- *Easy cleaning*
- *Two or four fiber versions*
- *Single mode or multimode*
- *Hermaphroditic operation*
- *Durable construction*
- *Proven in harsh environments*
- *Jam nut or flange mount receptacles*
- *Protective rubber plug grip*
- *Integral threaded dust covers*

The next generation of fiber connectors brings easy cleaning and proven field performance.

Telecast's new MX connector series represents a major breakthrough for fiber in field production. Using advanced expanded beam technology, this is the most dependable, easiest to maintain fiber connector available.

Reliability by Design

Unlike conventional pin-and-socket buttjoint connectors, the MX mating interface consists of easy to clean lenses. There are no recesses to trap dirt or interfere with signal transfer. Cleaning is simply a matter of wiping off the lenses with a lintfree cloth.

Fiber ends are protected from the elements and each other. There is no physical contact between fibers or between mating lenses.

Similarly, there are no fragile sleeves or alignment mechanisms to break. Reliability means dependability, and you can depend on a more predictable, repeatable mating every time, thanks to expanded beam technology.

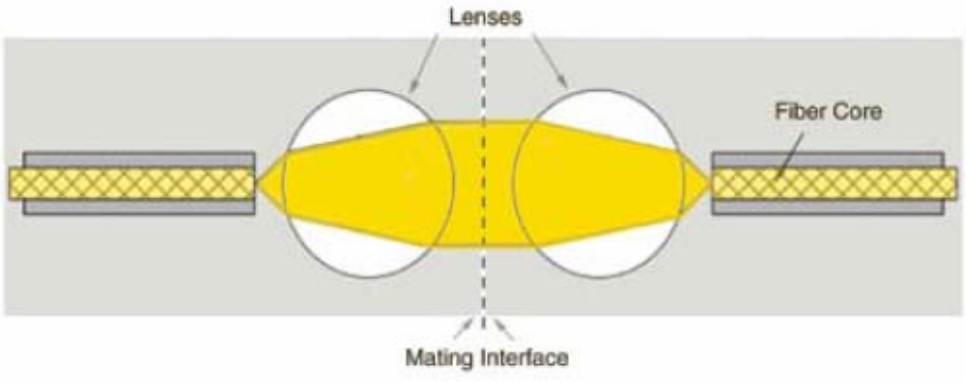
About Expanded Beam

Whereas ordinary butt-joint connectors rely on aligning fiber cores to within one micron tolerances, the MX connector employs precision lenses to optically expand the mating interface area. The beam of light from the core of one fiber is expanded to approximately 2,000 times its original size, then refocused back into the fiber of the mating connector. As a result, this minimizes the effect of dust, debris and even mechanical vibration.

Easy to handle, Easy to Use

An obvious design element of the MX is its small size. Both 2- and 4-fiber connectors use the same low profile housing, making it ideal for mounting on small devices and in tight situations.

All MX connectors are hermaphroditic, meaning you never have to worry about running your cables backwards. Plugs mate together without the need for intermediate barrels or couplers.



A more reliable, repeatable connection results from a larger mating area at the interface.

Specifications

General Description

- Non-Contacting Design of Mating Fibers
- Available in two and four fibers
- Shell Kits, Cable Adapter Kits & Inserts Available for Flexibility in Design
- Hermaphroditic Construction

Optical Performance

Insertion loss, typical	1 dB, single mode 0.8 dB, multimode
Insertion loss, max.	1.5 dB, single mode 1.0 dB, multimode

Mechanical

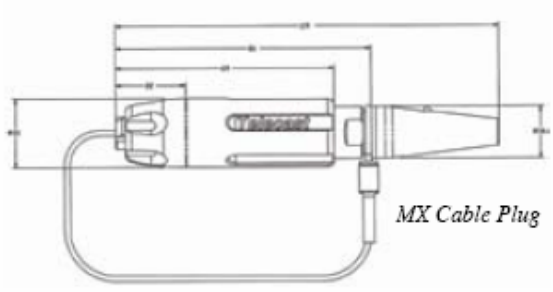
Durability	Per IEC 61300-2-2, 3000 Cycles, Mate and Unmate
Storage Temp	-55C to +95C
Operating Temp	-40C to +85C
Salt SprayPer	IEC 60068-2-52,Severity 1, +40C, 93%RH, 4 Cycles of 2 Hrs Spraying Followed By Storage
Sealing Immersion	Per IEC 60529, IPX8, 5 Meters, 24 Hrs
Dust	Per IEC 60529, IP6X, 4 Hrs
Rain	Per IEC 60529, IPX4, 10 Liters/Min, 1 Hr
Bump	Per IEC 60068-2-29, EB, Half Sinusoidal, 50G, 4000 Bumps, 6 Directions
Vibration	Per TIA/EIA-455-11C, Test Cond. II, 10G, 10-500Hz, 12 Sweeps, 15 Min Each
Retention	Per TIA/EIA-455-6B, Meth 1,1000N, 10Min
Flex	Per TIA/EIA-455-1B, Fig 1, ±90 Degrees, 15 Cycles/Min for 10 Minutes
Twist	Per TIA/EIA-455-36B, ±90 Degrees, 15 Cycles/Min for 1000 Cycles, 4.0kg Load
Free Fall	Per IEC 60068-2-32, Procedure 1, 1200mm Height, 500 Drops on Concrete

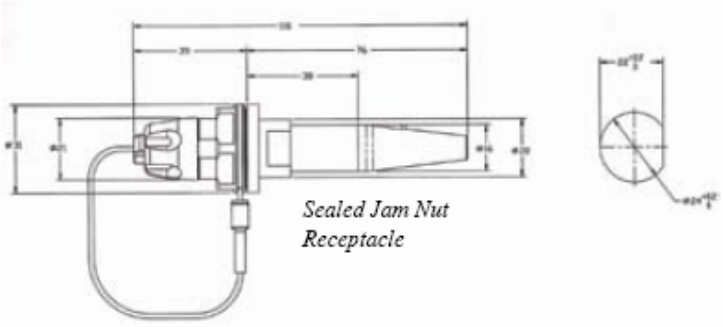
The 4-fiber MX mated plug set

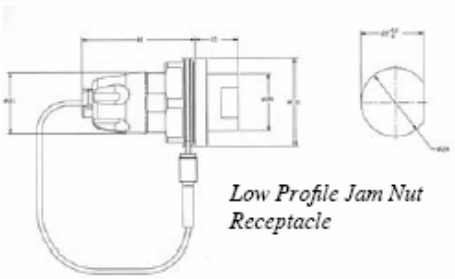
Smaller than other multifiber connectors, including the widely used PH hermaphroditic connector

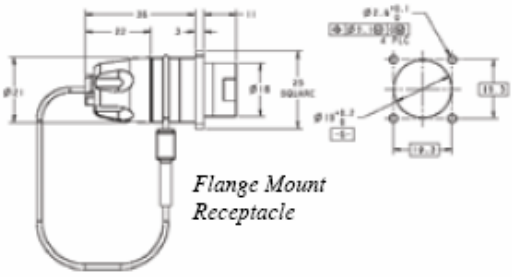
Ordering Information

Part Number	Description
MX-P2	MX Hermaphroditic Plug, 2-fiber
MX-P4	MX Hermaphroditic Plug, 4-fiber
MX-R2-JLP	MX Receptacle, 2-fiber, Jam Nut, Low Profile
MX-R4-JLP	MX Receptacle, 4-fiber, Jam Nut, Low Profile
MX-R2-JS	MX Receptacle, 2-fiber, Jam Nut, Sealed
MX-R4-JS	MX Receptacle, 4-fiber, Jam Nut, Sealed
MX-R2-F4	MX Receptacle, 2-fiber, Flange Mount
MX-R4-F4	MX Receptacle, 4-fiber, Flange Mount









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