





SERIES 180-183

MT Ferrule

High-density fiber optic connectors

MT fiber optic ferrules are super-high-density commercial interconnects that accommodate up to 24 fibers in a compact and lightweight ferrule. MT ferrules can be terminated with ribbon cable, jacketed ribbon cable, and round cable. MT interconnects are typically used for backplanes or trunk lines—such as in commercial aircraft interconnect wiring—where one high density, multi-channel line feeds many branches.

**The MT Ferrule
High-Density Advantage**



24 fibers

3 fibers

Up to 24 fibers in a single compact, lightweight ferrule (7mm x 3mm / .276" x .118")—the area of three size 16 termini side by side

Now, Glenair brings together the high density of these widely-used MT ferrules with the durable mating and harsh-environment performance of Glenair connectors—packaging MT ferrules in MIL-DTL-38999 Series III type, MIL-DTL-5015 reverse-bayonet type, and Mighty Mouse connector shells. Up to 24 fibers can be packaged in a single size 11 D38999 Series III Type connector, and four MT ferrules can be combined in one size 17 shell—for up to 96 fibers in a single connector (Consult the factory for even more fiber in the harness). Environmental sealing is rated IP67 in mated condition, with IP68 sealing available. A variety of material and finishes, including RoHS-compliant finish options can be specified.

- **Environmental sealing:**
IP67 mated, IP68 available
- **Ruggedized mil-spec caliber connector bodies:**
D38999 Series III type, MIL-DTL-5015 type reverse-bayonet and Mighty Mouse
- **RoHS-compliant finishes available**
- **Low insertion loss**
- **Single-mode and multimode fiber (UPC / APC configurations)**
- **Durability performances per TIA/EIA-455-21A with maximum loss increase of 0.10 dB average for multimode and 0.20 dB average for singlemode**
- **Optical performances IAW TIA/EIA 568-B.3**

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MT FERRULE CONNECTOR PRODUCT ARRAY

MIL-DTL-38999 Series III type connectors			
Shell Size 11 Insert Arrangement -1 Up to 24 fibers (1 MT)	Shell Size 13 Insert Arrangement -2 Up to 48 fibers (2 MT)	Shell Size 15 Insert Arrangement -3 Up to 72 fibers (3 MT)	Shell Size 17 Insert Arrangement -4 Up to 96 fibers (4 MT)

MIL-DTL-38999 Series III type connectors			
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Performance Specifications	
Test Description	Performance Requirements/Specifications
Optical Insertion Loss, Multimode	-0.3 dB Typical (50/125)
Optical Insertion Loss, Singlemode	-0.3 dB Typical (9/125)
Optical Back Reflection, Singlemode	Better than -30 dB - PC Polish
Mechanical Shock (Operational)	75G Half Sine, 10 ms Duration, 3 Times Both Direction Each Axis per TIA-455-14A
Mechanical Shock (Non-Operational)	36-44G Sawtooth, 10-12 ms Duration, 3 Times Both Direction Each Axis per MIL-STD-810F, Method 516.5
Vibration	Figure 514.5C-8 (36 Grms), 1 hour Exposure Each Axis per MIL-STD-810F, Method 514.5, Procedure 1
Mating Durability	500 Mating Cycles per TIA-455-21A
Thermal Cycling	5 Cycles, -40° (At Step 1) to 85°C (At Step 3) with 1 hour Exposure per EIA-364-32F, Condition VIII, Method A
Temperature Life	85°C for 336 hours per TIA-455-4C
Humidity	90%-95% RH, 96 hour Exposure per TIA-455-5C, Method A, Test Condition A

ASAP FIBER OPTIC CABLE SETS

Glenair's experienced fiber optic engineers can design, terminate, and test complex multibranch assemblies incorporating MT ferrule and other standard commercial fiber optic interconnects with rugged and reliable mil-spec caliber connectors featuring:

- Environmental shrink boots
- Plastic and metal-core conduit assemblies
- Field-repairable banding backshell assemblies
- Inside-the-box receptacle/pigtail assemblies, including low-profile backshells and conduit

