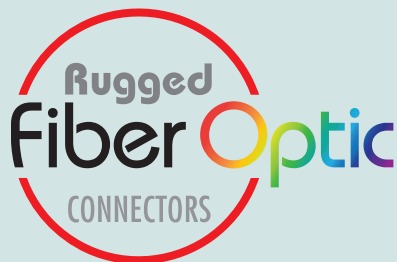


GLENAIR  
SIGNATURE  
FIBER OPTIC  
CONNECTION  
SYSTEMS



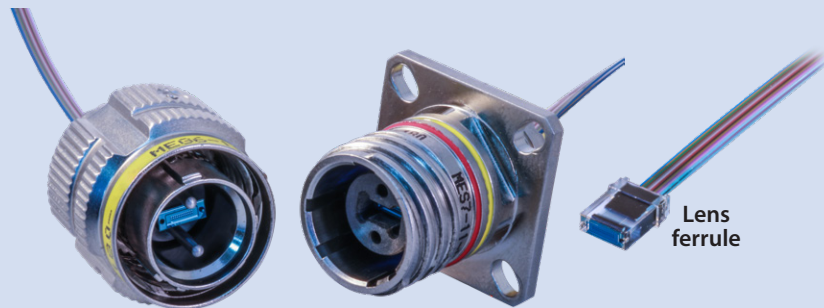
Rugged High-Density  
**MT Ferrule** Fiber Optic  
Connection System—with  
Mil-Grade SuperNine®  
Packaging



Ruggedized, high-density MT ferrule  
fiber optics in Glenair Signature  
SuperNine® aerospace-grade  
MIL-DTL-38999 connectors

- Singlemode and multimode fiber
- Low insertion loss
- Environmental sealing: IP68 in the mated condition
- Physical contact and expanded beam
- Available in composite

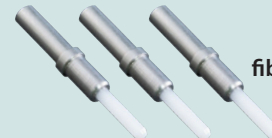
**ALSO AVAILABLE: EXPANDED-BEAM MT SOLUTIONS**



**RUGGED, HIGH-DENSITY**



24  
fibers



3  
fibers

Up to 24 fibers in a single compact,  
lightweight ferrule (7mm x 3mm)

# ULTRA HIGH-DENSITY MT Ferrule



## Signature fiber optic connection system: SuperNine D38999

SuperNine® connectors with plug-and-play MT ferrule accommodation - Shell Size / Insert Arrangements			
Shell Size-Insert Arrangement <b>11-1</b> Up to 24 fibers (1 MT ferrule)	Shell Size-Insert Arrangement <b>13-2</b> Up to 48 fibers (2 MT ferrules)	Shell Size-Insert Arrangement <b>15-3</b> Up to 72 fibers (3 MT ferrules)	Shell Size-Insert Arrangement <b>17-4</b> Up to 96 fibers (4 MT ferrules)

SuperNine® MT Performance Specifications	
Test Description	Performance Requirements/Specifications
Optical Insertion Loss, Multimode Expanded Beam	-0.5 dB Typical (50/125)
Optical Insertion Loss, Multimode PC	-0.3 dB Typical (50/125)
Optical Insertion Loss, Singlemode PC	-0.3 dB Typical (9/125)
Optical Insertion Loss, Singlemode APC	-0.3 dB Typical (9/125)
Optical Back Reflection, Multimode Expanded Beam	Better than -28 dB
Optical Back Reflection, Singlemode PC	Better than -30 dB
Optical Back Reflection, Singlemode APC	Better than -60 dB
Mechanical Shock	300 G Half-sine Pulse, 3 ms Duration, 3 Times Both Direction Each Axis per TIA-455-14A
Vibration, Random	49.5 Grms at Ambient Temperature per MIL-STD-1678-3, Measurement 3201, Test Condition C, 5.3c, 8 hours exposure each axis
Mating Durability	500 Mating Cycles per TIA-455-21A
Humidity *	90%-95% RH, 96 hour Exposure per TIA-455-5C, Method A, Test Condition A
Thermal Cycle *	5 Cycles, -40°C to 85°C with 1 hour Exposure per EIA-364-32F, Condition VIII, Method A
Temperature Life *	85°C for 336 hours per TIA-455-4C

\*cable and epoxy dependent

### TURNKEY SUPERNINE® MT FIBER OPTIC CABLE SETS

Glenair can design, terminate, and test complex multibranch and point-to-point assemblies incorporating SuperNine® MT connectors Panel mount MT receptacles may be terminated to standard commercial fiber optic interconnects for termination to board-level transceivers. MT plug assemblies are available with ruggedized backshells or environmental overmolding. Low-profile cable overmolds provide fiber media organization and ribbon-to-wire strain relief.

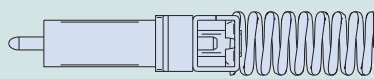
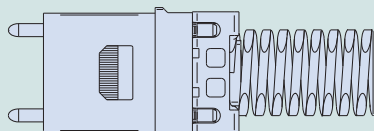


### PARALLEL OPTICAL TRANSCEIVERS



The ideal solution for board-level optical-to-electrical conversion utilizing MT fiber optic ferrules.

### HOW-TO-ORDER MT FERRULE KITS



<b>Sample Part Number</b>	<b>181-139</b>	<b>-1253</b>	<b>-12</b>	<b>M</b>
<b>Basic Part Number</b>	MT Ferrule kit			
<b>Fiber type</b>	<b>-126, -1253, -1253A</b> (See Table I)			
<b>Number of Fibers</b>	<b>-12, -24</b> (See Table I)			
<b>Ferrule Style</b>	<b>M</b> = Male (use with Plug) <b>F</b> = Female (use with Receptacle)			

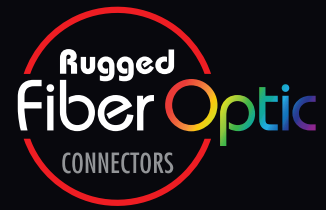
Table I					
Dash No.	Fiber Type	End Face	Fiber Size Core/Cladding	No. of Fibers	Ferrule Identification
<b>-126</b>	MM	PC	50/125	12	M-ME12
			62.5/125	24	M-ME24
<b>-1253</b>	SM	PC	9/125	12	E-E12
<b>-1253A</b>	SM	APC	9/125	12	M-ME12
				24	M-ME24

### MATERIAL/FINISH

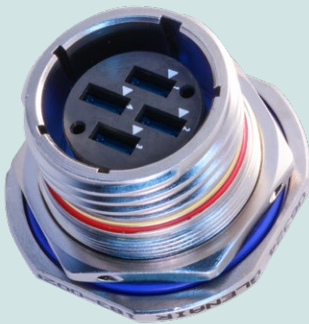
- Ferrule: Polyphenylene Sulfide Resin
- Pin Clamp, Spring: Stainless Steel
- Boot: TPE

# SERIES 183-002 SuperNine MT Fiber Optic Connectors

## How to order connectors



SuperNine MT Cable Plug						
<b>Sample Part Number</b>	<b>183-002</b>	<b>ME</b>	<b>G6</b>	<b>-17-4</b>	<b>N</b>	<b>1</b>
<b>Basic Part Number</b>	MT Ferrule Fiber Optic Connector					
<b>Material/Finish Code</b>	See Table I					
<b>Connector Style</b>	<b>G6</b> = Plug with EMI/RFI ground spring					
<b>Shell Size / Insert Arrangement</b>	<b>11-1, 13-2, 15-3, 17-4</b> Order MT ferrule kit P/N <b>181-139</b>					
<b>Alternate Key Position</b>	<b>A, B, C, D, E, N</b> = Normal <b>U</b> = Universal (per MIL-DTL-38999)					
<b>Insert Cavity Clocking Orientation (see Table II)</b>	<b>1</b> = Standard position <b>2</b> = Cavity position rotated 45° to master key/keyway <b>3</b> = Cavity position rotated 90° to master key/keyway					

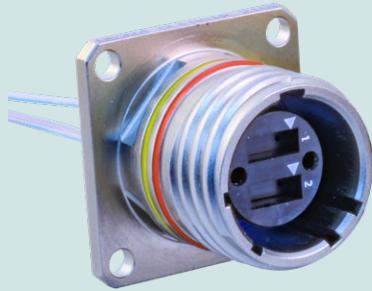


SuperNine MT Jam Nut Mount Receptacle						
<b>Sample Part Number</b>	<b>183-002</b>	<b>ME</b>	<b>08</b>	<b>-17-4</b>	<b>N</b>	<b>1</b>
<b>Basic Part Number</b>	MT Ferrule Fiber Optic Connector					
<b>Material/Finish Code</b>	See Table I					
<b>Connector Style</b>	<b>08</b> = Jam nut receptacle					
<b>Shell Size / Insert Arrangement</b>	<b>11-1, 13-2, 15-3, 17-4</b> Order MT ferrule kit P/N <b>181-139</b>					
<b>Alternate Key Position</b>	<b>A, B, C, D, E, N</b> = Normal <b>U</b> = Universal (per MIL-DTL-38999)					
<b>Insert Cavity Clocking Orientation (see Table II)</b>	<b>1</b> = Standard position <b>2</b> = Cavity position rotated 45° to master key/keyway <b>3</b> = Cavity position rotated 90° to master key/keyway					

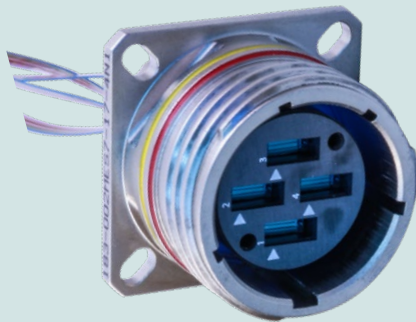


SuperNine MT In-Line Receptacle						
<b>Sample Part Number</b>	<b>183-002</b>	<b>ME</b>	<b>05</b>	<b>-17-4</b>	<b>N</b>	<b>1</b>
<b>Basic Part Number</b>	MT Ferrule Fiber Optic Connector					
<b>Material/Finish Code</b>	See Table I					
<b>Connector Style</b>	<b>05</b> = In-line receptacle					
<b>Shell Size / Insert Arrangement</b>	<b>11-1, 13-2, 15-3, 17-4</b> Order MT ferrule kit P/N <b>181-139</b>					
<b>Alternate Key Position</b>	<b>A, B, C, D, E, N</b> = Normal <b>U</b> = Universal (per MIL-DTL-38999)					
<b>Insert Cavity Clocking Orientation (see Table II)</b>	<b>1</b> = Standard position <b>2</b> = Cavity position rotated 45° to master key/keyway <b>3</b> = Cavity position rotated 90° to master key/keyway					

## How to order connectors



SuperNine MT Wall-Mount Receptacle, Standard Holes				
<b>Sample Part Number</b>	183-002	ME	H7	-17-4 N 1
<b>Basic Part Number</b>	MT Ferrule Fiber Optic Connector			
<b>Material/Finish Code</b>	See Table I			
<b>Connector Style</b>	H7 = Wall-mount receptacle with round holes			
<b>Shell Size / Insert Arrangement</b>	11-1, 13-2, 15-3, 17-4 Order MT ferrule kit P/N 181-139			
<b>Alternate Key Position</b>	A, B, C, D, E, N = Normal U = Universal (per MIL-DTL-38999)			
<b>Insert Cavity</b>	1 = Standard position			
<b>Clocking Orientation</b> (see Table II)	2 = Cavity position rotated 45° to master key/keyway 3 = Cavity position rotated 90° to master key/keyway			



SuperNine MT Wall-Mount Receptacle, Slotted Holes, Clinch Nuts, Helicoils				
<b>Sample Part Number</b>	183-002	ME	S7	-17-4 N 1
<b>Basic Part Number</b>	MT Ferrule Fiber Optic Connector			
<b>Material/Finish Code</b>	See Table I			
<b>Connector Style</b>	S7 = Wall-mount receptacle with slotted holes CM = Wall-mount receptacle with metric clinch nuts CS = Wall-mount receptacle with standard clinch nuts HM = Wall-mount receptacle with metric helicoils HS = Wall-mount receptacle with standard helicoils			
<b>Shell Size / Insert Arrangement</b>	11-1, 13-2, 15-3, 17-4 Order MT ferrule kit P/N 181-139			
<b>Alternate Key Position</b>	A, B, C, D, E, N = Normal U = Universal (per MIL-DTL-38999)			
<b>Insert Cavity</b>	1 = Standard position			
<b>Clocking Orientation</b> (see Table II)	2 = Cavity position rotated 45° to master key/keyway 3 = Cavity position rotated 90° to master key/keyway			

Code	Material	Finish Description
ME	Aluminum Alloy	Electroless Nickel
MT		Nickel-PTFE, Grey
NF		Cadmium, Olive Drab
ZR		Zinc-Nickel, Black
TZ		Tin-Zinc, Green/Gold
XM	Composite	Electroless Nickel
XW		Cadmium, Olive Drab
Z1	Stainless Steel	Passivate
ZL		Electro-Deposited Nickel

Code	Shell Size-Arrangement 11-1	Shell Size-Arrangement 13-2	Shell Size-Arrangement 15-3	Shell Size-Arrangement 17-4
1				
2				
3				

### NOTES

- Pin (male) and socket (female) ferrule kits can be used in either plug or receptacle connectors. Preferred configuration is female ferrule in receptacle connector