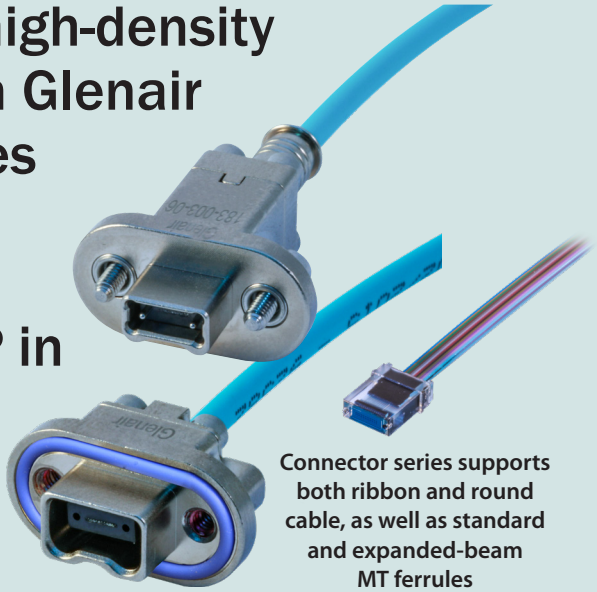
GLENAIR
SIGNATURE
FIBER OPTIC
CONNECTION
SYSTEMS

Rugged Fiber Optic CONNECTORS

Rugged High-Density **MT Ferrule** Fiber Optic Connection System—With Mil-Grade Miniature Series 79 Packaging

Single-ferrule high-density MT datalinks in Glenair Signature Series 79 rectangular packaging optimize SWaP in mission-critical mil-aero applications



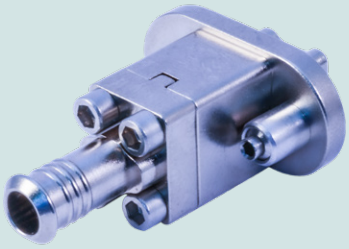
Connector series supports both ribbon and round cable, as well as standard and expanded-beam MT ferrules

- **Small form-factor, high-density fiber optic solution for rugged mil-aero applications**
- **Temperature tolerance from -40°C to +85°C**
- **Optimized for use with parallel optic transceivers in ribbon or round cable applications**
- **Designed for optimal low insertion loss performance in high vibration and shock environments**

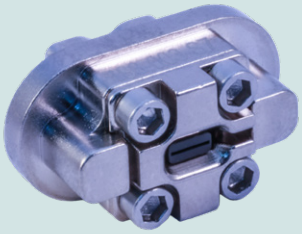
ULTRA HIGH-DENSITY

Rugged MT Fiber Optic Connectors

Signature fiber optic connection system: miniature Series 79 packaging



-06 plug, with retaining plate for EMI shield termination and strain relief of ribbon or round fiber cable



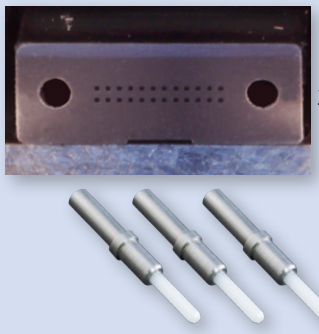
-S7 receptacle with standard retaining plate

-S7 receptacle with conductive EMI gasket

ABOUT SERIES 79 MT FIBER OPTIC CONNECTORS

Designed in accordance with rugged mil-aero industry specifications, the Glenair Series 79 MT fiber optic connector is the world's smallest ruggedized MT connector solution. High-density MT ferrules are packaged in precision-machined rectangular aluminum shells with electroless nickel finish, or passivated stainless steel shells for higher temperature applications. Receptacles may be equipped with optional EMI gaskets, and mate bottom-to-bottom with plug assemblies for robust resistance to vibration and shock. Designed for harsh-environment, inside-the-box use in parallel optics, fiber optic backplanes, missile systems, spacecraft and satellites, heads-up displays, and other ribbonized or flex-circuit fiber optic datalinks, the Series 79 MT delivers superior low insertion-loss performance (up to 500 mating cycles). Connectors are supplied in single (consult factory for dual and quad) MT configurations with banding platform or ultra low-profile retaining plate options.

The MT Ferrule High-Density Advantage



Up to 24 fibers in a single compact, lightweight ferrule (7mm x 3mm / .276" x .118") **—same real estate as three size #16 termini side by side**

PARALLEL OPTICAL TRANSCEIVERS

Glenair's rugged, small form-factor parallel optical transceivers are the ideal solution for board-level optical-to-electrical conversion utilizing MT fiber optic ferrules.

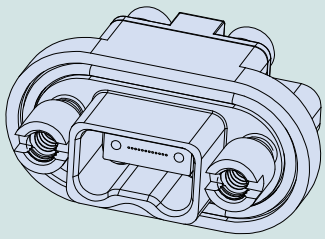
Series 79 MT Ferrule Fiber Optic Connector Performance Specifications per QTP-773 and Test Report GT-19-111	
Test Description	Test Results
Optical Insertion Loss, multimode (consult factory for singlemode)	50/125 µm fiber @ 850 nm: ≤0.15 dB average; 0.31 dB typical 50/125 µm fiber @ 1300 nm: ≤0.21 dB average; 0.38 dB typical
Temperature Cycling: per TIA/EIA-455-3, Test Condition C-2	- 40°C to +85°C, 5 Cycles, 56 hours Max. CIT = .25 dB; Max. IL post-test = .30 dB
Mating Durability	First 100 cycles with CIT measured every 10 cycles Max. CIT = 0.12 dB; Max. IL post-test = 0.20 dB (Mating hardware torqued to spec when taking IL measurements)
Mating Durability, Extended	From 101st cycle to 500th cycle with CIT measured every 25 cycles Max. CIT = 0.21 dB; Max. IL post-test = 0.30 dB (Mating hardware torqued to spec when taking IL measurements)
Physical Shock 1: 50g Peak, 11 ms duration, per TIA/EIA-455-14, Test Condition E	Max. CIT = 0.14 dB; Max. IL post-test = 0.42 dB; discontinuity ≤0.5 dB @ <1 us.
Physical Shock 2: 160g Peak, 4 ms duration, per MIL-STD-202, Method 213	Max. CIT = 0.04 dB; Max. IL post-test = 0.40 dB; discontinuity ≤0.5 dB @ <1 us.
Additional Physical Shock: 300g Peak, 0.5 ms duration, per MIL-STD-833E, Method 2002.4 (30 shocks total)	Max. CIT = .15 dB; Max. IL post-test = 0.20 dB; discontinuity ≤0.5 dB @ <1 us.
Vibration 1: 5-15 Hz, .12" double amplitude, 2 hours/axis (6 hours total) per MIL-STD-202, test condition 201, Sinusoidal	Max. CIT = 0.06 dB; Max. IL post-test = 0.37 dB
Vibration 2 : 20g Peak, 10-2,000 Hz, 4 hours/axis (12 hours total) per TIA-455-11, Test Condition IV, Sinusoidal	Max. CIT = 0.08 dB; Max. IL post-test = 0.43 dB
Weight	Plug with Ferrule kit 5.5 grams · Receptacle with Ferrule kit 7.5 grams

MT Fiber Optic Connectors

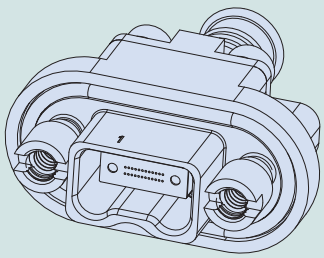
183-003 Standard Series 79 MT How To Order

Glenair is qualified by US Conec to terminate 1 and 2 row PRIZM® MT and MXC® Ferrules for ribbon and round cable fiber.

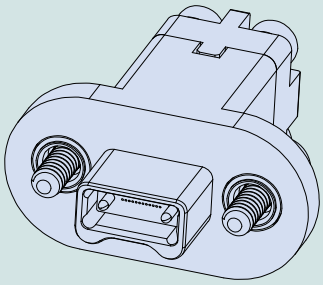
How To Order							
Sample Part Number	**183-003**	**ME**	**-06**	**-L**	**-1**	**A**	**-APC**
Basic Number	Series 79 Single MT Fiber Optic Connector						
Material / Finish	**ME** = Al Alloy / Electroless Nickel **MT** = Al Alloy / Nickel PTFE **ZR** = Al Alloy / Zinc Nickel, Black **NF** = Al Alloy / Cadmium, O.D. **Z1** = Stainless Steel / Passivate						
Connector Type	**-06** = Plug (used with male MT ferrule) **-07** = Receptacle (used with female MT ferrule) **-S7** = Receptacle with EMI gasket (used with female MT ferrule)						
Mounting Hardware	Hardware for PLUGS **-L** = Hex Head Jackscrew, non-removable **-K** = Slotted Head Jackscrew, non-removable **-B** = Thru-Hole Rear Panel Mount Jackposts for RECEPTACLES: **-X** = for .031" panel thickness **-W** = for .047" panel thickness **-V** = for .062" panel thickness **-T** = for .094" panel thickness **-R** = for .080" panel thickness						
Retaining Plate / Banding Platform	**-1** = 12 or 24 channel without banding platform **-2** = 12 or 24 channel with banding platform for EMI shield termination and strain relief **N** = No Retaining Plate (For use with standalone retaining plate) See Dwg. 189-168 for various retaining plate designs See Dwg. 189-177 for retaining plate used with Prizm-MT on Jacketed Cable						
Polarization Key Position	**A** or **B** position for Plug; **A**, **B**, or **U** position for Receptacle **Omit** for no Polarization Key. See Table.						
APC / Flat MT option	**-APC** = for use with angled MT Ferrule (MT/APC) **Omit** = for use with flat MT ferrule (MT/PC) including Prizm-MT						



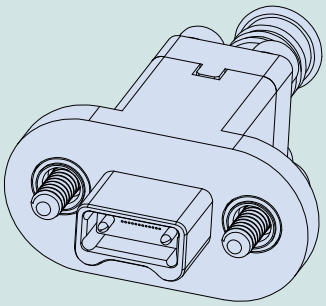
Receptacle with female MT ferrule, available with or without EMI gasket



Receptacle with female MT ferrule, retaining plate, and banding platform



Plug with male MT ferrule and retaining plate



Plug with male MT ferrule with retaining plate and banding platform

MATERIAL/FINISH/NOTES

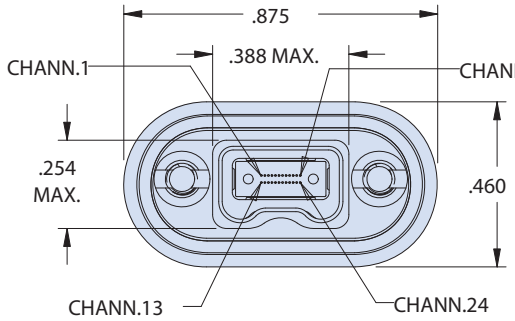
Mounting hardware: stainless steel / passivated
EMI gasket (optional): conductive silicone
Additional materials, finishes, connector configurations (dual and quad layouts), and hardware options are available, consult factory

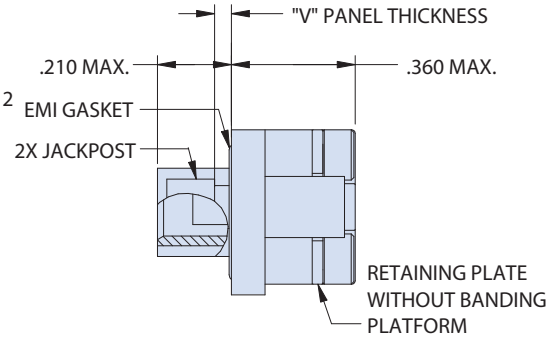
MT Fiber Optic Connectors

183-003 Standard Series 79 MT Connector styles and dimensions

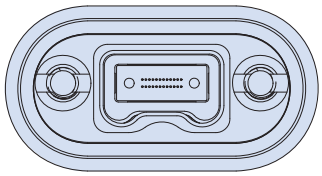
Glenair is qualified by US Conec to terminate 1 and 2 row PRIZM® MT and MXC® Ferrules for ribbon and round cable fiber.

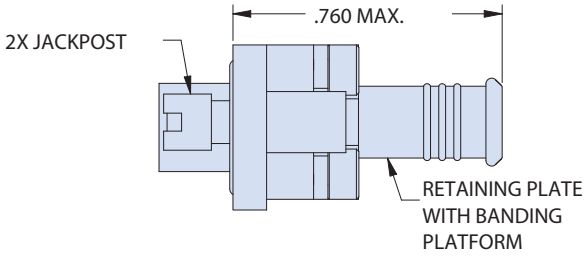
Receptacle, Low Profile



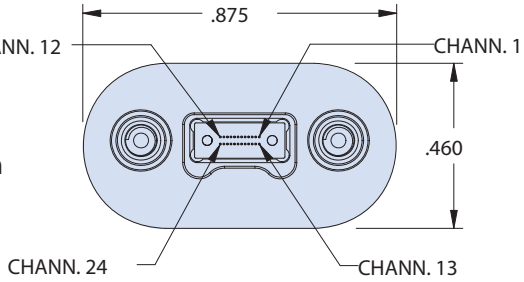


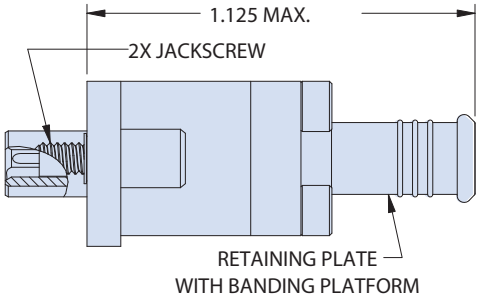
Receptacle, With Banding Platform



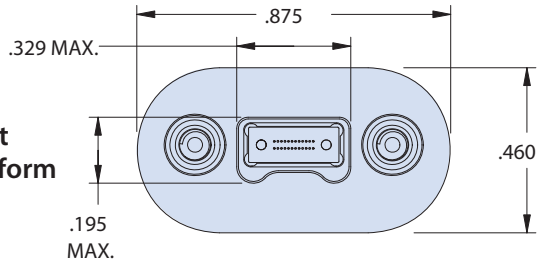


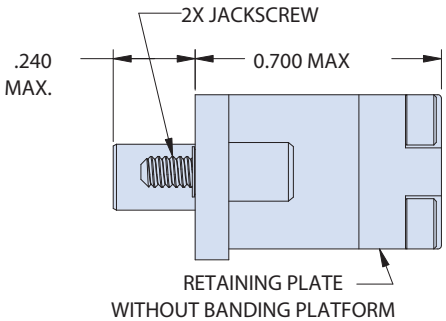
Plug, With Banding Platform





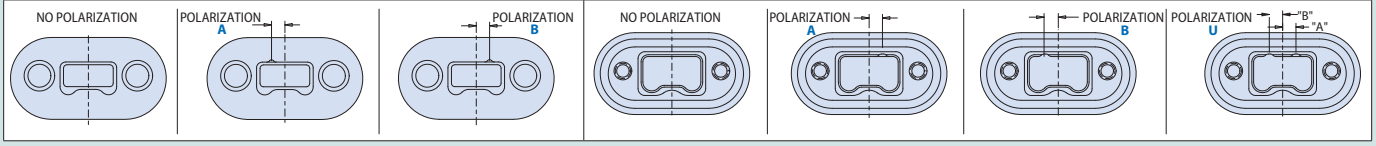
Plug, Without Banding Platform





Polarization Key Positions

Plug			Receptacle			
NO POLARIZATION	POLARIZATION A	POLARIZATION B	NO POLARIZATION	POLARIZATION A	POLARIZATION B	POLARIZATION U



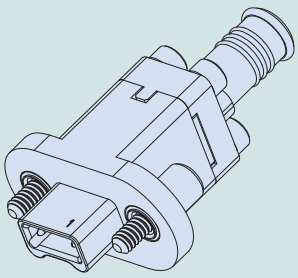
Dimensions in Inches (millimeters) are subject to change without notice.

MT Fiber Optic Connectors

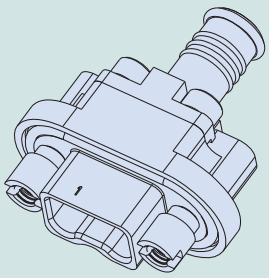
183-014 Environmental Series 79 MT
How To Order

How To Order							
Sample Part Number	**183-014**	**ME**	**-06**	**-L**	**-2**	**A**	**-APC**

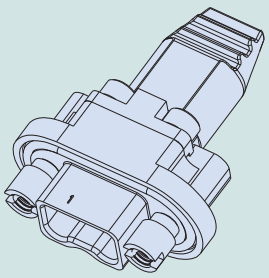
Basic Number	Series 79 Single MT Environmental Fiber Optic Connector
Material / Finish	**ME** = Al Alloy / Electroless Nickel **MT** = Al Alloy / Nickel PTFE **ZR** = Al Alloy / Zinc Nickel, Black **NF** = Al Alloy / Cadmium, O.D. **Z1** = Stainless Steel / Passivate
Connector Type	**-06** = Plug (used with male MT ferrule) **-07** = Receptacle (used with female MT ferrule) **-09** = Receptacle with EPDM O-ring (used with female MT ferrule)
Mounting Hardware	Hardware for PLUGS **-L** = Hex Head Jackscrew, non-removable **-K** = Slotted Head Jackscrew, non-removable **-B** = Thru-Hole Rear Panel Mount Jackposts for RECEPTACLES: **-X** = for .031" panel thickness **-W** = for .047" panel thickness **-V** = for .062" panel thickness **-T** = for .094" panel thickness **-R** = for .080" panel thickness (panel thickness dims ±.002")
Retaining Plate / Banding Platform	**-2** = 12 or 24 channel for plug or receptacle with banding porch **-3** = 12 channel for receptacle without banding porch only (N/A for plug) **-4** = 24 Channel for receptacle without banding porch only (N/A for plug) **-N** = No Retaining Plate (For use with standalone retaining plate) See Dwg. 189-165 for various retaining plate designs See Dwg. 189-178 for retaining plate used with Prizm-MT on Jacketed Cable
Polarization Key Position	**A** or **B** position for Plug; **A**, **B**, or **U** position for Receptacle **Omit** for no Polarization Key. See Table.
APC / Flat MT option	**-APC** = for use with angled MT Ferrule (MT/APC) **Omit** = for use with flat MT ferrule (MT/PC) including Prizm-MT



Plug
with Banding Porch



Receptacle
with Banding Porch



Receptacle
without Banding Porch

Additional Components
181-133 or **181-150** MT Ferrule Kit
601-500 or 601-501 Band-Master ATS® Nano Band for shield termination
189-160 Dust Cap

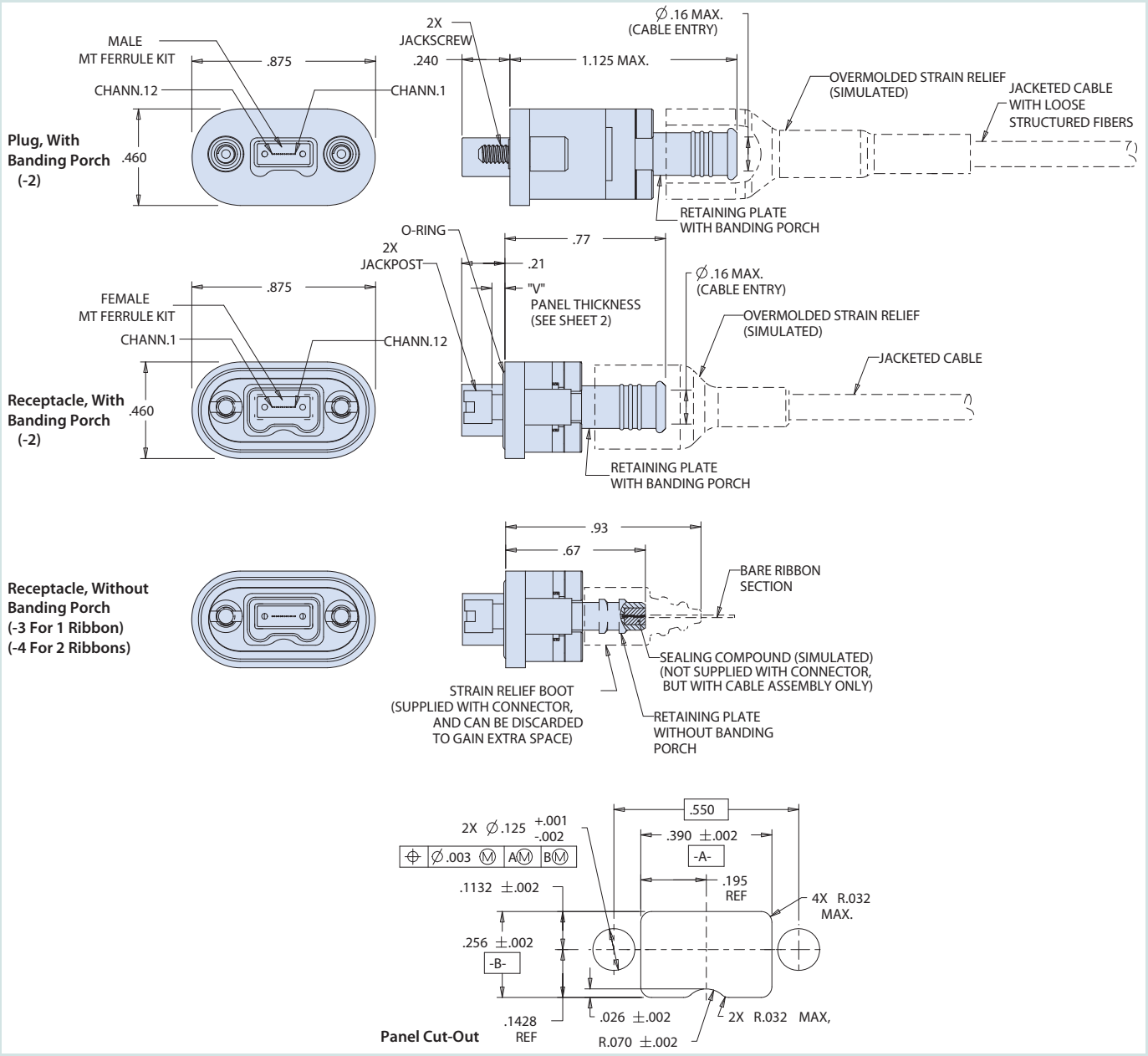
Seal Materials			
Connector Type	Panel O-Ring	Peripheral Seal	Rear Gasket
-06 Plug	N/A	N/A	Fluorosilicone
-07 Receptacle	Fluorosilicone	Fluorosilicone	Fluorosilicone
-09 Receptacle	EPDM	Fluorosilicone	Fluorosilicone

MATERIAL/FINISH/NOTES

Mounting hardware: stainless steel / passivated
Additional materials, finishes, connector configurations (dual and quad layouts), and hardware options are available, consult factory
Connectors supplied without MT ferrule kit, purchase separetely per P/N 181-133 or 181-150

MT Fiber Optic Connectors

183-014 Environmental Series 79 MT
Connector styles and dimensions



Polarization Key Positions

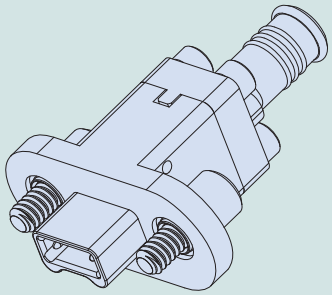
Plug			Receptacle			
NO POLARIZATION	POLARIZATION A	POLARIZATION B	NO POLARIZATION	POLARIZATION A	POLARIZATION B	POLARIZATION U

MT Fiber Optic Connectors

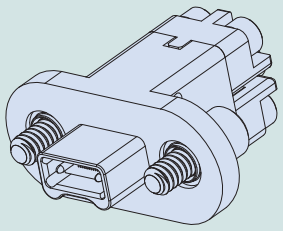
183-021 Series 79 MT with expanded polarized keying positions and #4-40 UNC jackscrew · How To Order

How To Order							
Sample Part Number	**183-021**	**ME**	**-06**	**-L**	**-1**	**-A13**	**-APC**

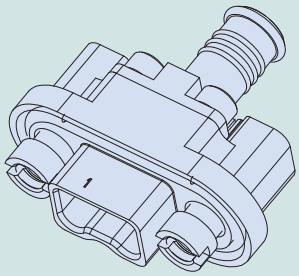
Basic Number	Series 79 Single MT Fiber Optic Connector
Material / Finish	**ME** = Al Alloy / Electroless Nickel **MT** = Al Alloy / Nickel PTFE **ZR** = Al Alloy / Zinc Nickel, Black **NF** = Al Alloy / Cadmium, O.D. **Z1** = Stainless Steel / Passivate
Connector Type	**-06** = Plug (used with male MT ferrule) **-07** = Receptacle (used with female MT ferrule) **-S7** = Receptacle with EMI O-ring (used with female MT ferrule)
Mounting Hardware	Hardware for PLUGS **-L** = Hex Head Jackscrew, non-removable **-B** = Thru-Hole Rear Panel Mount Jackposts for RECEPTACLES: **-X** = for .031" panel thickness **-W** = for .047" panel thickness **-V** = for .062" panel thickness **-T** = for .094" panel thickness **-R** = for .080" panel thickness (panel thickness dims ±.002")
Retaining Plate / Banding Platform	**-1** = 12 or 24 channel without banding porch **-2** = 12 or 24 channel with banding porch **-N** = No Retaining Plate (For use with standalone retaining plate) See Dwg. 189-168 for various retaining plate designs See Dwg. 189-177 for retaining plate used with Prizm-MT on Jacketed Cable
Polarization Key Position	See POLARIZED KEYING POSITIONS Table **-U** = Universal position for Receptacle only **Omit** for no Polarization Key. See Table.
APC / Flat MT option	**-APC** = for use with angled MT Ferrule (MT/APC) **Omit** = for use with flat MT ferrule (MT/PC) including Prizm-MT



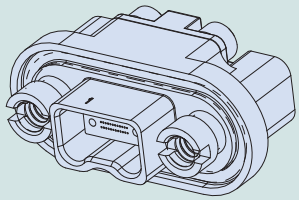
Plug with Banding Porch



Plug without Banding Porch



Receptacle with Banding Porch



Receptacle without Banding Porch

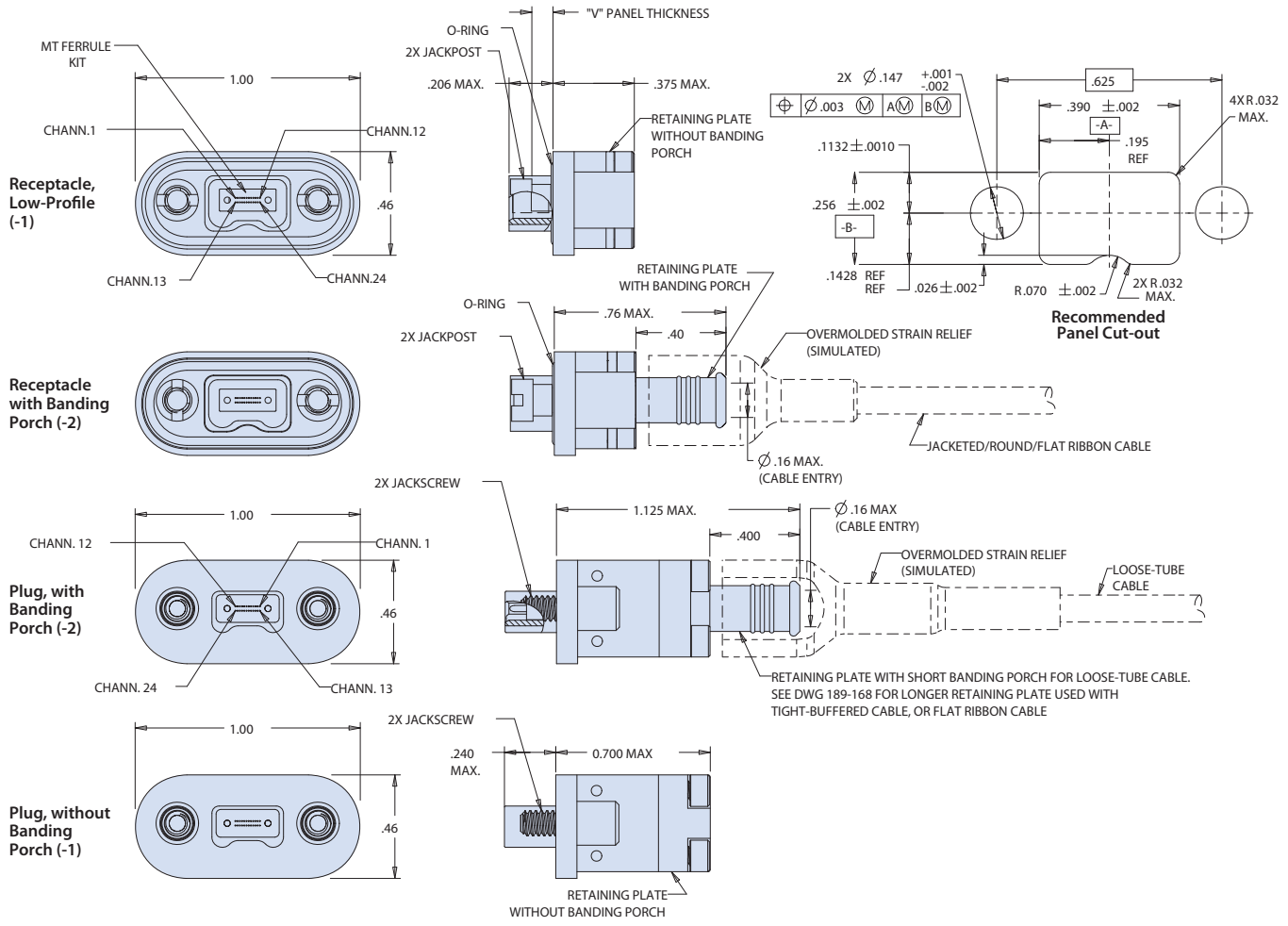
Additional Components
181-133 or **181-150** MT Ferrule Kit
601-500 or 601-501 Band-Master ATS® Nano Band for shield termination
189-172 Dust Cap
189-168 or **189-177** Various Retaining Plate Designs

MATERIAL/FINISH/NOTES

Mounting hardware: stainless steel / passivated
EMI O-ring: conductibe fluorosilicone Standard O-ring: fluorosilicone/silicone blend
Additional materials, finishes, connector configurations (dual and quad layouts), and hardware options are available, consult factory
Connectors supplied without MT ferrule kit, purchase separetely per P/N 181-133 or 181-150

MT Fiber Optic Connectors

183-021 Series 79 MT with expanded polarized keying positions and #4-40 UNC jackscrew · Connector styles and dimensions

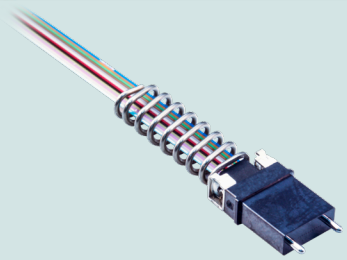


POLARIZED KEYING POSITIONS (Front view, receptacle) CODES and Plug / Receptacle Key Designations

-A13	-A23	-A14	-A24	-AD1	-AD2	-AD3	-AD4
-B13	-B23	-B14	-B24	-BE1	-BE2	-BE3	-BE4
-C13	-C23	-C14	-C24	-AE1	-AE2	-AE3	-AE4
-D13	-D23	-D14	-D24	(Omit) No Polarization Key, Plug	A B C D E 4 Plug Key designations 1 3 2		E D C B A 1 Receptacle Key designations 4 2 3
-E13	-E23	-E14	-E24	-U Universal Key Receptacle			

MT Fiber Optic Connectors

How To Order MT Ferrule Kits



How To Order				
Sample Part Number	**181-133**	**-126**	**-12**	**P**
Basic Part Number	MT Ferrule kit			
Fiber type	**-126**, **-1253**, **-1253A** (See Table I)			
Number of Fibers	**-12**, **-24** (See Table I)			
Ferrule Style	**P** = Male (use with Plug) **S** = Female (use with Receptacle)			

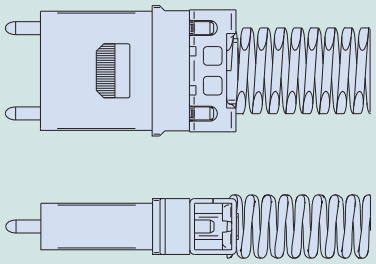


Table I

Dash No.	Fiber Type	End Face	Fiber Size Core/ Cladding	No. of Fibers	Ferrule Identification	Pin Clamp Identification (Male Kit only)
-126	MM	PC	50/125	12	M-ME12	1 Through Hole
			62.5/125	24	M-ME24	
-1253	SM	PC	9/125	12	E-E12	2 Through Holes
-1253A	SM	APC	9/125	12	E-E12	2 Through Holes

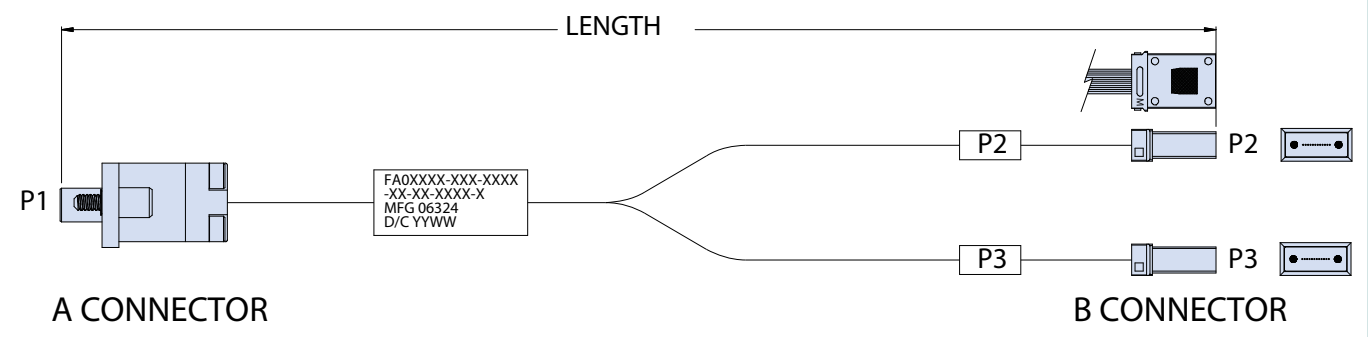
MATERIAL/FINISH

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

MT Fiber Optic Connectors

How To Order Series 79 MT to MT Ferrule Cable Assembly

How To Order													
Sample Part Number	**FA07364**	**-06**	**-17**	**ME**	**-B4**	**-50**	**-L**		**-1**		**-036**	**L**
Basic Number	Series 79 MT Ferrule Fiber Optic Cable Asembly											
A Connector Type	**-06** = Sr. 79 Plug 183-003 (used with male MT ferrule) **-07** = Sr. 79 Receptacle 183-003 (used with female MT ferrule) **-S7** = Sr. 79 Receptalcle 183-003 with EMI gasket (used with female MT ferrule)											
B Connector Type	**-06** = Sr. 79 Plug 183-003 (used with male MT ferrule) **-07** = Sr. 79 Receptacle 183-003 (used with female MT ferrule) **-S7** = Sr. 79 Receptalcle 183-003 with EMI gasket (used with female MT ferrule) **-12** = ST Connector **-13** = FC Connector **-14** = SC Connector **-15** = GC Connector **-16** = LC Connector **-17** = MT Connector (male) **-18** = MT Connector (female) **-19** = MTP Connector (male) **-20** = MTP Connector (female)											
Material / Finish (-06, -07, -S7)	**ME** = Al Alloy / Electroless Nickel **MT** = Al Alloy / Nickel PTFE **ZR** = Al Alloy / Zinc Nickel, Black **NF** = Al Alloy / Cadmium, O.D. **Z1** = Stainless Steel / Passivate											
Fiber Qty. / Type	**-B2** = 12 bare ribbon fibers **-B4** = 24 bare ribbon fibers **-R2** = 12 round ribbon fibers **-R4** = 24 round ribbon fibers											
Fiber Size	**-09** = 9.3/125 Singlemode **-50** = 50/125 Multimode **-62** = 62.5/125 Multimode											
Mounting Hardware (A Connector)	Plug **-L** = Hex head jackscrew, non-removable **-B** = Thru-hole Receptacle **-X** = Rear-panel jackpost, .031" thickness **-W** = Rear-panel jackpost, .041" thickness **-V** = Rear-panel jackpost, .062" thickness **-T** = Rear-panel jackpost, .094" thickness **-R** = for .080" panel thickness											
Mounting Hardware (B Connector, applies to Sr. 79 only)	Series 79 Plug **-L** = Hex head jackscrew, non-removable **-B** = Thru-hole **-K** = Slotted Head Jackscrew, non-removable Series 79 Receptacle **-X** = Rear-panel jackpost, .031" thickness **-W** = Rear-panel jackpost, .041" thickness **-V** = Rear-panel jackpost, .062" thickness **-T** = Rear-panel jackpost, .094" thickness **Omit** = if not Sr. 79 connector											
Banding Platform (A Connector)	**-1** = without banding platform **-2** = with banding platform											
Banding Platform (B Connector, applies to Sr. 79 only)	**-1** = without banding platform **-2** = with banding platform **Omit** if not Sr. 79 connector											
Length	In inches (e.g. -0036 = 36 inches)											
Protective Cover	**L** = supplied less covers **Omit** = supplied with covers											



Dimensions in Inches (millimeters) are subject to change without notice.