

# MT38999 Connectors

## For High Density Fiber Optic Interconnect Solutions

The features of the Amphenol MT Cylindrical Connector include:

- High fiber density in a relatively small circular connector package with all the advantages of the MIL-DTL-38999 series III connector
- Three levels of alignment provide for precision fiber to fiber interface:
  - Shell to shell with keying to allow for alternate positions
  - Insert plug to insert receptacle
  - MT contact guide pins
- Compatible with 12-fiber or 24-fiber MT ferrules in multi-mode PC, single mode PC, and single mode APC configurations
- 2 arrangements are available, shell size 11 with one ferrule, and shell size 21 with four ferrules

Very high density can be achieved with the use of Amphenol MT38999 connectors:

- Up to 24 fiber channels in a size 11 shell
- Up to 96 fiber channels in a size 21 shell

### OPTICAL / MECHANICAL / ENVIRONMENTAL

Parameter	Performance
Insertion Loss (850 nm)*	0.40 dB (typ)
Return Loss (850 nm)	-40.0 dB (typ)
Thermal Cycling	EIA-364-03D, test condition VII -40° to 85°C
Temperature Life	TIA/EIA-455-4; 85° for 336 hours
Vibration	MIL-STD-810F, Method 514.5
Mechanical Shock (Operational)	MIL-STD-810F, Method 516.5 75G half-sine, 10 ms duration
Mechanical Shock (Non-Operational)	MIL-STD-810F, Method 516.5 36-44G sawtooth, 10-12 ms duration
Humidity	TIA/EIA-455-5

\* Values shown are typical. Optical loss performance dependant on optical launch conditions, end face geometry, end face quality, and grade of MT ferrule.



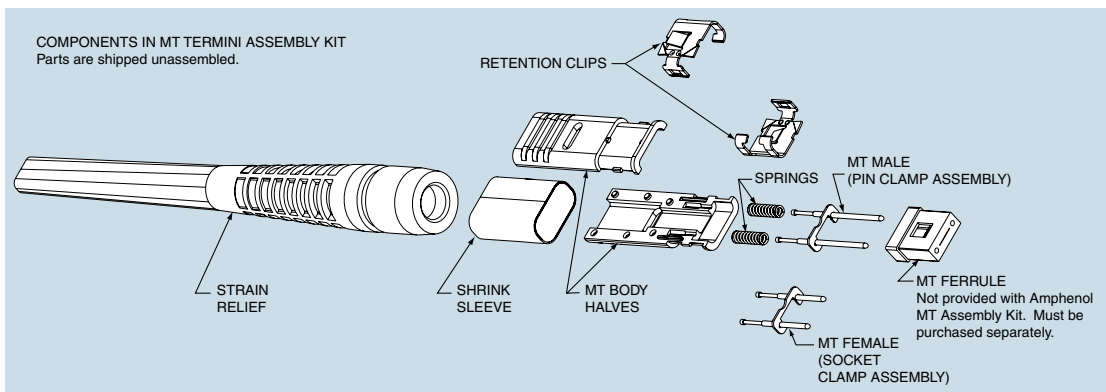
### MT Termini Assembly Kit

Amphenol supplies MT termini assemblies in kits, minus the MT ferrule. MT ferrules that meet the IEC1754-5 specification are recommended for use.

Kit Order Numbers (MT Ferrules are not included with kit):

MT male assembly kit (flat ribbon): **CF-198136-000**

MT female assembly kit (flat ribbon): **CF-198137-000**



(MT assembly kit shown)

Easy Steps to build a part number... **MT38999**

1.	2.	3.	4.	5.	6.	7.
Connector Type	Connector Class	Terminus Style	Shell Finish	Shell Style	Shell Size- Insert Arrangement	Insert Type & Key/Keyway Position
CF-	6	9	9	0	11-01	P

**Step 1. Select a Connector Type**

CF-	Multi-Channel Fiber Optic Connector
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**Step 2. Select a Connector Class**

	Designates
5	Aluminum
6	Composite
8	Stainless Steel

**Step 3. Terminus Style**

9	MT terminus - Flat ribbon cable
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**Step 4. Select a Shell Finish**

	Designates
4	Electroless nickel
6	Corrosion resistant stainless steel (connector class 8 only)
9	Olive drab cadmium
D	Durmalon™ (Nickel-PTFE)

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Other shell finishes are available. Consult Amphenol Aerospace for more information.

**Step 5. Select a Shell Style**

	Designates
0	Wall mount receptacle
1	Line receptacle
6	Straight plug
7	Jam nut receptacle

**Step 6. Select a Shell Size- Insert Arrangement**

Shell Size - Insert Arrg.	Designates
11-01	Shell size 11 - Single cavity
21-04	Shell size 21 - Four Cavity

**Step 7. Insert Type & Key/Keyway Position**

Insert Type and Keyway Position  
 P designates pin insert  
 S designates socket insert  
 For keyway positioning, choose the alternate rotation suffix from the chart below.

ALTERNATE POSITION SUFFIX

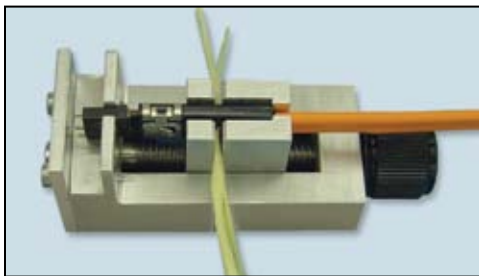
Alternate Position	Suffix Letter	
	Pins	Sockets
Normal	P	S
A	G	H
B	I	J
C	K	L
D	M	N
E	R	T

**MT Insert Availability**  
 Front face of socket inserts illustrated

Insert Arrangement 11-1      21-4

**MT Assembly Tool**

Order Number: 11-10000-000



**MT Removal Tool**

Order Number: CF-008025-000



See the Fiber Optic section of Amphenol's combined circular product catalog, 12-C3 - online at [www.amphenol-aerospace.com](http://www.amphenol-aerospace.com)

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