Amphenol® Aerospace

PDS-238-2

MT38999 Connectors and Fiber Optic Cable Assemblies

MT38999 CONNECTORS

FEATURES

+ 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
+ Two arrangements are available, shell size 11 with one ferrule, and shell size 21 with four ferrules
+ Up to 24 fiber channels in a size 11 shell
+ Up to 96 fiber channels in a size 11 shell

CONTACT US:

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MT CYLINDRICAL CONNECTORS

Amphenol MT 38999 Connectors are designed for high density fiber optic interconnect solutions.

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

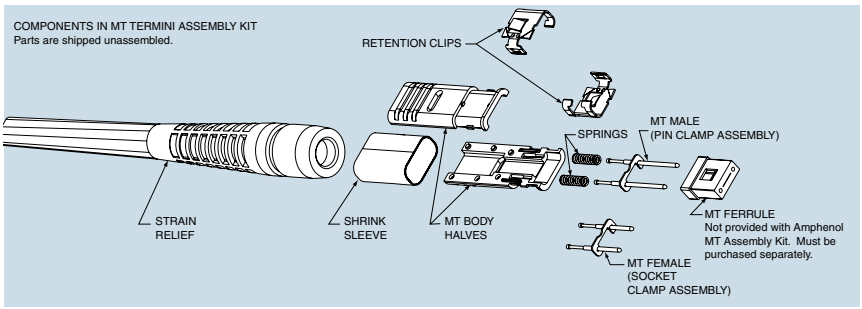
* Values shown are typical. Optical loss performance dependant on optical launch conditions, end face geometry, end face quality, and grade of MT ferrule.

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)

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. Connector Type

CF–	Multi-Channel Fiber Optic Connector

Step 2. Connector Class

	Designates
5	Aluminum
6	Composite
8	Stainless Steel

Step 3. Terminus Stype

9	MT terminus - Flat ribbon cable

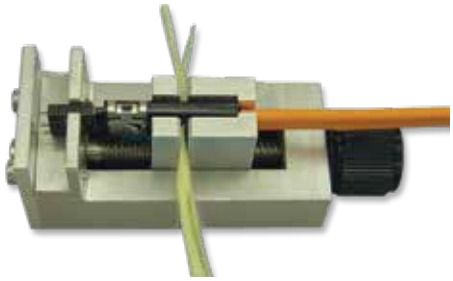
Step 4. Shell Finish

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

Durmalon is a trademark of Amphenol Aerospace. For more information on Durmalon, go to amphenol-aerospace.com.

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

MT Assembly Tool
Order Number: 11-100000-000



MT Removal Tool
Order Number: CF-008025-000

Step 5. Shell Stype

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

Step 6. 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 and Keyway Position

P designates pin insert

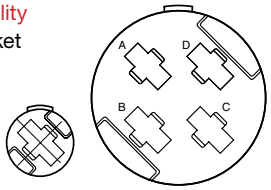
S designates socket insert

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

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See the Fiber Optic section of Amphenol's combined circular product catalog, 12-C( ) - online at amphenol-aerospace.com

MT38999 Connectors and Fiber Optic Cable Assemblies

MT FIBER OPTIC CABLE ASSEMBLIES

FEATURES AND BENEFITS

+ Maneuverability
+ Very high density in cylindrical connectors:
+ Up to 24 fiber channels in size 11 shell
+ Up to 96 fiber channels in size 21 shell

ROUND MT CABLE ASSEMBLIES

+ From simple to complex
+ Ruggedization with full testing (temperature, shock, vibration)
+ Insertion loss and return loss testing capabilities
+ Industry leading polish and termination capabilities
+ Using COTS cable from across the country

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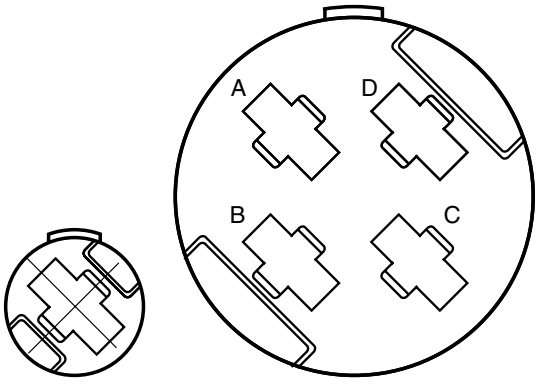
OVERVIEW

Amphenol Aerospace offers the High Performance Interconnect Solution for your High Speed Needs.

MT INSERT AVAILABILITY

Front face of socket inserts illustrated



11-1 21-4

Two arrangements are available as shown above - shell size 11 with one ferrule, and shell size 21 with four ferrules.

How to Order

1	2	3	4	5	6
Fiber Optic Connector	**Round Cable MT**	**Shell Finish**	**Shell Style**	**Shell Size – Insert Pattern**	**Alternate Position Suffix**
CF-	5R	4	7	11-2	Blank for Normal

Fiber Optic Connector Prefix

Round Cable MT
Ferrule Designation

Shell Finish:
4=Electroless Nickel
9=Olive Drab
D=Durmalon

Shell Style:
0=Wall Mount Receptacle
1=In line Receptacle
6=Straight Plug
7=Jam Nut

Shell Size - Insert Pattern
11-2 Single MT Ferrule
21-4 Four MT Ferrules

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

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