MT38999 Connectors and Fiber Optic Cable Assemblies

MT38999 CONNECTORS

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

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

OPTICAL / MECHANICAL / ENVIRONMENTAL

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss (850 nm)</td>
<td>0.40 dB (typ)</td>
</tr>
<tr>
<td>Return Loss (850 nm)</td>
<td>–40.0 dB (typ)</td>
</tr>
<tr>
<td>Thermal Cycling</td>
<td>EIA-364-03D, test condition VII –40° to 85°C</td>
</tr>
<tr>
<td>Temperature Life</td>
<td>TIA/EIA-455-4; 85° for 336 hours</td>
</tr>
<tr>
<td>Vibration</td>
<td>MIL-STD-810F, Method 514.5</td>
</tr>
<tr>
<td>Mechanical Shock (Operational)</td>
<td>MIL-STD-810F, Method 516.5</td>
</tr>
<tr>
<td>Mechanical Shock (Non-Operational)</td>
<td>MIL-STD-810F, Method 516.5</td>
</tr>
<tr>
<td>Humidity</td>
<td>TIA/EIA-455-5</td>
</tr>
</tbody>
</table>

* 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

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Phone: 607-563-5372

Call 800-678-0141 or visit us at www.amphenol-aerospace.com
## MT38999 Connectors and Fiber Optic Cable Assemblies
### MT38999 CONNECTORS

**Build a part number:** MT38999

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CF–</td>
<td>6</td>
<td>9</td>
<td>9</td>
<td>0</td>
<td>11-01</td>
<td>P</td>
</tr>
</tbody>
</table>

**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 Style**
- 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

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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

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

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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MT INSERT AVAILABILITY
Front face of socket inserts illustrated

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

<table>
<thead>
<tr>
<th>Fiber Optic Connector</th>
<th>Round Cable MT</th>
<th>Shell Finish</th>
<th>Shell Style</th>
<th>Shell Size – Insert Pattern</th>
<th>Alternate Position Suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF-</td>
<td>5R</td>
<td>4</td>
<td>7</td>
<td>11-2</td>
<td>Blank for Normal</td>
</tr>
</tbody>
</table>

**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

**Alternate Position Suffix**

<table>
<thead>
<tr>
<th>Alternate Position</th>
<th>Suffix Letter</th>
<th>Pins</th>
<th>Sockets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>P</td>
<td>S</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>G</td>
<td>H</td>
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</tr>
<tr>
<td>B</td>
<td>I</td>
<td>J</td>
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<tr>
<td>C</td>
<td>K</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>M</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>R</td>
<td>T</td>
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</tbody>
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