High-density Circular MT Cable Assemblies are designed for critical, high-reliability applications

Molex’s rugged, high-density circular MT cable assemblies meet today’s escalating performance requirements mandated by telecommunication, military, medical and many other industries. Utilizing the low-profile Circular MT connector, these cable assemblies are designed to meet or exceed the mechanical specifications of traditional data communication and telecommunication inter-chassis connections.

The Circular MT assemblies use a single MT ferrule housed in a nickel-plated, metal-connector shell. Fiber counts range from 12 to 72 fibers. The metal housing and stainless steel push-pull locking ring provide a more robust design than the current industry standard MPO connector polymer housings and latches. The MT ferrule is recessed in both the circular connector and receptacle housings, providing an additional improvement over traditional MT connectors. Recessing the ferrule ensures it is scoop-proof, preventing damage to the precise MT alignment pins and ferrule endface during handling and mating of the connector.

Features and Benefits

- MT Ferrules are recessed in the connector and receptacle housings ensuring scoop-proof mating which prevents damage to alignment pins and ferrule endface.
- Aluminum connector and receptacle housings provide a robust interconnect with exceptional pull strength.
- O-ring and Electro Magnetic Interference (EMI) gasket provide environmental seals that isolate dust, moisture and EMI.
- Designed for round, multi-fiber jackets providing improved fiber management.
- Standard MT Ferrules which provide an industry-standard interface with high density and reliable performance.
- 19.05mm (.750") diameter receptacle features a small footprint and similar size to industry standard MPO connector.

FEATURES AND SPECIFICATIONS

Reference Information

Packaging: Custom per assembly

Optical

Ferrule Type: MT Ferrule
Fiber Density: 12 to 72 fibers
Fiber Type:
  - Single mode: 9/125µm
  - Multimode: 50/125µm or 62.5/125µm
Insertion Loss:
  - Single mode:
    - 8 Fiber: 0.12 dB typical <0.5dB max.
    - 12 Fiber: 0.15 dB typical <0.75dB max.
    - 24 Fiber: 0.20 dB typical <0.75dB max.
  - Multimode
    - 12 Fiber: 0.15 dB typical <0.5dB max.
    - 24 Fiber: 0.22 dB typical <0.75dB max.
    - 36 Fiber: 0.30 dB typical <1.0dB max.
    - 72 Fiber: 0.35 dB typical <1.0dB max.

Mechanical

Operating Temperature Range: -5 to +75°C
Durability: 200 matings

Physical

Housing: Nickel-plated aluminum
### Order Numbers Supplied as Example Only

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Component</th>
<th>Component Width</th>
<th>Component Length</th>
<th>Cable Length</th>
<th>Fiber Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>106277-0001*</td>
<td>Connector, Double-Ended Assembly</td>
<td>12.70mm (.500&quot;)</td>
<td>36.30mm (1.429&quot;)</td>
<td>3.00m (9.840&quot;)</td>
<td>24 Fiber</td>
</tr>
<tr>
<td>106277-1001*</td>
<td>Receptacle, Single-Ended Assembly</td>
<td>19.05mm (.750&quot;)</td>
<td>28.70mm (1.130&quot;)</td>
<td>3.00m (9.840&quot;)</td>
<td>24 Fiber</td>
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<tr>
<td>106277-0000*</td>
<td>Connector and Receptacle System Cable Assembly</td>
<td>N/A</td>
<td>N/A</td>
<td>3.00m (9.840&quot;)</td>
<td>24 Fiber</td>
</tr>
</tbody>
</table>

*Only sold as terminated cable assemblies. Circular connector and receptacle components will not be sold separately. Part numbers and sales drawings will be established based on specific customer design requirements.

*†Cable Length: Dependent upon customer design requirement

*‡Fiber Density: Fiber counts range from 12 to 72 fibers, dependent upon customer design requirement