



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

Circular MT Connector Circular MT Connector and Receptacle 1-by-3 Circular MT Connector and Adapter Circular MT Receptacle Molex's rugged, high-density circular MT cable assemblies are designed to meet requirements mandated by telecommunication, military, medical and many other industries. Utilizing the low-profile Circular MT or 1-by-3 circular connectors, these cable assemblies are designed to meet or exceed the mechanical specifications of traditional datacommunication and telecommunication interchassis 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 MTP\* and MPO connectors' 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.

The 1-by-3 circular MT connector housings utilize three MT ferrules in a nickel-plated, metal-connector shell. Fiber counts range from 36 fibers up to 72 fibers by using either 12 or 24 fiber MT ferrules. The 1-by-3 circular MT connector housing uses a stainless-steel, locking mechanism to provide a robust connection. The circular MT receptacle and 1-by-3 circular MT adapter housings feature a deep, polarized mating cavity which will reduce alignment-pin hole damage that may occur during the mating process with traditional MT connector systems.

The circular MT receptacle housing uses a jam nut for mounting versus the 1-by-3 circular MT adapter that is flange mount with screws. The shutter designed for the 1-by-3 adapter provides laser eye safety and has passed the TP-91 dust test specification. Molex's circular MT cable assemblies offer a more robust MT ferrule-based interface versus ribbon-based optical interfaces, which have traditionally been rectangular. The circular MT and 1-by-3 circular MT products ensure improved alignment benefits, increased pull-strength and the use of new round ribbon-cable constructions. Circular MT connectors will be sold only as terminated cable assemblies. Circular MT cable assemblies complement Molex's existing line of MT products. For more information on Molex's extensive optical product offering, please visit: [www.molex.com/fiber](http://www.molex.com/fiber).

## 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

Electro Magnetic Interference (EMI) gasket provide seals and EMI

Stainless Steel locking mechanism provides a secure latch to prevent accidental demating

Standard MT ferrules which provide an industry-standard interface with high density and reliable performance

Enable custom board-to-board stack-height requirements

Designed for round, multi-fiber jackets to provide improved fiber management

## Circular MT Optical Cable Assemblies

106275 1-by-3 Circular MT



Lensed MT



1-by-3 Circular MT Connector and Adapter

### 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 <1.25dB  
max.

#### Mechanical

Operating Temperature Range:

-5 to +75°C

Durability: 200 matings

#### Physical

Housing: Nickel-plated aluminum

### Applications

Telecommunication Equipment

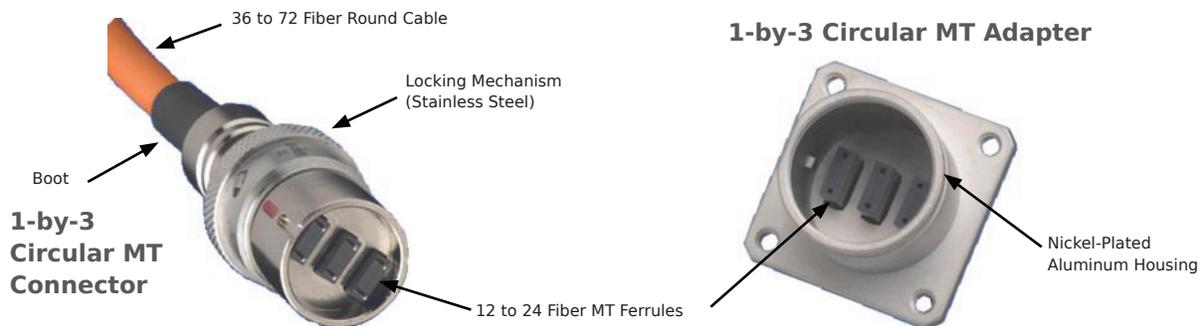
- Hubs, routers, data centers

Instrumentation and Medical Equipment

- Test equipment, switches, video systems

Military

- Communications equipment



### Ordering Information

Order No.	Component	Component Width	Component Length	Cable Length	Fiber Density
106275-1000*	1-by-3 Circular MT Connector, Double-Ended Assembly	Ø17.175mm (0.676")	Ø49.00mm (1.92")	3.00m (9.840')	3-by-12 Fiber MT = 36 Fibers
106275-1001*	1-by-3 Circular MT Adapter System Drawing	26.2-by-26.2mm (1.03 x 1.03")	38.80mm (1.527")	N/A	
106275-0000*	1-by-3 Circular MT Connector and Adapter System	N/A	N/A	3.00m (9.840')	

\* 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