

## MT38999

### Harsh Environment High-Density Optical Connector

The MT38999 Series III is a connector adopting the MT (IEC 1754-5) ferrule enclosed within a D38999 series III connector shell. These connectors have been designed for use in the most demanding civil and military electronic equipment interface applications.

The connector features high density optical capabilities within the generic MIL-DTL-38999 Series III tri-start thread anti-vibration coupling mechanism making it ideal for use in vehicle, aircraft and naval environments. It offers multiple alignment features for optimum performance as well as the ability to create alternative shell keying using the D38999 methodology.



Plug and receptacle connectors are available with standard straight backshell arrangements for plugs and the same for the receptacles, with the addition of a low profile version to facilitate those “behind the wall” applications. The range comes with a choice of shell materials including aluminum alloy (zinc cobalt, olive drab and black), nickel aluminum bronze (shot blast, non-reflective) and stainless steel (passivated).



Receptacle connectors are available with jam-nut or square-flange mounting and strain relief for zip-cords or tactical cable.

The connectors are terminated using an epoxy-polish ferrule termination process with standard MT fiber optic termination tools and equipment.

The MT38999 connectors offer a high density and high performance, flexibility and cost effectiveness, combined with a simple termination.

#### Features

- Size 11 shell: 12 optical channels
- Singlemode or Multimode fibre options
- Standard straight, low profile (BH)
- Low insertion loss / high return loss
- Aluminum, nickel aluminum bronze and stainless steel shell options

# MT38999 Specifications



<b>Insertion loss</b>	9/125 fiber at 1310nm / 1550nm: 12 channels: -0.75 dB max* 50 & 62.5/125 fiber at 850 nm / 1300 nm: 12 channels: -0.50 dB max*
<b>Return loss</b>	>-30 dB singlemode PC, -60 dB singlemode APC / >-20 dB multimode*
<b>Durability</b>	500 Matings as per TIA-455-21A
<b>Thermal cycling</b>	5 cycles, -40°C to +70°C to +85°C EIA 364-32F, test A**
<b>Temperature life</b>	85°C 336 hrs TIA-455-4°C**
<b>Water Immersion</b>	IP67
<b>Free fall resistance</b>	2 drops each level upto 1.5 m - IEC 60068-2-31
<b>Random vibration</b>	TIA 455-11D
<b>Mechanical shock</b>	TIA 455-14A
<b>Humidity</b>	TIA 455-5C
<b>Cable retention</b>	500N (cable dependant)
<b>Connector shell material/color</b>	Aluminum alloy (zinc cobalt, olive drab, black), nickel aluminum bronze (shot blast, non-reflective) or stainless steel (passivated)

\*Tested against reference

\*\*Cable dependant

## Ordering Information

**MT311 P N 12 SM D30 AZOL**

### Connector Family

**MT311** = 38999 type III shell size 11

### Connector Type

**P** = Plug (straight backshell)  
**BS** = Bulkhead square flange mount (straight backshell)  
**BD** = Bulkhead D-hole mount (straight backshell)  
**BDL** = Bulkhead D-hole mount (low profile)  
**BSL** = Bulkhead square flange mount (low profile)

### Polarizing Keys

**N** = Normal  
**RN** = Reversed normal  
**A** = Arrangement "A"

### Number of Channels

**12** = 12 Optical channels

### Connector Shell Material

**AZOL** = Aluminum, zinc cobalt, olive drab  
**AZBK** = Aluminum, zinc cobalt, black  
**S** = Stainless steel  
**N** = Nickel aluminum bronze, non-reflective shot blast

### Cable Diameter

**D30** = Round cable 3.0 mm  
**D45** = Round cable 4.5 mm (double jacket)  
**D55** = Round cable 5.5 mm  
**RIB** = Ribbon cable

### Fiber Type

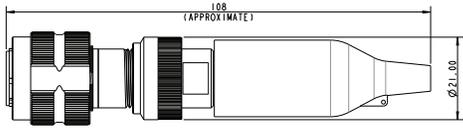
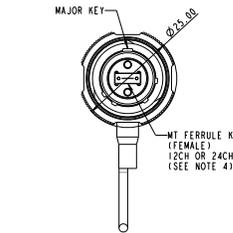
**MM** = Multimode  
**SM** = Singlemode



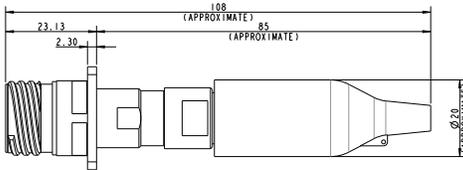
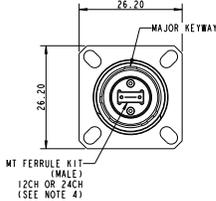
# MT38999 Specifications



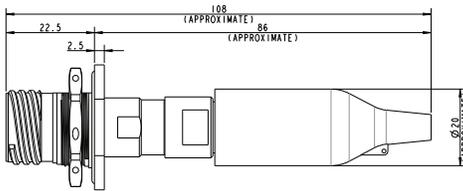
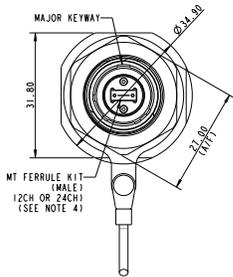
## Plug



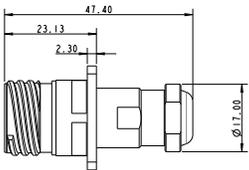
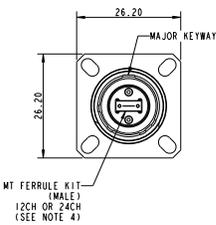
## Square Flange Receptacle



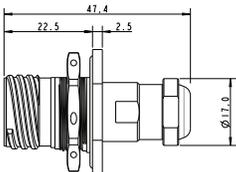
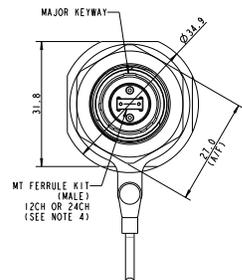
## Jam Nut Receptacle



## Low Profile Square Flange Receptacle



## Low Profile Jam Nut Receptacle



Asia-Pacific  
+86 21 5442 7668  
ccs.asia.sales@as.cinch.com

Europe, Middle East  
+44 (0) 1245 342060  
EMEA\_Sales@cinch.com

North America  
+1 507.833.8822  
ccsorders@us.cinch.com

[belfuse.com/cinch](http://belfuse.com/cinch)