

# HMA-M Mini connector

## Description:

The OPTOKON HMA-M connector series, a mini size „Expanded Beam“ connector is designed for connection of the nodes of tactical network by the help of cables with optical fibers. The used expanded beam technology preserves all advantages of signals transmission through the optical lines in field harsh environmental conditions. Additionally to military optical networks the HMA-M is suited for a vast array of applications, like heavy industry connections, petrochemical application, broadcasting temporary optical lines.

The innovative designs ensure its ability for deployment in the toughest environments where high performance and total reliability are critical. Benefiting from expanded beam technology the precision optical alignment system creates immunity from water, mud, dust oil and other contaminants.

The HMA-M Hermaphroditic coupling eliminates the need for adaptors and male and female mating halves. Hermaphroditic housings allow for rapid deployment, creating low loss Singlemode and Multimode daisy chained links in a variety of planforms ranging from simplex fiber to a four fibers. The OPTOKON HMA-M is ideally suited for environmental extremities where low maintenance and quick repairability is necessary.

## Features:

- Advanced expanded beam technology
- MIL-DTL-83526 specification
- Hermaphroditic interconnection
- 1 to 4 fiber channels Singlemode or Multimode
- Rugged field repairable connector design
- Keyed boot for 'Blind Mating'

## Benefits:

- Best optical performance available
- No adaptors necessary
- Inexpensive, low downtime field repair
- Easy clean, no special tools

## Materials/colors:

- Black anodized aluminium shell
- Grip & boot black



HMA-M plug

## Application:

- Broadcast
- Military communications
- Industrial
- Petrochemical

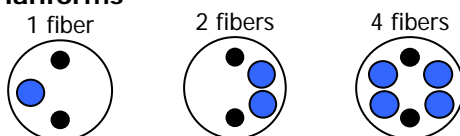


HMA-M bulkhead

## Specifications:

|                       |                                                                                                                        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------|
| Optical Loss          | 50/125 @ 850/1300 nm 0.7 dB typ., 1.0 dB max.<br>9/125 @ 1310/1550 nm 1.0 dB typ., 1.5 dB max.                         |
| Return Loss           | 9/125 @ 1310/1550 nm >32 dB                                                                                            |
| Durability            | 3000 matings minimum                                                                                                   |
| Operating temperature | -55 to +85 °C                                                                                                          |
| Storage temperature   | -55 to +85 °C                                                                                                          |
| Water immersion       | 2 m depth duration 24 Hours                                                                                            |
| Vibration Sinusoidal  | 10-500 Hz, 3 directions, 0.75 mm amplitude @ 10 g acceleration                                                         |
| Free fall resistance  | 500 falls from 1.2 m height                                                                                            |
| Bump resistance       | 4000 bumps @ 40 g acceleration                                                                                         |
| Tensile Strength      | Tensile of 1500 N, cable dependent                                                                                     |
| Crush resistance      | 6.7 kN                                                                                                                 |
| Cable Variations      | Compatible with tactical cable: Plug: 5.0-5.5 mm<br>Bulkhead: 2.8-5.5 mm o/d<br>Other cable sizes available on request |

## Planforms



**Technical drawings:**

|                                                               |                                                                                                                                                              |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Plug Connector: <b>HMA-M (SM,MM)</b></p>                   | <p>Suitable cable:<br/><br/>MIL-TAC D<br/>2 channel Ø 5.0 mm<br/>4 channel Ø 5.5 mm</p>                                                                      |
| <p>Bulkhead Jam-Nut: <b>HMA-M-BN (SM,MM)</b></p>              | <p>Suitable cable:<br/><br/>MIL-TAC D<br/>2 channel Ø 5.0 mm<br/>4 channel Ø 5.5 mm<br/><br/>Duplex<br/>2 channel 2.8x5.5 mm<br/>4 channel 2x 2.8x5.5 mm</p> |
| <p>Bulkhead Flange (square): <b>HMA-M-BF (SM,MM)</b></p>      | <p>Suitable cable:<br/><br/>MIL-TAC D<br/>2 channel Ø 5.0 mm<br/>4 channel Ø 5.5 mm<br/><br/>Duplex<br/>2 channel 2.8x5.5 mm<br/>4 channel 2x 2.8x5.5 mm</p> |
| <p>Bulkhead Flange (rectangular): <b>HMA-M-BX (SM,MM)</b></p> | <p>Suitable cable:<br/><br/>MIL-TAC D<br/>2 channel Ø 5.0 mm<br/>4 channel Ø 5.5 mm<br/><br/>Duplex<br/>2 channel 2.8x5.5 mm<br/>4 channel 2x 1.8x3.5 mm</p> |

**Ordering code:**

|     |   |      |   |                               |   |                |
|-----|---|------|---|-------------------------------|---|----------------|
| HMA | - | X    | - | XX                            | - | X(SM, M5, M6)  |
| M   |   | Mini |   |                               |   | X fiber number |
| -   |   |      |   | plug                          |   |                |
| BN  |   |      |   | bulkhead jam nut              |   |                |
| BF  |   |      |   | bulkhead flange (square)      |   |                |
| BX  |   |      |   | bulkhead flange (rectangular) |   |                |