

HMA-S Series connector

Description:

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

Features:

- Advanced expanded beam technology
- Hermaphroditic interconnection
- 1 to 8 fiber channels Single mode or Multimode
- Hybrid electrical & fiber channel options available
- Rugged field repairable connector design
- Keyed boot for 'Blind Mating'
- HMA-S is fully compatible with another producers of HMA connector and with Pro Beam Senior connector

Benefits:

- Best optical performance available
- No adaptors necessary
- Combined fiber and electrical channels
- Inexpensive, low downtime field repair
- Easy clean, no special tools

Application:

- Broadcast
- Military communications
- Industrial
- Petrochemical

Materials:

- Anodized high grade lightweight alloy
- Neoprene BR568 Grip ring



Plug Connector:



Bulkhead Jam-Nut

Ordering code:

HMA -S	-	(XX)	-	X(SM, M5, M6) - Y(D,P)
-	plug			X fiber number
BN	bulkhead jam nut			Y contact number
BF	bulkhead flange			YD data, size 20
				YP power, size 16

Typical configuration:

HMA-S – 6SM HMA plug connector, 6 SM fiber channels

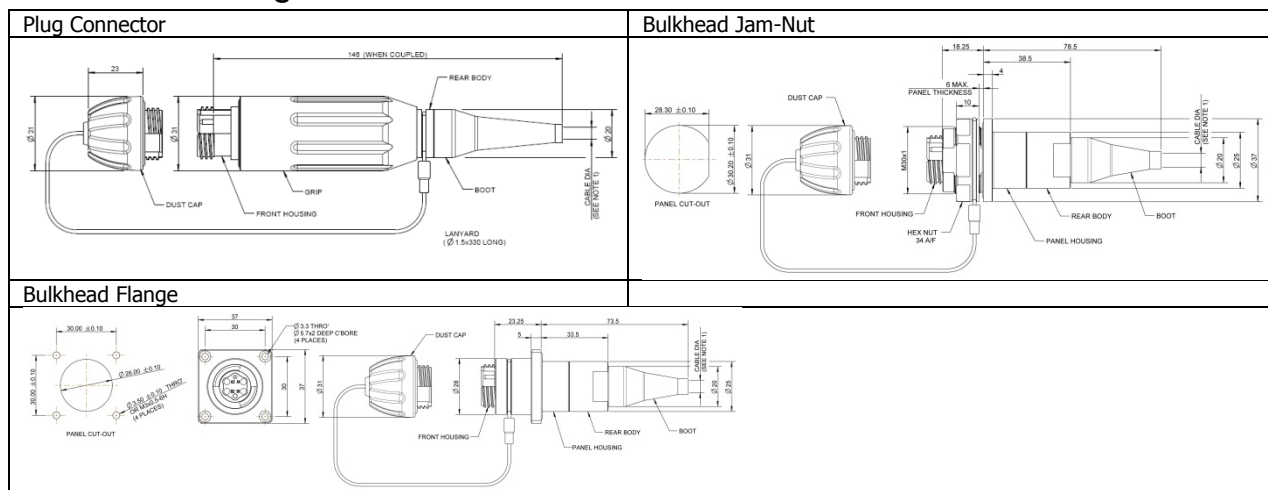
HMA-S – 4SM-2P HMA plug connector, 4 SM fiber channels, 2 electrical power contacts

Specifications:

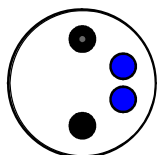
Insertion Loss	50/125 @ 850/1300 nm: 1 to 4 channels: 1.0 dB max; 6 & 8 channels: 1.5 dB max 9/125 @ 1310/1550 nm: 1 to 4 channels: 1.5 dB max; 6 & 8 channels: 2.0 dB max
Return Loss	9/125 @ 1310/1550 nm > 32 dB
Electrical power contacts	Size 20 & size 16 MIL-C-39029. Contact resistance <4 mΩ. Operating voltage 1000 VAC. Operating current 5A (short term 15 A)
Electrical: Test Voltage	Between contacts and contact / housing: 3000V / 50Hz, 1 minute EN61984
Durability	3000 Matings minimum
Operating temperature	-40 to +85 °C
Storage temperature	-55 to +85 °C
Water immersion	up to 15 m depth
Vibration Sinusoidal	10-500 Hz, 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
Corrosion resistance	500 Hours Salt Spray
Cable retention	1500 N (cable dependant)
Cable Variations	Compatible with tactical cable: Plug ≤ 6 mm o/d , Bulkhead ≤ 3 mm o/d Other cable sizes available on request
Color	black anodized green RAL 6014 ¹

Note: 1) green RAL 6014 on request
For details and technical information on the hybrid versions, please contact the factory.
All tests compliant to EN 186000-1 specifications

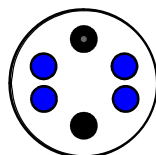
Technical drawings:



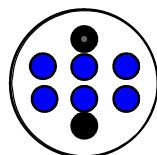
Optical insert arrangement:



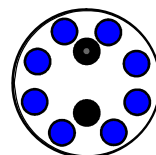
2CH OPTICAL



4CH OPTICAL

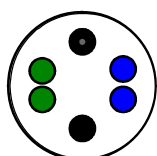


6CH OPTICAL

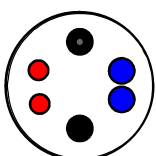


8CH OPTICAL

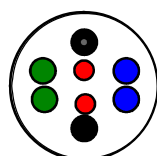
Hybrid insert arrangement:



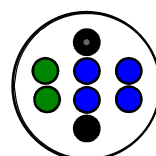
2CH OPTICAL
2 POWER (#16)



2CH OPTICAL
2 SIGNAL (#20)



2CH OPTICAL
2 POWER (#16)
2 SIGNAL (#20)



4CH OPTICAL
2 POWER (#16)