

OPTOKON HMA patchcord

Description:

The OPTOKON HMA optical modules are 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.

Benefiting from expanded beam technology, with a long and proven industry track record, the precision optical alignment system creates immunity from water, mud, dust, oil and other contaminants.

The HMA Hermaphroditic coupling eliminates the need for adaptors and male and female mating halves. Hermaphroditic housings allow for rapid deployment, creating low loss Single mode, Multimode and Hybrid daisy chained links in a variety of planforms ranging from simplex fiber to a copper Hybrid. The OPTOKON HMA is ideally suited for environmental extremities where low maintenance and quick repairability is necessary, the connectors are uniquely field installable and rapidly field repairable.

There are two different types of OPTOKON HMA connection modules:

- a) LD type military tactical cable with OPTOKON HMA plugs at both sides
- b) Hybrid connection module OPTOKON HMA to standard fiber optic connectors (FC, SC, ST, LC, ...)

Features:

- Advanced expanded beam technology
- Hermaphroditic interconnection
- 1 to 8 Fiber channels Single mode or Multimode
- Rugged connector design
- Two versions
- HMA plug tactical cable
- HMA bulkhead hybrid cable



Specifications:

Insertion loss1 (typ.)	0.5 - 0.7 dB (MM) 0.7 - 1.0 dB (SM)
Return loss1	>32 dB (SM)
Operating temperature	-55 to +85 °C
Storage temperature	-55 to +85 °C
Water immersion	up to 15 m depth, 24 hrs
Vibration Sinusoidal	10-500 Hz, 0.75 amplitude @ 10 g acceleration
Free fall resistance	500 falls onto concrete from 1.2 m height
Bump resistance	4000 bumps @ 40 g acceleration
Tensile Strength	Tensile of 1500 N cable dependent
Cable Variations	Compatible with tactical cable1: Plug < 6 mm o/d, Bulkhead < 3 mm o/d



Cable with HMA plug connectors on SBD-200 drum. HMA-J/LD4 S7A-JC-200

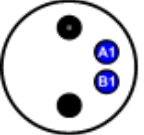

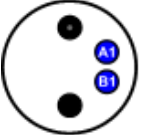
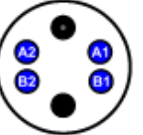
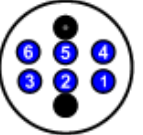



HMA-J-BN-SCD/D8 OM2-002 Hybrid cable with HMA connector and SC



HMA-J-4xSL/LD4 OM2-0.5-002 Hybrid cable with HMA connector and ST

Planforms:

HMA-J / HMA-M		HMA-S			
					
2 CH	4 CH	2 CH	4 CH	6 CH	8 CH

Application:

- Harsh environmental communications
- Broadcast
- Industrial, Petrochemical

Ordering code:

HMA-X(x)⁵ - (NxAAA)⁴ / CCC FFF - XX - (L2) - LLL

<p>Connector type¹</p> <p>Up to 4 fibers</p> <p>HMA-J Plug (J type)</p> <p>HMA-J-BN(B)³ Bulkhead jam-nut</p> <p>HMA-J-BF(B)³ Bulkhead flange</p> <p>HMA-M Plug (type mini)</p> <p>HMA-M-BN Bulkhead jam-nut</p> <p>HMA-M-BF Bulkhead flange¹</p> <p>HMA-M-BX Bulkhead flange¹</p> <p>Up to 8 fibers</p> <p>HMA-S Plug (S type)</p> <p>HMA-S-BN Bulkhead jam-nut</p> <p>HMA-S-BF Bulkhead flange</p>	<p>CCC - Cable type</p> <p>LD2 Tactical cable 2 fibers</p> <p>LD4 Tactical cable 4 fibers</p> <p>LD6 Tactical cable 6 fibers</p> <p>LD8 Tactical cable 8 fibers</p> <p>LDAC4⁷ Armored cable 4 fibers</p> <p>D8 Duplex 2.8 x 5.5 mm</p> <p>28 Cable Ø 2.8 mm</p> <p>FF - Fiber type</p> <p>OM1 MM 62.5/125 µm</p> <p>OM2 MM 50/125 µm</p> <p>OM3 MM 50/125 µm</p> <p>S2D SM 9/125 µm (G.652D)</p> <p>S7A⁶ SM 9/125 µm (G.657A1)</p>	<p>Cable length</p> <p>L, L2 Length (m)</p> <p>Cable type</p> <p>P Pigtail</p> <p>JC jumper crossed²</p> <p>JS jumper straight</p>
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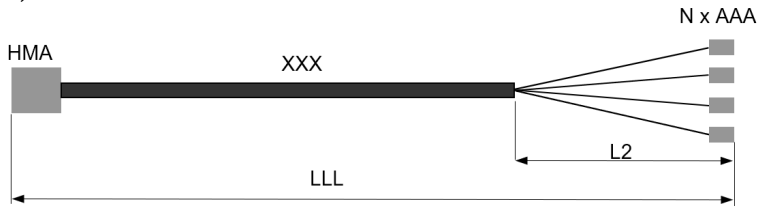
Note:

- 1) Other type of rugged connector (S900, ...) on demand
Detailed information concerning connectors: HMA-J: STR_02-08_EN-Connector_HMA-J
HMA-S: STR_03-08_EN-Connector_HMA-S
HMA-M: STR_01-12_EN-Connector_HMA-M
- 2) HMA cables: JC - standard, JS cable straight - on demand
Hybrid cable: HMA to single fiber connectors (FC, SC, ST, LC, ..): JS - standard
- 3) -BNB, -BFB boot version, more information refer to STR_02-08_EN-Connector_HMA-J
- 4) Hybrid cable - HMA to standard connectors (defined according to the CON_13-01_EN-ORD_CODE)
- 5) x -if cable configuration is different than planform configuration please use x=2, 4, 6 or 8 according to planform
- 6) S7A - G.657A1 standard, other on request

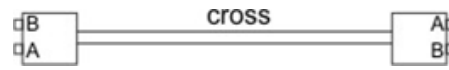


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7) LDAC - armored flexible cable



Cable connection:



Straight cable Connected pins

Cross cable Connected pins

2 fibers connector

4 fibers connector

A1 - A1

A1 - A1

B1 - B1

A2 - A2

B1 - B1

B2 - B2

2 fibers

A1 - B1

B1 - A1

4 fibers

A1 - B1

A2 - B2

B1 - A1

B2 - A2

6 fibers

1 - 6

2 - 5

3 - 4

4 - 3

5 - 2

6 - 1

8 fibers

1 - 5

2 - 6

3 - 7

4 - 8

5 - 1

6 - 2

7 - 3

8 - 4