

OPTOKON HMA¹ 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 reparability is necessary, the connectors are uniquely field installable and rapidly field repairable.

There are two different types of OPTOKON HMA connection modules:

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

Features:

- Advanced expanded beam technology
- Hermaphroditic interconnection
- 1 to 8 Fiber channels Singlemode or Multimode
- Rugged field repairable connector design
- Keyed boot for 'Blind Mating'
- Two versions
 - HMA plug tactical cable
 - HMA bulkhead hybrid cable



Military tactical cable terminated with the HMA plug

Application:

- Military communications
- Broadcast
- Industrial, Petrochemical



Tactical cable with HMA plug connectors coiled on SBD-200 drum.

Specifications:

Insertion loss (typ.)	0.5 – 0.7 dB (MM) 0.7 – 1.0 dB (SM)
Return loss	>30 dB (SM)
Operating temperature	-40 to +70 °C
Storage temperature	-55 to +85 °C
Water immersion	up to 2 m depth
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 cable: Plug < 6 mm o/d Bulkhead < 3 mm o/d

HMA-J/LD4 S7A-JC-200

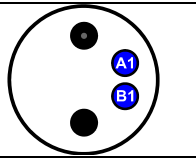
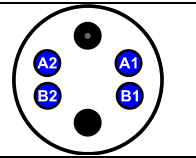
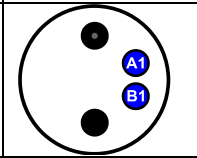
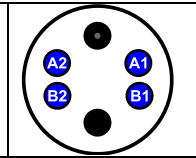
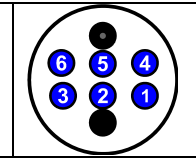
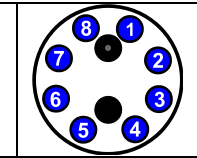


HMA-J-BN-SCD/D8 OM2-002



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

Planforms:

HMA-J / S900		HMA-S			
					
2 CH	4 CH	2 CH	4 CH	6 CH	8 CH

Ordering Code:

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

Connector type ¹	
Up to 4 fibers	
HMA-J(A⁷)	Plug
HMA-J-BN(B)³	Bulkhead jam-nut
HMA-J-BF(B)³	Bulkhead flange
Up to 8 fibers	
HMA-S	Plug
HMA-S-BN	Bulkhead jam-nut
HMA-S-BF	Bulkhead flange
Up to 8 fibers	
HMA-M	Plug
HMA-M-BN	Bulkhead jam-nut
HMA-M-BF	Bulkhead flange
HMA-M-BX	Bulkhead flange
Up to 8 fibers	
S900	Plug
S900-BN	Bulkhead jam-nut
S900-BF	Bulkhead flange

CCC – Cable type	
LD4	Tactical cable 4 fibers
LD2	Tactical cable 2 fibers
LD6	Tactical cable 6 fibers
LD8	Tactical cable 8 fibers
LDA4	Armored cable 4 fibers
D8	Duplex 2.8 x 5.5 mm
28	Cable Ø 2.8 mm
FF – Fiber type	
OM1	MM 62.5/125 µm
OM2	MM 50/125 µm
OM3	MM 50/125 µm
S2D	SM 9/125 µm (G.652D)
S7A⁶	SM 9/125 µm (G.657A1)

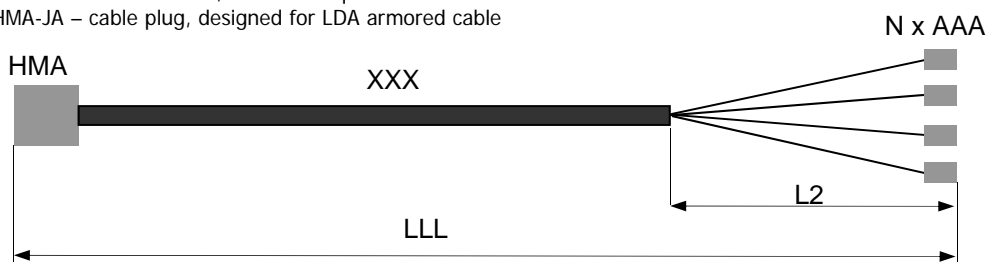
Cable length	
L, L2	Length (m)

Cable type	
P	Pigtail
JC	jumper crossed ²
JS	jumper straight

Note: 1) Other type of rugged connector 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
S900: STR_03-03_EN-Connector_S900

- 2) JC – standard, JS cable straight – on demand
- 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
y –if grip and boot color different from standard black please use y=G for Olive Green
- 6) S7A - G.657A1 standard, other on request
- 7) HMA-JA – cable plug, designed for LDA armored cable



Cable connection:

Straight cable		Cross cable	
Connected pins		Connected pins	
2 fibers connector	4 fibers connector	2 fibers	4 fibers
A1 – A1	A1 – A1	A1 – B1	A1 – B1
B1 – B1	A2 – A2	B1 – A1	A2 – B2
	B1 – B1		B1 – A1
	B2 – B2		B2 – A2
			6 fibers
			1 – 6
			2 – 5
			3 – 4
			4 – 3
			5 – 2
			6 – 1
			8 fibers
			1 – 8
			2 – 7
			3 – 6
			4 – 5
			5 – 4
			6 – 3
			7 – 2
			8 – 1