OPTOKON HMA[1] 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 repairabilty 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 field repairable connector design
- 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.

HMA-J/LD4 S7A-JC-200

Specifications:

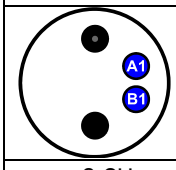
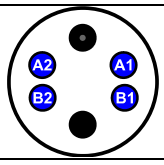
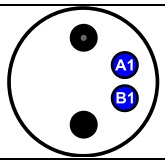
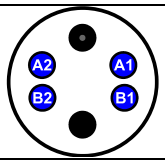
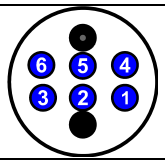
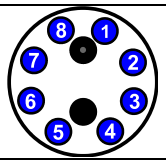
Insertion loss[1] (typ.)	0.5 – 0.7 dB (MM)
	0.7 – 1.0 dB (SM)
Return loss[1]	>32 dB (SM)
Operating temperature[8]	-40 to +70 °C
Storage temperature[8]	-55 to +85 °C
Water immersion	up to 2 m depth
Vibration Sinusoidal	10-500 Hz, 0.75 amplitude
	@ 10 g acceleration
Free fall resistance	500 falls onto 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[1]:
	Plug < 6 mm o/d
	Bulkhead < 3 mm o/d

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

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STR_03_05_EN
29/06/2018

Ordering Code:

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

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

CCC – Cable type	
LD2	Tactical cable 2 fibers
LD4	Tactical cable 4 fibers
LD6	Tactical cable 6 fibers
LD8	Tactical cable 8 fibers
LDAC4[7]	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)
S7A[6]	SM 9/125 µm (G.657A1)

Cable length	
L, L2	Length (m)

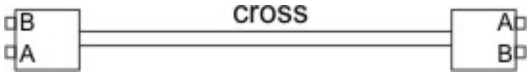
Cable type	
P	Pigtail
JC	jumper crossed[2]
JS	jumper straight

Note: 1) Other type of rugged connector (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
7) LDAC – armored flexible cable
8) Cable dependant

Cable connection:

Straight cable
Connected pins

2 fibers connector	4 fibers connector
A1 – A1	A1 – A1
B1 – B1	A2 – A2
	B1 – B1
	B2 – B2



Cross cable
Connected pins

2 fibers	4 fibers	6 fibers	8 fibers
A1 – B1	A1 – B1	1 – 6	1 – 5
B1 – A1	A2 – B2	2 – 5	2 – 6
	B1 – A1	3 – 4	3 – 7
	B2 – A2	4 – 3	4 – 8
		5 – 2	5 – 1
		6 – 1	6 – 2
			7 – 3
			8 – 4

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