TFOCA patchcord
Physical Contact Hermaphroditic Connectors

Description:

The TFOCA optical modules are designed for connection of the nodes of tactical network by the help of cables with optical fibers. The used enhanced technology preserves all advantages of signals transmission through the optical lines in field harsh environmental conditions.
The connector includes an optical interface with four standard 2.5 mm ferrules with solid core alignment sleeves. The front insert can be easily removed for field maintenance and cleaning.

The TFOCA 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 TFOCA is ideally suited for environmental extremities where low maintenance is required.

There are two different types of TFOCA connection modules:

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

Features:

- Hermaphroditic interconnection
- 4 Fiber channels Single mode or Multimode
- Rugged connector design
- Two versions
  TFOCA plug tactical cable
  TFOCA bulkhead hybrid cable

Application:

- Military communications
- Broadcast
- Industrial, Petrochemical

TFOCA connector specifications:

Insertion Loss (Single Mode)	0.40 dB – Typical, 0.75 dB – maximum
Back Reflection (Single Mode-UPC Polish)	-50 dB – Typical, -40 dB – maximum
Operating Temperature	-46° C to + 71° C
Storage Temperature	-55° C to + 85° C
Mud	Five minute immersion, clean with water (per MIL-C-83526/12 /13 requirements)
Water Pressure	MIL-STD-810, Method 512.4, 1 m, 48 hr
Ice Crush	DOD-STD-1678, Method 4050
Humidity	DOD-STD-1678, Method 4030, 10 cycles
Flammability	MIL-STD-1344, Method 1012
Vibration (Operational)	MIL-STD-1344, Method 2500.1
Shock	EIA/TIA-455-14, Condition A
Mating Durability	2,000 cycles per EIA/TIA-455-21
Cable Seal Flexing	100 cycles per MIL-STD-1344, Method 2017, Procedure 1
Twist	1,000 cycles per EIA/TIA-455-36
Cable Retention	400 lb minimum per EIA/TIA-455-6, 1 hr (applies to plug and strain relief receptacles)
Impact	EIA/TIA-455-2
Crush Resistance	450 lb minimum per EIA/TIA-455-26
EMI Shielding Effectiveness (Receptacle Only)	> 60 dB, 15 kHz to 10 GHz
Corrosion Resistance	MIL-STD-1344, Method 1001, Condition A

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Ordering Code:

XXXXXX – (NxAAA)[3] / CCC FFF - XX - (L2) - LLL

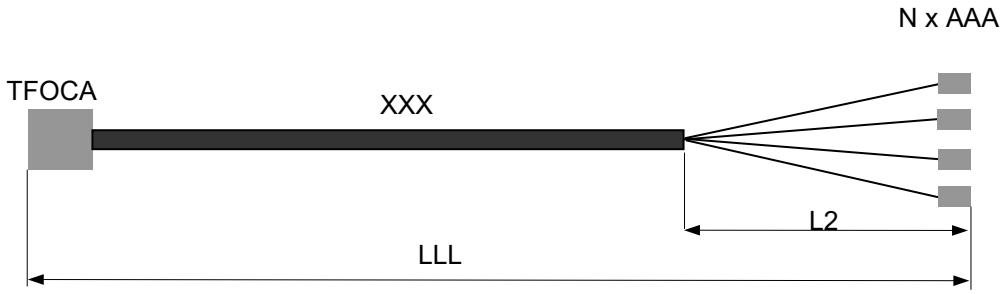
TFOCA connector type[1]
FS4H8291
FS4H1000
FS4H6000

CCC – Cable type	
LD4	Tactical 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
OM2-5	MM 50/125 µm
S2D	SM 9/125 µm (G.652D)
S7X	SM 9/125 µm (G.657x)

Cable length	
L, L2	Length (m)

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

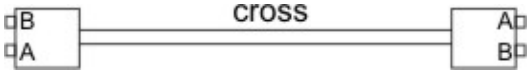
Note: 1) Other type of rugged connector on demand
2) TFOCA cables: JC – standard, JS cable straight – on demand
Hybrid cable: TFOCA to single fiber connectors (FC, SC, ST, LC, ..): JS – standard
3) Hybrid cable – TFOCA to standard connectors (defined according to the CON_13-01_EN-ORD_CODE)



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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