

MIL-DTL-38999 Fiber Optic Cable Sets for 'Harsh' Use

MIL38999 connectors based fiber optics Cable Sets are for HARSH environment military & naval applications. Based on MIL-C-85045 conformant tactical fiber optic cable which is extremely strong, lightweight & rugged. Also ideal for quick field deployment/rollback due to reduced size and weight. Available in deployable reel.



Optional reel available for deployment/retrieval



MIL-38999 Fiber Optic connectors

HARSH ENVIRONMENT APPLICATIONS

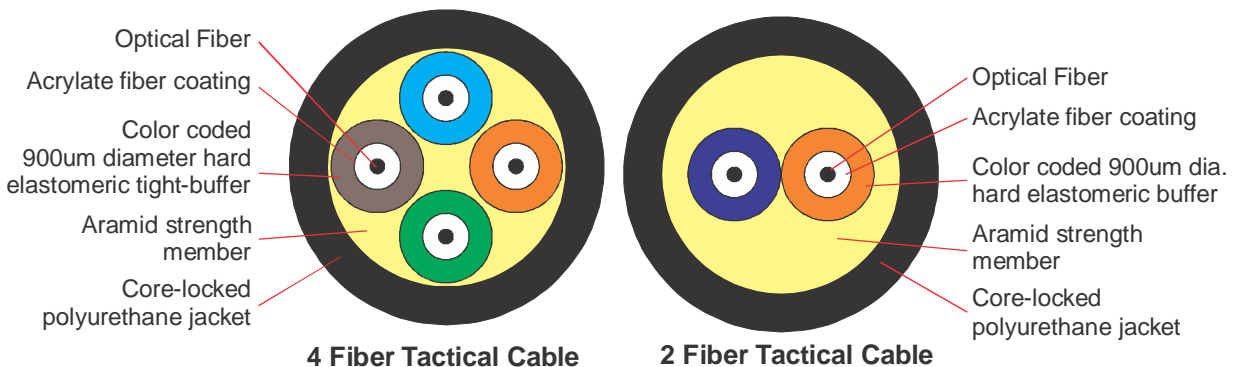
- Radars, Military Systems, Ground Control Systems, Launchers etc
- Excellent for deployment/retrieval applications like tactical communications
- Designed for extreme environmental conditions – temperature, humidity, ice, fungus and fluid immersion
- Rugged fiber optic cable with high tensile load for high survivability in severe crush, impact, vehicle runover, deployment and retrieval conditions
- Extremely strong, lightweight, rugged, survivable cable design for military use
- Polyurethane jacketed for abrasion, cut and chemical resistance

- **MIL-C-85045 Conformant , Optical Cable Corp., USA** or equivalent Fiber Optic cable
- **MIL-38999 Qualified Glenair/Amphenol** or equivalent connectors

MIL Standards Conformance

- MIL-DTL-38999
- MIL-PRF 85045
- MIL-PRF 29504

Tactical Cable Construction



Designs available with 2, 4, 6, 8 or more fibers

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Specifications for Military Tactical Cables

No of Fiber	Mode	Core/Cladding (um)	Cable Dia. mm	Weight kg/km	Tensile Load Max (N)		Bend Radius Min (cm)		Attenuation Min (dB/Km)		
					Install.	Oper.	Install	Oper.	850nm	1300nm	1550nm
2	Single	9/125	5	23	1800	600	8	4	-	0.5	0.5
4	Single	9/125	5.5	28	1800	600	8.8	4.4	-	0.5	0.5
8	Single	9/125	6.5	38	1800	600	10.4	5.2	-	0.5	0.5
2	Multi	62.5/125	5	23	1800	600	8	4	3.5	1.5	-
4	Multi	62.5/125	5.5	28	1800	600	8.8	4.4	3.5	1.5	-
8	Multi	62.5/125	6.5	38	1800	600	10.4	5.2	3.5	1.5	-

Environmental Specifications for MILitary Tactical Cables

Storage Temperature Range	-70 to +85°C
Operating Temperature Range	-55 to +85°C
Crush Resistance (MIL-85045/EIA-455-41)	440 N/cm
Impact Resistance (MIL-85045/EIA-455-25)	200 Impacts
Cyclic Flexing (MIL-85045/EIA-455-104)	2000 cycles, min.
Knot Force (MIL-85045/EIA-455-87)	500 N test force
Thermal Shock (MIL-85045/EIA-455-71)	-57 to +85°C
Temperature/Humidity (MIL-85045/EIA-455-5)	95%

How to Specify Part Numbers for Cable Sets:

STF - □ □ □ □ □ / □ □ □ □ □ - □ F / □ □ M / □ □ □ □ - □ □ □ □ □ - 00
A A A B C A A A B C N X X Y Y Y Y Z Z K K K

A	2 digit connector Code	9/125 SM MIL38999 Plug : 42 = size 11; 45 = size 13; 48 = size 17 50&62.5/125 MM MIL38999 Plug : 51 = size 11; 54 = size 13; 57 = size 17
B	Connector Type	Straight = S ; Rt. Angle= R ; Jamnut Recep. = J ; Wall Mt. Recep. = W
C	Connector Style	Male/Plug = P ; Female = J
D	Termini Style	Male/Plug = P ; Female/Socket = J
N	No. of Fibers	2 = 2 fibres; 4 = 4 fiber ; 8 = 8 fiber
XX	2 digit code for Mode	9S = 9/125um singlemode ; 5M = 50/125um multimode; 6M = 62.5/125um multimode ; CM = 50/125 & 62.5/125 multimode
YYY	Length	100 meter = 100M ; 1 Km = 1KM ; 1 feet = 1F
ZZ	2 digit cable code	DI = Distribution Style ; BR = Breakout; RI = Riser
KKK	Cable class code	Breakout = 023; Distribution = 065; Riser = 120

100m Cable Set SM 9/125um, 38999 St. Plug, 4 fibre = STF-45SPP/45SPP-4F/9SM/100M-DI065-00

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Tactical Fiber Optic Cable Sets with MIL-38999 Connectors

P/N for Fiber Optic Assembly	Mode	Size	No. of Fibers	Conn. 1		Conn. 2		Len. meter
				type	size	type	size	
STF-42SPP/42SPP-2F/9SM/100M-DI065-00	Singlemode	9/125	2	Plug	11	Plug	11	100
STF-45SPP/45SPP-4F/9SM/100M-DI065-00	Singlemode	9/125	4	Plug	13	Plug	13	100
STF-48SPP/48SPP-8F/9SM/100M-DI065-00	Singlemode	9/125	8	Plug	17	Plug	17	100
STF-42SPP/42SPP-2F/9SM/200M-DI065-00	Singlemode	9/125	2	Plug	11	Plug	11	200
STF-45SPP/45SPP-4F/9SM/200M-DI065-00	Singlemode	9/125	4	Plug	13	Plug	13	200
STF-48SPP/48SPP-8F/9SM/200M-DI065-00	Singlemode	9/125	8	Plug	17	Plug	17	200
STF-42SPP/42SPP-2F/9SM/500M-DI065-00	Singlemode	9/125	2	Plug	11	Plug	11	500
STF-45SPP/45SPP-4F/9SM/500M-DI065-00	Singlemode	9/125	4	Plug	13	Plug	13	500
STF-48SPP/48SPP-8F/9SM/500M-DI065-00	Singlemode	9/125	8	Plug	17	Plug	17	500
STF-42SPP/42SPP-2F/9SM/600M-DI065-00	Singlemode	9/125	2	Plug	11	Plug	11	600
STF-45SPP/45SPP-4F/9SM/600M-DI065-00	Singlemode	9/125	4	Plug	13	Plug	13	600
STF-48SPP/48SPP-8F/9SM/600M-DI065-00	Singlemode	9/125	8	Plug	17	Plug	17	600
STF-42SPP/42SPP-2F/9SM/1KM-DI065-00	Singlemode	9/125	2	Plug	11	Plug	11	1KM
STF-45SPP/45SPP-4F/9SM/1KM-DI065-00	Singlemode	9/125	4	Plug	13	Plug	13	1KM
STF-48SPP/48SPP-8F/9SM/1KM-DI065-00	Singlemode	9/125	8	Plug	17	Plug	17	1KM
STF-51SPP/51SPP-2F/CMM/100M-DI065-00	Multimode	50 & 62.5/125	2	Plug	11	Plug	11	100
STF-54SPP/54SPP-4F/CMM/100M-DI065-00	Multimode	50 & 62.5/125	4	Plug	13	Plug	13	100
STF-57SPP/57SPP-8F/CMM/100M-DI065-00	Multimode	50 & 62.5/125	8	Plug	17	Plug	17	100
STF-51SPP/51SPP-2F/CMM/200M-DI065-00	Multimode	50 & 62.5/125	2	Plug	11	Plug	11	200
STF-54SPP/54SPP-4F/CMM/200M-DI065-00	Multimode	50 & 62.5/125	4	Plug	13	Plug	13	200
STF-57SPP/57SPP-8F/CMM/200M-DI065-00	Multimode	50 & 62.5/125	8	Plug	17	Plug	17	200
STF-51SPP/51SPP-2F/CMM/500M-DI065-00	Multimode	50 & 62.5/125	2	Plug	11	Plug	11	500
STF-54SPP/54SPP-4F/CMM/500M-DI065-00	Multimode	50 & 62.5/125	4	Plug	13	Plug	13	500
STF-57SPP/57SPP-8F/CMM/500M-DI065-00	Multimode	50 & 62.5/125	8	Plug	17	Plug	17	500
STF-51SPP/51SPP-2F/CMM/600M-DI065-00	Multimode	50 & 62.5/125	2	Plug	11	Plug	11	600
STF-54SPP/54SPP-4F/CMM/600M-DI065-00	Multimode	50 & 62.5/125	4	Plug	13	Plug	13	600
STF-57SPP/57SPP-8F/CMM/600M -DI065-00	Multimode	50 & 62.5/125	8	Plug	17	Plug	17	600

Note on Deployable Reel :



Above fibre optic Cable Sets are available with or without a deployable reel. To order Cable Sets with deployable reel please add suffix –R to the end of Part Number.

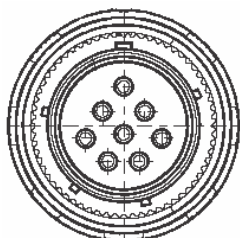
Example P/N WITH Reel: STF-51SPP/51SPP-8F/CMM /1KM -DI065-00-R

Example P/N WITHOUT Reel: STF-51SPP/51SPP-8F/CMM /1KM -DI065-00

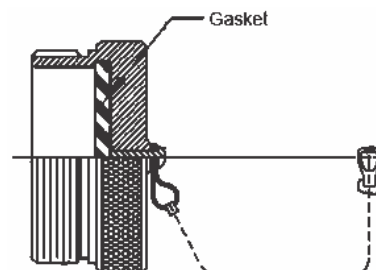
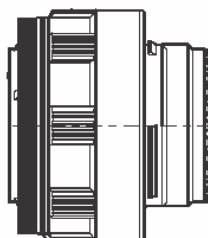
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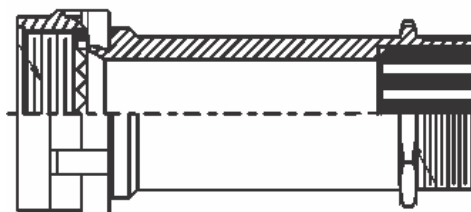
Connectors Choices for MIL38999 Series Fiber Optic Cable Sets



MIL-38999 Fiber Optic Plug Connectors



Dust Cap for MIL-38999 Fiber Optic Plug



Backshell for MIL-38999 Fiber Optic Connector

Conformant to MIL-38999 & MIL-T-29504/4 and /5
Precision Ceramic ferrule
Stainless steel body
Temperature : -55°C ~ +200°C
Durability : 500 cycles
Random Vibration : per EIA/TIA 455-11, Condition 7, Letter J.
Shock : per EIA/TIA 455-14, Condition D
Temperature Life : per MIL-STD-1344, Method 1005, Condition D
Thermal Shock : per MIL-STD-1344, Method 1003, Condition A

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