

Expanded Beam Tactical Fiber Optic Cable Sets - No FIELD CLEANING

These Expanded Beam Tactical Fiber Optic cable sets are for HARSH military applications, esp. for quick field deployment & retrieval due to reduced size/weight. Expanded Beam connectors are far more rugged for field applications and pose no cleaning problems as compared to physical contact connectors like MIL38999 or TFOCAII. Based on MIL-C-85045 conformant tactical cable which is extremely strong, lightweight, & rugged. Available in deployable reels.



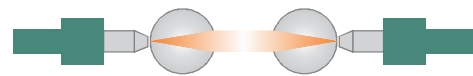
Expanded Beam Connectors



- MIL-C-85045 Conformant , Optical Cable Corp., USA or equivalent Fiber Optic cable
- Imported Expanded Beam connectors

EXPANDED BEAM ADVANTAGES

- Hermaphroditic Genderless mating
- Easy to clean in the field.
- Easy to align (repeatable performance)
- Non contact design - highly resistant to dirt as fiber is inside ball lenses
- Vibration resistant

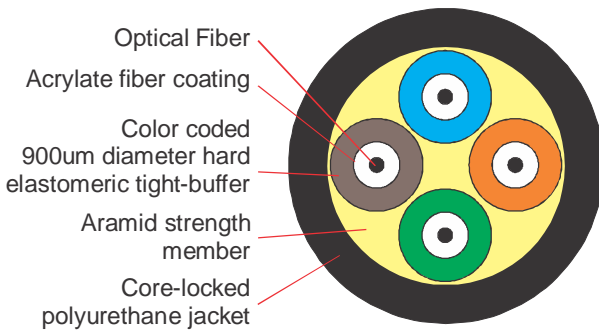


Expanded Beam Principle of Operation

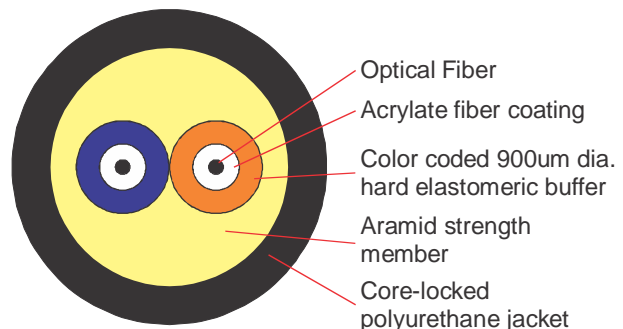
HARSH ENVIRONMENT APPLICATIONS

- 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 rollover, deployment and retrieval conditions
- Extremely strong, lightweight, rugged, survivable cable design for military use

Tactical Cable Construction



4 Fiber Tactical Cable



2 Fiber Tactical Cable

Specifications are subject to change without notice

Shown trademarks are property of their respective owners.

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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
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	-

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 -X - □ □ □ □ □ / □ □ □ □ □ - □ 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	3 digit connector Code	Singlemode Expanded Beam : 130 = 2 channel; 133 = 4 channel; 50/125 Expanded Beam : 147 = 2 channel; 149 = 4 channel; 62.5/125 Expanded Beam : 139 = 2 channel; 142 = 4 channel;
B	Connector Type	Straight = S ; Rt. Angle= R ; Jamnut Recep. = J ; Wall Mount = W
C	Connector Style	Male/Plug = P ; Female = J
N	No. of Fibers	2 = 2 fibers; 4 = 4 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
KKK	Cable class code	Breakout = 023; Distribution = 065

100m Cable Set SM 9/125um, Expanded Beam Plug, 4 fiber = STF -X-130SP/130SP-4F/9SM/100M-Di065-00

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Fiber Optic Cable Sets with Expanded Beam connectors

P/N for Fiber Optic Assembly	Cable Drum	Mode	No. of Fibers	Conn. 1	Conn. 2	Len. meter
STF-X-130SP/130SP-2F/9SM/100M-DI065-00	Fig 1	SM 9/125	2	Plug	Plug	100
STF-X-133SP/133SP-4F/9SM/100M-DI065-00	Fig 1	SM 9/125	4	Plug	Plug	100
STF-X-130SP/130SP-2F/9SM/200M-DI065-00	Fig 1	SM 9/125	2	Plug	Plug	200
STF-X-133SP/133SP-4F/9SM/200M-DI065-00	Fig 1	SM 9/125	4	Plug	Plug	200
STF-X-130SP/130SP-2F/9SM/500M-DI065-00	Fig 2	SM 9/125	2	Plug	Plug	500
STF-X-133SP/133SP-4F/9SM/500M-DI065-00	Fig 2	SM 9/125	4	Plug	Plug	500
STF-X-130SP/130SP-2F/9SM/600M-DI065-00	Fig 2	SM 9/125	2	Plug	Plug	600
STF-X-133SP/133SP-4F/9SM/600M-DI065-00	Fig 2	SM 9/125	4	Plug	Plug	600
STF-X-130SP/130SP-2F/9SM/1KM-DI065-00	Fig 2	SM 9/125	2	Plug	Plug	1KM
STF-X-133SP/133SP-4F/9SM/1K M-DI065-00	Fig 2	SM 9/125	4	Plug	Plug	1KM
STF-X-130SP/130SP-2F/9SM/2KM-DI065-00	Fig 2	SM 9/125	2	Plug	Plug	2KM
STF-X-133SP/133SP-4F/9SM/2K M-DI065-00	Fig 2	SM 9/125	4	Plug	Plug	2KM
STF-X-139SP/139SP-2F/6MM/100M-DI065-00	Fig 1	MM 62.5/125	2	Plug	Plug	100
STF-X-142SP/142SP-4F/6MM/100M-DI065-00	Fig 1	MM 62.5/125	4	Plug	Plug	100
STF-X-139SP/139SP-2F/6MM/200M-DI065-00	Fig 1	MM 62.5/125	2	Plug	Plug	200
STF-X-142SP/142SP-4F/6MM/200M-DI065-00	Fig 1	MM 62.5/125	4	Plug	Plug	200
STF-X-139SP/139SP-2F/6MM/500M-DI065-00	Fig 2	MM 62.5/125	2	Plug	Plug	500
STF-X-142SP/142SP-4F/6MM/500M-DI065-00	Fig 2	MM 62.5/125	4	Plug	Plug	500
STF-X-139SP/139SP-2F/6MM/600M-DI065-00	Fig 2	MM 62.5/125	2	Plug	Plug	600
STF-X-142SP/142SP-4F/6MM/600M-DI065-00	Fig 2	MM 62.5/125	4	Plug	Plug	600

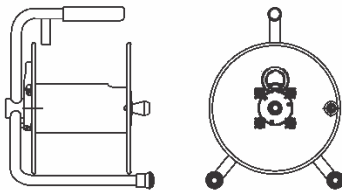
To order Cable Sets with deployable reel please add suffix –R to the end of Part Number.

Example P/N WITH Reel: STF-X-130SP/130SP-4F/9SM/1KM-DI065-00-R

Example P/N WITHOUT Reel: STF-X-130SP/130SP-4F/9SM/1KM-DI065-00



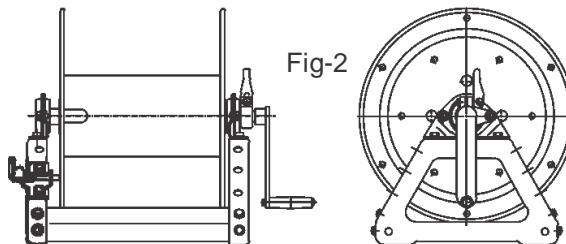
Fig-1



- Dim (W x H x D) : 15.5 x 19 x 12.7 inch
- Weight : 10 Kg (reel only, does not include cable weight)



Fig-2

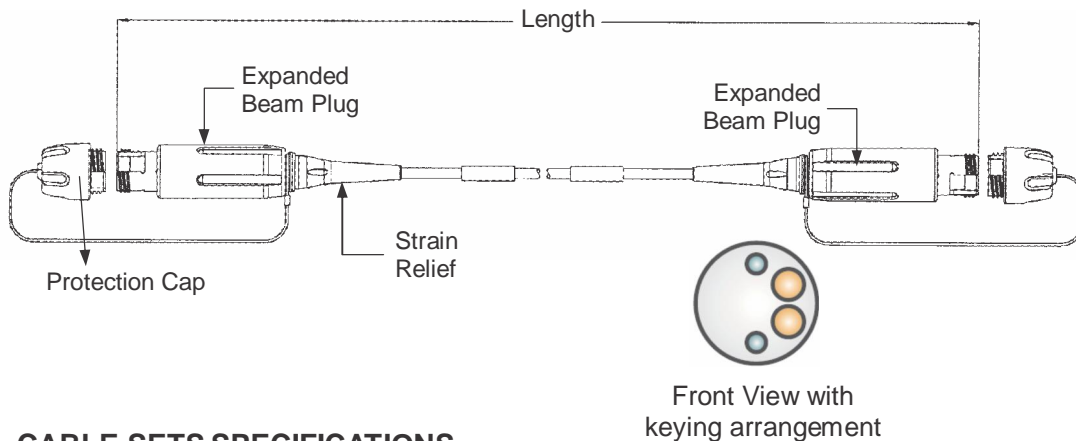


- Dim (WxHxD) : 16.5x18.1x32 inch
- Weight : < 18 Kg (Reel only, does not include cable weight)

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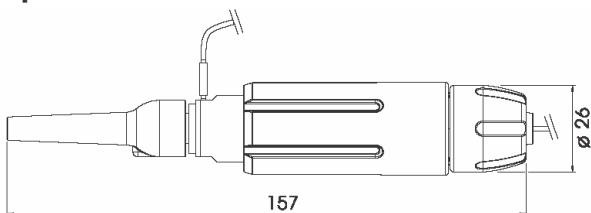
Tactical Fiber Optic Cable Sets with Expanded Beam Connectors



CABLE SETS SPECIFICATIONS

- No. of Fibers : 2 or 4 as per selection
- Mode : Multimode 62.5/125um or Singlemode 9/125um as per selection
- Wavelength : 850 or 1300nm for MM / 1310nm for SM as per selection
- Length of Cable : As per choice
- Cable Loss : Typ. 1.5 dB/Km (1300nm) for MM ; 0.6 dB/Km (1310nm) for SM
- Connector A : 2 or 4 channel Expanded Beam Plug
- Connector B : 2 or 4 channel Expanded Beam Plug
- Connectors Loss : < 1.5 dB (both for single and multimode)

Expanded Beam Connector Details



Operating temperature	-40 to +70°C
Storage temperature	-55 to +85°C
Water immersion	up to 2M depth
Vibration Sinusoidal	10-500Hz, 0.75 amplitude @ 10g acceleration
Free fall resistance	500 falls onto concrete from 1.2M height
Bump resistance	4000 bumps @ 40g acceleration
Tensile Strength	Tensile of 1500N, cable dependent

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