

# Tactical Optical Fiber Link, RS232/422/485 Over Fiber, I-FLRS... Series

I-FLRS..Series is a Tactical RS232/422/485 over Fiber-Optic link that provides a high reliability, high performance optical transport of signals over long distances. We give 'FULL SOLUTION' to fiber enable existing copper based RS232/422/485 customized to your application



## FIBER OPTIC LINK FEATURES

- RS232/422/485 over fiber
- Distances upto 2 Km. For extended distances please contact us
- Transmission speed upto 115.2 Kbps
- Low loss – enables long length with minimal degradation of carrier-to-noise
- No electrical interference, signal is not affected by radiated interference.
- Excellent for deployment/retrieval applications like tactical communication.
- 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 conditions
- Single/dual RS232/422 channels (2/4 fiber)
- 12V, 24V DC power option

## APPLICATIONS

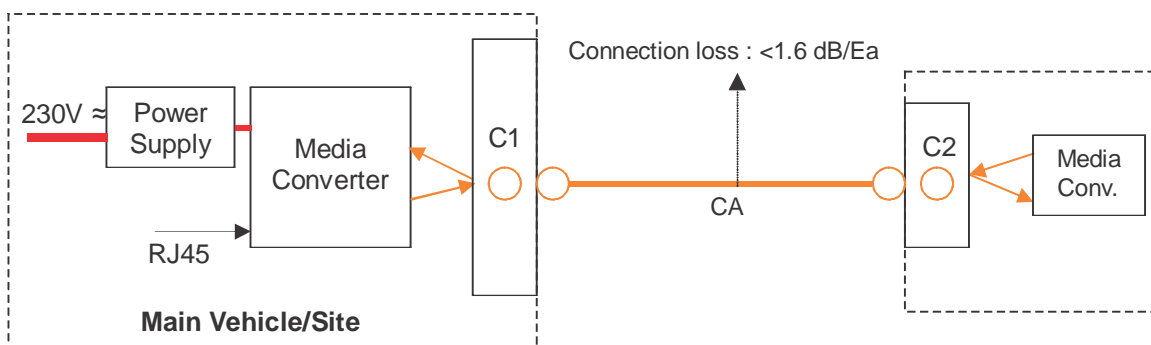
- SIGINT/COMINT/ECM Electronic Warfare
- Missile Launchers & launch controllers
- Naval Ethernet over fiber
- Radar Systems
- Antenna remoting application

## MATERIALS USED

- Imported tactical media converters meeting IEEE 802.3 & EMI EN55022 (CISPR) standards
- MIL-C-85045 conformant tactical fiber optic cable
- Imported expanded beam connectors.



Expanded Beam Fiber Optic Connectors



### Fiber Optic Link Components

- Harsh media converters
- Tactical Cable Sets with expanded beam connector
- Expanded beam breakout cable sets
- Tactical deployable reel
- Power supply

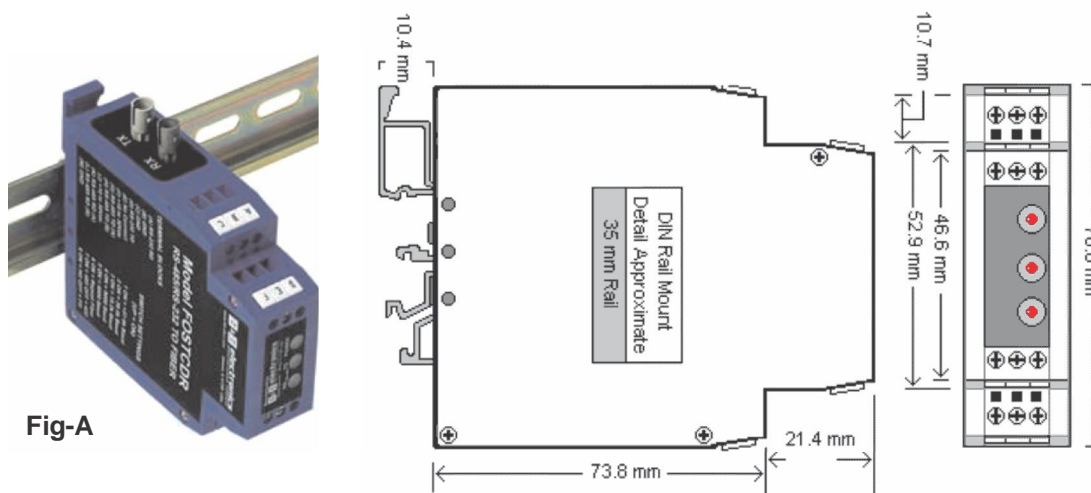
- C1 & C2 : Provide a transition from harsh to sheltered environment with SC/ST & breakout assly.
- CA is military tactical FO cable assembly on a tactical reel

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

**Rugged Media Converter**

	Multimode	Single mode
Optical Budget	12 dB	17 dB
Data Rate (RS232)	115.2 kbps	115.2 kbps
Data Rate (RS422/485)	560.8 kbps	115.2 kbps
Power Supply	10 - 30 VDC	
Optical Interface Connectors	MM ST	SM SC or ST
Copper Connections	Terminal Block	Terminal Block
Operating Temperature	-40°C to +75°C	
Storage Temperature	-40°C to +85°C	
Humidity	95% RH	
EMI	EN55022 (CISR22 Class A)	



**Fig-A**

Media Converter Multi Mode



Dimensions: 12.8 x 9 x 3 cm

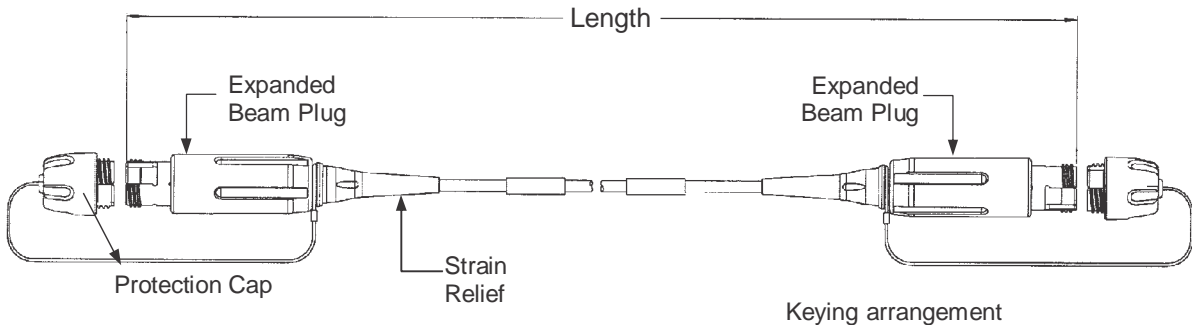
**Fig-B**

Media Converter Single Mode

Shown trademarks are property of their respective owners.

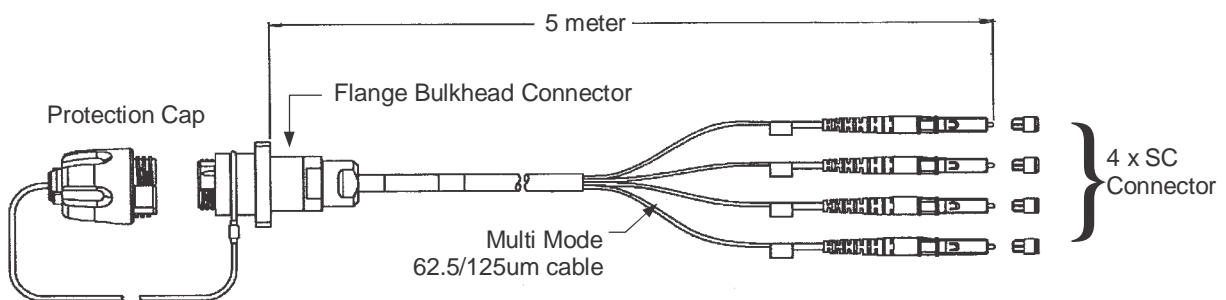
While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

## EXPANDED BEAM PLUG-PLUG CABLE SETS



- 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 RECEPTACLE TO ST/SC BREAKOUT

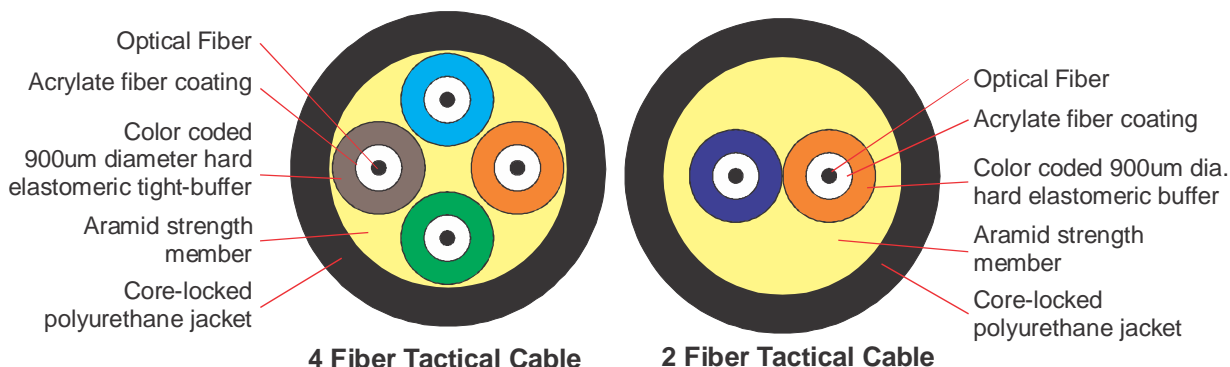


- No. of Fibers : 2 or 4 as per selection
- Mode : Multimode 62.5/125um or Singlemode 9/125um as per selection
- Wavelength : 850 or 1300nm for MM / 1310nm for SM as per selection
- Length of Cable : 5 meter
- Cable Loss : Typ. 1.5 dB/Km (1300nm) for MM ; 0.6 dB/Km (1310nm) for SM
- Connector A : 2 or 4 Channel Expanded Beam Square Bulkhead Receptacle
- Connector B : 2 or 4 x SC/ST
- Connectors Losses : < 1.5 dB for Expanded Beam Connector  
< 0.5 dB for SC/ST

Shown trademarks are property of their respective owners.

While the information contained herein in this catalogue, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

### MILITARY TACTICAL CABLE SPECIFICATIONS



### 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

Operating Temperature Range	Oper: -55 to +85°C ; Storage : -70 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.
Thermal Shock (MIL-85045/EIA-455-71)	-57 to +85°C
Humidity (MIL-85045/EIA-455-5)	95%

### How to Specify Part Numbers for Fiber Optic Links

I-FLRS - □ - □ □ C - □ □ M - □ - □ □ - □ □ - 00 - R  
**B XX YY D TH CC**

<b>B</b>	1 digit type code	3 = RS232/422/485
<b>XX</b>	Channel Code	2 Channels = 02; 4 Channels = 04
<b>YY</b>	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
<b>D</b>	Distance	500 meters = 500 ; 1500 meters = 1.5KM
<b>T</b>	Converter Type	I = Indoor ; R = Rugged ; H = Harsh Environment
<b>H</b>	Mounting	1 = Din Rail; 2 = 1U 19" Rack ; 3 = Direct Panel Mount
<b>CC</b>	Cable Class	Tactical = 065; Riser = 120
<b>R</b>	Cable Drum	Tactical Cable Drum

Ex. RS232/422, 2 channel tactical, 300m distance = I-FLRS-3-02C-6MM-300M-R1-065-00-R

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

## Tactical RS232/422/485 Over Fiber Links

- 2 fiber link assumes that 2 media converters are available – 1 on each side
- 4 fiber link assumes that 4 media converters are available – 2 on each side

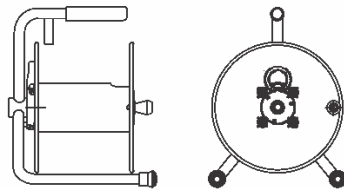
P/N for FO Ethernet Link	Media Converter *	Cable Drum	Core/Cladding (um)	No. of Fibers	No. of Conv.	Length Meter
I-FLRS-3-02C-6MM-150M-R1-065-00	MM Fig-A	Fig-1	62.5/125	2	2	150
I-FLRS-3-02C-6MM-300M-R1-065-00	MM Fig-A	Fig-1	62.5/125	2	2	300
I-FLRS-3-02C-6MM-500M-R1-065-00	MM Fig-A	Fig-2	62.5/125	2	2	500
I-FLRS-3-02C-6MM-800M-R1-065-00	MM Fig-A	Fig-2	62.5/125	2	2	800
I-FLRS-3-02C-9SM-300M-R1-065-00	SM Fig-B	Fig-1	9/125	2	2	300
I-FLRS-3-02C-9SM-500M-R1-065-00	SM Fig-B	Fig-2	9/125	2	2	500
I-FLRS-3-02C-9SM-700M-R1-065-00	SM Fig-B	Fig-2	9/125	2	2	700
I-FLRS-3-02C-9SM-1KM-R1-065-00	SM Fig-B	Fig-2	9/125	2	2	1KM
I-FLRS-3-02C-9SM-1.5KM-R1-065-00	SM Fig-B	Fig-2	9/125	2	2	1.5KM
I-FLRS-3-04C-6MM-150M-R1-065-00	MM Fig-A	Fig-1	62.5/125	4	4	150
I-FLRS-3-04C-6MM-300M-R1-065-00	MM Fig-A	Fig-1	62.5/125	4	4	300
I-FLRS-3-04C-6MM-500M-R1-065-00	MM Fig-A	Fig-2	62.5/125	4	4	500
I-FLRS-3-04C-6MM-800M-R1-065-00	MM Fig-A	Fig-2	62.5/125	4	4	800
I-FLRS-3-04C-9SM-300M-R1-065-00	SM Fig-B	Fig-1	9/125	4	4	300
I-FLRS-3-04C-9SM-500M-R1-065-00	SM Fig-B	Fig-2	9/125	4	4	500
I-FLRS-3-04C-9SM-700M-R1-065-00	SM Fig-B	Fig-2	9/125	4	4	700
I-FLRS-3-04C-9SM-1KM-R1-065-00	SM Fig-B	Fig-2	9/125	4	4	1KM
I-FLRS-3-04C-9SM-1.5KM-R1-065-00	SM Fig-B	Fig-2	9/125	4	4	1.5KM

\* - Refer to Media Converter Page

Note : Custom RS232/422/485 over fiber optic links as per application demands are available. Customizations include variations in length, channels type, mounting options etc.



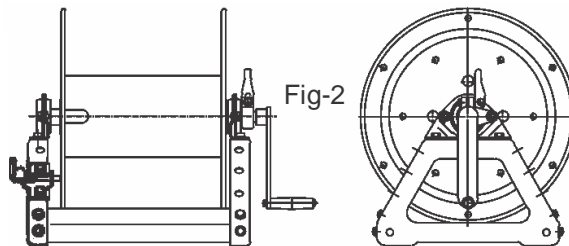
Fig-1



- 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



- Dimensions: 16.5(W)x18.1(H)x32(D) inch
- Weight : < 18 Kg (Reel only, does not include cable weight)

Specifications are subject to change without notice

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

MIL-83522 cables assemblies are for naval use. MIL-83522 connector is qualified for naval applications and features a higher spring force than commercial ST connectors, allowing it to meet the shock requirements of MIL-C-83522. In addition we also provide assemblies with Navy approved Commercial-off-the-Shelf (COTS) ST connectors. These COTS connectors provide the same robustness with a spring force more consistent with commercial ST connectors, enabling them to connect effectively with other ST connectors and ancillary electronics.



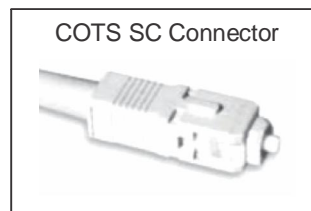
## Features

- Superior optical performance in extreme environmental conditions
- Mil-qualified series: high spring force for shock and vibration resistance, critical in military applications
- Navy approved COTS: for moderate shock and vibration environments

## Applications

- Navy shipboard, surface, submarine, critical combat & communications systems
- Electronic battlefield networks
- Mobile emergency telecom stations
- Deployable outdoor, harsh environment

## Naval MIL-ST & COTS ST/SC Guide



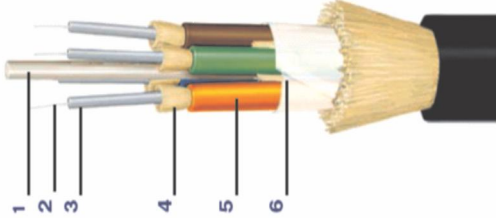
- MIL-83522 is the applicable std. for naval MIL-ST connector. QPL ST connectors are to be used on all fiber optic cable plant backbones and on all cable drops for tactical applications.
- Navy approved COTS, Commercial ST connectors may be used on non-tactical cable drops
- Navy approved COTS, Commercial ST connectors should not be mated to the QPL ST connectors with the stiffer spring constant (such as at the shock mounted rack patch panel).
- Navy approved COTS, Commercial ST connectors may be used to mate with adapters on commercial interface cards which includes Network Interface Cards (NIC cards).
- ST connectors are not to be used on the cabinet exterior and for other external connections on tactical applications. MIL-C-28876 multiple termini connectors are to be used for this application.
- Since the QPL ST has been known to break off or shear the adapter tabs (pins) of plastic or softer metal ST adapters they should not be used on these types of commercial interfaces or with equipment and patch panels mounted to the interior of a non-shock isolated cabinet. The navy approved COTS, commercial ST should be used instead for these applications.

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

# MIL-83522 (MIL ST) Fiber Optic Cable Assemblies for Naval Use

## Cable Specifications:



## MIL-85045 Cable Construction

1. Central Strength Member: Dielectric fiberglass rod
2. Fiber: Single-mode or multimode fiber
3. Buffer : 900 micron tight buffer
4. OFCC: Aramid yarn with water blocking
5. OFCC Jacket: Low-smoke-zero-halogen polyolefin
6. Cabling: OFCC subunits are bundles with strands of water blocking yarn, wrapped in a water blocking tape and encased in water blocked aramid yarn
7. Jacket: Low-smoke-zero-halogen for resistance to chemicals, fluids, fungus and abrasion

MIL SPEC Part No.	No. of Fiber	Pull Strength Newton	Installation		Operating		
			Bend Radius (cm)	Tension Newton	Bend Radius (cm)	Cable O.D. (mm)	Cable Weight (Approx.) (Kg/Km)
<b>THERMOPLASTIC JACKETED CABLES</b>							
M85045/15-01N,P	4	2015	6.6	418	13.2	8.26	60
M85045/15-02N,P	4	2015	6.6	418	13.2	8.26	60
M85045/16-01	1	220	1.6	100	3.2	2.0	4.5
M85045/16-02	1	220	1.6	100	3.2	2.0	4.5
<b>THERMOSET JACKETED CABLES</b>							
M85045/18-01N,P	4	2015	6.6	418	13.2	8.26	60
M85045/18-02N,P	4	2015	6.6	418	13.2	8.26	60

## FIBER PERFORMANCE

	Multimode	Singlemode
Applicable Specification	MIL-PRF-49291/6	MIL-PRF-49291/7
Core Diameter	62.5um ± 3um	8.3um Nominal
Cladding Diameter	125um ± 1um	125um ± 1um
Coating Diameter	250um ± 15um	250um ± 15um
Buffer Diameter	900um ± 50um	900um ± 50um
Max. Attenuation	3.5 dB/km @ 850nm 1.5 dB/km @ 1300nm	1.0 dB/km @ 1310nm 1.0 dB/km @ 1550nm
Min. Bandwidth (overfilled)	350 MHz/km @ 850nm 800 MHz/km @ 1300nm	N/A N/A
Proof Test	100,000 psi	100,000 psi
Radiation Resistance	per MIL-PRF-49291	per MIL-PRF-49291

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.

**CABLE SPECIFICATIONS**

	Thermoplastic	Thermoset
Applicable Specifications	M85045/13 & /15	M85045/17 & /18
Strength Member	Water-blocked aramid yarn	Water-blocked aramid yarn
OFCC nom. Diameter	2.0 mm (0.079 in)	2.0 mm (0.079 in)
Storage Temperature	-40°C to +70°C	-40°C to +75°C
Operating Temperature	-28°C to +65°C	-28°C to +65°C
Life Aging	240 hrs @ 110°C	240 hrs @ 110°C
Smoke Index, NES 711	< 25	< 25
Toxicity, NES 713	< 5	< 5
Halogen Content	< 0.2% by weight	< 0.2% by weight
Flammability	UL-1685 NFPA 262 (Modified)	UL-1685 NFPA 262 (Modified)
Crush Resistance	2,000N per cm of outer cable diameter	2,000N per cm of outer cable diameter
Abrasion Resistance	250 cycles	750 cycles
Low Temp Flexibility	-28°C	-40°C
Tempest	Comply	Comply
Fluid Immersion Lubricating Oil Fuel Oil	24 hrs @ 75°C 24 hrs @ 35°C	24 hrs @ 100°C 24 hrs @ 100°C

**How to Specify Part Numbers for Cable Sets:**

STF - □ □ □ □ □ / □ □ □ □ - □ F / □ □ M / □ □ □ □ - □ □ - 00 - R  
**A A B C D A A B C N X X Y Y Y Y Z Z**

<b>A</b>	2 digit connector Code	MIL-ST SM = 480 ; MIL-ST MM = 486 ; ST-COTS SM = 492 ; ST-COTS MM = 498 ; ST-COTS SM = 503 ; ST-COTS MM = 509
<b>B</b>	Connector Type	Straight = S ; Rt. Angle= R
<b>C</b>	Connector Style	Male/Plug = P ; Female = J
<b>N</b>	No. of Fibers	2 = 2 fibres; 4 = 4 fiber ; 8 = 8 fiber
<b>XX</b>	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
<b>YYY</b>	Length	100 meter = 100M ; 1 Km = 1KM ; 1 feet = 1F
<b>ZZ</b>	2 digit cable code	MIL85045 = 074; Tactical Distribution = 065; Riser = 120
<b>R</b>	Cable Drum	For cable drum add suffix R

5m assembly SM, MIL-ST to MIL-ST, 4 fibre = STF-480SP/480SP-4F/9SM/5M-074-00

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.



## MIL-83522 (MIL ST) Fiber Optic Cable Assemblies for Naval Use



### MIL-83522 Naval Fiber Optic Cable Assemblies, (MIL-85045 cable)

P/N for Fiber Optic Assembly	Mode	No. of Fibres	Conn A	Conn B	Len. Meter
STF-480SP/480SP-1F/SM/1M-074-00	SM	1	MIL-ST	MIL-ST	1
STF-480SP/480SP-1F/SM/5M-074-00	SM	1	MIL-ST	MIL-ST	5
STF-480SP/480SP-1F/SM/10M-074-00	SM	1	MIL-ST	MIL-ST	10
STF-480SP/480SP-2F/SM/1M-074-00	SM	2	MIL-ST	MIL-ST	1
STF-480SP/480SP-2F/SM/5M-074-00	SM	2	MIL-ST	MIL-ST	5
STF-480SP/480SP-2F/SM/10M-074-00	SM	2	MIL-ST	MIL-ST	10
STF-480SP/480SP-4F/SM/1M-074-00	SM	4	MIL-ST	MIL-ST	1
STF-480SP/480SP-4F/SM/5M-074-00	SM	4	MIL-ST	MIL-ST	5
STF-480SP/480SP-4F/SM/10M-074-00	SM	4	MIL-ST	MIL-ST	10
STF-486SP/486SP-1F/MM/1M-074-00	MM	1	MIL-ST	MIL-ST	1
STF-486SP/486SP-1F/MM/5M-074-00	MM	1	MIL-ST	MIL-ST	5
STF-486SP/486SP-1F/MM/10M-074-00	MM	1	MIL-ST	MIL-ST	10
STF-486SP/486SP-2F/MM/1M-074-00	MM	2	MIL-ST	MIL-ST	1
STF-486SP/486SP-2F/MM/5M-074-00	MM	2	MIL-ST	MIL-ST	5
STF-486SP/486SP-2F/MM/10M-074-00	MM	2	MIL-ST	MIL-ST	10
STF-486SP/486SP-4F/MM/1M-074-00	MM	4	MIL-ST	MIL-ST	1
STF-486SP/486SP-4F/MM/5M-074-00	MM	4	MIL-ST	MIL-ST	5
STF-486SP/486SP-4F/MM/10M-074-00	MM	4	MIL-ST	MIL-ST	10
STF-498SP/498SP-1F/MM/1M-074-00	MM	1	ST-COTS	ST-COTS	1
STF-498SP/498SP-1F/MM/5M-074-00	MM	1	ST-COTS	ST-COTS	5
STF-498SP/498SP-1F/MM/10M-074-00	MM	1	ST-COTS	ST-COTS	10
STF-498SP/498SP-2F/MM/1M-074-00	MM	2	ST-COTS	ST-COTS	1
STF-498SP/498SP-2F/MM/5M-074-00	MM	2	ST-COTS	ST-COTS	5
STF-498SP/498SP-4F/MM/1M-074-00	MM	4	ST-COTS	ST-COTS	1
STF-498SP/498SP-4F/MM/5M-074-00	MM	4	ST-COTS	ST-COTS	5
STF-492SP/492SP-1F/SM/1M-074-00	SM	1	ST-COTS	ST-COTS	1
STF-492SP/492SP-1F/SM/5M-074-00	SM	1	ST-COTS	ST-COTS	5
STF-492SP/492SP-1F/SM/10M-074-00	SM	1	ST-COTS	ST-COTS	10
STF-492SP/492SP-2F/SM/1M-074-00	SM	2	ST-COTS	ST-COTS	1
STF-492SP/492SP-2F/SM/5M-074-00	SM	2	ST-COTS	ST-COTS	5
STF-492SP/492SP-2F/SM/10M-074-00	SM	2	ST-COTS	ST-COTS	10

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.



## MIL-83522 Naval Fiber Optic Cable Assemblies, (MIL-85045 cable)

P/N for Fiber Optic Assembly	Mode	No. of Fibres	Conn A	Conn B	Len. Meter
STF-492SP/492SP-4F/SM/1M-074-00	SM	4	ST-COTS	ST-COTS	1
STF-492SP/492SP-4F/SM/5M-074-00	SM	4	ST-COTS	ST-COTS	5
STF-492SP/492SP-4F/SM/10M-074-00	SM	4	ST-COTS	ST-COTS	10
STF-480SP/503SP-1F/SM/1M-074-00	SM	1	MIL-ST	SC-COTS	1
STF-480SP/503SP-1F/SM/5M-074-00	SM	1	MIL-ST	SC-COTS	5
STF-480SP/503SP-1F/SM/10M-074-00	SM	1	MIL-ST	SC-COTS	10
STF-480SP/503SP-2F/SM/1M-074-00	SM	2	MIL-ST	SC-COTS	1
STF-480SP/503SP-2F/SM/5M-074-00	SM	2	MIL-ST	SC-COTS	5
STF-480SP/503SP-2F/SM/10M-074-00	SM	2	MIL-ST	SC-COTS	10
STF-480SP/503SP-4F/SM/1M-074-00	SM	4	MIL-ST	SC-COTS	1
STF-480SP/503SP-4F/SM/5M-074-00	SM	4	MIL-ST	SC-COTS	5
STF-480SP/503SP-4F/SM/10M-074-00	SM	4	MIL-ST	SC-COTS	10
STF-486SP/509SP-1F/MM/1M-074-00	MM	1	MIL-ST	SC-COTS	1
STF-486SP/509SP-1F/MM/5M-074-00	MM	1	MIL-ST	SC-COTS	5
STF-486SP/509SP-1F/MM/10M-074-00	MM	1	MIL-ST	SC-COTS	10
STF-486SP/509SP-2F/MM/1M-074-00	MM	2	MIL-ST	SC-COTS	1
STF-486SP/509SP-2F/MM/5M-074-00	MM	2	MIL-ST	SC-COTS	5
STF-486SP/509SP-2F/MM/10M-074-00	MM	2	MIL-ST	SC-COTS	10
STF-486SP/509SP-4F/MM/1M-074-00	MM	4	MIL-ST	SC-COTS	1
STF-486SP/509SP-4F/MM/5M-074-00	MM	4	MIL-ST	SC-COTS	5
STF-486SP/509SP-4F/MM/10M-074-00	MM	4	MIL-ST	SC-COTS	10
STF-498SP/509SP-1F/MM/1M-074-00	MM	1	ST-COTS	SC-COTS	1
STF-498SP/509SP-1F/MM/5M-074-00	MM	1	ST-COTS	SC-COTS	5
STF-498SP/509SP-1F/MM/10M-074-00	MM	1	ST-COTS	SC-COTS	10
STF-498SP/509SP-2F/MM/1M-074-00	MM	2	ST-COTS	SC-COTS	1
STF-498SP/509SP-2F/MM/5M-074-00	MM	2	ST-COTS	SC-COTS	5
STF-498SP/509SP-2F/MM/10M-074-00	MM	2	ST-COTS	SC-COTS	10
STF-498SP/509SP-4F/MM/1M-074-00	MM	4	ST-COTS	SC-COTS	1
STF-498SP/509SP-4F/MM/5M-074-00	MM	4	ST-COTS	SC-COTS	5
STF-498SP/509SP-4F/MM/10M-074-00	MM	4	ST-COTS	SC-COTS	10

Shown trademarks are property of their respective owners.

While the information contained herein in this catalog, has been carefully compiled to the best of our knowledge, nothing is intended as representation and warranty on our part; and no statement shall be construed as recommendation to infringe any of existing patents. We accept no liability of whatsoever for any faults and errors in the information contained herein. Contents of this catalogue and specifications of the products, are subject to change without notice due to continuous improvements.