

I-FLET-3..series is a Tactical ethernet over fiber-optic link that provides a high reliability, high performance optical transport of ethernet signals over long distances. We give 'FULL SOLUTION' to fiber enable existing copper based ethernet transmission customized to your application



FIBER OPTIC LINK FEATURES

- 10/100Base ethernet over fiber
- Distance upto 20 Km
- Transmission speed upto 100 Mbps
- Low loss – enables long length with minimal degradation of carrier-to-noise
- No electrical interference, signal is not Effected 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 ethernet channels (2 or 4 fiber)
- AC or 24VDC power options

APPLICATIONS

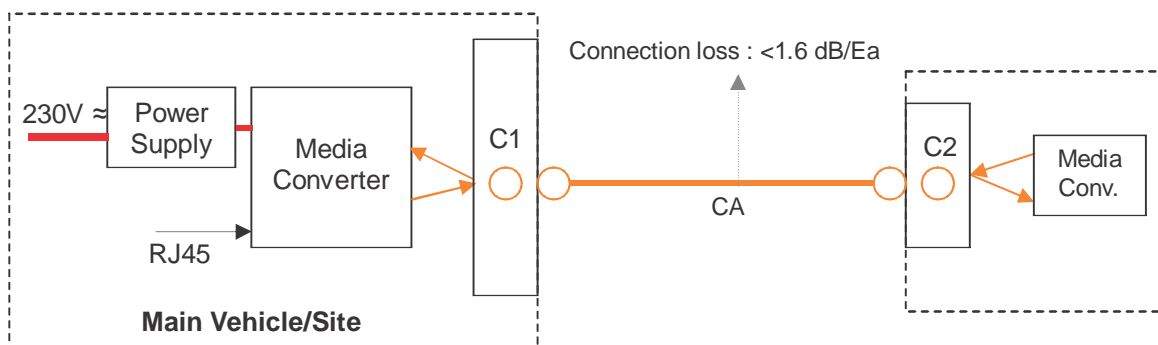
- SIGINT/COMINT/ECM Electronic Warfare
- Missile Launchers & launch controllers
- Naval Ethernet over fiber
- Radar Systems
- Antenna remoting application

MATERIALS USED

- Imported hardened media converters meeting IEEE 802. with -40 ~ 85°C range
- 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 connectors
- 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

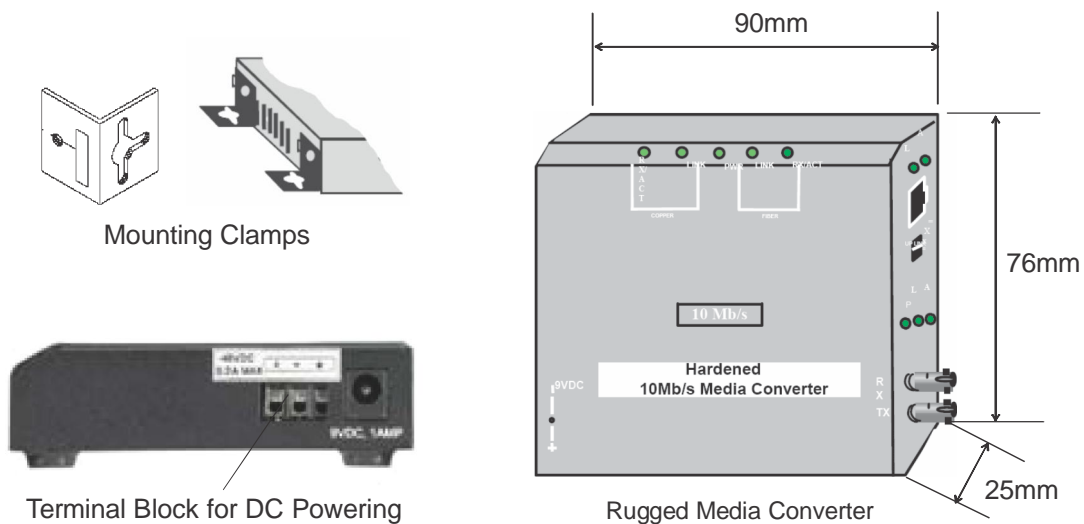
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Rugged Media Converter

(Includes : Converter + Mounting Clamps + Terminal Block for Powering)

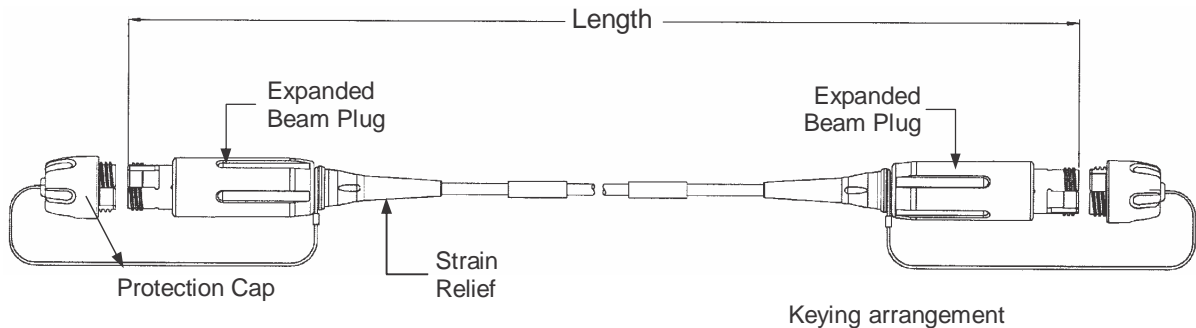
	Multimode	Single mode
Optical Budget	12 dB	17 dB normal 29 dB long reach
Data Rate (Ethernet Type)	100 Mbps	100 Mbps
Power Supply	AC or 24VDC	
Optical Interface Connectors	SC/ST	SC/ST
Ethernet Port	RJ45	
Operating Temperature	-40°C to +75°C	
Storage Temperature	-40°C to +85°C	
Humidity	95% RH	
EMI	EN55022 (CISR22 Class A)	
Shock	IEC60068-2-27	
Vibration	IEC60068-2-6	
Humidity	95% RH	



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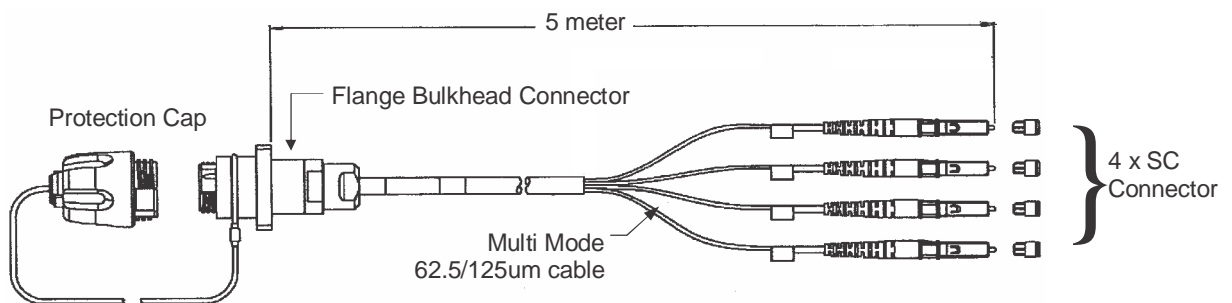
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EXPANDED BEAM PLUG-PLUG CABLE SET



- 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

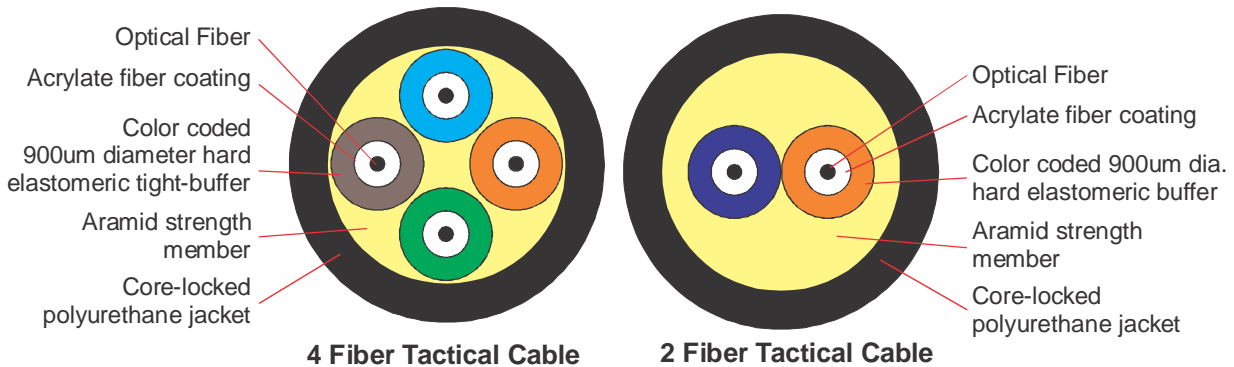


- No. of Fibers : 2 or 4 as per selection
- Mode : Multimode 62.5/125um or Singlemode 9/125um as per selection
- Wavelength : 850 or 1300nm for MM / 1310nm for SM as per selection
- Length of Cable : 5 meter
- Cable Loss : Typ. 1.5 dB/Km (1300nm) for MM ; 0.6 dB/Km (1310nm) for SM
- Connector A : 2 or 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

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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-IFLRS - □ - □ □ C - □ □ M - □ - □ □ - □ □ - 00 - R
B X X Y Y D T H C C

B	1 digit type code	3 = 10/100BaseT
XX	Channel Code	2 Channels = 02; 4 Channels = 04
YY	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
D	Distance	500 meters = 500 ; 1500 meters = 1.5KM
T	Converter Type	I = Indoor ; R = Rugged ; H = Harsh Environment
H	Mounting	1 = Din Rail; 2 = 1U 19" Rack ; 3 = Direct Panel Mount
CC	Cable Class	Tactical = 065; Riser = 120
R	Cable Drum	Tactical Cable Drum

Ex. 10/100BaseT, 2 channel tactical, 1 Km distance = I-IFLET-3-02C-6MM-1KM-R1-065-00-R

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Tactical Ethernet Over Fiber Links

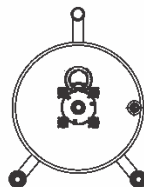
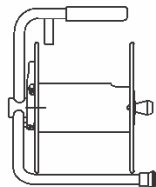
- 2 fiber link assumes that 2 media converters are available – 1 on each side
- 4 fiber link assumes that 4 media converters are available – 2 on each side

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

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



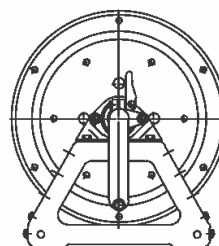
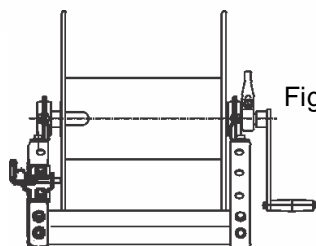
Fig-1



- 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)

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