

# MILITARY FIBER OPTIC SOLUTIONS 2021-2022 edition



**TALK TO US** 

Toll-free: 877-347-0091 | Tel: 315-768-8179 | FISBLUE.COM

# **TEST EQUIPMENT**

FIS Blue manufactures and distributes many types of fiber optic and electrical test equipment.

FIS Blue offers a variety of test equipment for the Broadcast, Military, Aviation, Telco and Data/LAN markets.

All FIS Blue test equipment is proudly Made in the USA to the highest quality standards and comes with a 1-year warranty.

# **TACTICAL CABLE**

FIS Blue offers a full line of Tactical Cable designed to MIL-PRF-85045/8. With in-house production capability, FIS Blue offers the best inventory position and lead-times in the industry. All fiber types are available.

In addition to standard Tactical Cable, FIS Blue also offers a line of Micro-Armored Tactical cable. This is a super-slim diameter cable with a braided steel layer for maximum protection. Be sure to ask about other configurations not listed.

# **FIS BLUE POWER METER**

A Fiber Optic Power Meter is the essential tool for measuring optical power within a fiber optic link. The FIS Blue Fiber Optic Hand Held Power Meter offers solid performance, portability and ease-of-use, all at a great price.

## FIS BLUE LIGHT SOURCE

The FIS Blue Light Source is the perfect match for the FIS Blue Power Meter. Singlemode units are equipped with lasers having a typical output power of -1.0dBm. Multimode units have LEDs with a minimum output of -17dBm.

		-
PART #	DESCRIPTION	-
FB-813LR	FIS Blue Power Meter & 850/1300nm MM LED Light Source Kit, ST Adapter	
FB-1315LRST	FIS Blue Power Meter & 1310/1550nm SM Laser Light Source Kit, ST Adapter	
FB-1835LRVFL	FIS Blue Power Meter & 850/1300nm MM and 1310/1550nm SM Light Sources plus VFL Kit, ST Adapter	6
FB-9000	FIS Blue VFL, 2.5mm connectors	
FB-9000AD	1.25mm adapter for FB-9000 VFL	
	Samuel	

# **BULK CABLE**

In-house production allows us to offer competitively priced Tactical Cable Assemblies and Bulk Tactical Cable. Tactical Cable utilizes a rugged polyurethane outer jacket. There are several fiber counts and fiber type options available. FIS Blue also the ability to run custom fiber counts, color and print cable if needed. Private label bulk cable is also available. In addition to the in-house line of FIS Blue Tactical Cable, other brands are available.

# **TACTICAL CABLE**

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	PART#	DESCRIPTION						
	FB-SM-TACCABLE-2	Tight Buffer Tactical, 2-fiber, SM						
	FB-SM-TACCABLE-4	Tight Buffer Tactical, 4-fiber, SM						
	FB-SM-TACCABLE-6	Tight Buffer Tactical, 6-fiber, SM						
	FB-SM-TACCABLE-12	Tight Buffer Tactical, 12-fiber, SM						
	FB-MM-TACCABLE-4	Tight Buffer Tactical, 4-fiber, 62.5µm MM						
	FB-MM-TACCABLE-12	Tight Buffer Tactical, 12-fiber, 62.5µm MM						
	FB-OM4-TACCABLE-2	Tight Buffer Tactical, 2-fiber, 50μm OM4 MM						
	FB-OM4-TACCABLE-4	Tight Buffer Tactical, 4-fiber, 50µm OM4 MM						
	FB-OM4-TACCABLE-6	Tight Buffer Tactical, 6-fiber, 50µm OM4 MM						
	FB-OM4-TACCABLE-12	Tight Buffer Tactical, 12-fiber, 50µm OM4 MM						

Polyurethane Outer Jacket Hytrel Buffer Aramid Yarn Aramid Yarn



## MICRO ARMORED TAC CABLE

Super strong steel armored micro cable.

- Flexible
- Special Compact Design
- · High Tensile Strength
- High Resistant Outer Jacket

	PART #	DESCRIPTION
	SOLID 2.2-1FRHF	1-fiber Singlemode Micro-Armored Tac, 2.2mm OD
	FLEX 4.1-4-FRHF	4-fiber Singlemode Micro-Armored Tac, 4.1mm OD
	FLEX 5.6-12-FR	12-fiber Singlemode Micro-Armored Tac, 5.6mm OD
	SOLID 2.2-1-FRHF-OM3	1-fiber 50µm OM3 Micro-Armored Tac, 2.2mm OD
	FLEX 4.1-4-FRHF-OM3	4-fiber 50μm OM3 Micro-Armored Tac, 4.1mm OD
	FLEX 5.6-12-FR-OM3	12-fiber 50µm OM3 Micro-armored Tac, 5.6mm OD

> For current spec sheets and further details, go to www.fisblue.com

# M29504/04 and /05 TERMINI, STYLE 1



#### **SOCKETS**

Mil-Spec STYLE 1	Ferrule ID	Fiber Type	
M29504/05-4237	125.5μm	9/125μm	
M29504/05-4238	126.0μm	9/125μm	
M29504/05-4239	126.0μm	50 & 62.5/125μm	
M29504/05-4046	127.0μm	50 & 62.5/125μm	
M29504/05-4049	142.0μm	100/140μm	
M29504/05-4243	236.0µm	200/233μm	

#### **PINS**

Mil-Spec STYLE 1	Ferrule ID	Fiber Type
M29504/04-4208	125.5μm	9/125μm
M29504/04-4209	126.0μm	9/125μm
M29504/04-4210	126.0µm	50 & 62.5/125μm
M29504/04-4040	127.0μm	50 & 62.5/125μm
M29504/04-4043	142.0μm	100/140μm
M29504/04-4214	236.0µm	200/233μm

ARINC 801, SMPTE and other termini available upon request

# M29504/04 and /05 TERMINI, STYLE 2



#### **SOCKETS**

Mil-Spec STYLE 2	Ferrule ID	Fiber Type
M29504/5-4248	126.0μm	9/125μm
M29504/5-4249	126.0μm	50 & 62.5/125μm
M29504/5-4250	127.0μm	50 & 62.5/125μm

#### **PINS**

Mil-Spec STYLE 2	Ferrule ID	Fiber Type	
M29504/4-4219	126.0μm	9/125μm	
M29504/4-4220	126.0μm	50 & 62.5/125μm	
M29504/4-4221	127.0μm	50 & 62.5/125μm	



PART #	Ferrule ID	Fiber Type
M29504/14-4140	125.0μm	9/125μm
M29504/14-4141	126.0μm	9/125μm
M29504/14-4131	126.0μm	50 & 62.5/125μm
M29504/14-4132	127.0μm	50 & 62.5/125μm
M29504/14-4135	142.0μm	100/140μm

**PINS** 

#### **DUMMY**

M29504/3-4038

# M29504/14 AND /15 TERMINI

#### **SOCKETS**

PART #	Ferrule ID	Fiber Type
M29504/15-4180	125.0μm	9/125μm
M29504/15-4181	126.0μm	9/125μm
M29504/15-4171	126.0μm	50 & 62.5/125μm
M29504/15-4172	127.0μm	50 & 62.5/125μm
M29504/15-4175	142.0μm	100/140μm

# **MIL-AERO CABLE ASSEMBLIES**

FIS Blue is the premier cable assembly house for fiber optic Mil-Aero Assemblies. With a foundation of decades of experience, FIS Blue offers the best ability to build the most complex fiber optic cable assemblies available. Customers can have their own designed cables built and tested



> For current spec sheets and further details, go to www.fisblue.com

# **TERMINI**

FIS Blue offers a full line of fiber optic termini. We carry all types of termini under the M29504 Mil-Spec designation. In addition, we stock ARINC 801 and SMPTE termini.







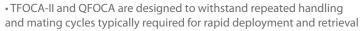


# **ASSEMBLIES**

FIS Blue is capable of all types of harsh environment cable assemblies. From M28876 and D38999 to Expanded Beam and TFOCA-II/III assemblies. FIS Blue is the premier fiber optic cable assembly house for harsh environment assemblies.

# **TFOCA-II/QFOCA CABLE ASSEMBLIES**

Fiber optic cables serve many important purposes in the military, mining, oil and gas industries. One of the most important is distance. The unique characteristics of fiber make it the "go-to" solution for long distance transmissions. FIS Blue has the industry's quickest turnaround times on TFOCA-II and QFOCA Cable Assemblies. Since FIS Blue also produces the Tactical Cable itself, the pricing on our cable assemblies is very competitive.



• Hermaphroditic design for Multimode or Singlemode fiber



# **TFOCA-III**

TFOCA-III connectors are available in 6 and 24-channel configurations, both Multimode and Singlemode.

Many of the benefits are the same as the TFCOA-II: hermaphroditic connectorization, removable insert cap and harsh environment operational.



# **CONNECTOR CHART**

	ST (UPC)	SC (UPC / APC)	LC (UPC / APC)	FC (UPC / APC)	LC / ODVA	TFOCA-11 / QFOCA	TF0CA-III	Delphi Hermaphroditic	Expanded Beam MIL-PRF-83526/20	Micro (MX) Expanded Beam	M28876	MIL-DTL-38999	QSeal (OpticalCON)	Fischer Fiber Optic	SMPTE 304 (LEMO / Canare)	Q-Drive / StranGen-X
CHANNELS					2	=	<u> </u>	ŎĬ	ΩZ	ΣĐ	≥	×	88	Œ	25	Ò
1-fiber	X	X	X	X												
2-fiber	X	X	X	X	X				X	X		X	X	X		
2-fiber / 2-copper														X		
2-fiber / 4-copper															X	
4-fiber	X	X	X	X		X		X	X	X	X	X	X	X		Х
4-fiber / 8-copper																X
5-fiber	X	X	X	X								X				
6-fiber	X	X	X	X			X				X					
8-fiber	X	X	X	X							X	X				
11-fiber	X	X	X	X								X				
12-fiber	X	X	X	X		X		X								Х
16-fiber	X	X	X	X								X				
18-fiber	X	X	X	X							X					
21-fiber	X	X	X	X								X				
24-fiber	X	X	X	X			X									
29-fiber	X	X	X	X								X				
31-fiber	X	X	X	X							Х					
37-fiber	X	X	X	X								X				
		All Industries	Non-Rugged					Broadcast, Military, Mining/0il/Gas			Military, Navy	Broadcast, Military-Aero		Broadcast		Mining/0il/Gas





## FISCHER CABLE ASSEMBLIES

Fischer Fiber Optic push-pull connector solutions are built to withstand the elements of rugged and harsh environments, providing virtually faultless performance. Extreme Environmental Robustness: IP68 ingress protection when mated or with caps and IP67 sealing even unmated. In addition, extensive vibration and shock testing have shown that this is an ultra rugged connector.

To build on the existing line of high quality connectors, Fischer now offers a hybrid 4-channel (2-fiber optic / 2-copper) connector. The electrical contacts can handle up to 10A and 400V. The fiber optic contacts can be terminated with Singlemode or Multimode fibers.

# **FISHER CONECTOR ASSEMBLIES**

Channels	Plug	Receptical
1-Fiber	Cable Mounted	Jam-Nut, Rear Mount
2-Fiber		Jam-Nut, Front Mount
4-Fiber		Flange Mount, Front Mount
2-Copper/2-Fiber		Cable Mounted

# **TACTICAL CABLE ASSEMBLIES**

Fiber optic cables have many applications in the military industry. Fiber's distinctive characteristics make it the ideal solution for transmissions needing to travel long distances. FIS Blue's in house manufacturing allows for timely production of Tactical Cable, along with its assemblies, at very competitive prices.



- QFOCA and TFOCA-II are designed to withstand repeated handling and mating cycles typically required for rapid deployment.
- Different connectors available: ST, LC, SC, FC, TFOCA-II, D38999, M28876, Delphi, Expanded Beam and more.
- Custom lengths from 1 to 6,600 feet available.

TFOCA-II® is a registered trademark of Amphenol Fiber Systems International

# **DELPHI/APTIV CABLE ASSEMBLIES**

Delphi/APTIV's hermaphroditic connectors provide superior, consistent optical performance when deployed in the harshest environments. The connectors

allow "daisy-chaining" of cable assemblies to extend equipment runs without concern for connector male/female interface compatibility.

- Available in 4 and 12 channel configurations
- 4 channel connector complies with SMPTE Standard 358M-2001 for the broadcast industry
- Plug-to-plug in-line cable linking system

Waterproof and field maintainable







# **EXPANDED BEAM CABLE ASSEMBLIES**

FIS Blue is an accomplished manufacturer of Expanded Beam fiber optic cable assemblies. Expanded Beam connectors are very desirable in dirty and harsh environments. The lens technology allows the connectors to work in "less than perfect" conditions. Available in singlemode or multimode and 1 to 4 channels. Connector options include Plug, Jam-Nut Receptacle and Flange Mount Receptacle. All connectors are proudly made in the USA.

# FIS BLUE CABLE REELS

FIS Blue offers specially designed steel cable reels to transport or store your broadcast and fiber application. In addition to the standard broadcast reels, high quality OCC, Schill, Shane and Hannay reels are offered. The Schill reels offer many sizes and options to fit any application. For military applications, the Shane reels are the industry leader.







# MINING, OIL & GAS

A full inventory of connectors, cable and cable assemblies are being offered for the Mining, Oil and Gas industries.

Custom cable assemblies are available in multiple configurations, including 12-channel (8-fiber / 4-copper).

Let FIS Blue be your main supplier of fiber optics for Mining, Oil and Gas environment assemblies.

# **QPC Q-DRIVE CONNECTORS**

QPC now offers a complete line of connectors for the Mining, Oil and Gas industries. Based on their proven QFOCA platform, there are 4 and 12-channel fiber optic Q-Drive connectors. They come complete with enhanced cable strain relief and stainless steel Kellems grips. These are hermaphroditic connectors that are 100% inter-mateable with the Amphenol Top-Drive and Stran Technologies GenX connectors. Additionally, a 12-channel (8-fiber optic termini and 4-copper contacts) Q-Drive connector is also available.

# STRAN TECHNOLOGIES GenX CONNECTORS

The GenX line of connectors is a time tested solution and widely accepted.

The GenX is available in standard 4-channel fiber optic and 12-channel (8-fiber optic termini and 4-copper contacts). The copper contacts are rated at 600 volts. These connectors are hermaphroditic which allow for easy in-field daisy chaining of longer cable runs.

The plug connectors feature a stainless steel Kellems cable grip for added strength and durability. The receptacles have a 'centralizing shroud' to ensure damage free matings.

# M28876 CABLE ASSEMBLIES, 4 TO 31-CHANNEL

For rugged fiber optic military applications that require higher fiber counts, the M28876 is a good solution. The M28876 connectors come in a variety of fiber counts from 4 to 31 and vary in shell size from 13 - 23. There are a diverse amount of connector styles. These are offered in plug, jam-nut receptacle nd flange mount receptacle. In addition, each of these have different options for the strain relief/backshell: none, straight, 90° and 45°.

In addition to connectors, FIS Blue is also a world-wide leader in M28876 cable assembly production. FIS Blue custom builds all types of M28876 and Navy assemblies to meet any need. All cable assemblies are 100% tested and are shipped with documented test results. In addition, full interferometer results are available upon request.



# FIS BLUE BASIC & DELUXE CLEANING & TOOL KITS

FIS Blue has an extensive range of tools, cleaning supplies, test equipment and kits. The kits are meant to be a universal tool and cleaning solution for all types of fiber optic connectors. Whether an ST, SMPTE or TFOCA-II connector needs its ferrules cleaned, these kits can handle the job.

The Deluxe Tool & Cleaning Kits with Testers include all of the standard items from the Basic Kits, plus additional hand tools and a Power Meter and Light Source Kit.



PART #	DESCRIPTION
FB-BAMIL-KIT	FIS Blue Basic Military Cleaning & Tool Kit
FB-BAMIL-KIT-TFCTY	FIS Blue Basic M29504/16 (TFOCA-II) Kit with Continuity Tester
FB-BAMIL-KIT-DLCTY	FIS Blue Basic M29504/14 /15 (M28876 & Delphi) Kit with Continuity Tester
FB-BAMIL-KIT-D3CTY	FIS Blue Basic M29504/04 /05 (D38999) Kit with Continuity Tester
FB-DXMIL-KIT	FIS Blue Deluxe Military Testing & Cleaning Kit with Power Meter & Light Source for M29504/04, /05, /14, /15, /16

#### FIS BLUE CLEANING SUPPLIES

All your fiber optic cleaning supplies are available at FIS Blue. From sticks and wipes and wet and dry cleaning solutions, there is a solution for everyone. Below is a small part of the offering. Please call for more options!



▲ Part # FB CCP-50

PART #	DESCRIPTION
MCCS25	Sticklers CleanStixx, 2.5mm sticks, 50pk
MCCS16	Sticklers CleanStixx, 2.0/1.6mm sticks, 50pk
MCCS12	Sticklers CleanStixx, 1.25mm sticks, 50pk
MCCXMT	Sticklers CleanStixx, Lens sticks, 50pk
MCCP25	Sticklers CleanStixx, Lens/Ferrule sticks, 50pk
FB-CCP-50	Fiber Optic Contact Cleaners (1x dry & 1 wet swab), 50pk
34155	Kim Wipes Box, single box
POC03M	Sticklers Fiber Optic Connector Cleaner, single can

## **ONE-CLICK CLEANER**



The US Conec IBC™ Brand Cleaners are 

▲ Part # 13310

mechanical cleaning tools designed to clean connectors residing 
in an adapter or faceplate and unmated connectors. The IBC™

Brand Cleaning tools use a novel dry cleaning strand to gently sweep and

lift away dust and residues from the connector end face.

PART # DESCRIPTION

12910 One-Click for LC, MU & 1.25mm Harsh Environment Connectors

12926 One-Click for SMPTE 304M & 2mm Harsh Environment Connectors

13310 One-Click for TFOCA II, ST, SC, FC & 2.5mm Harsh Environment Connectors

13309 One-Click for M16 1.6mm & D38999 Harsh Environment Connectors

# **FULL FIBER OPTIC CABLE OFFERING:**

- ▷ MIL-PRF-85045 Polyurethane Tactical Cable
- D MIL-PRF-85045/13, /15, /16, /17, /18, /20, /21, /22, /23, /24 Shipboard Cable
- ▷ Standard Polyurethane Tactical Cable
- > ARINC 802 Commercial Aircraft Cable
- ▷ Riser & Plenum Simplex and Duplex Cable

- All fiber types offered: Singlemode, OM1 62.5μm, OM2 50μm,
   OM3 50μm & OM4 5μm, 100/140μm and 200/230μm Multimode

















