

# Fiber Instrument Sales, Inc.

Fiber Optic Product Solutions Catalog



# **800–5000–FIS (347)** www.fiberinstrumentsales.com



## "FIS" HAS DELIVERED FIBER OPTIC PRODUCTS WORLD-WIDE SINCE 1985. AS A FULL-LINE DISTRIBUTOR AND MANUFACTURER, FIS MAINTAINS ONE OF THE LARGEST PRODUCT INVENTORIES IN THE INDUSTRY.

FIBER INSTRUMENT SALES

From engineering specialty fiber optic components, to equipment rentals, to its highly-acclaimed customer training through FIS University, FIS and its highly trained sales staff are nationally and internationally recognized as the fiber industry's "premier problem solvers."

# "Solutionist" Capabilities...

🖌 Our family of manufacturing companies provide custom solutions.

EXTRUSION | INJECTION MOLDING | CNC MACHINING METAL FABRICATION | ELECTRONIC EQUIPMENT PACKAGING





Wide product selection.

- **Engineering, production and** application support expertise.
- The largest cross sectional fiber optic inventory at one location in the world.

Our managed costs provide the profits you deserve!



# Commitment to Quality!

- ISO 9001-2008 Certified
- Products Made in USA
- Over 50,000 sq ft production space
- Custom Manufacturing Capabilities



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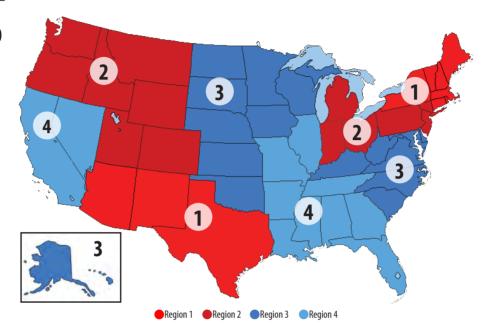
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# Continuing to be Your Fiber-Optic Information Source

# Website

www.fiberinstrumentsales.com



In addition to online shopping, the FIS website offers a wealth of information to make your job easier and more productive. Spec sheets, white papers, training videos, Communicator Newsletter and WaveLengths Magazine – all are all accessible online.

# Live Tech Help

Our tech support engineers and technicians are available by phone as well as online, via our website. You can even access our President and CEO, Frank Giotto. Just click on the link, "Ask the President."

# **Tutorial Videos**

Fusion splicing, fiber termination and network testing are just a few of the informative FIS videos available to you. Videos can be accessed through the FIS Website and via WaveLengths Online Magazine. Clear and concise, FIS tutorial videos are the next best thing to receiving classroom training.

# **NFOC-NETS Conference**

www.nfoc-nets.com

The NFOC-NETS Communications Conference provides telecom and datacom professionals with the opportunity to attend educational sessions presented by industry experts. These sessions address new fiber optic technologies and applications as well as the business opportunities they present. Dozens of the world's top companies exhibit their products at the NFOC each year.

# **WaveLengths** Magazine

www.wavelengthsmagazine.com

Upbeat and informative, WaveLengths Magazine provides you with a broad understanding of topics relating to the Telecom and Datacom industries. Coverage includes new technology, industry trends, network installation, testing and more. If you work with fiber optics, copper or wireless technologies, Wavelengths is the magazine for you. Our full-color Print Edition is approximately 40 pages in length. Our Online Edition has additional content including audio, video, and interactive features (wavelengthsmagazine.com). Both editions are available FREE to FIS customers!

# **Communicator Newsletter**

This eight-month publication is a great tool for helping you make informed purchase decisions. For example, various issues of Communicator have provided guidance in selecting the right fusion splicer, OTDR, splice closure and more. Refer to these Communicator "buying guides" when making important purchase decisions. All issues are available in the Communicator Archives on the FIS website.





WAVELENGTHS



Live

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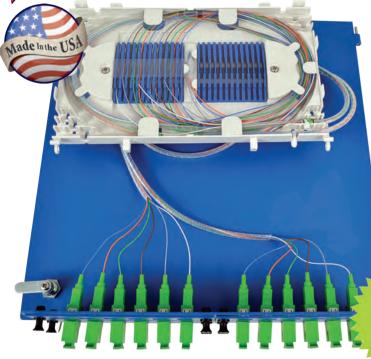
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# **ENCLOSURES**

# **CUSTOM FIBER OPTIC ENCLOSURES**



## **Key Features**

- Rack Mount Modifications Available
- Development Concept to Product Production
- Custom Colors Available
- Aluminum or Steel Enclosures
- Made in the USA



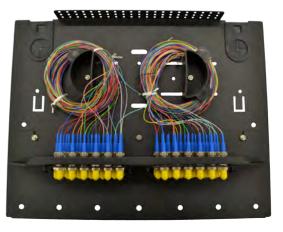
# PRETERMINATED FIBER SOLUTIONS



4

## **Key Features**

- Custom Length Multi-Fiber Terminated Cables
- Installed Pulling Eye for Installation
- High Density MTP/MPO Cassettes
- Singlemode and Multimode Fiber Types
- •Singlemode Bend-Insensitive Fibers Available



# **Pre-Loaded Distribution Interconnects** BUILD YOUR CUSTOM PRE-LOADED RACK MOUNT PART NUMBER

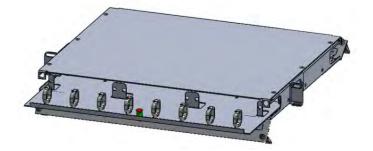
FIS' expert manufacturing teams can load any rack mount box to your specifications for easy onsite installation. Just unpack, load in the rack, and splice, saving time loading boxes at the jobsite and making installations easy and efficient. Contact your FIS sales representative for pricing and other configurations.

| CLOSURE TYPE   | PORTS  | COLOR                  | ADAPTER  | FIBER TYPE   | STYLE   | FIBER LENGTH<br>(IN METERS) | SPLICE TRAY  | SPLICE   |
|--|--|------------------------|--|--|---|-----------------------------|--|--|
| WM   | 036  | Х                      | LC   | SM   | T9  | 2                           | 12   | F  |
| WM=Wall Mount<br>RM=Rack Mount Slide<br>RS=Patch & Splice Rack<br>RMS=Rack Mount Swing<br>RF=Rack Mount Flush<br>CW=Corning Wall Mount | 006= 6 Ports<br>012=12 Ports<br>024=24 Ports<br>036=36 Ports<br>048=48 Ports<br>072=72 Ports | X=Off White<br>B=Black | SC=SC<br>SCA=SC/APC<br>DSC=Duplex SC<br>DSCA=Duplex SC/APC<br>LC=Duplex LC<br>LCA=Duplex LC/APC        | SM=9/125<br>OM1=62.5/125<br>OM2=50/125<br>OM3=50/125<br>(106/300m)<br>OM4=50/125 | T9=900µm pigtail<br>T3=3mm pigtail<br>MD=Module<br>MP=Multi-Fiber pigtail |                             | 12=12 Fiber Position<br>24=24 Fiber Position                                     | F=Single Fusion<br>M=Mech. Splice<br>R=Ribbon Fusion |
| CR=Corning Rack Mount<br>LW=Leviton Wall Mount<br>LR=Leviton Rack Mount<br>AR=AFL Rackmount<br>AW= AFL Wallmount                       | 096=96 Ports<br>144=144 Ports<br>288=288 Ports   |                        | QLC=Quad LC<br>QLCA=Quad LC/APC<br>FC=FC<br>FCA=FC/APC<br>ST=ST<br>STA=ST/APC<br>MJ=MTRJ<br>MT=MTP/MPO | (10G/550m)   |   |                             | F<br>F1-WM-036-X-<br>Mount, 36 Ports, Beige, LC<br>tail, 2 Meters, 12 Fiber Spli | Translates to:<br>Singlemode, 900µm                  |

# Building Information Modeling (BIM) Now Available



- Provided Free to Architects, Designers and Contractors
- Quick "Snapping Together" of parts in Revit Environment
- Actual 3D Geometry
- Relevant Metadata Embedded
   into each BIM Model
- BICSI Compliant
- High Resolution Revit Model Rendering



Available

Downloadable

www.fisfiber.con



The FIS Rack Mount Enclosures are designed for low or high density patching applications. This sturdy 14 gauge rack enclosure is available in 2, 3, 4, and 9RU versions. This unit provides a removable door with front and back access to the slide-out tray. The FIS Enclosures accommodate 19" or 23" racks. Purchase 6. 8, 12 or 24 pack adapter panels. Standard color is Black, simply attach suffix to Rack Mount Enclosures for Off-White (-BW), ex. F1RM2RU4X-BW.

## FIS Rack Mount Fiber Optic Swing-Out Patch Panels





| PART #                | DESCRIPTION              |     |
|-----------------------|--------------------------|-----|
| F1RMS02RU4X           | Color Black              |     |
| F1RMS02RU4X-BW        | Color Off White          |     |
| 10" or 22" rack mount | able (22" mounting brack | otc |

- or 23" rack mountable (23" mounting brackets
- sold separately)
- Accepts 4 LGX style adapter plates, modules or cassettes
- · Front cable retaining rings included
- for patch cable management

- Hinged front and rear removable doors
- Dimensions: 17"W x 13"D x 3.5" H
- Powder coated 0.60" Aluminum
- FIS Rack Mount Fiber Optic Flush Mount Patch Panel Frame





#### **1RU FLUSH MOUNT PATCH PANEL FRAME – ACCOMMODATES (3) ADAPTER PANELS**

#### DESCRIPTION

- F1FM1RU3X Color Black
- 19" rack mountable

PART #

Flush Mount

- Accepts 3 LGX style adapter plates, modules or cassettes
- Dimensions: 19"W x 1.75" H
- Powder coated 0.60" Aluminum
- **4RU FLUSH MOUNT PATCH PANEL FRAME** S

| ACCOMM | ODATES (12 | 2) ADAP | TER F | PANEL |
|--------|------------|---------|-------|-------|
| PART # | DESC       | RIPTION |       |       |

| F1FM4RU12X | Color Black |
|------------|-------------|
|            |             |

- 19" rack mountable
- Accepts 12 LGX style adapter plates, modules or cassettes
- Flush Mount
- Dimensions: 19"W x 7" H
- Powder coated 0.60" Aluminum

## FIS Rack Mount Fiber Optic Patch and Splice Panel Frame



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#### **4RU FIBER OPTIC PATCH & SPLICE PANEL INTERCONNECT –** ACCOMMODATES (4) ADAPTER PANELS

| PART #      | DESCRIPTION |
|-------------|-------------|
| F1RMSP4RU4X | Color Black |

- 19" rack mountable
- Dimensions: 17"W x 7" H x 14"D Accepts 4 LGX style adapter plates, modules or cassettes
  - Powder coated 0.60" Aluminum
- (2) Sliding trays to access fiber optic patch cables or fusion splice trays

#### **9RU FLUSH MOUNT PATCH PANEL FRAME** -**ACCOMMODATES (12) ADAPTER PANELS**

DESCRIPTION PART # F1RS72HBLK **Color Black** 

- 19" rack mountable
- · Accepts 12 LGX style adapter plates, modules or cassettes
- Recommended Splice Tray (PN 4048-SSTP)
- Dimensions: 17"W x 15"H x 14"D
  - Powder coated 0.60" Aluminum

## **FIS Rack Mount Fiber Optic Distribution Interconnects**

## 1RU RACK MOUNT – ACCOMMODATES (3) ADAPTER PANELS (UP TO 96 FIBERS)

| PART #    | DESCRIPTION |
|-----------|-------------|
| F1RM1RU3X | Color Black |

- Hinged front and rear removable doors
- 19" or 23" rack mountable (23" mounting brackets sold separately)
  Accepts 3 LGX style adapter plates, modules or cassettes
- Dimensions: 17"W x 13"D x 1.75" H
- Powder coated 0.60" Aluminum
- Cable entries and exits on the front and rear of enclosure

#### **2RU RACK MOUNT – ACCOMMODATES (4) ADAPTER PANELS**

# PART #DESCRIPTIONF1RM2RU4X2RU Enclosure with Solid Front and Rear doors, Color BlackF1RM2RU4XL2RU Enclosure with Smoked Lexan Front and Solid Rear door, Color Off WhiteF1RM2RU4XL-BW2RU Enclosure with Solid Front and Rear doors, Color Off WhiteF1RM2RU4XL-BW2RU Enclosure with Smoked Lexan Front and Solid Rear door, Color Off White

- 19" or 23" rack mountable (23" mounting brackets sold separately)
- Accepts 4 LGX style adapter plates, modules or cassettes
- Front cable retaining rings included for patch cable management
- Hinged front and rear removable doors
- Dimensions: 17"W x 13"D x 3.5" H
- Powder coated 0.60" Aluminum

#### 2RU RACK MOUNT – ACCOMMODATES (6) ADAPTER PANELS

#### PART # DESCRIPTION

| F1RM2RU6X     | 2RU Enclosure with Solid Front and Rear doors                              |
|---------------|--|
| F1RM2RU6XL    | 2RU Enclosure with Smoked Lexan Front and Solid Rear door                  |
| F1RM2RU6X-BW  | 2RU Enclosure with Solid Front and Rear doors, Color Off White             |
| F1RM2RU6XL-BW | 2RU Enclosure with Smoked Lexan Front and Solid Rear door, Color Off White |

- 19" or 23" rack mountable (23" mounting brackets sold separately)
- Accepts 6 LGX style adapter plates, modules or cassettes
- Available in color Black(BLK) or Off-White (BW)
- · Hinged front and rear removable doors
- Dimensions: 17"W x 13"D x 3.5" H
- Powder coated 0.60" Aluminum

#### **4RU RACK MOUNT – ACCOMMODATES (12) ADAPTER PANELS**

#### PART # DESCRIPTION

| F1RM4RU12X     | 4RU Enclosure with Solid Front and Rear doors                               |
|----------------|---|
| F1RM4RU12XL    | 4RU Enclosure with Smoked Lexan Front and Solid Rear door                   |
| F1RM4RU12X-BW  | 4RU Enclosure with Solid Front and Rear doors, Color Off White              |
| F1RM4RU12XI-BW | 4RIJ Enclosure with Smoked Lexan Front and Solid Rear door. Color Off White |

- 19" or 23" rack mountable (23" mounting brackets sold separately)
- Accepts 12 LGX style adapter plates, modules or cassettes
- · Vertically mounted panels with cable retaining rings on the front entry
- Hinged front and rear removable doors
- Dimensions: 17"W x 13"D x 7.125"H
- Powder coated 0.60" Aluminum

#### 8RU RACK MOUNT – ACCOMMODATES (24) ADAPTER PANELS

#### PART # DESCRIPTION

F1RM8RU24X 8RU Enclosure with Solid Front and Rear doors

 F1RM8RU24XL
 8RU Enclosure with Smoked Lexan Front and Solid Rear door

 F1RM8RU24X-BW
 8RU Enclosure with Solid Front and Rear doors, Color Off White

 F1RM8RU24XL-BW
 8RU Enclosure with Smoked Lexan Front and Solid Rear door, Color Off White

• 19" or 23" rack mountable (23" mounting brackets sold separately)

- Accepts 24 LGX style adapter plates, modules or cassettes
- Splice trays available for installing behind patch panel frame
- Available solid or clear Lexan front door
- Dimensions: 17"W x 13"D x 15" H
- Powder coated 0.60" Aluminum



### **ENCLOSURES** ADAPTER PANELS



#### **UNIVERSAL MOUNTING BRACKET FOR CORNING WCH & CCH BOXES**

Now available from FIS is a Universal Mounting Bracket that allows installers to use LGX style (dimensions 1 1/4" x 5 1/8") adapter plates from other manufacturers in Corning WCH & CCH series boxes. For use when original manufacturers' plates are not available to complete adds and changes. These mounting plates accept and work well with all adapter plates on this page or with Snap Packs™.

PART # F1-CCHBK

Universal Mounting Bracket for Corning WCH & CCH Boxes (adapter plate not included)

#### **LGX PLATES FOR FIS WALL & RACK MOUNT ENCLOSURES**

\*All FIS Adapter Plates are LGX compatible. Each panel is 5.1" (130mm) long by 1.13" (28.7mm) wide, with a on center post width of 4.64 (118mm)

DESCRIPTION



BIM

Content Available











F1-SC6APCU

| SC6APCUL45          | F1-LC6DAQUL45 | F1-SC8BKSUL    | F1-SC6DBKAPCUL | F1-LC6DBKMUL                 | F1-SC8BKAPCUL                | F1-ST8BKSUL |
|---------------------|---------------|----------------|----------------|------------------------------|------------------------------|-------------|
| <b>BEIGE PART #</b> |               | BLACK PART #   | DES            | CRIPTION                     |                              |             |
| F1SC6APCUL45        | NEW           | F1SC6APCBKUL45 | SC 6           | Pack (APC Singlemode – Lo    | oaded) Green Adapters        |             |
| F1LC6DAQUL45        | NEW           | F1LC6DAQBKUL45 | LC Du          | uplex 6 Pack (10 Gig) 12 Fit | pers Aqua Adapters           |             |
| F1-BLANKU           |               | F1-BLANKUBK    | Blan           | k Plate with No Holes (Unlo  | paded)                       |             |
| F1-ST6U             |               | F1-ST6UBK      | ST 6           | Pack (Unloaded)              |                              |             |
| F1-ST6LMUL          |               | F1-ST6BKMUL    | ST 6           | Pack (Multimode - Loaded     | )                            |             |
| F1-ST6LSUL          |               | F1-ST6BKSUL    | ST 6           | Pack (Singlemode - Loadeo    | d)                           |             |
| F1-ST8U             |               | F1-ST8UBK      | ST 8           | Pack (Unloaded)              |                              |             |
| F1-ST8LMUL          |               | F1-ST8BKMUL    | ST 8           | Pack (Multimode - Loaded     | )                            |             |
| F1-ST8LSUL          |               | F1-ST8BKSUL    | ST 8           | Pack (Singlemode - Loadeo    | d)                           |             |
| F1-FC6U             |               | F1-FC6UBK      | FC 6           | Pack (Unloaded)              |                              |             |
| F1-FC6MUL           |               | F1-FC6BKMUL    |                | Pack (Multimode/Singlem      |                              |             |
| F1-FC6SUL           |               | F1-FC6BKSUL    | FC 6           | Pack (Singlemode - Loadeo    | d)                           |             |
| F1-FC6APCUL         |               | F1-FC6BKAPCUL  | FC 6           | Pack (APC Singlemode - Lo    | aded)                        |             |
| F1-SC6U             |               | F1-SC6IUBK     |                | Pack (Unloaded)              |                              |             |
| F1-SC6MUL           |               | F1-SC6IBKMUL   |                | Pack (Multimode - Loaded     |                              |             |
| F1-SC6SUL           |               | F1-SC6IBKSUL   |                | Pack (Singlemode - Loadeo    |                              |             |
| F1-SC6APCUL         |               | F1-SC6IBKAPCUL | SC 6           | Pack (APC Singlemode - Lo    | aded) Green Adapters         |             |
| F1-SC8U             |               | F1-SC8UBK      |                | Pack (Unloaded)              |                              |             |
| F1-SC8MUL           |               | F1-SC8BKMUL    |                | Pack (Multimode - Loaded     |                              |             |
| F1-SC8SUL           |               | F1-SC8BKSUL    |                | Pack (Singlemode – Loadeo    |                              |             |
| F1-SC8APCUL         |               | F1-SC8BKAPCUL  |                | Pack (APC Singlemode - Lo    |                              |             |
| F1-SC6DMUL          |               | F1-SC6DBKMUL   |                | uplex 6 Pack (Multimode -    |                              |             |
| F1-SC6DAQUL         |               | F1-SC6DAQBKUL  |                |                              | 10 Gig Loaded) Aqua Adapte   | rs          |
| F1-SC6DSUL          |               | F1-SC6DBKSUL   |                | uplex 6 Pack (Singlemode -   | - Loaded) Blue Adapters      |             |
| F1-MTRJ6MUL         |               | F1-MTRJ6BKMUL  |                | RJ 6 Pack (Multimode)        |                              |             |
| F1-LC6DMUL          |               | F1-LC6DBKMUL   |                | uplex 6 Pack (Multimode) 1   |                              |             |
| F1-LC6DSUL          |               | F1-LC6DBKSUL   |                | uplex 6 Pack (Singlemode)    |                              |             |
| F1-LC6DAPCUL        |               | F1-LC6DBKAPCUL |                |                              | ode) 12 Fibers Green Adapter | S           |
| F1-LC6DAQUL         |               | F1-LC6DBKAQUL  |                | uplex 6 Pack (10 Gig) 12 Fit |                              |             |
| F1-LC24MUL          |               | F1-LC24BLKMUL  |                | uad 6 Pack (Multimode) 24    |                              |             |
| F1-LC24AQUL         |               | F1-LC24AQBLKUL |                | uad 6 Pack (10 Gig) 24 Fibe  |                              |             |
| F1-LC24SUL          |               | F1-LC24BLKSUL  |                | uad 6 Pack (Singlemode) 24   |                              |             |
| F1-MTP6MUL          |               | F1-MTP6BKMUL   |                | 6 Pack Plate Loaded with A   |                              |             |
| F1-MTP8MUL          |               | F1-MTP8BKMUL   | MTP            | 8 Pack Plate Loaded with A   | Adapters                     |             |

## **ENCLOSURES | SPLICE TRAYS**

#### **FIS PLASTIC SPLICE TRAYS**

The FIS Splice Tray is injection molded using UL94 fire retardant material. The tray is designed to fit in most splice closures and can accommodate 12 fusion, mechanical, bare fiber splices or 6 rigid fusion splices depending on the splice chips chosen. See splice holding chips below. The standard version accepts 12 fusion splice protection sleeves. Features include: fiber routing molded into the tray, fiber tie down holes, snap or slide together construction.

| PART #    | DESCRIPTION               | DIMENSIONS           |
|-----------|---------------------------|----------------------|
| F1-6808   | Single Fusion Splice Tray | 7″L x 4.25″W x .48″H |
| F1-6808M  | Mechanical Splice Tray    | 7″L x 4.25″W x .48″H |
| F1-6808BA | Bare Fiber Splice Tray    | 7″Lx 4.25″W x .48″H  |



# F1-SPL12

F1-6808



The FIS Aluminum Splice Trays are compact, lightweight, and available with multiple splice holding chip and cover options. Choose the right tray for your applications. All trays are preconfigured for standard heat shrink fusion splices unless otherwise stated.

| PART #      | DESCRIPTION   | DIMENSIONS             |
|-------------|---|------------------------|
| F1-SPL12    | Aluminum Fusion Splice Tray, 12 Position                          | 6.5″L x 4.7″W x .42″H  |
| F1-SPL24    | Aluminum Fusion Splice Tray, 24 Position                          | 11.8″ L x 4″W x .42″ H |
| F1-6707BLKH | Aluminum Fusion Splice Tray, 6 Position                           | 7.5″Lx 4″W x .63″ H    |
| F1-6707BLKF | Aluminum Fusion Splice Tray, 12 Position                          | 7.5″L x 4″W x .63″ H   |
| F1-6707BLKM | Aluminum Mechanical Splice Tray, 12 Position                      | 7.5″Lx 4″W x .63″ H    |
| F1-6707BLKR | Aluminum Bare Fiber, 12 Position                                  | 7.5″Lx 4″W x .63″ H    |
| F1-8735C    | Aluminum Fusion Splice Tray with Clear Plastic Cover, 12 Position | 7″L x 4″W x .31″H      |
| F1-8729G    | Aluminum Fusion Splice Tray with Clear Plastic Cover, 12 Position | 4″ Lx 11″Wx.31″H       |

#### **FIS SPLICE BRIDGES**

The FIS Splice Support Bridge is available in two basic designs. The 24-way splice bridge will accommodate up to 24 fusion splices or 12 mechanical. It is supplied with a protective lid with a designation label. The 4-way version will accept 4 fusion or mechanical splices.

| or meenamear spirces. |  |
|-----------------------|--|
| PART #                | DESCRIPTION  |
| F1-8730               | Splice Bridge (4-way) Fits in The 4 Port Wall Mount      |
| F1-8731               | Splice Bridge (up to 12 Mechanical or 24 Fusion Splices) |

#### **FIS FUSION & MECHANICAL SPLICE HOLDING CHIPS**

Several styles of Splice Chips are available from FIS. Use double sided tape or epoxy to adhere soft chips to mounting surface. FIS will install any stocked Splice Chip in your FIS Splice Tray upon request.

| PART #     | DESCRIPTION  |
|------------|--|
| F1-6707FCM | Protection Sleeve Chip 12 Position (Soft) (1) (non-adhesive backing) |
| F1-6707MCM | Mechanical Chip 12 Position (Soft) (2) (non-adhesive backing)        |
| FSH-MR-06  | Foam Fusion Splice Chips for Mini/Micro Sleeves (5)                  |
| USC-FN12   | Bare Fiber Fusion Splice Chip 12 Position (Rigid) (4)                |
| USC-HS     | Heat Shrink Splice Chip 6 Position (Rigid) (adhesive backing) (3)    |
| FSH-LDR    | Protection sleeve chip 12 position (plastic) (adhesive backing) (6)  |

#### **CABLE GRIPS**

| PART # | DESCRIPTION         |
|--------|---------------------|
| 80022  | Cord Grip 1/2" Gray |
| 80020  | Cord Grip 3/8" Gray |







F1-8735

F1-8729





80020

🥻 @FiberExperts | 📑 /FiberExperts | www.fiberinstrumentsales.com | 1.800.5000.FIS (347)







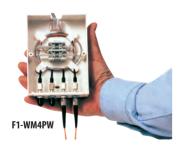


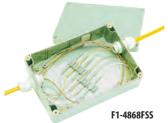






F1-SP288





#### **MINI WALL MOUNT**

This powder coated aluminum wall box features a single outer door with capacity of (1) LGX style adapter plate. Bridge stances and cable spool available for fiber management. Standard color is Black.

| PART #  | DESCRIPTION                               | DIMENSIONS (HxWxD) |
|---------|---|--------------------|
| F1-MW1X | Mini Wall mount accepts (1) adapter panel | 9.18"x6.38"x2.625" |

#### FIS ECONOMY WALL MOUNT ENCLOSURES

The FIS economy wall mount has excellent features for installations including bridge stances for cable tie down of incoming and outgoing fiber cables and a removable front door. A cable management spool is included as well as a mounting stud and nut for installation of fusion splice trays. Lockable inner door provides safe storage of incoming cable, while allowing the technician to manipulate the outgoing fiber patches. Accommodates (2) or (4) multimedia adapter panels depending on size of enclosure. Standard color is Black. Custom interconnect with loaded fiber pigtails and colors available. Splice Tray sold separately. Recommended Splice Tray dimensions 7"x4".

| PART #    | DESCRIPTION   | DIMENSIONS (HxWxD)  |
|-----------|---|---------------------|
| F1-EW2X   | Economy Wall Mount Fiber Distribution Enclosure, accepts (2) adapter panels (Black)     | 10.33"x12.12"x3.81" |
| F1-EW2XBW | Economy Wall Mount Fiber Distribution Enclosure, accepts (2) adapter panels (Off White) | 10.33"x12.12"x3.81" |
| F1-EW4X   | Economy Wall Mount Fiber Distribution Enclosure, accepts (4) adapter panels (Black)     | 12.24"x12.12"x3.82" |
| F1-EW4XBW | Economy Wall Mount Fiber Distribution Enclosure, accepts (4) adapter panels (Off White) | 12.24"x12.12"x3.82" |

#### **FIS DELUXE WALL MOUNT ENCLOSURES**

FIS Deluxe Mount has two front doors that fold back and are removable for unlimited access to fiber cables during installations. Cable management spool and mounting stud with nut for securing fusion splice trays included. This box is powder coated Black and manufactured of Aluminum.

| PART #     | DESCRIPTION   | DIMENSIONS (HxWxD)  |
|------------|---|---------------------|
| F1-DW2X    | Deluxe Wall Mount Fiber Distribution Enclosure, accepts (2) adapter panels (Black)      | 13"x13.51"x3"       |
| F1-DW2XBW  | Deluxe Wall Mount Fiber Distribution Enclosure, accepts (2) adapter panels (Off White)  | 13"x13.51"x3"       |
| F1-DW4X    | Deluxe Wall Mount Fiber Distribution Enclosure, accepts (4) adapter panels (Black)      | 13"x13.51"x3"       |
| F1-DW4XBW  | Deluxe Wall Mount Fiber Distribution Enclosure, accepts (4) adapter panels (Off White)  | 13"x13.51"x3"       |
| F1-DW8X    | Deluxe Wall Mount Fiber Distribution Enclosure, accepts (8) adapter panels (Black)      | 13"x13.51"x5.53"    |
| F1-DW8XBW  | Deluxe Wall Mount Fiber Distribution Enclosure, accepts (8) adapter panels (Off White)  | 13"x13.51"x5.53"    |
| F1-DW12X   | Deluxe Wall Mount Fiber Distribution Enclosure, accepts (12) adapter panels (Black)     | 19.22"x13.51"x5.53" |
| F1-DW12XBW | Deluxe Wall Mount Fiber Distribution Enclosure, accepts (12) adapter panels (Off White) | 19.22"x13.51"x5.53" |

#### **FIS WALL MOUNT SPLICE ENCLOSURE**

Manufactured with 16 gauge steel, this indoor enclosure provides housing for up to 288 single fusion splices. Double doors lock on both sides and cable management hardware is included. Use Starfighter 2000-SSTA splice travs to utilize maximum capacity. Splice trays not included. Holds 12 splice trays.

| PART #   | DESCRIPTION                     | DIMENSIONS (HxWxD)    |  |
|----------|---------------------------------|-----------------------|--|
| F1-SP288 | FIS Wall Mount Splice Enclosure | 17.5" x 21.4" x 4.75" |  |

#### **FIS 4 PORT WALL MOUNT**

The 4-Port Wall Mount Box is a compact design ideal for data applications. It can either be wall mounted or placed in a floor box and can house up to (4) fibers, inline adapters and pigtails. Cables can be easily terminated or spliced together. The wall mount has facilities for incoming cable/fiber to be presented via mini-trunking grommets. Dimensions: 5"(W) x 6 1/2"(L) x 1 1/2"(H). Adapters and splice chip sold separately, on page 8 and 9.

| PART #   | DESCRIPTION   |
|----------|---|
| F1-WM4PW | 4-Port for ST, FC, SMA or D4 - Adapters not included      |
| F1-WM4S  | 4-Port for (2) SC Duplex Adapters - Adapters not included |

#### **FIS SPLICE ENCLOSURE**

The splice enclosure unit utilizes a 12 position molded splice chip to secure splices, for controlled environments, to be mounted on a wall. Cable entry grommets secure incoming/outgoing cable up to 12mm. Inside clamps provide the ability to coil excess cable. The F1-2011 is the same; it replaces splice holding chips with two mounted ST Mating Sleeves, handling up to 7mm cable. Dimensions: 2 1/8"(W) x 6 3/4"(L) x 4 3/4"(H)

| PART #      | DESCRIPTION  |
|-------------|--|
| F1-4868-FSS | Fusion Splice Enclosure (up to 7mm cable size)       |
| F1-4868-MSS | Mechanical Splice Enclosure (up to 7mm cable size)   |
| F1-4868-FLL | Fusion Splice Enclosure (7mm to 12mm cable size)     |
| F1-4868-MLL | Mechanical Splice Enclosure (7mm to 12mm cable size) |

#### **FIS COMPACT WALL BOX**

Utilize this new wall mount box for fusion splice sleeve storage or direct connector termination. Simply place two small cable ties through the back of the box, slide the cable into box and secure. Next use the small cable management spool to store some slack prior to splicing or termination. There are knock-outs on each side of the box for simplex SC or LC duplex adapters. Built in splice sleeve holders accommodate up to two 40mm heat shrink splice sleeves. Dimensions 4"(H) x 3.25"(W) x 1"(D).

PART # DESCRIPTION

F1-CWB02

FIS Compact Wall Box with fiber management ring and splice tray(white)





#### **FIS FIBER OPTIC SPLICE CLOSURE**

This FIS Outside Plant Direct Burial Closure offers the perfect choice for low fiber count distribution applications involving butt and inline installations. The compact size and rugged design allow the closure to be applied in below grade, aerial and buried installations. Dimensions: 21" (L) x 8"(W)x 4"(H), Weight: 9lbs.

- 4 Entry Ports
- Accepts cables from 10mm 22mm diameter
- Direct Burial or Aerial applications
- Can be configured for butt or in-line applications
- Integrated splice trays included
- Permanent waterproof sealing requires no re-entry kit

| • IP rating:66 (Equ | al to NEMA 4 and 4X)  |
|---------------------|---|
| PART #              | DESCRIPTION   |
| F1-OSPDBC24         | FIS Fiber Optic Splice Closure - 24 Fiber                     |
| F1-OSPDBC48         | FIS Fiber Optic Splice Closure - 48 Fiber                     |
| F1-OSPTRAY          | Splice Tray 12 but expandable to 24 Fiber For F1-OSPDBC-XX Cl |
|                     | 12 count, 24 count (Double Stacked)                           |







osures

F1-FLEXSPLC

#### **FIS FLEXIBLE CABLE SPLICE PROTECTOR**

The FIS Flexible Cable Splice Protector is an ideal solution for protecting fiber optic splices in challenging field conditions. This rugged, easy-to-install splice protector accommodates up to 12 splices with mini or micro protection sleeves, protecting them from moisture, vibration, shock and other adverse environmental conditions. • Use for singlemode or multimode fibers • Accommodates 25-60mm long splice sleeves

• 5" Minimum bend radius (Flexible center portion only) • Dimensions: 13.75" (L) x 1.35" (W)

|             | idailas (instance conter portion only |
|-------------|---------------------------------------|
| PART #      | DESCRIPTION                           |
| F1-FLEXSPLC | FIS Flexible Cable Splice Protector   |



#### **FIS FIBER OPTIC NID TERMINATION BOX**

FIS Wall Mount Fiber Optic NID Terminal Box is designed to provide protection for fiber optic connectors and splices in indoor or outdoor environments. The enclosure has a built in, swing-out mini splice tray plus a bulkhead panel with SC cutouts ports. 2 or 3 Cable access ports with built in weather-tight grommets allow for easy cable installation. Adapters not included.

| PART #    | DESCRIPTION  | DIMENSIONS<br>(HxWxD) |
|-----------|--|-----------------------|
| F1-62DW-2 | FIS NID Termination Box (For 2 SC or 4 LC Connections) 2 Entry Ports         | 8.2″ x 6″ x 2″        |
| F1-62DW-3 | FIS NID Termination Box (For 12 SC or up to 24 LC Connections) 3 Entry Ports | 10.2″ x 7″ x 2″       |



F1-62DW-3

# Why is FIS a Leading Supplier of Custom Fiber Optic Assemblies...

## **1. FLEXIBILITY**

- Wide Selection of components from leading manufacturers
- Ability to build to Engineering specifications or drawings
- From a quantity of 1 or 1,000's FIS can deliver

## 2. FAST DELIVERY & HIGH QUALITY

- Cables are ready to ship nationwide and internationally in as little as 2-3 days
- 100% inspection and tested to industry standards
- ISO 9001-2008 Certified
- Over 25 years of cable assembly experience

## **3. ADDITIONAL SERVICES**

- Termination of Customer Supplied Materials
- Creation of Engineer drawings of assemblies
- Custom packaging, labeling
- Experienced engineering team to help design an assembly for any application

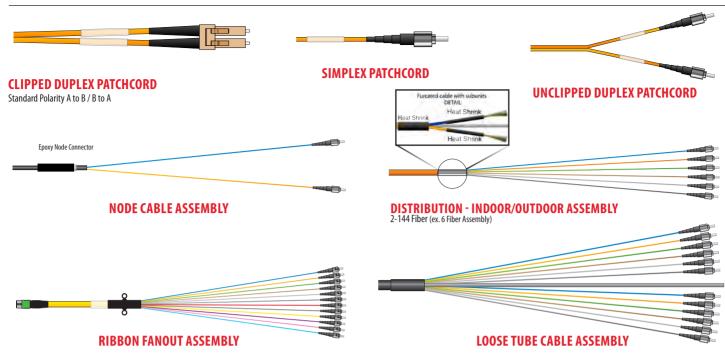
## *Our goal is to provide our customers exactly what they need and when they need it. Just provide our sales representative a description, engineering specification,*

Just provide our sales representative a description, engineering specification or even a drawing on a napkin and we will do the rest!

| CABLE TYPE   | FIBER TYPE   | CONNECTOR<br>SIDE A  | CONNECTOR<br>SIDE B  | MODE  | LENGTH<br>(IN METERS)         |
|--|--|--|--|---|-------------------------------|
| S  | 3  | 7A   | 8U   | S   | Х                             |
| S=Simplex 3.0mm<br>D=Duplex 3.0mm<br>B=Breakout<br>C=Distribution<br>G=GGP Fiber Cable<br>L=Loose Tube<br>I=Indoor/Outdoor<br>R=Ribbon<br>X=Duplex 1.6mm<br>T=Simplex 1.6mm<br>T=Simplex 2.0mm<br>V=Duplex 2.0mm<br>V=Duplex 2.0mm<br>LA=Loosetube Armored<br>A=Armored Cable<br>PM=Polarization Maintaining<br>RF=Ribbon Fan-Out<br>ENC=Epoxy Node Cable<br>N=900µm Buffered Fiber<br>DB=Dry Block Cable Specialty<br>MD=Micro-Distribution | 1=50/125µm - 0M2<br>2=62.5/125µm - 0M1<br>3=8-9/125µm - 0S2<br>4=0ther<br>5=100/140µm<br>6=200/230µm<br>7=960/1000µm (plastic)<br>8=BI 50µm 10Gig - 0M3<br>9=BI Singlemode<br>10=BI 50µm 10Gig - 0M4 | 1=SMA905<br>2=SMA906<br>3=Biconic<br>4=FC/Stainless Alloy<br>5=ST/Stainless Alloy<br>6=D4<br>7=FC/PC<br>7U=FC/UPC<br>7A=FC/APC<br>8=ST/PC<br>8A=ST/APC<br>8U=ST/UPC<br>Y=SC/PC<br>YU=SC/UPC<br>YA=SC/APC<br>D=SC Duplex w/ Clips<br>L=LC/PC<br>LU=LC/UPC<br>LA=LC/APC<br>C=LC Duplex w/ Clips  | W=FDDI<br>X=Escon<br>F=Ferrule Only<br>M=MU/PC<br>9A=PM-FC/APC<br>9U=PM-FC/UPC<br>P=Pigtail<br>AU=High Performance FC/UPC<br>AA=High Performance FC/APC<br>BU=High Performance SC/UPC<br>BA=High Performance SC/APC<br>EU=E2000/APC<br>EA=E2000/APC<br>MJ=MTRJ (no pins)<br>MT=MTP (w/pins)<br>MP=MTRJ (w/pins)<br>MF=MTP (no pins)<br>VF=VF45 | S= Singlemode<br>M= Multimode<br>H= Hybrid<br>P= PM Fiber |                               |
| IG= Indoor/Outdoor Rated (250µm)<br>BA=Breakout Cable w/Interlocking Armor<br>TB= Tactical/Broadcast Cable   |  | KNOW   | Jacket Types   |   |                               |
| DA= Outdoor Gel Free Armored Cable<br>LZ=LSZH Cable<br>RA=Ribbon Interlocking Armored Cable<br>AER= Aerial<br>RD= Round Duplex<br>F= 1.8mm Simplex<br>H= 1.8mm Duplex<br>FD= Flat Drop Cable   | • PLENUM (O<br>or smoke wh<br>• RISER (OFN   | FNP) - refers to a specific fire of the second seco | code rating of cables that are resistant t<br>les are primarily used in pathways for e<br>may emit toxic fµmes when burned an<br>er cable, but riser cable cannot replace  | ither heated, cooled<br>d is to be run in non-            | or return airflows.<br>plenum |
| Z =1.2mm Simplex   | Files II   | ISTRUMENT SALES, INC.  | corning  | <b>F</b> AFL  | <b>3M</b>                     |

## **CUSTOM FIBER OPTIC CABLE ASSEMBLY CONFIGURATOR:**

## **CONFIGURATION ILLUSTRATION**



## USE THIS CHART TO BUILD CABLE YOU NEED TO YOUR EXACT SPECIFICATIONS.

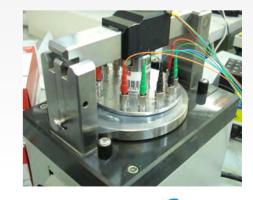
| CONNECTOR MFG  | CABLE MFG  | CABLE RATING   | FIBER COUNT  | BUILD-UP<br>BREAKOUT                     | PULLING EYE<br>INSTALLED               |
|--|--|--|--|--|--|
| FIS  | TLC  | RI   |  |  |  |
| NP= No Preference<br>FIS= FIS<br>M= 3M<br>MO= Molex<br>S= Seikoh Giken<br>CCS= Corning<br>U= USConec<br>CUS= Customer Supplied | NP= No Preference<br>TLC= TLC<br>MHK= Mohawk<br>CCS= Corning<br>AFL= AFL<br>GCC= General Cable<br>OCC= OCC<br>HIT= Hitachi<br>OTH= Other | NP= No Preference<br>RI= OFNR (Riser)<br>PL= OFNP (Plenum)<br>LZ= LSZH (Low Smoke)<br>UV= Polyethylene/Outdoor | 04=4 Fiber<br>06=6 Fiber<br>12=12 Fiber<br>24=24 Fiber<br>48=48 Fiber<br>72=72 Fiber<br>96=96 Fiber<br>144=144 Fiber | Z9=900μm<br>Z1=1.8mm<br>Z2=2mm<br>Z3=3mm | PE= Outside End Only<br>PBE= Both Ends |
|  | CUS= Customer Supplied   |  |  | C 3 7A 0                                 | Part # Example:                        |

S-3-7A-8U-FIS-S-3-TLC-RI Translates to: Simplex 9/125 FC/APC - ST/UPC with FIS brand connectors, singlemode, 3 meter, TLC cable, riser patchcord

### What our Customers are saying...

"FIS has been a great resource to not only provide high quality cable assemblies but also help out in the tough situations; when I need a cord tomorrow for a network turn up, or finding a solution to a unique problem they are always there. I have yet to be disappointed."

Dave G. Applications Engineer



USCONEC

SG

SEIKOH GIKEN



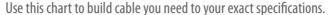


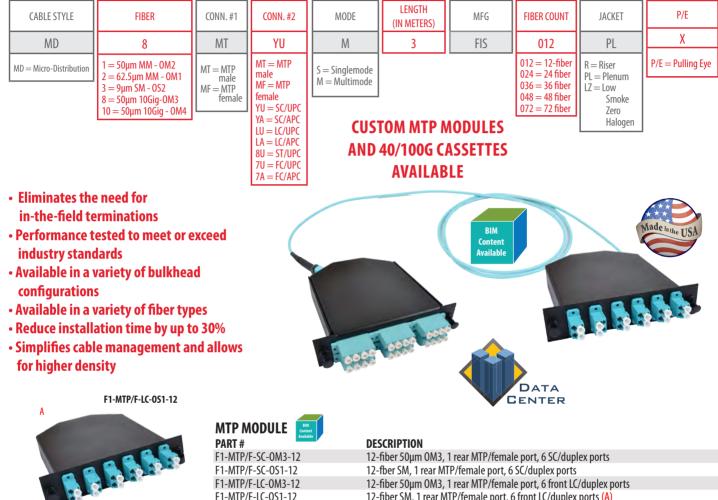
## **ASSEMBLIES**

## **MTP PRE-TERMINATED SYSTEMS**

The FIS MTP Module is a pre-terminated, pre-tested, rack mount module system allowing for a simple installation of MTP backbone cables with a transition to standard LC or SC connections. The FIS modules are designed to fit into rack mount boxes with LGX slot configurations. Using a pre-terminated cable assembly in conjunction with modules within a rack allows for easier installation, simpler cable management and an overall simpler installation. Contact your FIS sales representative today for further details or use the part numbers and configurator below to construct the proper combination to meet any requirement.

### **CUSTOM MTP TRUNK CABLE ASSEMBLY CONFIGURATOR:**





F1-MTP/F-LC-0M3-24

R



| r i-mir/r-sc-osi-iz i2-iber sm, i rear mir/remaie port, o sc/duplex ports            |                       |
|--|-----------------------|
| F1-MTP/F-LC-OM3-12 12-fiber 50µm OM3, 1 rear MTP/female port, 6 front LC/duplex po   | orts                  |
| F1-MTP/F-LC-OS1-12 12-fiber SM, 1 rear MTP/female port, 6 front LC/duplex ports (A)  |                       |
| F1-MTP/F-LC-OM3-24 24-fiber 50µm OM3, 2 rear MTP/female ports, 6 front LC/quad ports | orts <mark>(B)</mark> |
| F1-MTP/F-LC-OS1-24 24-fiber SM, 2 rear MTP/female ports, 6 front LC/quad ports       |                       |
| ** Also available with MTP / Male Ports and/or SC ports **                           |                       |

| <b>MTP TRUNK CABLES</b>  |
|--------------------------|
| PART #                   |
| MD-8-MT-MT-M-**-FIS-012- |

| PARI #                                 | DESCRIPTION   |
|--|---|
| MD-8-MT-MT-M-**-FIS-012-PLN            | 12-fiber, 50µm 10Gig/OM3, (1) MTP/male - (1) MTP/male, plenum                                   |
| MD-3-MT-MT-S-**-FIS-012-PLN            | 12-fiber, 9µm SM/OS1,(1) MTP/male - (1) MTP/male, plenum  |
| MD-8-MT-MT-M-**-FIS-024-PLN            | 24-fiber, 50µm 10Gig/OM3, (2) MTP/male - (2) MTP/male, plenum                                   |
| MD-3-MT-MT-S-**-FIS-024-PLN            | 24-fiber, 9µm SM/OS1, (2) MTP/male - (2) MTP/male, plenum                                       |
| MD-8-MT-MT-M-**-FIS-036-PLN            | 36-fiber, 50µm 10Gig/OM3, (3) MTP/male - (3) MTP/male, plenum                                   |
| MD-3-MT-MT-S-**-FIS-036-PLN            | 36-fiber, 9µm SM/OS1, (3) MTP/male - (3) MTP/male, plenum                                       |
| MD-8-MT-MT-M-**-FIS-048-PLN            | 48-fiber, 50μm 10Gig/OM3, (4) MTP/male - (4) MTP/male, plenum                                   |
| MD-3-MT-MT-S-**-FIS-048-PLN            | 48-fiber, 9μm SM/OS1, (4) MTP/male - (4) MTP/male, plenum                                       |
| MD-8-MT-MT-M-**-FIS-072-PLN            | 72-fiber, 50µm 10Gig/OM3, (6) MTP/male - (6) MTP/male, plenum                                   |
| MD-3-MT-MT-S-**-FIS-072-PLN            | 72-fiber, 9μm SM/OS1, (6) MTP/male - (6) MTP/male, plenum                                       |
| ** Trunk cable pricing = termination + | - per meter cable **<br>\$169.00 (termination) + \$126.00 (\$2.52 x 50 meters) — \$204.00 tetal |
| Evample: E0 meter 34 fiber EM cable:   | (160.00  (termination) + (126.00  (C2 E2 v E0 maters) - (204.00  total)                         |

Example: 50 meter 24-fiber SM cable: \$168.00 (termination) + \$126.00 ( $$2.52 \times 50$  meters) = \$294.00 total

DECOUDTION

## **BUILD YOUR OWN CUSTOM SPLITTER COUPLER MODULE/PACKAGE**

| BOX STYLE  | CORE/CLAD SIZE | DEVICE/<br>CHANNELS   | CONFIGURATION   | SPLIT RATIO  | CONN. TYPE<br>(INPUT)   | CONN. TYPE<br>(OUTPUT)  | OPTIONS   |
|--|----------------|---|---|--|---|---|---|
| RMC  | 3              | S   | 2   | 20   | 8U  | 8U  | 6   |
| RMC = LGX Style Rack Mount<br>RSC = Ruggedized Style Splitter<br>PNC = Packaged Network Coupler<br>BC = No Box, Standard Package<br>RU= 1 RU Panel<br><b>Part # Example:</b> |                | S - Splitter/Coupler<br>W - WDM<br>D - DWDM<br>CM-CWDM MUX<br>CD-CWDM Demux<br>AC-1291-1351<br>BC-1471-1531<br>CC-1511-1571 | 2-1x2<br>3-1x3<br>4-1x4<br>5-1x5<br>6-1x6<br>7-1x7<br>8-1x8<br>12-1x12<br>16-1x16 | 01 = 01/99  05 = 05/95  10 = 10/90  20 = 20/80  25 = 25/75  30 = 30/70  40 = 40/60  50 = 50/50 | 7= FC/PC<br>7U= FC/UPC<br>7A= FC/APC<br>8= ST/PC<br>8U= ST/UPC<br>Y=SC/PC<br>YU= SC/UPC<br>YA= SC/APC | 7= FC/PC<br>7U= FC/UPC<br>7A= FC/APC<br>8= ST/PC<br>8U= ST/UPC<br>Y=SC/PC<br>YU= SC/UPC<br>YA= SC/APC | 1 - 250µm Bare Fiber<br>2 - Ruggedized 2mm Jacket<br>3 - Ruggedized 3mm Jacket<br>4 - Tree Coupler (Cascade)<br>5 - 900µm Buffered Fiber<br>6 - Single Module<br>7 - Double Module<br>8 - 1U Rack Mount |
| RMC-3-S-2-20-8U-8U-6<br>Translates to: Rack Mount Coupler Module,Single-<br>mode 1x2, 20/80 Split Ratio, ST/UPC Input & Output<br>SINGLE WIDTH MODULE                        |                |   | 32-1x32<br>64-1x64  | EV= Even   | -   |   |   |

#### **FIS HIGH PORT COUNT SM COUPLERS**

These multiple port splitters are manufactured with high performance fused singlemode couplers and are often referred to as Tree or Star coupler/splitters. Quality splitter boxes feature low insertion loss and can be fused to building cable or terminated with any standard fiber optic connector. Product has 1 meter tails on both ends of packaging. FIS can terminate these splitters prior to delivery, consult with a FIS sales associate.

| PART #         | DESCRIPTION                                    | DIMENSIONS      |
|----------------|--|-----------------|
| SSSCA1X43529C  | SM Tree Coupler Module, 1x4, 1310/1550nm 900µm | 100 X 80 X 10mm |
| SSSCA1X815510  | SM Tree Coupler Module, 1x8, 1550nm, 900µm     | 125 X 96 X 16mm |
| SSSCA1X1615500 | SM Tree Coupler Module, 1x16, 1550nm, 900µm    | 125 X 96 X 16mm |

#### **RACK MOUNTABLE SPLITTER MODULES**

These LGX style rack mountable splitter/coupler modules are convenient for quick installation and protect components from being damaged. Simply install module into compatible LGX style fiber enclosure, plug in plant cable and/or patch cables for distribution of optical signal. Custom configurations/split ratios/connector styles available.

| PART #               | DESCRIPTION                                |
|----------------------|--|
| RMC-3-S-2-50-YU-YU-6 | LGX Style Module, 1x2, 50/50 split, SC/UPC |
| RMC-3-S-2-50-YA-YA-6 | LGX Style Module, 1x2, 50/50 split, SC/APC |
| RMC-3-S-2-35-YU-YU-6 | LGX Style Module, 1x2, 65/35 split, SC/UPC |
| RMC-3-S-2-20-YA-YA-6 | LGX Style Module, 1x2, 80/20 split, SC/APC |
| RMC-3-S-2-10-YA-YA-6 | LGX Style Module, 1x2, 90/10 split, SC/APC |

#### **CWDM LGX STYLE MODULES**

FIS CWDM LGX modules provide the most economic and efficient wavelength division multiplexing solution. Available in 4, 8 or 16 channel mux and demux configurations. The CWDM modules are bi-directional, have low insertion loss and feature 20nm channel separation. DWDM modules also available. Other configurations available.

PART #DESCRIPTIONRMC-3-CM-8-LC-YA-YA-6CWDM LGX Module, 8 Channel, 1471-1611nm, 20nm spacing, Mux, SC/APC AdaptersRMC-3-CD-8-LC-YA-YA-6CWDM LGX Module, 8 Channel, 1471-1611nm, 20nm spacing, Demux, SC/APC AdaptersRMC-3-CM-4-BC-YA-YA-6CWDM LGX Module, 4 Channel, 1471-1531nm, 20nm spacing, Mux, SC/APC AdaptersRMC-3-CD-4-BC-YA-YA-6CWDM LGX Module, 4 Channel, 1471-1531nm, 20nm spacing, Demux, SC/APC AdaptersRMC-3-CD-4-BC-YA-YA-6CWDM LGX Module, 4 Channel, 1471-1531nm, 20nm spacing, Demux, SC/APC AdaptersRMC-3-CD-4-TC-YA-YA-6CWDM LGX Module, 4 Channel, 1551-1611nm, 20nm spacing, Mux, SC/APC AdaptersRMC-3-CD-4-TC-YA-YA-6CWDM LGX Module, 4 Channel, 1551-1611nm, 20nm spacing, Demux, SC/APC AdaptersRMC-3-CD-4-TC-YA-YA-6CWDM LGX Module, 4 Channel, 1551-1611nm, 20nm spacing, Demux, SC/APC Adapters

#### **COMPACT CWDM PACKAGE**

FIS CWDM compact package features channel spacing of 20nm with wide bandpass characteristics. Available in 4 or 8 channel wavelengths. These compact packages are ultra stable and highly reliable. Commonly used in splice tray applications or outdoor enclosures. Available in 1291-1611nm channel spacing.

| PART #               | DESCRIPTION  |
|----------------------|--|
| BC-3-CM-8-LC-YA-YA-5 | CWDM Compact Package, 8 Channel, 1471-1611nm, 20nm spacing, Mux, SC/APC Adapters   |
| BC-3-CD-8-LC-YA-YA-5 | CWDM Compact Package, 8 Channel, 1471-1611nm, 20nm spacing, Demux, SC/APC Adapters |
| BC-3-CM-4-AC-YA-YA-5 | CWDM Compact Package, 4 Channel, 1291-1351nm, 20nm spacing, Mux, SC/APC Adapters   |
| BC-3-CM-4-BC-YA-YA-5 | CWDM Compact Package, 4 Channel, 1471-1531nm, 20nm spacing, Mux, SC/APC Adapters   |
|                      |  |



**1U Splitter Panel** 

SSCA1X1615500





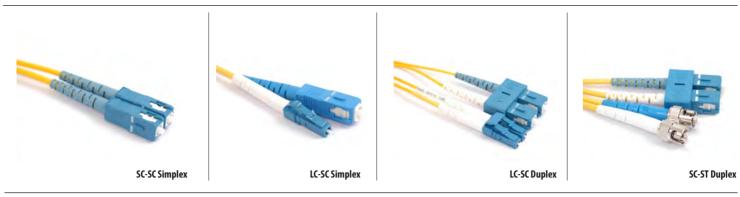




8 Channel



## **ASSEMBLIES** | SINGLEMODE - SIMPLEX & DUPLEX PATCHCORDS



Fiber optic cable assemblies from Fiber Instrument Sales provide the highest quality and maximum performance expected from ceramic ferrule connectors. Listed lengths and styles provide the user prompt delivery by selecting from our well stocked inventory. FIS UPC cords are 100% tested and visually inspected. UPC assemblies are provided with individual test results.

#### UPC SINGLEMODE SIMPLEX PATCHCORDS

| 010.        | MINISELMODE SI |           | CIICORDS    |
|-------------|----------------|-----------|-------------|
| PART #      | DESCRIPTION    | LENGTH    | JACKET SIZE |
| S388S1FISC  | ST-ST          | 1 Meter   | 3mm         |
| S388S2FISC  | ST-ST          | 2 Meters  | 3mm         |
| S388S3FISC  | ST-ST          | 3 Meters  | 3mm         |
| S388S5FISC  | ST-ST          | 5 Meters  | 3mm         |
| S388S10FISC | ST-ST          | 10 Meters | 3mm         |
| S388S15FISC | ST-ST          | 15 Meters | 3mm         |
| S388S20FISC | ST-ST          | 20 Meters | 3mm         |
| S3YYS1FISC  | SC-SC          | 1 Meter   | 3mm         |
| S3YYS2FISC  | SC-SC          | 2 Meters  | 3mm         |
| S3YYS3FISC  | SC-SC          | 3 Meters  | 3mm         |
| S3YYS5FISC  | SC-SC          | 5 Meters  | 3mm         |
| S3YYS10FISC | SC-SC          | 10 Meters | 3mm         |
| S3YYS15FISC | SC-SC          | 15 Meters | 3mm         |
| S3YYS20FISC | SC-SC          | 20 Meters | 3mm         |
| Y3LLS1FISC  | LC-LC          | 1 Meter   | 1.6mm       |
| Y3LLS2FISC  | LC-LC          | 2 Meters  | 1.6mm       |
| Y3LLS3FISC  | LC-LC          | 3 Meters  | 1.6mm       |
| Y3LLS5FISC  | LC-LC          | 5 Meters  | 1.6mm       |
| Y3LLS10FISC | LC-LC          | 10 Meters | 1.6mm       |
| Y3LLS15FISC | LC-LC          | 15 Meters | 1.6mm       |
| Y3LLS20FISC | LC-LC          | 20 Meters | 1.6mm       |
| S38YS1FISC  | ST-SC          | 1 Meter   | 3mm         |
| S38YS2FISC  | ST-SC          | 2 Meters  | 3mm         |
| S38YS3FISC  | ST-SC          | 3 Meters  | 3mm         |
| S38YS5FISC  | ST-SC          | 5 Meters  | 3mm         |
| S38YS10FISC | ST-SC          | 10 Meters | 3mm         |
| S38YS15FISC | ST-SC          | 15 Meters | 3mm         |
| S38YS20FISC | ST-SC          | 20 Meters | 3mm         |
| Y3LYS1FISC  | LC-SC          | 1 Meter   | 1.6mm       |
| Y3LYS2FISC  | LC-SC          | 2 Meters  | 1.6mm       |
| Y3LYS3FISC  | LC-SC          | 3 Meters  | 1.6mm       |
| Y3LYS5FISC  | LC-SC          | 5 Meters  | 1.6mm       |
| Y3LYS10FISC | LC-SC          | 10 Meters | 1.6mm       |
| Y3LYS15FISC | LC-SC          | 15 Meters | 1.6mm       |
| Y3LYS20FISC | LC-SC          | 20 Meters | 1.6mm       |
| S377S1FISC  | FC-FC          | 1 Meter   | 3mm         |
| S377S2FISC  | FC-FC          | 2 Meters  | 3mm         |
| S377S3FISC  | FC-FC          | 3 Meters  | 3mm         |
| S377S5FISC  | FC-FC          | 5 Meters  | 3mm         |
| S377S10FISC | FC-FC          | 10 Meters | 3mm         |
| S377S15FISC | FC-FC          | 15 Meters | 3mm         |
| S377S20FISC | FC-FC          | 20 Meters | 3mm         |
|             |                |           |             |

| UPC SINGLEMODE DUPLEX PATCHCORDS |             |           |             |  |
|----------------------------------|-------------|-----------|-------------|--|
| PART #                           | DESCRIPTION | LENGTH    | JACKET SIZE |  |
| X3LYS1FISC                       | LC-SC       | 1 Meter   | 1.6mm       |  |
| X3LYS2FISC                       | LC-SC       | 2 Meters  | 1.6mm       |  |
| X3LYS3FISC                       | LC-SC       | 3 Meters  | 1.6mm       |  |
| X3LYS5FISC                       | LC-SC       | 5 Meters  | 1.6mm       |  |
| X3LYS10FISC                      | LC-SC       | 10 Meters | 1.6mm       |  |
| X3LYS15FISC                      | LC-SC       | 15 Meters | 1.6mm       |  |
| X3LYS20FISC                      | LC-SC       | 20 Meters | 1.6mm       |  |
| D3YYS1FISC                       | SC-SC       | 1 Meter   | 3mm         |  |
| D3YYS2FISC                       | SC-SC       | 2 Meters  | 3mm         |  |
| D3YYS3FISC                       | SC-SC       | 3 Meters  | 3mm         |  |
| D3YYS5FISC                       | SC-SC       | 5 Meters  | 3mm         |  |
| D3YYS10FISC                      | SC-SC       | 10 Meters | 3mm         |  |
| D3YYS15FISC                      | SC-SC       | 15 Meters | 3mm         |  |
| D3YYS20FISC                      | SC-SC       | 20 Meters | 3mm         |  |
| D388S1FISC                       | ST-ST       | 1 Meter   | 3mm         |  |
| D388S2FISC                       | ST-ST       | 2 Meters  | 3mm         |  |
| D388S3FISC                       | ST-ST       | 3 Meters  | 3mm         |  |
| D388S5FISC                       | ST-ST       | 5 Meters  | 3mm         |  |
| D388S10FISC                      | ST-ST       | 10 Meters | 3mm         |  |
| D388S15FISC                      | ST-ST       | 15 Meters | 3mm         |  |
| D388S20FISC                      | ST-ST       | 20 Meters | 3mm         |  |
| D38YS1FISC                       | ST-SC       | 1 Meter   | 3mm         |  |
| D38YS2FISC                       | ST-SC       | 2 Meters  | 3mm         |  |
| D38YS3FISC                       | ST-SC       | 3 Meters  | 3mm         |  |
| D38YS5FISC                       | ST-SC       | 5 Meters  | 3mm         |  |
| D38YS10FISC                      | ST-SC       | 10 Meters | 3mm         |  |
| D38YS15FISC                      | ST-SC       | 15 Meters | 3mm         |  |
| D38YS20FISC                      | ST-SC       | 20 Meters | 3mm         |  |
| D377S1FISC                       | FC-FC       | 1 Meter   | 3mm         |  |
| D377S2FISC                       | FC-FC       | 2 Meters  | 3mm         |  |
| D377S3FISC                       | FC-FC       | 3 Meters  | 3mm         |  |
| D377S5FISC                       | FC-FC       | 5 Meters  | 3mm         |  |
| D377S10FISC                      | FC-FC       | 10 Meters | 3mm         |  |
| D377S15FISC                      | FC-FC       | 15 Meters | 3mm         |  |
| D377S20FISC                      | FC-FC       | 20 Meters | 3mm         |  |
| X3LLS1FISC                       | LC-LC       | 1 Meter   | 1.6mm       |  |
| X3LLS2FISC                       | LC-LC       | 2 Meters  | 1.6mm       |  |
| X3LLS3FISC                       | LC-LC       | 3 Meters  | 1.6mm       |  |
| X3LLS5FISC                       | LC-LC       | 5 Meters  | 1.6mm       |  |
| X3LLS10FISC                      | LC-LC       | 10 Meters | 1.6mm       |  |
| X3LLS15FISC                      | LC-LC       | 15 Meters | 1.6mm       |  |
| X3LLS20FISC                      | LC-LC       | 20 Meters | 1.6mm       |  |

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## ASSEMBLIES | MULTIMODE - SIMPLEX & DUPLEX 50µm 0M3/0M4









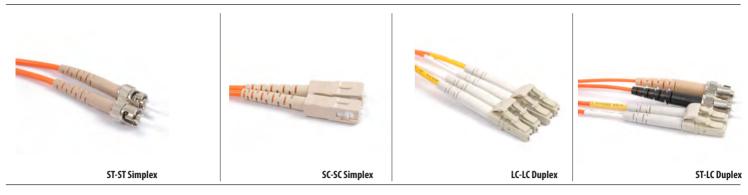
LC-LC Duplex

| <b>1.6</b> мм | MULTIMODE S | MPLEX PAT | CHCORDS    |
|---------------|-------------|-----------|------------|
| PART #        | DESCRIPTION | LENGTH    | FIBER TYPE |
| Y8YYM1FISC    | SC-SC       | 1 Meter   | 0M3        |
| Y8YYM2FISC    | SC-SC       | 2 Meters  | 0M3        |
| Y8YYM3FISC    | SC-SC       | 3 Meters  | 0M3        |
| Y8YYM5FISC    | SC-SC       | 5 Meters  | 0M3        |
| Y8YYM10FISC   | SC-SC       | 10 Meters | 0M3        |
| Y8YYM15FISC   | SC-SC       | 15 Meters | 0M3        |
| Y8YYM20FISC   | SC-SC       | 20 Meters | 0M3        |
| Y8LLM1FISC    | LC-LC       | 1 Meter   | 0M3        |
| Y8LLM2FISC    | LC-LC       | 2 Meters  | 0M3        |
| Y8LLM3FISC    | LC-LC       | 3 Meters  | 0M3        |
| Y8LLM5FISC    | LC-LC       | 5 Meters  | 0M3        |
| Y8LLM10FISC   | LC-LC       | 10 Meters | 0M3        |
| Y8LLM15FISC   | LC-LC       | 15 Meters | 0M3        |
| Y8LLM20FISC   | LC-LC       | 20 Meters | 0M3        |
| Y88M1FISC     | ST-ST       | 1 Meter   | 0M3        |
| Y88M2FISC     | ST-ST       | 2 Meters  | 0M3        |
| Y88M3FISC     | ST-ST       | 3 Meters  | 0M3        |
| Y88M5FISC     | ST-ST       | 5 Meters  | 0M3        |
| Y88M10FISC    | ST-ST       | 10 Meters | 0M3        |
| Y88M15FISC    | ST-ST       | 15 Meters | 0M3        |
| Y88M20FISC    | ST-ST       | 20 Meters | 0M3        |
| Y8LYM1FISC    | LC-SC       | 1 Meter   | 0M3        |
| Y8LYM2FISC    | LC-SC       | 2 Meters  | 0M3        |
| Y8LYM3FISC    | LC-SC       | 3 Meters  | 0M3        |
| Y8LYM5FISC    | LC-SC       | 5 Meters  | 0M3        |
| Y8LYM10FISC   | LC-SC       | 10 Meters | 0M3        |
| Y8LYM15FISC   | LC-SC       | 15 Meters | 0M3        |
| Y8LYM20FISC   | LC-SC       | 20 Meters | 0M3        |
| Y8Y8M1FISC    | SC-ST       | 1 Meter   | 0M3        |
| Y8Y8M2FISC    | SC-ST       | 2 Meters  | 0M3        |
| Y8Y8M3FISC    | SC-ST       | 3 Meters  | 0M3        |
| Y8Y8M5FISC    | SC-ST       | 5 Meters  | 0M3        |
| Y8Y8M10FISC   | SC-ST       | 10 Meters | 0M3        |
| Y8Y8M15FISC   | SC-ST       | 15 Meters | 0M3        |
| Y8Y8M20FISC   | SC-ST       | 20 Meters | 0M3        |
| Y8L8M1FISC    | LC-ST       | 1 Meter   | 0M3        |
| Y8L8M2FISC    | LC-ST       | 2 Meters  | 0M3        |
| Y8L8M3FISC    | LC-ST       | 3 Meters  | 0M3        |
| Y8L8M5FISC    | LC-ST       | 5 Meters  | 0M3        |
| Y8L8M10FISC   | LC-ST       | 10 Meters | 0M3        |
| Y8L8M15FISC   | LC-ST       | 15 Meters | 0M3        |
| Y8L8M20FISC   | LC-ST       | 20 Meters | 0M3        |

## **Quantity Pricing Available**

| 1.6м         | м <b>MULTIMODE (</b> | <b>DUPLEX PAT</b> | CHCORDS    |
|--------------|----------------------|-------------------|------------|
| PART #       | DESCRIPTION          | LENGTH            | FIBER TYPE |
| X8YYM1FISC   | SC-SC                | 1 Meter           | 0M3        |
| X8YYM2FISC   | SC-SC                | 2 Meters          | 0M3        |
| X8YYM3FISC   | SC-SC                | 3 Meters          | 0M3        |
| X8YYM5FISC   | SC-SC                | 5 Meters          | 0M3        |
| X8YYM10FISC  | SC-SC                | 10 Meters         | 0M3        |
| X8LLM1FISC   | LC-LC                | 1 Meter           | 0M3        |
| X8LLM2FISC   | LC-LC                | 2 Meters          | 0M3        |
| X8LLM3FISC   | LC-LC                | 3 Meters          | 0M3        |
| X8LLM5FISC   | LC-LC                | 5 Meters          | 0M3        |
| X8LLM10FISC  | LC-LC                | 10 Meters         | 0M3        |
| X888M1FISC   | ST-ST                | 1 Meter           | 0M3        |
| X888M2FISC   | ST-ST                | 2 Meters          | 0M3        |
| X888M3FISC   | ST-ST                | 3 Meters          | 0M3        |
| X888M5FISC   | ST-ST                | 5 Meters          | 0M3        |
| X888M10FISC  | ST-ST                | 10 Meters         | 0M3        |
| X8LYM1FISC   | LC-SC                | 1 Meter           | 0M3        |
| X8LYM2FISC   | LC-SC                | 2 Meters          | 0M3        |
| X8LYM3FISC   | LC-SC                | 3 Meters          | 0M3        |
| X8LYM5FISC   | LC-SC                | 5 Meters          | 0M3        |
| X8LYM10FISC  | LC-SC                | 10 Meters         | 0M3        |
| X8Y8M1FISC   | SC-ST                | 1 Meter           | 0M3        |
| X8Y8M2FISC   | SC-ST                | 2 Meters          | 0M3        |
| X8Y8M3FISC   | SC-ST                | 3 Meters          | 0M3        |
| X8Y8M5FISC   | SC-ST                | 5 Meters          | 0M3        |
| X8Y8M10FISC  | SC-ST                | 10 Meters         | 0M3        |
| X8L8M1FISC   | LC-ST                | 1 Meter           | 0M3        |
| X8L8M2FISC   | LC-ST                | 2 Meters          | 0M3        |
| X8L8M3FISC   | LC-ST                | 3 Meters          | 0M3        |
| X8L8M5FISC   | LC-ST                | 5 Meters          | 0M3        |
| X8L8M10FISC  | LC-ST                | 10 Meters         | 0M3        |
| X10YYM1FISC  | SC-SC                | 1 Meter           | 0M4        |
| X10YYM2FISC  | SC-SC                | 2 Meters          | 0M4        |
| X10YYM3FISC  | SC-SC                | 3 Meters          | 0M4        |
| X10YYM5FISC  | SC-SC                | 5 Meters          | 0M4        |
| X10YYM10FISC | SC-SC                | 10 Meters         | 0M4        |
| X10LLM1FISC  | LC-LC                | 1 Meter           | 0M4        |
| X10LLM2FISC  | LC-LC                | 2 Meters          | 0M4        |
| X10LLM3FISC  | LC-LC                | 3 Meters          | 0M4        |
| X10LLM5FISC  | LC-LC                | 5 Meters          | 0M4        |
| X10LLM10FISC | LC-LC                | 10 Meters         | 0M4        |
| X1088M1FISC  | ST-ST                | 1 Meters          | 0M4        |
| X1088M2FISC  | ST-ST                | 2 Meters          | 0M4        |
| X1088M3FISC  | ST-ST                | 3 Meters          | 0M4        |
| X1088M5FISC  | ST-ST                | 5 Meters          | 0M4        |
| X1088M10FISC | ST-ST                | 10 Meters         | 0M4        |
|              |                      |                   |            |

## ASSEMBLIES | SIMPLEX & DUPLEX PATCHCORDS - 50µm 0M2



Fiber optic cable assemblies from Fiber Instrument Sales provide the highest quality and maximum performance expected from ceramic ferrule connectors. Listed lengths and styles provide the user prompt delivery by selecting from our well stocked inventory. FIS UPC cords are 100% tested and visually inspected. UPC assemblies are provided with individual test results.

| MULIIMO      | DE SIMPLEX P/ | ATCHCORDS   |                    |       |
|--------------|---------------|-------------|--------------------|-------|
| PART #       | DESCRIPTION   | LENGTH      | <b>JACKET SIZE</b> | PRICE |
| S188M1FISC   | ST-ST         | 1 Meter     | 3mm                |       |
| S188M2FISC   | ST-ST         | 2 Meters    | 3mm                |       |
| S188M3FISC   | ST-ST         | 3 Meters    | 3mm                |       |
| S188M5FISC   | ST-ST         | 5 Meters    | 3mm                |       |
| S188M10FISC  | ST-ST         | 10 Meters   | 3mm                |       |
| S188M15FISC  | ST-ST         | 15 Meters   | 3mm                |       |
| S188M20FISC  | ST-ST         | 20 Meters   | 3mm                |       |
| S1YYM1FISC   | SC-SC         | 1 Meter     | 3mm                |       |
| S1YYM2FISC   | SC-SC         | 2 Meters    | 3mm                |       |
| S1YYM3FISC   | SC-SC         | 3 Meters    | 3mm                |       |
| S1YYM5FISC   | SC-SC         | 5 Meters    | 3mm                |       |
| S1YYM10FISC  | SC-SC         | 10 Meters   | 3mm                |       |
| S1YYM15FISC  | SC-SC         | 15 Meters   | 3mm                |       |
| S1YYM20FISC  | SC-SC         | 20 Meters   | 3mm                |       |
| Y1LLM1FISC   | LC-LC         | 1 Meter     | 1.6mm              |       |
| Y1LLM2FISC   | LC-LC         | 2 Meters    | 1.6mm              |       |
| Y1LLM3FISC   | LC-LC         | 3 Meters    | 1.6mm              |       |
| Y1LLM5FISC   | LC-LC         | 5 Meters    | 1.6mm              |       |
| Y1LLM10FISC  | LC-LC         | 10 Meters   | 1.6mm              |       |
| Y1LLM15FISC  | LC-LC         | 15 Meters   | 1.6mm              |       |
| Y1LLM20FISC  | LC-LC         | 20 Meters   | 1.6mm              |       |
| 1.6мм МТ     | 'RJ Female Mu | ıltimode 62 | .5um - 0M1         |       |
| X2MJMJM1FISC | MTRJ-MTRJ     | 1 Meters    | •                  |       |
| X2MJMJM2FISC | MTRJ-MTRJ     | 2 Meters    |                    |       |
| X2MJMJM3FISC | MTRJ-MTRJ     | 3 Meters    |                    |       |
| X2MJMJM5FISC | MTRJ-MTRJ     | 5 Meters    |                    |       |
| X2MJYM1FISC  | MTRJ-SC       | 1 Meter     |                    |       |
| X2MJYM2FISC  | MTRJ-SC       | 2 Meters    |                    |       |
| X2MJYM3FISC  | MTRJ-SC       | 3 Meters    |                    |       |
| X2MJYM5FISC  | MTRJ-SC       | 5 Meters    |                    |       |
| X2MJ8M1FISC  | MTRJ-ST       | 1 Meter     |                    |       |
| X2MJ8M2FISC  | MTRJ-ST       | 2 Meters    |                    |       |
| X2MJ8M3FISC  | MTRJ-ST       | 3 Meters    |                    |       |
| X2MJ8M5FISC  | MTRJ-ST       | 5 Meters    |                    |       |

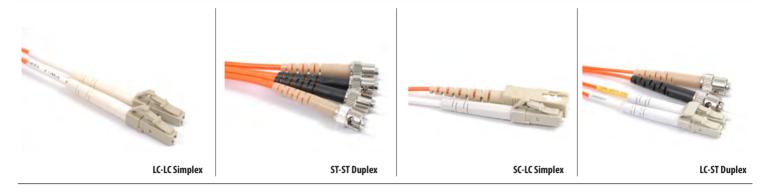
#### MULTIMODE SIMPLEX PATCHCORDS 50um - 0M2

| Custom | Lengths A | vailable |
|--------|-----------|----------|
| custon | enguis A  | vulluole |

| MULTIMODE DUPLEX PATCHCORDS 50µm - 0M2 |             |           |             |
|--|-------------|-----------|-------------|
| PART #                                 | DESCRIPTION | LENGTH    | JACKET SIZE |
| D188M1FISC                             | ST-ST       | 1 Meter   | 3mm         |
| D188M2FISC                             | ST-ST       | 2 Meters  | 3mm         |
| D188M3FISC                             | ST-ST       | 3 Meters  | 3mm         |
| D188M5FISC                             | ST-ST       | 5 Meters  | 3mm         |
| D188M10FISC                            | ST-ST       | 10 Meters | 3mm         |
| D188M15FISC                            | ST-ST       | 15 Meters | 3mm         |
| D188M20FISC                            | ST-ST       | 20 Meters | 3mm         |
| D1YYM1FISC                             | SC-SC       | 1 Meter   | 3mm         |
| D1YYM2FISC                             | SC-SC       | 2 Meters  | 3mm         |
| D1YYM3FISC                             | SC-SC       | 3 Meters  | 3mm         |
| D1YYM5FISC                             | SC-SC       | 5 Meters  | 3mm         |
| D1YYM10FISC                            | SC-SC       | 10 Meters | 3mm         |
| D1YYM15FISC                            | SC-SC       | 15 Meters | 3mm         |
| D1YYM20FISC                            | SC-SC       | 20 Meters | 3mm         |
| X1LLM1FISC                             | LC-LC       | 1 Meter   | 1.6mm       |
| X1LLM2FISC                             | LC-LC       | 2 Meters  | 1.6mm       |
| X1LLM3FISC                             | LC-LC       | 3 Meters  | 1.6mm       |
| X1LLM5FISC                             | LC-LC       | 5 Meters  | 1.6mm       |
| X1LLM10FISC                            | LC-LC       | 10 Meters | 1.6mm       |
| X1LLM15FISC                            | LC-LC       | 15 Meters | 1.6mm       |
| X1LLM20FISC                            | LC-LC       | 20 Meters | 1.6mm       |
| D18YM1FISC                             | ST-SC       | 1 Meter   | 3mm         |
| D18YM2FISC                             | ST-SC       | 2 Meters  | 3mm         |
| D18YM3FISC                             | ST-SC       | 3 Meters  | 3mm         |
| D18YM5FISC                             | ST-SC       | 5 Meters  | 3mm         |
| D18YM10FISC                            | ST-SC       | 10 Meters | 3mm         |
| D18YM15FISC                            | ST-SC       | 15 Meters | 3mm         |
| D18YM20FISC                            | ST-SC       | 20 Meters | 3mm         |
| X18LM1FISC                             | ST-LC       | 1 Meter   | 1.6mm       |
| X18LM2FISC                             | ST-LC       | 2 Meters  | 1.6mm       |
| X18LM3FISC                             | ST-LC       | 3 Meters  | 1.6mm       |
| X18LM5FISC                             | ST-LC       | 5 Meters  | 1.6mm       |
| X18LM10FISC                            | ST-LC       | 10 Meters | 1.6mm       |
| X18LM15FISC                            | ST-LC       | 15 Meters | 1.6mm       |
| X18LM20FISC                            | ST-LC       | 20 Meters | 1.6mm       |
| X1YLM1FISC                             | SC-LC       | 1 Meter   | 1.6mm       |
| X1YLM2FISC                             | SC-LC       | 2 Meters  | 1.6mm       |
| X1YLM3FISC                             | SC-LC       | 3 Meters  | 1.6mm       |
| X1YLM5FISC                             | SC-LC       | 5 Meters  | 1.6mm       |
| X1YLM10FISC                            | SC-LC       | 10 Meters | 1.6mm       |
| X1YLM15FISC                            | SC-LC       | 15 Meters | 1.6mm       |
| X1YLM20FISC                            | SC-LC       | 20 Meters | 1.6mm       |

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## ASSEMBLIES | SIMPLEX & DUPLEX PATCHCORDS - 62.5µm 0M1



#### MULTIMODE SIMPLEX PATCHCORDS 62.5µm - 0M1

|             |             | circompo o |             |
|-------------|-------------|------------|-------------|
| PART #      | DESCRIPTION | LENGTH     | JACKET SIZE |
| S288M1FISC  | ST-ST       | 1 Meter    | 3mm         |
| S288M2FISC  | ST-ST       | 2 Meters   | 3mm         |
| S288M3FISC  | ST-ST       | 3 Meters   | 3mm         |
| S288M5FISC  | ST-ST       | 5 Meters   | 3mm         |
| S288M10FISC | ST-ST       | 10 Meters  | 3mm         |
| S288M15FISC | ST-ST       | 15 Meters  | 3mm         |
| S288M20FISC | ST-ST       | 20 Meters  | 3mm         |
| S2YYM1FISC  | SC-SC       | 1 Meter    | 3mm         |
| S2YYM2FISC  | SC-SC       | 2 Meters   | 3mm         |
| S2YYM3FISC  | SC-SC       | 3 Meters   | 3mm         |
| S2YYM5FISC  | SC-SC       | 5 Meters   | 3mm         |
| S2YYM10FISC | SC-SC       | 10 Meters  | 3mm         |
| S2YYM15FISC | SC-SC       | 15 Meters  | 3mm         |
| S2YYM20FISC | SC-SC       | 20 Meters  | 3mm         |
| Y2LLM1FISC  | LC-LC       | 1 Meter    | 1.6mm       |
| Y2LLM2FISC  | LC-LC       | 2 Meters   | 1.6mm       |
| Y2LLM3FISC  | LC-LC       | 3 Meters   | 1.6mm       |
| Y3LLS5FISC  | LC-LC       | 5 Meters   | 1.6mm       |
| Y2LLM10FISC | LC-LC       | 10 Meters  | 1.6mm       |
| Y2LLM15FISC | LC-LC       | 15 Meters  | 1.6mm       |
| Y2LLM20FISC | LC-LC       | 20 Meters  | 1.6mm       |

#### MULTIMODE DUPLEX PATCHCORDS 62.5µm - 0M1

| PART #      | DESCRIPTION | LENGTH    | JACKET SIZE |
|-------------|-------------|-----------|-------------|
| D2YYM1FISC  | SC-SC       | 1 Meter   | 3mm         |
| D2YYM2FISC  | SC-SC       | 2 Meters  | 3mm         |
| D2YYM3FISC  | SC-SC       | 3 Meters  | 3mm         |
| D2YYM5FISC  | SC-SC       | 5 Meters  | 3mm         |
| D2YYM10FISC | SC-SC       | 10 Meters | 3mm         |
| D2YYM15FISC | SC-SC       | 15 Meters | 3mm         |
| D2YYM20FISC | SC-SC       | 20 Meters | 3mm         |
| D288M1FISC  | ST-ST       | 1 Meter   | 3mm         |
| D288M2FISC  | ST-ST       | 2 Meters  | 3mm         |
| D288M3FISC  | ST-ST       | 3 Meters  | 3mm         |
| D288M5FISC  | ST-ST       | 5 Meters  | 3mm         |
| D288M10FISC | ST-ST       | 10 Meters | 3mm         |
| D288M15FISC | ST-ST       | 15 Meters | 3mm         |
| D288M20FISC | ST-ST       | 20 Meters | 3mm         |
| X2LLM1FISC  | LC-LC       | 1 Meter   | 1.6mm       |
| X2LLM2FISC  | LC-LC       | 2 Meters  | 1.6mm       |
| X2LLM3FISC  | LC-LC       | 3 Meters  | 1.6mm       |
| X2LLM5FISC  | LC-LC       | 5 Meters  | 1.6mm       |
| X2LLM10FISC | LC-LC       | 10 Meters | 1.6mm       |
| X2LLM15FISC | LC-LC       | 15 Meters | 1.6mm       |
| X2LLM20FISC | LC-LC       | 20 Meters | 1.6mm       |

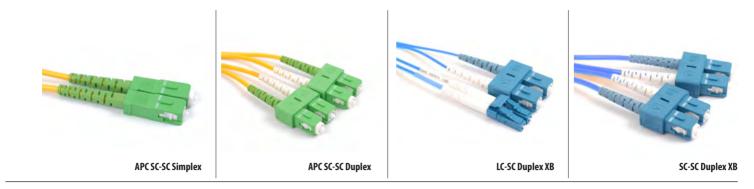
#### HYBRID SIMPLEX PATCHCORDS 62.5µm - OM1

| PART #      | DESCRIPTION | LENGTH    | JACKET SIZE |
|-------------|-------------|-----------|-------------|
| S28YM1FISC  | ST-SC       | 1 Meter   | 3mm         |
| S28YM2FISC  | ST-SC       | 2 Meters  | 3mm         |
| S28YM3FISC  | ST-SC       | 3 Meters  | 3mm         |
| S28YM5FISC  | ST-SC       | 5 Meters  | 3mm         |
| S28YM10FISC | ST-SC       | 10 Meters | 3mm         |
| S28YM15FISC | ST-SC       | 15 Meters | 3mm         |
| S28YM20FISC | ST-SC       | 20 Meters | 3mm         |
| Y2YLM1FISC  | SC-LC       | 1 Meter   | 1.6mm       |
| Y2YLM2FISC  | SC-LC       | 2 Meters  | 1.6mm       |
| Y2YLM3FISC  | SC-LC       | 3 Meters  | 1.6mm       |
| Y2YLM5FISC  | SC-LC       | 5 Meters  | 1.6mm       |
| Y2YLM10FISC | SC-LC       | 10 Meters | 1.6mm       |
| Y2YLM15FISC | SC-LC       | 15 Meters | 1.6mm       |
| Y2YLM20FISC | SC-LC       | 20 Meters | 1.6mm       |
| Y28LM1FISC  | ST-LC       | 1 Meter   | 1.6mm       |
| Y28LM2FISC  | ST-LC       | 2 Meters  | 1.6mm       |
| Y28LM3FISC  | ST-LC       | 3 Meters  | 1.6mm       |
| Y38LS5FISC  | ST-LC       | 5 Meters  | 1.6mm       |
| Y28LM10FISC | ST-LC       | 10 Meters | 1.6mm       |
| Y28LM15FISC | ST-LC       | 15 Meters | 1.6mm       |
| Y28LM20FISC | ST-LC       | 20 Meters | 1.6mm       |

#### HYBRID SIMPLEX PATCHCORDS 62.5µm - OM1

| PART #      | DESCRIPTION | LENGTH    | JACKET SIZE |
|-------------|-------------|-----------|-------------|
| D28YM1FISC  | ST-SC       | 1 Meter   | 3mm         |
| D28YM2FISC  | ST-SC       | 2 Meters  | 3mm         |
| D28YM3FISC  | ST-SC       | 3 Meters  | 3mm         |
| D28YM5FISC  | ST-SC       | 5 Meters  | 3mm         |
| D28YM10FISC | ST-SC       | 10 Meters | 3mm         |
| D28YM15FISC | ST-SC       | 15 Meters | 3mm         |
| D28YM20FISC | ST-SC       | 20 Meters | 3mm         |
| X2YLM1FISC  | SC-LC       | 1 Meter   | 1.6mm       |
| X2YLM2FISC  | SC-LC       | 2 Meters  | 1.6mm       |
| X2YLM3FISC  | SC-LC       | 3 Meters  | 1.6mm       |
| X2YLM5FISC  | SC-LC       | 5 Meters  | 1.6mm       |
| X2YLM10FISC | SC-LC       | 10 Meters | 1.6mm       |
| X2YLM15FISC | SC-LC       | 15 Meters | 1.6mm       |
| X2YLM20FISC | SC-LC       | 20 Meters | 1.6mm       |
| X28LM1FISC  | ST-LC       | 1 Meter   | 1.6mm       |
| X28LM2FISC  | ST-LC       | 2 Meters  | 1.6mm       |
| X28LM3FISC  | ST-LC       | 3 Meters  | 1.6mm       |
| X28LS5FISC  | ST-LC       | 5 Meters  | 1.6mm       |
| X28LM10FISC | ST-LC       | 10 Meters | 1.6mm       |
| X28LM15FISC | ST-LC       | 15 Meters | 1.6mm       |
| X28LM20FISC | ST-LC       | 20 Meters | 1.6mm       |
|             |             |           |             |

## **ASSEMBLIES | SINGLEMODE SIMPLEX & DUPLEX PATCHCORDS**



#### **SINGLEMODE SIMPLEX APC PATCHCORDS - 0S2**

| SINGLEMODE SIMILLER AI CITATCHCORDS 032 |             |           |             |       |
|---|-------------|-----------|-------------|-------|
| PART #                                  | DESCRIPTION | LENGTH    | JACKET SIZE | PRICE |
| Y3LALAS1FISC                            | LC-LC       | 1 Meter   | 1.6mm       |       |
| Y3LALAS2FISC                            | LC-LC       | 2 Meters  | 1.6mm       |       |
| Y3LALAS3FISC                            | LC-LC       | 3 Meters  | 1.6mm       |       |
| Y3LALAS5FISC                            | LC-LC       | 5 Meters  | 1.6mm       |       |
| Y3LALAS10FISC                           | LC-LC       | 10 Meters | 1.6mm       |       |
| Y3LALAS15FISC                           | LC-LC       | 15 Meters | 1.6mm       |       |
| Y3LALAS20FISC                           | LC-LC       | 20 Meters | 1.6mm       |       |
| S3YAYAS1FISC                            | SC-SC       | 1 Meter   | 3mm         |       |
| S3YAYAS2FISC                            | SC-SC       | 2 Meters  | 3mm         |       |
| S3YAYAS3FISC                            | SC-SC       | 3 Meters  | 3mm         |       |
| S3YAYAS5FISC                            | SC-SC       | 5 Meters  | 3mm         |       |
| S3YAYAS10FISC                           | SC-SC       | 10 Meters | 3mm         |       |
| S3YAYAS15FISC                           | SC-SC       | 15 Meters | 3mm         |       |
| S3YAYAS20FISC                           | SC-SC       | 20 Meters | 3mm         |       |
| S37AYAS1FISC                            | FC-SC       | 1 Meter   | 3mm         |       |
| S37AYAS2FISC                            | FC-SC       | 2 Meters  | 3mm         |       |
| S37AYAS3FISC                            | FC-SC       | 3 Meters  | 3mm         |       |
| S37AYAS5FISC                            | FC-SC       | 5 Meters  | 3mm         |       |
| S37AYAS10FISC                           | FC-SC       | 10 Meters | 3mm         |       |
| S37AYAS15FISC                           | FC-SC       | 15 Meters | 3mm         |       |
| S37AYAS20FISC                           | FC-SC       | 20 Meters | 3mm         |       |

#### **SINGLEMODE DUPLEX APC PATCHCORDS - 0S2**

| PART #        | DESCRIPTION | LENGTH    | JACKET SIZE |
|---------------|-------------|-----------|-------------|
| X3LALAS1FISC  | LC-LC       | 1 Meter   | 1.6mm       |
| X3LALAS2FISC  | LC-LC       | 2 Meters  | 1.6mm       |
| X3LALAS3FISC  | LC-LC       | 3 Meters  | 1.6mm       |
| X3LALAS5FISC  | LC-LC       | 5 Meters  | 1.6mm       |
| X3LALAS10FISC | LC-LC       | 10 Meters | 1.6mm       |
| X3LALAS15FISC | LC-LC       | 15 Meters | 1.6mm       |
| X3LALAS20FISC | LC-LC       | 20 Meters | 1.6mm       |
| D3YAYAS1FISC  | SC-SC       | 1 Meter   | 3mm         |
| D3YAYAS2FISC  | SC-SC       | 2 Meters  | 3mm         |
| D3YAYAS3FISC  | SC-SC       | 3 Meters  | 3mm         |
| D3YAYAS5FISC  | SC-SC       | 5 Meters  | 3mm         |
| D3YAYAS10FISC | SC-SC       | 10 Meters | 3mm         |
| D3YAYAS15FISC | SC-SC       | 15 Meters | 3mm         |
| D3YAYAS20FISC | SC-SC       | 20 Meters | 3mm         |
| D37AYAS1FISC  | FC-SC       | 1 Meter   | 3mm         |
| D37AYAS2FISC  | FC-SC       | 2 Meters  | 3mm         |
| D37AYAS3FISC  | FC-SC       | 3 Meters  | 3mm         |
| D37AYAS5FISC  | FC-SC       | 5 Meters  | 3mm         |
| D37AYAS10FISC | FC-SC       | 10 Meters | 3mm         |
| D37AYAS15FISC | FC-SC       | 15 Meters | 3mm         |
| D37AYAS20FISC | FC-SC       | 20 Meters | 3mm         |
|               |             |           |             |

| SINGLEMODE UPC SIMPLEX CLEARCURVE® XB |                       |           |             |
|---------------------------------------|-----------------------|-----------|-------------|
| BEND                                  | <b>INSENSITIVE PA</b> | TCHCORDS  | - G.657.A1  |
| PART #                                | DESCRIPTION           | LENGTH    | JACKET SIZE |
| S98YS1FISCXB                          | ST-SC                 | 1 Meter   | 3mm         |
| S98YS2FISCXB                          | ST-SC                 | 2 Meters  | 3mm         |
| S98YS3FISCXB                          | ST-SC                 | 3 Meters  | 3mm         |
| S98YS5FISCXB                          | ST-SC                 | 5 Meters  | 3mm         |
| S98YS10FISCXB                         | ST-SC                 | 10 Meters | 3mm         |
| S98YS15FISCXB                         | ST-SC                 | 15 Meters | 3mm         |
| S98YS20FISCXB                         | ST-SC                 | 20 Meters | 3mm         |
| Y9LYS1FISCXB                          | LC-SC                 | 1 Meter   | 1.6mm       |
| Y9LYS2FISCXB                          | LC-SC                 | 2 Meters  | 1.6mm       |
| Y9LYS3FISCXB                          | LC-SC                 | 3 Meters  | 1.6mm       |
| Y9LYS5FISCXB                          | LC-SC                 | 5 Meters  | 1.6mm       |
| Y9LYS10FISCXB                         | LC-SC                 | 10 Meters | 1.6mm       |
| Y9LYS15FISCXB                         | LC-SC                 | 15 Meters | 1.6mm       |
| Y9LYS20FISCXB                         | LC-SC                 | 20 Meters | 1.6mm       |
| S977S1FISCXB                          | FC-FC                 | 1 Meter   | 3mm         |
| S977S2FISCXB                          | FC-FC                 | 2 Meters  | 3mm         |
| S977S3FISCXB                          | FC-FC                 | 3 Meters  | 3mm         |
| S977S5FISCXB                          | FC-FC                 | 5 Meters  | 3mm         |
| S977S10FISCXB                         | FC-FC                 | 10 Meters | 3mm         |
| S977S15FISCXB                         | FC-FC                 | 15 Meters | 3mm         |
| S977S20FISCXB                         | FC-FC                 | 20 Meters | 3mm         |

#### SINGLEMODE DUPLEX SIMPLEX CLEARCURVE® XB BEND INSENSITIVE PATCHCORDS - G.657.A1

| PART #         | DESCRIPTION | LENGTH    | JACKET SIZE |
|----------------|-------------|-----------|-------------|
| X9LYS1FISCXBXB | LC-SC       | 1 Meter   | 1.6mm       |
| X9LYS2FISCXB   | LC-SC       | 2 Meters  | 1.6mm       |
| X9LYS3FISCXB   | LC-SC       | 3 Meters  | 1.6mm       |
| X9LYS5FISCXB   | LC-SC       | 5 Meters  | 1.6mm       |
| X9LYS10FISCXB  | LC-SC       | 10 Meters | 1.6mm       |
| X9LYS15FISCXB  | LC-SC       | 15 Meters | 1.6mm       |
| X9LYS20FISCXB  | LC-SC       | 20 Meters | 1.6mm       |
| D9YYS1FISCXB   | SC-SC       | 1 Meter   | 3mm         |
| D9YYS2FISCXB   | SC-SC       | 2 Meters  | 3mm         |
| D9YYS3FISCXB   | SC-SC       | 3 Meters  | 3mm         |
| D9YYS5FISCXB   | SC-SC       | 5 Meters  | 3mm         |
| D9YYS10FISCXB  | SC-SC       | 10 Meters | 3mm         |
| D9YYS15FISCXB  | SC-SC       | 15 Meters | 3mm         |
| D9YYS20FISCXB  | SC-SC       | 20 Meters | 3mm         |
| X9LLS1FISCXB   | LC-LC       | 1 Meter   | 1.6mm       |
| X9LLS2FISCXB   | LC-LC       | 2 Meters  | 1.6mm       |
| X9LLS3FISCXB   | LC-LC       | 3 Meters  | 1.6mm       |
| X9LLS5FISCXB   | LC-LC       | 5 Meters  | 1.6mm       |
| X9LLS10FISCXB  | LC-LC       | 10 Meters | 1.6mm       |
| X9LLS15FISCXB  | LC-LC       | 15 Meters | 1.6mm       |
| X9LLS20FISCXB  | LC-LC       | 20 Meters | 1.6mm       |
|                |             |           |             |

### ASSEMBLIES | DUPLEX PATCHCORDS MULTIMODE / SINGLEMODE

| VOLITION PATCHCORDS |                                    |           |  |  |
|---------------------|------------------------------------|-----------|--|--|
| PART #              | DESCRIPTION                        | LENGTH    |  |  |
| VOLV9L/R2           | VF-45 - VF-45 - Singlemode         | 2 Meters  |  |  |
| VOLV9L/R3           | VF-45 - VF-45 - Singlemode         | 3 Meters  |  |  |
| VOLV9L/R5           | VF-45 - VF-45 - Singlemode         | 5 Meters  |  |  |
| VOLV9L/R15          | VF-45 - VF-45 - Singlemode         | 15 Meters |  |  |
| VOLV6L/R1           | VF-45 - VF-45 - Multimode (62.5µm) | 1 Meter   |  |  |
| VOLV6L/R2           | VF-45 - VF-45 - Multimode (62.5µm) | 2 Meters  |  |  |
| VOLV6L/R3           | VF-45 - VF-45 - Multimode (62.5µm) | 3 Meters  |  |  |
| VOLV6L/R5           | VF-45 - VF-45 - Multimode (62.5µm) | 5 Meters  |  |  |
| VOLV6L/R10          | VF-45 - VF-45 - Multimode (62.5µm) | 10 Meters |  |  |
| G2VF8M1FIS          | VF-45 -ST - Multimode (62.5µm)     | 1 Meter   |  |  |
| G2VF8M2FIS          | VF-45 -ST - Multimode (62.5µm)     | 2 Meters  |  |  |
| G2VF8M3FIS          | VF-45 -ST - Multimode (62.5µm)     | 3 Meters  |  |  |
| G2VF8M5FIS          | VF-45 -ST - Multimode (62.5µm)     | 5 Meters  |  |  |
| G2VF8M1FIS          | VF-45 -ST - Multimode (62.5µm)     | 10 Meters |  |  |
| G2VFLM1FIS          | VF-45 -LC - Multimode (62.5µm)     | 1 Meter   |  |  |
| G2VFLM2FIS          | VF-45 -LC - Multimode (62.5µm)     | 2 Meters  |  |  |
| G2VFLM3FIS          | VF-45 -LC - Multimode (62.5µm)     | 3 Meters  |  |  |
| G2VFLM5FIS          | VF-45 -LC - Multimode (62.5µm)     | 5 Meters  |  |  |
| G2VFLM10FIS         | VF-45 -LC - Multimode (62.5µm)     | 10 Meters |  |  |
| G2VFYM1FIS          | VF-45 -SC - Multimode (62.5µm)     | 1 Meter   |  |  |
| G2VFYM2FIS          | VF-45 -SC - Multimode (62.5µm)     | 2 Meters  |  |  |
| G2VFYM3FIS          | VF-45 -SC - Multimode (62.5µm)     | 3 Meters  |  |  |
| G2VFYM5FIS          | VF-45 -SC - Multimode (62.5µm)     | 5 Meters  |  |  |
| G2VFYM10FIS         | VF-45 -SC - Multimode (62.5µm)     | 10 Meters |  |  |
| G2VFMJM1FIS         | VF-45 -MTRJ - Multimode (62.5µm)   | 1 Meter   |  |  |
| G2VFMJM2FIS         | VF-45 -MTRJ - Multimode (62.5µm)   | 2 Meters  |  |  |
| G2VFMJM3FIS         | VF-45 -MTRJ - Multimode (62.5µm)   | 3 Meters  |  |  |
| G2VFMJM5FIS         | VF-45 -MTRJ - Multimode (62.5µm)   | 5 Meters  |  |  |
| G2VFMJM10FIS        | VF-45 -MTRJ - Multimode (62.5µm)   | 10 Meters |  |  |
|                     |                                    |           |  |  |



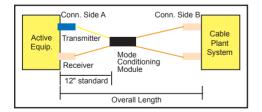
#### **MODE CONDITIONING PATCHCORDS**

Mode Conditioning Patchcords are used in conjunction with laser transmitters with VCSEL for 1 Gb with FDDI fiber in fiber optic links to improve the transition bandwidth by the reduction of modal dispersion. These cords can be assembled in various configurations to meet your specific needs. Contact your FIS sales representative for pricing and delivery. Improve the performance of your network today.

LENG

#### Part # Example:

F1-MCP-3-1-SC-SC Translates to: Mode Conditioning Patchcord 3 meters length, 50/125µm, SC connectors both ends.



#### SC-SC MCP MULTIMODE 62.5/125µm

| PART #            | LENGTH    |  |
|-------------------|-----------|--|
| F1-MCP-1-2-SC-SC  | 1 Meter   |  |
| F1-MCP-3-2-SC-SC  | 3 Meters  |  |
| F1-MCP-5-2-SC-SC  | 5 Meters  |  |
| F1-MCP-10-2-SC-SC | 10 Meters |  |

#### SC-ST MCP MULTIMODE 62.5/125µm

| PART #            | LENGTH    |  |
|-------------------|-----------|--|
| F1-MCP-1-2-SC-ST  | 1 Meter   |  |
| F1-MCP-3-2-SC-ST  | 3 Meters  |  |
| F1-MCP-5-2-SC-ST  | 5 Meters  |  |
| F1-MCP-10-2-SC-ST | 10 Meters |  |

COND. IN METERS F1-MCP 3

MODE

#### LC-SC MCP MULTIMODE 62.5/125µm

| PART # LENGTH     |               |  |  |
|-------------------|---------------|--|--|
| F1-MCP-1-2-LC-SC  | 1 Meter       |  |  |
| F1-MCP-3-2-LC-SC  | 3 Meters      |  |  |
| F1-MCP-5-2-LC-SC  | 5 Meters      |  |  |
| F1-MCP-10-2-LC-SC | 10 Meters     |  |  |
| LC-ST MCP MULTIMO | DE 62.5/125µm |  |  |
| PART #            | LENGTH        |  |  |
| F1-MCP-1-2-LC-ST  | 1 Meter       |  |  |
| F1-MCP-3-2-LC-ST  | 3 Meters      |  |  |
| F1-MCP-5-2-LC-ST  | 5 Meters      |  |  |
| F1-MCP-10-2-LC-ST | 10 Meters     |  |  |

#### **CUSTOM MODE CONDITIONING MATRIX**

| iTH<br>Ters | MULTIMODE<br>LEGS  | CONN.<br>Side A   | CONN.<br>Side B  |
|-------------|--|---|--|
|             | 1  | SC  | SC   |
|             | CORE / CLAD SIZE<br>1=50/125µm - 0M2<br>2=62.5/125µm - 0M1 | CONNECTORS<br>SC=SC/PC<br>ST=ST/PC<br>LC=LC/PC<br>MJ=MTRJ (no pins)<br>MP=MTRJ (w/pins) | CONNECTORS<br>SC=SC/PC<br>ST=ST/PC<br>LC=LC/PC<br>MJ=MTRJ (no pins)<br>MP=MTRJ (w/pins |

ALL PATCHCORDS 3mm Duplex Jacketing

| ST-ST MCP MULTIMODE 62.5/125µm |           |  |
|--------------------------------|-----------|--|
| PART #                         | LENGTH    |  |
| F1-MCP-1-2-ST-ST               | 1 Meter   |  |
| F1-MCP-3-2-ST-ST               | 3 Meters  |  |
| F1-MCP-5-2-ST-ST               | 5 Meters  |  |
| F1-MCP-10-2-ST-ST              | 10 Meters |  |

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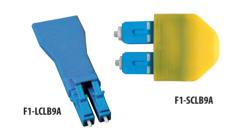
#### www.fiberinstrumentsales.com

## ASSEMBLIES | SPECIALTY OPTICAL ASSEMBLIES





F1-3071





#### FIS COMPACT NODE CABLES (SERVICE CABLES)

Fiber Instrument Sales' Compact Node is an epoxy based optical node cable assembly. Designed for HFC applications with the flexibility to fit aerial, pedestal and vault applications. The epoxy provides exceptional strength and mechanical isolation of the fibers. The compact length provides greater flexibility to install inside tight pedestals and other constricted applications. Central tube cable construction is easy to install and break-out in splice travs and enclosures. Available in various custom configurations up to 12 fibers.

| PART #               | DESCRIPTION   |
|----------------------|---|
| NC-3-BA-P-S-15-FIS-2 | Node Cable 2 Fiber Loosetube Cable SM SC/APC – Pigtail, 15 Meters |
| NC-3-BA-P-S-15-FIS-4 | Node Cable 4 Fiber Loosetube Cable SM SC/APC – Pigtail, 15 Meters |
| NC-3-BA-P-S-15-FIS-6 | Node Cable 6 Fiber Loosetube Cable SM SC/APC – Pigtail, 15 Meters |
| NC-3-BU-P-S-15-FIS-2 | Node Cable 2 Fiber Loosetube Cable SM SC/UPC – Pigtail, 15 Meters |
| NC-3-BU-P-S-15-FIS-4 | Node Cable 4 Fiber Loosetube Cable SM SC/UPC – Pigtail, 15 Meters |
| NC-3-BU-P-S-15-FIS-6 | Node Cable 6 Fiber Loosetube Cable SM SC/UPC – Pigtail, 15 Meters |

#### **FIS FIBER OPTIC TERMINATOR CONNECTORS**

Low reflection Terminators are designed for use in unused ports and reduce back reflection into fiber optic systems. Each connector is environmentally sealed for protection. Back Reflection APC = -65dB UPC = -55dB

| connector is chime | intentariy searca for protection. Back hencedon hi e | 0545 01 0 | 5540 |
|--------------------|--|-----------|------|
| PART #             | DESCRIPTION  |           |      |
| F1-0071            | FIS ST/UPC Terminator Connector                      |           |      |
| F1-2071            | FIS FC/UPC Terminator Connector                      |           |      |
| F1-3071            | FIS SC/UPC Terminator Connector                      |           |      |
| F1-2072            | FIS FC/APC Terminator Connector                      |           |      |
| F1-3072            | FIS SC/APC Terminator Connector                      |           |      |
| F1-4071            | FIS LC/UPC Terminator Connector                      |           |      |
| F1-4072            | FIS LC/APC Terminator Connector                      |           |      |
|                    |  |           |      |

#### **FIS LOOPBACK MODULES**

Loopbacks are designed for testing, engineering and the burn-in stage of boards or other equipment. They provide system test engineers a simple but effective way of testing the transmission capability and receiver sensitivity of network equipment.

| PART #     | DESCRIPTION                     |
|------------|---------------------------------|
| F1-SCLB9A  | SC Loopback SM 9/125µm Fiber    |
| F1-SCLB62A | SC Loopback MM 62.5/125µm Fiber |
| F1-LCLB9A  | LC Loopback SM 9/125µm Fiber    |
| F1-LCLB62A | LC Loopback MM 62.5/125µm Fiber |
| F1-LCLB50A | LC Loopback MM 50/125µm Fiber   |

#### **POLARIZATION MAINTAINING PATCH CABLE**

For polarization-sensitive applications, FIS offers PM patch cables with UPC or APC connector finishes. Available in 900µm and 3mm jacketed versions. Important specifications need to be discussed with FIS Sales Associate upon ordering, such as: Alignment (slow or fast axis) Fiber Specifications, Cable Jacket (900µm buffer or 3.0mm), whether or not the purchased PM assemblies will be used for splicing. Contact FIS for additional specifications and pricing on PM jumpers of various lengths. Specify Fibercore Limited PM fiber or Corning PM Fiber.

| PART #            | DESCRIPTION   |
|-------------------|---|
| S-4-9A-9A-S-1-FIS | Simplex FC/APC - FC/APC, Slow Axis, 3.0mm Jacketed, Blue, 1 Meter |
| S-4-9U-9U-S-1-FIS | Simplex FC/UPC - FC/UPC, Slow Axis, 3.0mm Jacketed, Blue, 1 Meter |
| S-4-9U-9A-S-1-FIS | Simplex FC/UPC - FC/APC, Slow Axis, 3.0mm Jacketed, Blue, 1 Meter |
| 3-4-90-9A-3-1-FIS | Simplex FC/OPC - FC/APC, Slow Axis, S.Umm Jacketed, Blue, T Meter |

#### DID YOU KNOW... FIS Can Customize Patchcords, Cassettes & Cable Assemblies

#### **STANDARD CONFIGURATIONS**

Standard configurations (typical lead-time 2-4 days) – Convert your next project to "plug n' go" by having your cable assemblies pre-terminated by FIS. Our expert technicians prepare assemblies from 1-fiber patchcords to 144-fiber assemblies, while offering a wide array of components for you to create the perfect assembly for your application. Included below are manufacturing specifica-tions for FIS' pre-terminated assemblies to better help you prepare your installation. If a need arises to change a specification to best meet your application, please call your FIS representative for more details and refer to the custom configuration section below to see the various services available.

#### CUSTOM CONFIGURATIONS

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Custom configurations (typical lead-time 3-5 days) – FIS has the ability to manufacture a variety of custom configurations. Our custom abilities include but are not limited to labeling, packaging, testing requirements, and building to customer supplied specifications and drawings. With our experienced sales and engineering teams, FIS can help create and produce a custom solution to meet almost any application.

#### LENGTH SPECIFICATIONS

#### SIMPLEX/DUPLEX

TOTAL LENGTH = -0/+3" (> 5 MTRS), -0/+10% (< 5 MTRS) BREAKOUT = N/A MAXIMUM CONNECTOR TO CONNECTOR = 1.5"

#### MULTIFIBE

TOTAL LENGTH = -0/+3" (> 5 MTRS), -0/+10% (< 5 MTRS) BREAKOUT = 1 MTR (-0/+3") MAXIMUM CONNECTOR TO CONNECTOR = 1.5"

#### **TESTING SPECIFICATIONS**

#### **INSERTION LOSS**

 $\begin{array}{l} \mbox{MULTIMODE} = > /= 0.4 \mbox{ dB} \mbox{(TYPICAL)} \\ \mbox{SINGLEMODE} = > /= 0.3 \mbox{ dB} \mbox{(TYPICAL)} \end{array}$ 

#### **RETURN LOSS**

PC = </= -25dB UPC = </= -55dB APC = </= -60dB



## **Multimode Pigtails** Available!

DSP12LCUPC

#### **DISTRIBUTION STYLE PIGTAILS - 3 METERS**

Distribution Style Pigtails are similar to 900µm Color Coded Pigtails; the only difference being that the individual 900µm tight buffered fibers are enclosed in an outer PVC jacket. Yellow for SM, Agua for 50µm OM3, and Orange for 62.5 OM1 and 50µm OM2. Typical losses are the same as for individual 900µm pigtails.

| PART #         | DESCRIPTION   |
|----------------|---|
| DSP6SCUPCBU    | 6 Fiber SC/UPC Distribution Style Pigtail,<br>SM, Blue Boots            |
| DSP12SCUPCBU   | 12 Fiber SC/UPC Distribution Style Pigtail,<br>SM, Blue Boots           |
| DSP6SCAPCGR    | 6 Fiber SC/APC Distribution Style Pigtail,<br>SM, Green Boots           |
| DSP12SCAPCGR   | 12 Fiber SC/APC Distribution Style Pigtail,<br>SM, Green Boots          |
| DSP6LCUPCBU    | 6 Fiber LC/UPC Distribution Style Pigtail,<br>SM, Blue Boots            |
| DSP12LCUPCBU   | 12 Fiber LC/UPC Distribution Style Pigtail,<br>SM, Blue Boots           |
| DSP6SCMM50GAQ  | 6 Fiber SC/UPC Distribution Style Pigtail,<br>ΜΜ, 50μm, OM3 Aqua Boots  |
| DSP12SCMM50GAQ | 12 Fiber SC/UPC Distribution Style Pigtail,<br>MM, 50µm, OM3 Aqua Boots |
| DSP6LCMM50GAQ  | 6 Fiber LC/UPC Distribution Style Pigtail,<br>ΜΜ, 50μm, OM3 Aqua Boots  |
| DSP12LCMM50GAQ | 12 Fiber LC/UPC Distribution Style Pigtail,<br>MM, 50µm, OM3 Aqua Boots |

#### **PIGTAILS FOR SPLICING-COLOR CODED 6 & 12 PACKS** 6 Pack includes fiber colors of Blue/Orange/Green/Brown/Slate/White and are

length of 3 meters. 12 Pack includes all twelve standard industry colors. Singlemode UPC - typical loss .3dB, back reflection –55dB / APC –typical loss .2dB, min. back refection –65dB. Multimode Typical Insertion Loss – max. .4dB

DESCRIPTION PART # SP-6SCUPC-BU SC/UPC Singlemode 900µm (6 pack) with blue boots SP-12SCUPC-BU SC/UPC Singlemode 900µm(12 pack) with blue boots SP-6SCAPC-GR SC/APC Singlemode 900µm (6 pack) with green boots SP-12SCAPC-GR SC/APC Singlemode 900µm (12 pack) with green boots SP-6SCMM-BG SC/PC 62.5µm 900µm (6 pack) with beige boots SP-12SCMM-BG SC/PC 62.5µm 900µm (12 pack) with beige boots SC/PC 50µm 900µm (6 pack) with black boots SP-6SCMM50-BLK SP-12SCMM50-BLK SC/PC 50µm 900µm (12 pack) with black boots SC/PC 50µm OM3 900µm (6 pack) with aqua boots SP-6SCMM50G-A0 SP-12SCMM50G-AQ SC/PC 50µm 0M3 900µm (12 pack) with beige boots SP-6LCUPC-BU LC/UPC Singlemode 900µm (6 pack) with blue boots LC/UPC Singlemode 900µm (12 pack) with blue boots SP-12LCUPC-BU SP-6LCMM-BG LC/PC 62.5µm, 900µm (6 pack) with beige boots SP-6LCMM50-BLK LC/PC 50µm, 900µm (6 pack) with black boots LC/PC 50µm 0M3 10G, 900µm (6 pack) with aqua boots SP-6LCMM50G-A0 SP-12LCMM-BG LC/PC 62.5um, 900um (12 pack) with beige boots SP-12LCMM50-BLK LC/PC 50µm, 900µm (12 pack) with black boots LC/PC 50µm 0M3 10G, 900µm (12 pack) with aqua boots SP-12LCMM50G-AQ SP-6STMM-BG ST/PC 62.5µm 900µm (6 pack) with beige boots SP-6STMM50-BLK ST/PC 50µm, 900µm (6 pack) with black boots SP-12STMM-BG ST/PC 62.5µm, 900µm (12 pack) with beige boots SP-12STMM50-BLK ST/PC 50µm, 900µm (12 pack) with black boots SP-6STUPC-BU ST/UPC Singlemode 900µm (6 pack) with blue boots SP-12STUPC-BU ST/UPC Singlemode 900µm (12 pack) with blue boots

#### **RIBBON FAN-OUT PACKS** DESCRIPTION

PART #

| RF-3-BU-P-S-3-FIS-12 | SM, SC/UPC - Pigtail, 3 Meters 36" Fan-out, 2 Meter Tail, 12 Fiber |
|----------------------|--|
| RF-3-BA-P-S-3-FIS-12 | SM, SC/APC - Pigtail, 3 Meters 36" Fan-out, 2 Meter Tail, 12 Fiber |
| RF-3-AU-P-S-3-FIS-12 | SM, FC/UPC - Pigtail, 3 Meters 36" Fan-out, 2 Meter Tail, 12 Fiber |
| RF-3-AA-P-S-3-FIS-12 | SM, FC/APC - Pigtail, 3 Meters 36" Fan-out, 2 Meter Tail, 12 Fiber |

#### FIS SNAP PACKS™

These pre-terminated adapter panels provide convenience to technicians splicing into fiber distribution frames. Available in 6 or 12 fiber bundles with TIA-598-A standard color code, these bundled fibers provide cable management from patchpanel to splice bays. Custom lengths and different connector style adapter panels are available, contact your

| FIS sales associate. |  |
|----------------------|--|
| PART #               | DESCRIPTION  |
| F1-SC6LS-SPN         | (6) Adapters, SC/UPC, 6 Fiber Pigtail, Singlemode, 3 Meters              |
| F1-DSC6LS-SPN        | (6) Duplex Adapters, SC/UPC, 12 Fiber Pigtail, Singlemode, 3 Meters      |
| F1-SC6APC-SPN        | (6) Adapters, SC/APC, 6 Fiber Pigtail, Singlemode 3 Meters               |
| F1-LC6DL-SPN         | (6) Duplex Adapters, LC/UPC, 12 Fiber Pigtail, Singlemode, 3 Meters      |
| F1-DSC6LM-SPN        | (6) Duplex Adapters, SC,12 Fiber Pigtail, 62.5/125μm OM1, 3 Meters       |
| F1-ST6LM-SPN         | (6) Adapters, ST, 6 Fiber Pigtail, 62.5/125μm OM1, 3 Meters              |
| F1-ST6LS-SPN         | (6) Adapters, ST, 6 Fiber Pigtail, Singlemode, 3 Meters                  |
| F1-SC6LM-SPN         | (6) Adapters, SC/PC 6 Fiber Pigtails, 62.5/125μm, 3 Meters               |
| F1-SC6LM50-SPN       | (6) Adapters, SC/PC 6 Fiber Pigtails, 50/125μm, 3 Meters                 |
| F1-SC6LM50G-SPN      | (6) Adapters, SC/PC 6 Fiber Pigtails, 50/125μm OM3 10G, 3 Meters         |
| F1-DSC6LM50-SPN      | (6) Duplex Adapters, SC/PC 12 Fiber Pigtails, 50/125µm, 3 Meters         |
| F1-DSC6LM50G-SPN     | (6) Duplex Adapters, SC/PC 12 Fiber Pigtails, 50/125μm OM3 10G, 3 Meters |
| F1-LC6DLM-SPN        | (6) Duplex Adapters, LC/PC 12 Fiber Pigtails, 62.5/125μm, 3 Meters       |
| F1-LC6DLM50-SPN      | (6) Duplex Adapters, LC/PC 12 Fiber Pigtails, 50/125μm, 3 Meters         |
| F1-LC6DLM50G-SPN     | (6) Duplex Adapters, LC/PC 12 Fiber Pigtails, OM3 10G, 3 Meters          |





FIS couplers and WDM's are designed, manufactured, and tested to meet a variety of high performance and environmental requirements. Our high qualitiy couplers are available in single wavelength and dual window varieties in an assortment of split ratios. Our WDM's feature low insertion loss in combination with high isolation. All device types are available in bare fiber, 900µm, or 3mm ruggedized versions and can be terminated with your choice of connectors or installed in a variety of modules.

#### SINGLEMODE DUAL WINDOW COUPLERS/SPLITTERS

| PART #              | DESCRIPTION                      |
|---------------------|----------------------------------|
| 250µm               |                                  |
| SDW13550122UC       | 1x2 (1310/1550nm) 50/50 Ratio    |
| SDW13510122UC       | 1x2 (1310/1550nm) 10/90 Ratio    |
| SDW13520122UC       | 1x2 (1310/1550nm) 20/80 Ratio    |
| SDW13530122UC       | 1x2 (1310/1550nm) 30/70 Ratio    |
| SDW13540122UC       | 1x2 (1310/1550nm) 40/60 Ratio    |
| SDW13550222UC       | 2x2 (1310/1550nm) 50/50 Ratio    |
| 900µm               |                                  |
| SDW13550129UC       | 1x2 (1310/1550nm) 50/50 Ratio    |
| SDW13550129UC       | 1x2 (1310/1550nm) 10/90 Ratio    |
| SDW13520129UC       | 1x2 (1310/1550nm) 20/80 Ratio    |
| SDW13530129UC       | 1x2 (1310/1550nm) 30/70 Ratio    |
| SDW13540129UC       | 1x2 (1310/1550nm) 40/60 Ratio    |
| SDW13550229UC       | 2x2 (1310/1550nm) 50/50 Ratio    |
| SDW1351X3333333129C | 1x3 (1310/1550nm) 33/33/33 Ratio |
|                     |                                  |

## MULTIMODE COUPLERS/SPLITTERS (800-1600nm) PART # DESCRIPTION

| 250µm                        |  |
|------------------------------|--|
| MMC28550122C                 | 1x2 62.5/125µm Coupler 50/50 Ratio 250µm Fiber |
| ММС38550122С<br><b>900µm</b> | 1x2 50/125µm Coupler 50/50 Ratio 250µm Fiber   |
| MMC28550129C                 | 1x2 62.5/125µm Coupler 50/50 Ratio 900µm Fiber |
| MMC28550229C                 | 2x2 62.5/125µm Coupler 50/50 Ratio 900µm Fiber |
| MMC38550129C                 | 1x2 50/125µm Coupler 50/50 Ratio 900µm Fiber   |
| WAVELENGTH                   | I DIVISION MULTIPLEXERS                        |

A Wave Division Multiplexer (WDM) is a coupler that enables you to channel a signal to multiple devices operating at different wavelengths.
PART # DESCRIPTION
250µm
WDM13550122UC 1x2 Sm Dual Window (1310/1550nm) WDM 250µm Fiber
900µm
WDM13500129UC 1x2 Sm Dual Window (1310/1550nm) WDM 900µm Fiber

WDM135002290C 1λ2 Sin Dual Window (1310/1550nm) WDM 900μm Fiber WDM13500229UC 2x2 Sm Dual Window (1310/1550nm) WDM 900μm Fiber

#### PLANAR LIGHTWAVE CIRCUIT COUPLERS/SPLITTERS

Today's high-port-count applications for broadband system applications demand the best performance and the highest reliability under the most adverse of environments. Planar Lightwave Circuit Splitters deliver on all these requirements. FIS provides a variety of PLC's pre-terminated with SC/UPC, SC/APC or the connector of choice.

| PART <sup>®</sup> # | DESCRIPTION                               |
|---------------------|---|
| F1PLC04             | 1x4 PLC Unconnectorized                   |
| F1PLC08             | 1x8 PLC Unconnectorized                   |
| F1PLC16             | 1x16 PLC Unconnectorized                  |
| F1PLC32             | 1x32 PLC Unconncectorized                 |
| F1-PLC-04-SCU       | 1x4 PLC with Fan Out & SC/UPC Connectors  |
| F1-PLC-08-SCU       | 1x8 PLC with Fan Out & SC/UPC Connectors  |
| F1-PLC-16-SCU       | 1x16 PLC with Fan Out & SC/UPC Connectors |
| F1-PLC-32-SCU       | 1x32 PLC with Fan Out & SC/UPC Connectors |
| F1-PLC-04-SCA       | 1x4 PLC with Fan Out & SC/APC Connectors  |
| F1-PLC-08-SCA       | 1x8 PLC with Fan Out & SC/APC Connectors  |
| F1-PLC-16-SCA       | 1x16 PLC with Fan Out & SC/APC Connectors |
| F1-PLC-32-SCA       | 1x32 PLC with Fan Out & SC/APC Connectors |

#### RUGGEDIZED 2mm/3mm JACKETED COUPLERS/SPLITTERS

Install these ruggedized splitters into outdoor or indoor enclosures. The 2mm or 3mm furcated fiber legs offer extra protection when technicians are working in compact areas. The splitter/couplers are housed in a small plastic case; furcated fiber legs are attached with or without connectors installed. Custom size jacketing/split ratios/connector styles available.

| PART #               | DESCRIPTION   |
|----------------------|---|
| RSC-3-S-2-50-YA-YA-2 | Ruggedized Splitter, SM, 1 x 2, 50/50 split, SC/APC-SC/APC, 2mm jacketing |
| RSC-3-S-2-45-YA-YA-2 | Ruggedized Splitter, SM, 1 x 2, 55/45 split, SC/APC-SC/APC, 2mm jacketing |
| RSC-3-S-2-40-YA-YA-2 | Ruggedized Splitter, SM, 1 x 2, 60/40 split, SC/APC-SC/APC, 2mm jacketing |
| RSC-3-S-2-30-YA-YA-2 | Ruggedized Splitter, SM, 1 x 2, 70/30 split, SC/APC-SC/APC, 2mm jacketing |
| RSC-3-S-2-05-YA-YA-2 | Ruggedized Splitter, SM, 1 x 2, 90/5 split, SC/APC-SC/APC, 2mm jacketing  |
| RSC-1-S-2-50-Y-Y-3   | Ruggedized Splitter, 50µm, 1 x 2, 50/50 split, SC/PC-SC/PC, 3mm jacketing |
| RSC-1-S-2-40-Y-Y-3   | Ruggedized Splitter, 50µm, 1 x 2, 60/40 split, SC/PC-SC/PC, 3mm jacketing |

#### **PACKAGED NETWORK COUPLER**

Housed and connectorized with your specified connector are 1X2 or 1X4 multimode or singlemode splitters. Also available in same packaging is singlemode 1310/1550nm Wave Division Multiplexer (WDM). Specify core/clad size, connector style, and split ratio. (Highest port count available is 1X4).

| PART #                       | DESCRIPTION   |
|------------------------------|---|
| PNC-3-S-2-50-YU-YU           | Packaged Network Coupler Box, Singlemode, 50/50 split, 1x2 SC/UPC Adapters  |
| PNC-3-S-2-10-YU-YU           | Packaged Network Coupler Box, Singlemode, 90/10 split, 1x2, SC/UPC Adapters |
| PNC-3-S-4-EV-YU-YU           | Packaged Network Coupler Box, Singlemode, Even split, 1x4, SC/UPC Adapters  |
| Other Configurations Availab | le - Call FIS Representative  |







## **TEST EQUIPMENT | OTDRS**



The FIS Firecat OTDR provides an industry leading value with its low cost and easy functionality. This unit is perfect for both inexperienced and experienced technicians alike with its simple on screen 'soft key menus'. By providing the essentials for fiber optic troubleshooting, this OTDR is the perfect tool for basic link troubleshooting and is affordable enough for every truck, office or tool kit.

#### **FEATURES:**

- Dynamic Range 23dB
- Lowest Cost OTDR in the Industry
- Easy Operation with 'Soft Key Menus'
- Small, Lightweight and Rugged
- Interchangeable Adapters
- Event Table and Auto-Test Modes
- USB Data Transfer
- Backlight Keypad and Screen for Easy
- Use in Dim Lighting Conditions
- Available in a Ruggedized Version for harsh conditions

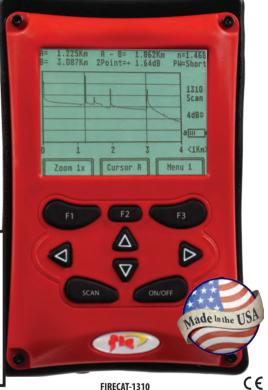


| PART #       | DESCRIPTION                                  |
|--------------|--|
| FIRECAT-850  | Single Wavelength — Multimode 850nm          |
| FIRECAT-1300 | Single Wavelength – Multimode 1300nm         |
| FIRECAT-1310 | Single Wavelength – Singlemode 1310nm        |
| FIRECAT-1550 | Single Wavelength – Singlemode 1550nm        |
| FIRECAT-8513 | Dual Wavelength - Multimode 850/1300nm       |
| FIRECAT-1315 | Dual Wavelength – Singlemode 1310/1550nm     |
| FIRECAT-QUAD | Quad Wavelength – MM/SM 850/1300/1310/1550nm |

#### NOTE: ADD "R" TO THE END OF THE PART NUMBER FOR RUGGEDIZED VERSION

Add Additional \$100.00 to price (Example: FIRECAT - 850 - R = Single wavelength - Multimode 850 -Ruggedized)

# **TEST EQUIPMENT**



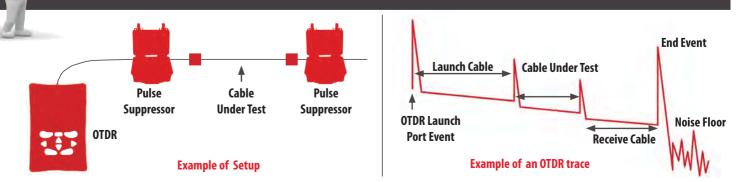
FIRECAT-1310

Each Unit Includes: 110v AC adapter, Certification Software, Data Transfer Cable, SC Interchangeable Adapter, Soft Carry Case, and Instruction Manual When purchasing unit for 220v application, 220v adapter must be purchased separately.

| A | C | Œ | S | S | 0 | R | IE. | S |
|---|---|---|---|---|---|---|-----|---|
|   |   |   |   |   |   |   |     |   |

| PART #        | DESCRIPTION                   |
|---------------|-------------------------------|
| FIRECAT-AC110 | AC Adapter 110v               |
| FIRECAT-AC220 | AC Adapter 220v               |
| FIRECAT-CASE  | Hard Carry Case               |
| FIRECAT-USB   | USB Flash Drive with Software |
| FIRECAT-CABLE | Data Transfer Cable           |
| F1-FIRECAT-ST | ST Adapter                    |
| F1-FIRECAT-FC | FC Adapter                    |
| F1-FIRECAT-SC | SC Adapter                    |

Using two (2) Pulse Suppressors, sometimes referred to as a launch and receive cable, allows a more accurate measurement of the cable link under test. It allows the pulse to settle down prior to the first connector on the cable link and lets the technician determine its insertion loss and back reflection (ORL). A receive cable placed on the far connector at the end of the cable is used determine its insertion loss and back reflection (ORL).



## TEST EQUIPMENT OTDRS





The Hand Held Bobcat OTDR has a 32db dynamic range and a short dead zone for testing networks from FTTx up to the metro environment. It has an easy to read color display with fault finder, construction and expert/manual modes of operation. The OVP is shipped with software for generating complete and profestional documentation with the ability to include scope images and loss test results. Take advantage of the Bluetooth feature that allows operation via a compatible Android device using the free Android App. This OTDR is the perfect tool for basic link troubleshooting and is affordable enough for every truck, office or tool kit.



#### DESCRIPTION PART #

| OVP-1310-DR | Single Wavelength - Singlemode 1310nm w/VFL and LTS - Android™ Compatible    |
|-------------|--|
| OVP-8513-DR | Dual Wavelength - Multimode 850/1300nm w/VFL and LTS - Android™ Compatible   |
| OVP-1315-DR | Dual Wavelength - Singlemode 1310/1550nm w/VFL and LTS - Android™ Compatible |
| OVPQUAD-DR  | Quad Wavelength - MM/SM 850/1300/1310/1550 w/LTS - Android™ Compatible       |
|             |  |

#### ACCESSORIES

131

- 3n

PART #

OVR-8513

OVR-1315

**OVR-OUAD** 

| PART #         |
|----------------|
| F1-OVXHRDCSE   |
| OVP-BC         |
| OVX-ADAPTERSET |
|                |

#### DESCRIPTION

Hard Transit Case for OVP and OVX Auxiliary Charger Kit (1) SC, (1) ST, (1) FC Adapters for OVX & OVP Series





The Bobcat 2 is our newest high preformance Optical Time Domain Reflectometer. The FIS OVR has touch screen capability, with 36dB dynamic range and project management database. It displays results in standard trace and event table views and displays networks in a schematic view. The FIS OVR includes video scope feature with probe and displayed measurement zones for connector end face grading according to IEC61300-3-35. The OVR supports Bluetooth operation via our free Android app which allows geotagging of traces and easy file sharing with e-mail. This OTDR also performs macro bend analysis and bidirectional analysis. Use the supplied Software package to view traces or product professional reports.



#### Video Scope with IEC 61300-3-35 DESCRIPTION

#### **FEATURES:**

- Touch Screen
- 36 dB Dynamic Range
- Schematic Event Analyzer
- Project Management Database
- Intergrated Video Scope
- IEC61300-3-35 Pass/Fail Video Scope Grading
- Free Android OTDR App for Bluetooh Operation
- Dual Trace Capability for Macro Bend and Bidirectional Analysis
- Power Meter, CW Source Included (No PM on Quad OTDRs)
- VFL Available

850/1350nm OTDR with Video Scope/Probe and Loss Test Set 1310/1550nm OTDR with Video Scope/Probe and Loss Test Set 850/1300/1310/1550nm OTDR with Video Scope and Probe

## **TEST EQUIPMENT | OTDRS**

2

SPL

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Zoom

**Optical Time-Domain Reflectometer** 

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OVX-1315-LTS



The FIS Advanced Hand Held OTDR has up to 39dB dynamic range with a 1 meter dead zone. It is Ideal for testing PON systems or links up to 240km. The unit has an integrated power meter, stable light source, video scope and a visual fault locator, making it a complete testing system, with an extremely intuitive operating system to keep learning curve as short as possible. This unit stores ~500 traces and 10,000 power meter measurements which can be downloaded to a USB flash drive or through a USB cable. It is shipped with Windows®/Telcordia SR-4731 compatible software that generates complete and professional reports with the ability to include scope images and loss test results. Models are available that include an active 1625nm port or up to four ITU standard CWDM wavelengths.

#### **FEATURES**

- No Boot Up Delay "Instant On"
- Up to 39dB Dynamic Range
- 1 Meter Dead Zone
- Interactive Event Table with Pass/Fail Feature
- Fault Finder/Construction/Expert Modes
- Bright Color Display
- Integrated Video Scope
- Onboard Memory for ~500 Traces
- Onboard, Context Sensitive Help
- Rugged Enclosure with Protective Boot
- SM, MM, Triple and Ouad Units Available
- USB Flash Drive Port and Mini USB Port
- Long Battery Life





#### New File Management Screen

850/1300nm with VFL + Optical Loss Test Set

1310/1550nm with VFL + Optical Loss Test Set

39dB 1310/1550nm OTDR with VFL + Optical Loss Test Set NEW

1310/1550nm and Active 1625nm with VFL + Optical Loss Test Set 1310/1550 OTDR with 8 Channel CWDM Analyzer, VFL and LTS

CWDM OTDR and Light Source w/VFL and Broadband Power Meter CWDM OTDR and Light Source w/VFL and Broadband Power Meter

850/1300/1310/1550nm with VFL + Optical Loss Test Set

Each Unit Includes: Universal Power Adapter with US, UK, Continental Europe and Australian plugs, Interchangeable FC/ST/SC Adapters for each OTDR and Power Meter Port, Windows®/Telcordia SR-4731 compatible Software, USB Cable, Manual and Rubber Boot.

DESCRIPTION

PART # 0VX-8513-LTSE 0VX-1315-LTSE 0VX-1315-EXT 0VX-QUAD-LTSE 0VX-131516-ACTLTSE 0VX-1315-8CA 0VX147/149/151/153CWDM 0VX155/157/159/161CWDM

#### **ACCESSORIES**

| PART #        | DESCRIPTION  |
|---------------|--|
| OVX-USB       | 500MB USB Flash Drive loaded with Trace Viewing Software |
| F1-VPMUSB     | 200x Probe (OVX Compatible)                              |
| F1-OVXHRDCASE | OVX OTDR Hard Case                                       |
| OVXADAPTERSET | (1) SC, (1) ST, (1) FC Adapters for OVX & OVP Series     |
| F1-OVXCASE    | Soft Case w/Shoulder Strap                               |
|               |  |

### FIS HAND HELD OPTICAL SPECTRUM ANALYZER

The FIS Hand Held Optical Spectrum Analyzers offer full featured analysis of DWDM and CWDM systems in a truly portable package. This OSA has a super-fast acquisition time of two scans per second, and Pass/Fail feature with an easy to read color display. The OSX offers features such as Power Tilt for DWDM channel equalization and Gain Tilt to adjust EDFA gain flatness. The OSA will store up to 1,000 tests and is shipped with Windows<sup>®</sup> compatible software for fast and easy reporting.

• Bar Graph & Table Displays

• Rugged Case with Impact Resistant Boot

• 4" Bright Color Display

Real Time operation

Video Scope capability

8hr Battery Life

#### **FEATURES:**

- Easy Operation with Help Mode
- 50 or 100 GHz DWDM and 20nm CWDM
- Channel Spacing
- Fast with two scans per second
- Over 80 Channels DWDM and 18 CWDM on the ITU Grid

#### Each Unit Includes: Universal Power Adapter, Interchangeable FC/SC Adapters, Windows® Compatible

#### Software, USB Cable, Manual and Rubber Boot

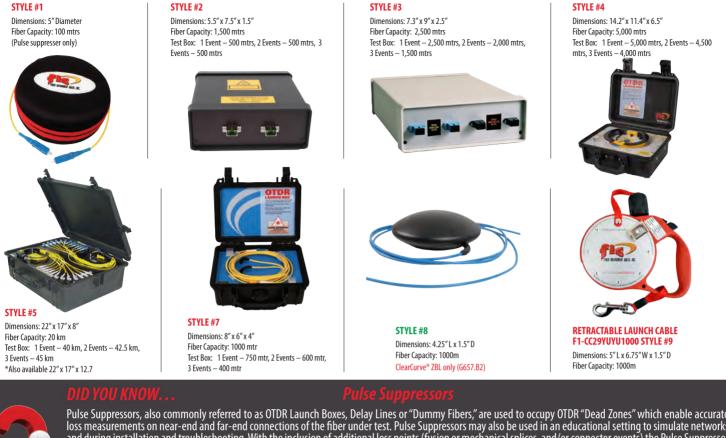
| PART #  | DESCRIPTION   |  |  |  |  |
|---------|---|--|--|--|--|
| OSR-20  | 9 Channel CWDM Hand Held Optical Spectrum Analyzer 1310nm and 1471nm-1611nm NEW   |  |  |  |  |
| OSR-80C | C Band Hand Held Optical Spectrum Analyzer with Touch Screen, 1531nm-1566.2nm NEW |  |  |  |  |
| OSX-80C | C-Band Optical Spectrum Analyzer  |  |  |  |  |
| OSX-80L | L-Band Optical Spectrum Analyzer  |  |  |  |  |
| 0SX-20  | CWDM Optical Channel Analyzer   |  |  |  |  |
|         |   |  |  |  |  |



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CE

## **TEST EQUIPMENT | PULSE OR TEST BOXES**



Pulse Suppressors, also commonly referred to as OTDR Launch Boxes, Delay Lines or "Dummy Fibers," are used to occupy OTDR "Dead Zones" which enable accurate loss measurements on near-end and far-end connections of the fiber under test. Pulse Suppressors may also be used in an educational setting to simulate networks and during installation and troubleshooting. With the inclusion of additional loss points (fusion or mechanical splices, and/or connector events) the Pulse Suppressor becomes a Test Box for quick verification of your OTDR's calibrated accuracy. Generate an initial scan upon first use of your OTDR, then periodically check future scans against the reference to be sure the equipment is within calibrated range. FIS specializes in customization of Pulse Suppressors and Test Boxes!

Use this chart to build the launch box you need to your exact specifications.

#### Part # Example: PS-2-3-200-0-0-B-7A/YA

Translates to: Pulse Suppressor in 5.5"x7.5"x1.5" box w/200 meters of 9/125µm fiber with 1 FC/APC & 1 SC/APC Bulkhead Interface

| BOX PURPOSE  | STYLE  | FIBER #1<br>(CORE/CLAD)   | FIBER LENGTH<br>(IN METERS) | FIBER #2<br>(CORE/CLAD)   | FIBER LENGTH<br>(IN METERS) | INTERFACE   | CONNECTOR<br>FIBER 1 / FIBER 2   |
|--|--|---|-----------------------------|---|-----------------------------|---|--|
| PS   | 2  | 3   | 200                         | 0   | 0                           | В   | 7A/YA  |
| PS= Pulse suppressor<br>TB= Test Box<br>Test box includes up to<br>3 events, must specify<br>distance between events | 1= #1<br>2= #2<br>3= #3<br>4= #4<br>5= #5<br>6= #6<br>7= #7<br>8= #8<br>9= #9<br>Pigtails Only in boxes<br>1, 4, 5, 6, 7 & 8 | 1=50/125µm - 0M2<br>2=62.5/125µm - 0M1<br>3=9/125µm - 0S2<br>4=0ther<br>8=BI 10G 50/125µm - 0M3<br>9=ClearCurve <sup>®</sup> SM ZBL<br>10=BI 10G 50/125µm - 0M4 |                             | 0= none<br>1= 50/125µm - 0M2<br>2= 62.5/125µm - 0M1<br>3= 9/125µm - 0S2<br>4= 0ther<br>8= BI 106 50/125µm - 0M3<br>9= ClearCurve® SM ZBL<br>10= BI 10G 50/125µm - 0M4 |                             | B= Bulkhead<br>P= Pigtails<br>Pigtails Only<br>in boxes<br>1, 4, 5, 6 & 7<br>R= Ruggedized<br>Pigtails<br>(Microduct) | 7U = FC/UPC $7A = FC/APC$ $8 = ST/PC$ $LU = LC/UPC$ $LA = LC/APC$ $MU = MU/UPC$ $YU = SC/UPC$ $YA = SC/APC$ $0 = 0 ther$ |

#### FIS LAUNCH BOX PART NUMBER EXAMPLES X-Indicates Connector Choice

| PART #   | DESCRIPTION  |
|--|--|
| PS-2-3-500-0-0-B-XX/XX   | Launch Box Style #2, 500m 9/125µm SMF-28e+ <sup>∞</sup> , w/ 2 Bulkhead Adapters of Choice       |
| PS-3-3-1000-2-1000-B-XX/XX                                     | Launch Box Style #3, 1000m 9/125µm Fiber and 1000m 62.5/125µm Fiber, Bulkhead Adapters of Choice |
| PS-4-3-1000-0-0-P-XX/XX  | Launch Box Style #4, 1000m 9/125µm SMF-28e+®, 2 meter Pigtails w/Connector of Choice             |
| PS-7-3-500-0-0-P-XX/XX   | Launch Box Style #7, 500m 9/125µm SMF-28e+®, 2 meter Pigtails w/Connector of Choice              |
| PS-7-1-100-0-0-P-XX/XX   | Launch Box Style #7, 100m 50/125µm Fiber, 2 meter Pigtails w/Connector of Choice                 |
| PS-7-2-100-0-0-P-XX/XX   | Launch Box Style #7, 100m 62.5/125µm Fiber, 2 meter Pigtails w/Connector of Choice               |
| PS-1-1-100-0-0-P-YU/YU   | Launch Disc, Style #1, 100m 50/125µm Fiber, 1.5m pigtails - SC/UPC connectors both ends          |
| PS-1-2-100-0-0-P-YU/YU   | Launch Disc, Style #1, 100m 62.5/125µm Fiber, 1.5m pigtails - SC/UPC connectors both ends        |
| PS-1-3-100-0-0-P-YU/YU   | Launch Disc, Style #1, 100m Singlemode SMF28e+, 1.5m pigtails - SC/UPC connectors both ends      |
| PS-7-1-500-0-0-P-YU/YU   | Launch Box, Style #7, 500m 50/125µm Fiber, 1.5m pigtails - SC/UPC connectors both ends           |
| PS-7-2-500-0-0-P-YU/YU   | Launch Box, Style #7, 500m 62.5/125µm Fiber, 1.5m pigtails - SC/UPC connectors both ends         |
| PS-7-3-500-0-0-P-YU/YU   | Launch Box, Style #7, 500m Singlemode SMF28e+, 1.5m pigtails - SC/UPC connectors both ends       |
| *When ordering Test Boxes, please specify type and location of | up to 3 events. Each additional event \$30.00  |



#### **FIS POWER METER**

A power meter is the essential tool for measuring optical power within a fiber optic link. The FIS Power Meter is a solid performer, with 0.01dB resolution. Standard FIS units test from +5dBm to -65dBm, and FIS CATV units test from +23dBm to -45dBm.

#### **FEATURES**

| <ul> <li>2mm Germanium F</li> </ul>   | Photodiode   |
|---|--|
| Available with 1490   | nm Calibrated Wavelength • CATV Version Available  |
| • 70-Hour Battery Lif   | • Built in Stand for Easy Viewing  |
| Low Battery Indicat   | Ruggedized Units Available for Harsh Outdoor Environments  |
| Each Unit Includes: Operating Manual, 9V Battery, 2.5mm & 1.25mm Adapters, and Carry Case |  |
| PART #  | DESCRIPTION  |
| F1-8513HR   | Hand Held Power Meter with 0.01dB Resolution   |
| F1-8513HRCATV   | CATV Hand Held Power Meter with 0.01dB Resolution  |
| F1-8513HR-4   | 0.01dB Resolution Power Meter with 1310/1490/1550nm  |
| F1-8513HRCATV-4   | CATV 0.01dB Resolution Power Meter with 1310/1490/1550nm   |
| 9080-0000   | Ruggedized Power Meter with 2.5mm & 1.25mm Universal Adapter   |
| 9081-0000   | FIS Test Set/Power Meter - 850/1300nm Light Source with ST Adapters and 2.5mm & 1.25mm PM Universal Adapter  |
| 9082-0000   | FIS Test Set/Power Meter - 1310/1550nm Light Source with FC Adapters and 2.5mm & 1.25mm PM Universal Adapter   |
| 9083-0000   | FIS Test Set/Power Meter - 1490/1550nm Light Source and Power Meter with FC Adapters and 2.5mm & 1.25mm PM Universal Adapter                               |
| Add "C" to part number  | for CATV version, (Singlemode Only) add \$30.00 • Add "V" to part number for VFL Option add \$190.00 • Add "T" to part number for TALK Option add \$250.00 |

#### POWER METER ACCESSORIES

| PART #       | DESCRIPTION   |
|--------------|---|
| F1-8513Mm    | 2.5mm Universal Adapter (ST, FC, SC) (Polymer)        |
| F1-8513SC    | SC Adapter  |
| F1-8513ST    | ST Adapter  |
| F1-8513FC    | FC Adapter  |
| F1-8513SMA   | SMA Adapter   |
| F1-8513MTP   | MTP Adapter   |
| F1-8513MTJ   | MT-RJ Adapter   |
| F1-8513LCMMm | 1.25mm Universal Adapter (Polymer)                    |
| 1018-0000    | Rugged Carry Case (See picture of Test Set Kit below) |
| F1-9103U     | Universal 110/220v Power Supply                       |
|              |   |

#### **FIS POWER METER & LIGHT SOURCE KIT**

Purchase either our hand held or ruggedized series power meter and light source together and receive a convenient carry case with reference cords and mating sleeves. Operating manuals and batteries included. Multimode sources standard with ST style interface, Singlemode sources standard with FC style interface. Power meters supplied with universal 2.5mm and 1.25mm adapter caps.

| PART #       | DESCRIPTION  |
|--------------|--|
| F1-813LR     | Hand Held PM (0.01dB Resolution) 850/1300nm Dual LED LS (ST Interface)                   |
| F1-1315LR    | Hand Held PM (0.01dB Resolution) 1310/1550nm Dual Laser LS (FC Interface)                |
| F1-1835LR    | Hand Held PM (0.01 Res), 850/1300nm & 1310/1550nm Light Sources (FC/SM, ST/MM Interface) |
| F1-1835LRVFL | Hand Held PM (0.01 Res), 850/1300nm & 1310/1550nm Light Sources and VFL                  |
| F1-1345LR    | Hand Held PM (0.01 Res) 1310nm 1490nm,1550nm Laser Light Source (FC Interface)           |
| F1-813RG     | Ruggedized PM (0.01 Res) 850/1300nm LED Light Source (ST Interface)                      |
| F1-1315RG    | Ruggedized PM (0.01 Res) 1310/1550nm Laser Light Source (FC Interface)                   |
| F1-LRDLXCASE | Hard Case for 3 units (empty)  |

## TEST EQUIPMENT | LIGHT SOURCE



#### **FIS LIGHT SOURCE**

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

#### **FEATURES**

- Single or Dual Light Sources
- Continuous Wave (CW) or 2kHz Modulation
- Auto Shut Off & Low Battery Indicator
- Optional AC Power Supply

- 30-Hour Typical Battery Life
- Fixed Adapter for Optimal Performance
- Built in Stand for Easy Viewing
- Ruggedized Units Available for Harsh Outdoor Environments

Each Unit Includes: Operating Manual, 9V Battery, 2.5mm & 1.25mm Adapters, and Carry Case

| PART #    | DESCRIPTION  |
|-----------|--|
| 9050-0000 | 850nm LED Light Source with ST Adapter               |
| 9051-0000 | 1300nm LED Light Source with ST Adapter              |
| 9052-0000 | Dual 850/1300nm LED Light Source with ST Adapter     |
| 9053-0000 | 1310nm Laser Light Source with FC Adapter            |
| 9054-0000 | 1550nm Laser Light Source with FC Adapter            |
| 9055-0000 | Dual 1310/1550nm Laser Source with FC Adapter        |
| 9056-0000 | 1490/1550nm Laser Light Source with FC Adapter       |
| 9058-0000 | Dual 1300nm LED/1310nm Laser Source (ST & FC)        |
| 9086-0000 | Ruggedized Light Source 850/1300nm with ST Adapters  |
| 9087-0000 | Ruggedized Light Source 1310/1550nm with FC Adapters |
| 9088-0000 | Ruggedized Light Source 1490/1550nm with FC Adapters |
| F1-9103U  | Universal 110/220v Power Supply                      |
|           |  |
|           | C E<br>1 3 3 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0     |
|           |  |



#### **FIS OV-3 TEST SET**

Loss Test Sets contain both a power meter and a light source in a single unit and are used to perform bi-directional end-to-end loss measurements. The FIS OV-3 Test Set is available configured in a number of flexible models to meet the installation and maintenance requirements of all optical networks. Include the CATV, VFL and Talk options to any model for additional functionality. The OV-3 is available in a power meter only version with the same great features.

#### **FEATURES**

- High Resolution Power Meter Calibrated at 850/1310/1490/1550nm
- 2mm Germanium Detector
- Backlit Display
- Available as Power Meter Only or Test Set
- Single or Dual Wavelength Light Source

Stores up to 255 Tests
Li-Ion Rechargeable Battery
CATV, VFL and Talk Options
One-Year Warranty
Carry Case

 Each Unit Indudes: 110v/220v AC Charger, PC Software, 2.5mm and 1.25mm Universal Adapters, Soft Cary Case, RS232 Data Cable, (3 mtr patch cable included with Units with Light Source Option).

 PART #
 DESCRIPTION

 0V3 - PM
 Deluxe Power Meter with RS232

 0V3 - F
 Text Set with 900 cm Light Source

| 003-03   | lest set with as unit light source     |
|--|--|
| 0V3-13   | Test Set with 1300nm Light Source      |
| OV3-8513   | Test Set with 850/1300nm Light Source  |
| 0V3-31   | Test Set with 1310nm Light Source      |
| 0V3-15   | Test Set with 1550nm Light Source      |
| 0V3-1315   | Test Set with 1310/1550nm Light Source |
| OV3-1415   | Test Set with 1490/1550nm Light Source |
| Add "C" to part number for CATV version, (Singlemode Only) $\cdot$ Add "V" to part number for VFL Option |  |

#### **FIS FIBER OPTIC TALK SET**

Fiber Instrument Sales' new full duplex Talk Set is a hands free unit designed for transmitting voice in both directions in a single fiber using two different wavelengths, 850/1300nm for the multimode unit and 1310/1550nm for singlemode. Includes adjustment for power and sensitivity. The built in VOX (sensitivity) circuit is meant to conserve battery power when the operator is not speaking. In addition to these features the unit also comes with a rechargeable 9V 540mAh battery and a charging port for in-unit charging. The Talk Set comes standard with ST or FC adapter ports. The loss budget for our Multimode set is 15dB; The Singlemode set is 20dB. Finally, each Talk Set comes equipped with a stereo headset with boom microphone, providing comfort for long-term use and high performance.

Each Set Includes: (2) Units, (2) Headphones with Microphone, 9V Battery

| PART #    | DESCRIPTION                               |
|-----------|---|
| 9061-1000 | FIS Multimode Talk Set (pair) ST Adapter  |
| 9061-2000 | FIS Multimode Talk Set (pair) FC Adapter  |
| 9062-1000 | FIS Singlemode Talk Set (pair) FC Adapter |
| 9062-2000 | FIS Singlemode Talk Set (pair) ST Adapter |



#### FIS DESKTOP VIDEO MICROSCOPE

The FIS Video Microscope is a natural choice for fast-paced production environments, where ease of use and fast, accurate inspections are a necessity. The microscope offers a high-resolution look at the end face of most standard connectors, through a choice of either 200x or 400x magnifications. The optics and internal components are designed to be rugged and reliable, with no user-serviceable parts.

#### Each Package comes with:

(1) Video Microscope, (1) 22" LCD monitor, (1) 6' Video Cable, (1) 2.5mm Universal Adapter

| PART #       | DESCRIPTION                         |
|--------------|-------------------------------------|
| F1-VM200LCD  | 200x Video System (110v)            |
| F1-VM400LCD  | 400x Video System (110v)            |
| F1-VM200PLCD | 200x Video System (220v)            |
| F1-VM400PLCD | 400x Video System (220v)            |
| F1-VM200USB  | 200x, USB (No LCD Monitor included) |
| F1-VM400USB  | 400x, USB (No LCD Monitor included) |

#### MICROSCOPE ACCESSORIES

Adapters are for use with the FIS Video Microscope VM Series and F1-VS200/400U Series.

| PART #     | DESCRIPTION                 |
|------------|-----------------------------|
| F1-VS25    | Universal 2.5mm Adapter     |
| F1-VS12U   | Universal 1.25mm Adapter    |
| F1-VSAPC25 | Universal 2.5mm APC Adapter |
| F1-VSLC    | LC Simplex Adapter          |
| F1-VSSMA   | SMA Adapter                 |



F1-9786

#### FIS UNIVERSAL 100x MICROSCOPE

The FIS Universal Microscope is provided with a 2.5mm universal faceplate. Insert the ferrule into the microscope and inspect the end face with ease. This complete 100x microscope is perfect for multimode connectors and is easy to use.

| PART #    | DESCRIPTION                                       |
|-----------|---|
| F1-9786   | Hand Held Universal Microscope (ST, FC & SC) 100x |
| F1-9786LC | LC Adapter for F1-9786                            |



#### FIS MINI FIBER MICROSCOPE

Utilize this compact scope to inspect connector ferrule endfaces for dirt, debris or oils that may interfere with signal transmission. Scope has both Obligue and Coaxial white LED lighting.

Includes: Microscope, (2) AAA Batteries, 2.5mm adapter, 1.25mm adapter

| PART #    | DESCRIPTION             |
|-----------|-------------------------|
| F1-MS200U | Compact 200x Microscope |



#### FIS 200x & 400x MICROSCOPE

These low cost, high quality microscopes are available in 200x or 400x magnification, and utilize white LED light to provide coaxial illumination of connector end-faces. Three "AAA" batteries provide more than 40 hours of use before battery replacement is required. Provided with a universal 2.5mm adapter, with other connector styles available. Dimensions: 8.76"L x 2.16"H

| PART #    | DESCRIPTION   |
|-----------|---|
| F1-VS200U | 200x Microscope with 1.25mm & 2.5mm Universal Adapter   |
| F1-VS400U | 400x Microscope with a 1.25mm & 2.5mm Universal Adapter |



## **TEST EQUIPMENT** | FIBER OPTIC INSPECTION & ACCESSORIES

#### FIS FIBER OPTIC INSPECTION MICROSCOPE

The FIS Video Microscope is ideal for inspecting fiber optic connector endfaces in the field. This package combines a top quality Video Monitor and Handheld Inspection Probe in one affordable package. The probe comes with interchangeable tips that enable you to inspect both male connectors and female bulkhead adapters. A large 5.6" LCD screen displays endfaces at 200x to ensure that connectors are clean and free of defects.

#### **MONITOR MODULE**

- Large 5.6"TFT LCD display
- Angle-adjustable screen for optimal viewing
- Brightness and contrast dials
- Screen folds for easy portability

#### HANDHELD VIDEO INSPECTION PROBE

- Easy-focusing knob enables one hand operation
- Interchangeable Probe Tips for inspecting different connector styles
- USB module/software included for viewing and saving images on a PC

#### **OTHER FEATURES**

- Rechargeable Batteries provide over 4 hours continuous operation
- AC Power Adapter/Charger
- Aluminum Carry Case with Shoulder Strap
- 1 year limited warranty
- RoHS Compliant

PART # F1-VPMKIT200 F1-VPMUSB

#### DESCRIPTION

FISH FISH

FIS Hand Held Video Monitor & 200X Microscope Probe 200X Probe USB Adapter, Software (No Monitor)

#### **FIS PROBE ADAPTER TIPS**

| PART #      | DESCRIPTION                                      | PART #      | DESCRIPTION                        |
|-------------|--|-------------|------------------------------------|
| F1-VP25     | 2.5mm Ferrule/PC Male/Patchcord Inspection Tip   | F1-VPLC     | LC/PC Bulkhead Inspection Tip      |
| F1-VP25APC  | 2.5mm Ferrule/APC Male/Patchcord Inspection Tip  | F1-VPLX5APC | LX.5/APC Bulkhead Inspection Tip   |
| F1-VP125    | 1.25mm Ferrule/PC Male/Patchcord Inspection Tip  | F1-VPLX5    | LX.5/PC Bulkhead Inspection Tip    |
| F1-VP125APC | 1.25mm Ferrule/APC Male/Patchcord Inspection Tip | F1-VPLEMO   | Lemo/PC Bulkhead Inspection Tip    |
| F1-VPMPM    | MPO/MTP Ferrule Male/Patchcord Inspection Tip    | F1-VPMP0    | MPO/MTP/PC Bulkhead Inspection Tip |

#### FIS UNIVERSAL TESTING SLEEVE

Designed specifically for testing applications, the FIS Universal Testing Sleeve reduces labor time while testing fiber optic patchcords with standard 2.5mm ferrules. Adapters for ST or FC reference cord are available.

| PART #    | DESCRIPTION                            |
|-----------|--|
| F1-81UNIV | FIS ST to 2.5mm Universal Test Adapter |
| F1-85UNIV | FIS FC to 2.5mm Universal Test Adapter |

#### **FIS MULTIMODE MANDRELS**

The use of mandrels in multimode insertion loss testing helps to ensure the proper launch condition into the fiber under test. By wrapping the fiber around the correct size mandrel, high order modes are stripped out and low order modes are spread out to achieve the desired launch conditions for testing. Each includes the mandrel and clip for holding the cable firmly in place during testing. Accepts jacket diameters from 1.6mm to 3.0mm and for use with both OM1, OM2 cable.

PART # DESCRIPTION

|           | Deschir Hon  |
|-----------|--|
| F1-MM6250 | 62.5/125µm and 50/125µm Mandrel Kit                    |
| F1-CCM04  | 4mm ClearCurve Mandrel (1.6 -2.0mm jacket recommended) |

#### **INFRARED DETECTION CARD**

The Infrared Detection Card enables you to easily and safely detect the presence of invisible infrared light, which is potentially harmful to the eyes. Simply point the fiber optic cable, connector or other light source at the card for a visual indication of whether or not infrared light is present. Optimized for wavelengths between 850 - 1310nm.
PART # DESCRIPTION

| DESCRIPTION                |
|----------------------------|
| 850 - 1310nm Infrared Card |

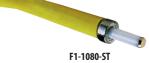
#### **FIS GOLD TIPPED PIGTAIL**

PART # F1-IDC

FIS gold tipped pigtails are available for applications requiring a reference back reflection. Available in ST, FC, and SC style connectors. For singlemode applications the reflective quality of the gold provides high back reflection characteristics at 1310nm & 1550nm.

| PART #        | DESCRIPTION                                     |
|---------------|---|
| F1-1080-ST    | 1 Meter ST/UPC Pigtail with Gold Tipped Ferrule |
| F1-1080-FC    | 1 Meter FC/UPC Pigtail with Gold Tipped Ferrule |
| F1-1080-SC    | 1 Meter SC/UPC Pigtail with Gold Tipped Ferrule |
| F1-1080-SCAPC | 1 Meter SC/APC Pigtail with Gold Tipped Ferrule |
| F1-1080-FCAPC | 1 Meter FC/APC Pigtail with Gold Tipped Ferrule |
|               |   |







#### **FIS POCKET FAULT LOCATOR**

Rugged and lightweight in aluminum housing, the FIS Pocket Fault Locator is equipped with a 650nm laser for fast and easy location of fault points in patchcords, patchpanels and enclosures. The unit can also be used to identify fibers in multi-fiber cables. The device weights 4.5oz, is 7.1" in length, and can be used for both Singlemode and Multimode applications. Battery life is 30 hours in continuous mode and 40 hours in modulated mode.

Each Unit Includes: PFL, Lanyard, Protective Boots, (2) AA Batteries and Holster.

| F1-9000Pocket Fault Locator - 2.5mm Universal Version - BlueF1-9000125Pocket Fault Locator - 1.25mm Universal Version - Blue | PART #     | DESCRIPTION   |
|--|------------|---|
| F1-9000125 Pocket Fault Locator - 1.25mm Universal Version - Blue  | F1-9000    | Pocket Fault Locator - 2.5mm Universal Version - Blue                 |
|  | F1-9000125 | Pocket Fault Locator - 1.25mm Universal Version - Blue                |
| F1-9000AD 1.25mm Adapter (Compatible with PFL's using Universal 2.5mm Adapters)  | F1-9000AD  | 1.25mm Adapter (Compatible with PFL's using Universal 2.5mm Adapters) |



The FIS Visual Fault Locator is an essential tool for troubleshooting a fiber optic system. A 1mW packaged laser sends a 650nm visible red light down the length of the fiber. The escaping light allows easy identification of breaks or severe macro bends. Internal optics are used to optimize the unit's performance for either singlemode or multimode applications. Fiber end identification and continuity testing for long distances are also natural applications.

Each Unit Includes: Manual, (2) AA Batteries, and Carry Case.

| PART #        | DESCRIPTION   |
|---------------|---|
| 0F-1000-UF    | Visual Fault Locator with 2.5mm Universal Adapter (MM & SM) |
| 0F-1000U-LC   | Visual Fault Locator with LC Adapter (MM & SM)              |
| OF-1000U-FCA  | Visual Fault Locator with FC/APC Adapter (SM)               |
| OF-1000U-SCA  | Visual Fault Locator with SC/APC Adapter (SM)               |
| OF-1000U-MTRJ | Visual Fault Locator with MT-RJ Adapter (MM & SM)           |
|               |   |





#### **FIS CONTINUITY TESTER**

A Continuity Tester enables you to easily verify light throughput as the LED transmits red light down the fiber, providing visual identification at the fiber's far end. Operates with two "AA" size batteries (provided).

| PART #     | DESCRIPTION   |
|------------|---|
| F1-5000U   | Fiber Continuity Tester 2.5mm Universal (ST, FC & SC) |
| F1-5000    | Fiber Continuity Tester (ST)                          |
| F1-5000SMA | Fiber Continuity Tester (SMA)                         |
| F1-5000FC  | Fiber Continuity Tester (FC)                          |
| F1-5000SC  | Fiber Continuity Tester (SC)                          |
| F1-5000LC  | Fiber Continuity Tester (LC)                          |

#### **FIS CA3 Core Alignment Splicer**

The New CA3 Core Alignment Fusion Splicer is designed with the splice technician in mind. The CA3 offers fast splice and heating times, excellent environmental performance, and a standard kit package with precision cleaver and (2) extended life batteries. Users have the option of operating the unit with integrated hard keys, or a new intuitive 4.3" LCD (tempered glass) touch screen. Fast, low-loss splice performance and compatibility with FIS Cheetah Splice on Connectors make this fusion splicer perfect for premise and long haul OSP applications.

#### **FEATURES**

- Fast Splice Time SM 7s Quick Mode / 18s Heat Time
- Removable fiber holders for easy fiber handling
- Rugged 4.3" Tempered Glass LCD Touch Screen
- Typical 130 Cycles (Splice & Heat) / single battery (2 Batteries Standard with Kit)
- Perfect for use with Splice-On Connectors with Metal SOC Holder

FIS CA3 Splicer Kit Includes: Splicer, Charger, Precision Cleaver, (2) Extended Life Batteries, Mini Cleaning Kit, Carry Case, Electrodes, Fiber Optic Stripper

| PART #      | DESCRIPTION   |
|-------------|---|
| F1-CA3      | CA-3 Core Alignment Splicer Kit with<br>Precision Cleaver and (2) Batteries |
| ACCESSORIES |   |
| F1-CA3BAT   | CA-3 Battery Module   |
| F1-CA3PM    | CA-3 Power Supply Module  |
| F1-CA3PC    | CA-3 Power Cord   |
| F1-CA3ET    | CA-3 Spare Electrodes   |



**High Resolution** LCD Touch Screen Monitor



**Excellent Dust and** Wind Protection



CE

Kit includes choice of **FIS Precision Cleavers** 

# **SPEED & SECURITY** with FIS' New Cheetah SOC Installer **Certification & Extended Warranty!**

## **SOC Certification**

- Review Splicer Fundamentals
- Troubleshooting Installations
- Proper Installation of the SOC

## **Extended Warranty**

- 20 Year Coverage
- Available Worldwide
- Applicable to all Styles

Contact your sales representative or visit www.fiberinstrumentsales.com for further details! Compatible with heeta Splice-On Connec

# **SPLICING**



# **FUSION SPLICE PROTECTION SLEEVES**

#### STANDARD SLEEVE – (3.0mm AFTER SHRINK)

This sleeve design represents the industry's most reliable, highest quality sleeve at an economical price. Standard lengths include 60mm and 40mm. Sleeves come standard with a clear outer tube for viewing the color of the fiber itself.

| PAKI #        | DESCRIPTION         |
|---------------|---------------------|
| F1-1002C-50   | 60mm, 50 pk (Clear) |
| F1-100240C-50 | 40mm, 50 pk (Clear) |
| F1-1002RC-50  | 60mm, 50 pk (Red)   |
|               | •                   |

#### SLIM SLEEVE – (2.5mm AFTER SHRINK)

These clear protection sleeves use reduced diameter components for a smaller finished product. The smaller diameter allows users to fit more splices into existing splice trays.

| PART #       | DESCRIPTION         |
|--------------|---------------------|
| F1-S25C-50   | 60mm, 50 pk (Clear) |
| F1-S2540C-50 | 40mm, 50 pk (Clear) |

#### **TAPERED SLEEVE – (3.0mm AFTER SHRINK)**

This newly developed sleeve offers tapered ends designed to keep the metal strength member in proper position while in use. Available in 60mm and 40mm lengths.

| PART #        | DESCRIPTION         |
|---------------|---------------------|
| F1-1002T-50   | 60mm, 50 pk (Clear) |
| F1-100240T-50 | 40mm, 50 pk (Clear) |

#### MICRO SLEEVE (1.5mm After Shrink) & Mini Sleeve (2.0mm After Shrink)

Designed to fit smaller areas for splice storage are Mini and Micro Protection Sleeves. Micro Sleeves will only accommodate 250µm coated fibers. Mini Sleeves will accommodate 900µm or 250µm coated fibers.

| PART #        | DESCRIPTION               |
|---------------|---------------------------|
| MCR0140CFD-50 | Micro 40mm, 50 pk (Clear) |
| MCR0125CFD-50 | Micro 25mm, 50 pk (Clear) |
| MINI140CDS-50 | Mini 40mm, 50 pk (Clear)  |
| MINI125CDS-50 | Mini 25mm, 50 pk (Clear)  |

#### **RIBBON SPLICE PROTECTION SLEEVE**

FIS offers two ribbon sleeve styles: Dual Strength Member and Single Strength Member. The Dual Strength Member design eliminates any undue stress on the ribbon, creating a perfectly flat exit for the ribbon. Available with a ceramic strength member.

| PART #     | DESCRIPTION               |
|------------|---------------------------|
| F1-10112DP | Dual Member 40mm, Clear   |
| F1-10112CP | Single Member 40mm, Clear |

#### **DIELECTRIC SPLICE PROTECTION SLEEVE** – (3.0mm After Shrink)

Our Dielectric sleeves are manufactured with a non-metallic strength member for the ultimate in corrosion and electrical resistance.

| PART #  | DESCRIPTION |
|---------|-------------|
| F1-DE60 | 60mm, Clear |
| F1-DE40 | 40mm, Clear |



#### **Ultrasleeve® PROTECTION SLEEVE**

Simply load the fused fiber and close the sleeve, no heat shrink curing, crimping or gluing. Ultrasleeve® features an acrylic foam tape, which seals the sleeve and protects from damage. The Ultrasleeve® splice protector can be closed by hand and is installed after splice is completed.

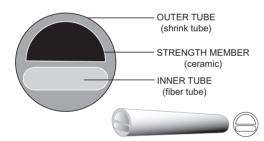
| PART #  | DESCRIPTION                   |
|---------|-------------------------------|
| F1-FS40 | 40mm Splice Protection Sleeve |
| F1-FS60 | 60mm Splice Protection Sleeve |



OUTER TUBE (shrink tube)

INNER TUBE (fiber tube)

STRENGTH MEMBER (steel)





#### **FIS LYNX™ PRECISION CLEAVER**

The LYNX provides clean, accurate cleaves required for fusion splicing. LYNX is also ideal for preparing fiber for quick-term style connectors such as Bobtails, UNICAMs and other pre-polished connectors. LYNX features a cleave angle of 90 degrees +/- 0.5 degrees. Its 16-position blade provides approximately 48,000 cleaves. LYNX cleaves single fibers (250-900µm). The LYNX Precision Cleaver can be used alone or mounted to an optional Work Tray that includes a goose neck LED.

| PART #       | DESCRIPTION                               |
|--------------|---|
| F1-LYNX      | LYNX Precision Cleaver                    |
| F1-LYNXWKS   | LYNX Cleaver with Illuminated Workstation |
| F1-LYNXBLADE | LYNX Replacement Blade                    |

#### **FIS FIELD CLEAVER**

Choose from these three cleavers, suitable for use with quick-term connectors and optimal for mechanical splicing. Each cleaver provides a guide for variable cleave lengths from 5-20mm. The blades will perform over 6,000 cleaves before replacement is necessary. The score and snap function is easy to use and preferred by many installers.

| PART #   | DESCRIPTION                     |
|----------|---------------------------------|
| F1-6000  | FIS Cleaver                     |
| F1-60CBL | FIS Replacement Blade (Carbide) |
| F1-60DBL | FIS Replacement Blade (Diamond) |
| S315X02  | Replacement Leaf Spring         |

#### **FIS PROTECTION SLEEVE OVEN**

FIS's new splice protection sleeve oven is the perfect companion to any fusion splicer by allowing for the external shrinking of fiber protection sleeves. This extends the life of a fusion splicer's battery allowing for more splices in the field and improving the efficiency of the splice process. Low profile allows for easy placement of either 40mm or 60mm fusion splice sleeves while providing a stable base for a variety of applications.

PART # DESCRIPTION

F1-9777 Rechargeable Standard Splice Sleeve oven, universal 110/220VAC



CE

CE

#### **FIS FIBER OPTIC THERMAL STRIPPER - TS SERIES**

This thermal stripper is a portable device for stripping coated optical fiber. This compact hand-held device enables the stripping process to be completed with just one hand.

| PART #     | DESCRIPTION   |
|------------|---|
| F1-TS900   | FIS Fiber Optic Thermal Stripper (Removes 900µm coating)                          |
| F1-TS250RF | FIS Fiber Optic Thermal Stripper (Removes 400µm/250µm coating on 12-ribbon fiber) |
| F1-TS250   | FIS Fiber Optic Thermal Stripper (Removes 250µm coating)                          |

# **SPLICING** | MECHANICAL SPLICING / FANOUT & BREAKOUT KITS















F1-9795-3

38

#### ULTRASPLICE

The ULTRAsplice<sup>®</sup> is a high performance, easy to install tunable and reusable mechanical splice. One splice accepts any combination of buffer sizes from 250µm-900µm. Average loss is less than .2dB with a fiber retention of over 2 lbs. Installation is simple: Cleave and insert the fibers, while checking fiber location in the glass capillary, secure by twisting a locking nut. US-126 is IBM #33G8228, US-128 is IBM #33G8227. Meets and exceeds Telcordia specifications. (Also available in specialty fiber sizes).

DESCRIPTION PART # US-1

| 126 | Singlemode Universal ULTRAsplice |
|-----|----------------------------------|
| 28  | Multimode Universal ULTRAsplice® |

#### LOCK JAW

These mechanical splices hold fiber with a self-gripping clamshell design. These unique splices also allow for the optional use of cyanoacrylate adhesive (e.g. Super Glue) to achieve a superior pull strength of 1.5 lbs. The splices fit into any mechanical splice style splice tray, accommodate 125um clad fiber (singlemode or multimode) and have a typical loss of .2dB. The splices are also available in our new FIS Mechanical Splice Kit that includes 6 FIS Mechanical Splices, Jacket/Buffer Stripper, Field Cleaver, Adhesive, Optic Prep Wipes and Instructions. Pull str

| i uli suciiyui | 1.JIDS WITH dullesive. |
|----------------|------------------------|
| PART #         | DESCRIPTION            |

YTION

F1-MC125 Splice for 125µm Clad Fiber SM or MM

F1-MC1255K Splice Kit - (6) splices, cleaver, adhesive, cleaner & strip tool

#### **ELASTOMERIC LAB SPLICE**

The improved FIS Elastomeric Lab Splice is ideal for making temporary fiber connections and can be reused hundreds of times. To use splice for instrument testing, simply insert a cleaved pigtail from OTDR or Power Meter and the cleaved unconnectorized fiber to be tested. Excellent for both multimode and singlemode fiber, the splice accepts fiber cladding diameters of 125µm to 140µm. The Lab Splices are supplied in blister packs of 6 (containing one of each color: pink, peach, yellow, green, blue and purple) or 12 (containing 2 of each color).

| PART #      | DESCRIPTION |
|-------------|-------------|
| FIS-1140-6  | Pack of 6   |
| FIS-1140-12 | Pack of 12  |
|             | Holdor      |

# **FANOUT & BREAKOUT KITS**

### **FIS BUFFER TUBE/RIBBON FAN-OUT KITS**

FIS Fan-Out Kits are designed for a simple and easy breakout from standard Buffer Tubes or Ribbon Cables. The kits are pre-configured of 900µm Hytrel tubing in the appropriate industry-standard color code. FIS Fan-Out Kits have a unique snap-together design that offers the ability to unsnap the unit for reentry if necessary. This cost-saving feature allows you to cover your application possibilities with just one style. DECONDENAN

| PAKI #     | DESCRIPTION                        |
|------------|------------------------------------|
| F1-BF0425M | 4 Fiber (25" Tubing) Accepts 250µm |
| F1-BF0625M | 6 Fiber (25" Tubing) Accepts 250µm |
| F1-BF1225M | 12 Fiber (25"Tubing) Accepts 250µm |
| F1-BF0436M | 4 Fiber (36" Tubing) Accepts 250µm |
| F1-BF0636M | 6 Fiber (36" Tubing) Accepts 250µm |
| F1-BF1236M | 12 Fiber (36"Tubing) Accepts 250µm |

#### FIS COLOR CODED BREAKOUT KITS

The FIS 2mm and 3mm Breakout Kits are designed for the guick and simple termination of distribution cables. Color coded tubing eliminates the need for marking individual fiber ends, as your cable will be color coded to TIA/EIA standards. Testing and installation time is also reduced. Custom Colors Available.

| PART #         | DESCRIPTION  |
|----------------|--|
| F1-B0K0640-20M | 2mm, 6 Fiber (40"Tubing) Accepts 900µm                 |
| F1-B0K1240-20M | 2mm, 12 Fiber (40"Tubing) Accepts 900µm                |
| F1-BOK0640MA   | 2mm, 6 Fiber (40"Tubing) Accepts 900µm - Aqua          |
| F1-BOK1240MA   | 2mm, 12 Fiber (40"Tubing) Accepts 900µm - Aqua         |
| F1-B0K0640M    | 3mm, 6 Fiber (40"Tubing) Accepts 900µm                 |
| F1-B0K1240M    | 3mm, 12 Fiber (40"Tubing) Accepts 900μm                |
| F1-B0K0640M250 | 3mm, 6 Fiber Colored Coded, <b>Accepts 250µm - NEW</b> |
| F1-B0K1240M250 | 3mm 12 Fiber Colored Coded, <b>Accepts 250µm - NEW</b> |

#### **FIS UNIVERSAL BREAKOUT KITS**

The ability to connectorize loose tube fiber requires the installation of a 3mm jacket over the 250µm coated fiber. The jacket, or furcation tube, contains an inner pull string for easy installation. This low-cost Universal Breakout Kit provides directions and materials to prepare cable ends for connectorization. Kit includes: 25 meters of 3mm furcation tubing, 2 sizes of black shrink tube (13mm and 26mm diameter), 2 gel remover packets, 2 two gram Hysol Epoxy packs, 8 pcs. adhesive shrink tube and 12 pcs. clear shrink tube.

PART # DESCRIPTION

F1-5527 Orange Furcation Tube for Multimode

F1-5528 Yellow Furcation Tube for Singlemode

#### **ROSIN BAG**

FIS technicians utilize rosin bags to ease the application of furcation tubing and help remove flooding gels while stripping. The rosin bags are used to dry wet surfaces making furcation guicker and easier. Rosin bags are available in 3 packs only. PART # DESCRIPTION

F1-9795-3 3 Rosin Bags per pack

# **CONNECTIVITY**





LOAD IN HOLDER



**THE 2 MINUTE CONNECTION** 

LOAD FIBER





**FIS BOBTAIL™ NO-POLISH CONNECTOR** 

FIS Bobtail Connectors provide a pre-polished, quick termination style connector for an industry leading value. Bobtails are ideal for many applications including but not limited to local area networks, restoration work, testing applications, and laboratory settings. The open epoxy canal allows application of Crazy Glue, Super Glue or any Cyanoacrylate adhesives. As always, your satisfaction is guaranteed or return the connectors to FIS for a complete refund.

| PART #       | DESCRIPTION                                      | BOOT SIZE |
|--------------|--|-----------|
| F1-0066-BT   | Bobtail ST Pre-polished Connector - 62.5µm (OM1) | 900µm     |
| F1-006650-BT | Bobtail ST Pre-polished Connector - 50µm (OM2)   | 900µm     |
| F1-0069-BT   | Bobtail ST Pre-polished Connector - Singlemode   | 900µm     |
| F1-5066-BT   | Bobtail LC Pre-polished Connector - 62.5µm (OM1) | 900µm     |
| F1-506650-BT | Bobtail LC Pre-polished Connector - 50µm (OM2)   | 900µm     |
| F1-5069-BT   | Bobtail LC Pre-polished Connector - Singlemode   | 900µm     |
| F1-3066-BT   | Bobtail SC Pre-polished Connector - 62.5µm (OM1) | 900µm     |
| F1-306650-BT | Bobtail SC Pre-polished Connector - 50µm (OM2)   | 900µm     |
| F1-3069-BT   | Bobtail SC Pre-polished Connector - Singlemode   | 900µm     |

FIS BOBTAIL<sup>™</sup> PULL FORCE (LBS.) VS . COMPETITION

|   | Connector A<br>(leading competitor) | Connector B<br>(leading competitor) | Bobtail™<br>Connector |
|---|-------------------------------------|-------------------------------------|-----------------------|
| Test #1   | .6*                                 | 1.7                                 | 1.7                   |
| Test #2   | .5*                                 | 1.8                                 | 1.3                   |
| Test #3   | .4                                  | 1.8                                 | 1.2                   |
| Test #4   | .5                                  | 2.1                                 | 1.9                   |
| Test #5   | 1.0*                                | 1.3                                 | 2.1                   |
| Test #6   | .8                                  | 1.6                                 | 2.3                   |
| .6 lbs. average 1.71 lbs. average 1.75 lbs. average * Connector broke off fiber |                                     |                                     |                       |

#### CAUTION: FIS discourages the use of the Bobtail or any mechanical splice style connector in 10 Gig network systems.

#### **FIS UNIVERSAL SLIDING BOBTAIL HOLDER**

The new and improved FIS assembly tool is now designed with a precision machined sled to aid in the insertion of the prepared field fiber. This feature virtually eliminates fiber stub breakage and minimizes insertion loss. Includes adapter plates for SC, LC, and ST Bobtail Connectors.

DESCRIPTION PART # FIS Universal Sliding Bobtail Holder F1-00SUNBTH

## FIS BOBTAIL<sup>™</sup> MINI REPAIR KIT

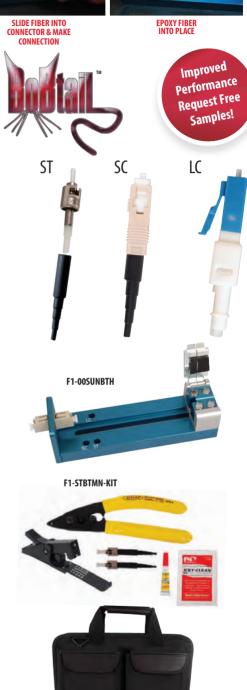
#### PART # DESCRIPTION

| F1-STBTMN-KIT | Mini ST 62.5 Kit w. Stripper, Cleaver, Adhesive & (2) ST Bobtails |
|---------------|---|
| F1-SCBTMN-KIT | Mini SC 62.5 Kit w. Stripper, Cleaver, Adhesive & (2) SC Bobtails |
| F1-LCBTMN-KIT | Mini LC 62.5 Kit w. Stripper, Cleaver, Adhesive & (2) LC Bobtails |
|               |   |

#### **DELUXE BOBTAIL™ INSTALLATION KIT**

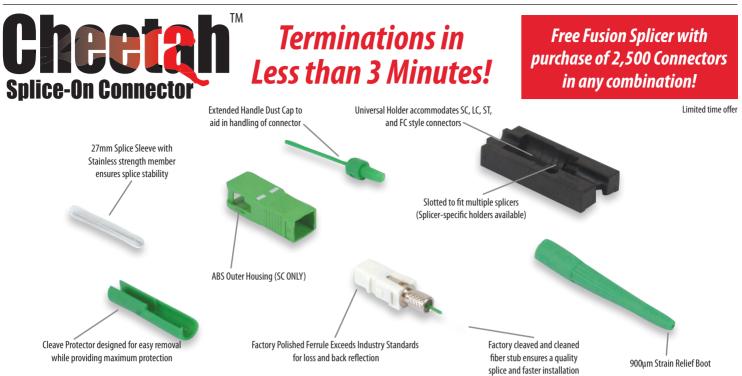
The Bobtail<sup>™</sup> Installation Kit includes all the consumables and tools necessary for field termination of Bobtail<sup>™</sup> connectors. When used in conjunction with the optional VFL it allows for active optimization of the connector before epoxy application.

| QTY               | DESCRIPTION                               | PART #      |
|-------------------|---|-------------|
| 1                 | LYNX Cleaver                              | F1-LYNX     |
| 1                 | Universal Sliding Bobtail Holding Fixture | F1-00SUNBTH |
| 1                 | Quickset Adhesive                         | F1-BTXY     |
| 1                 | Stripping Tool                            | F1-1301T    |
| 1                 | DryWipes                                  | F1-6702     |
| 1                 | 4oz. Bottle of Alcohol                    | F1-0007     |
| 1                 | Connector Cleaner                         | F1-7020C    |
| 6                 | Syringe Tips                              | F1-00-TIP   |
| 1                 | Pocket Fault Locator                      | F1-9000     |
| 3                 | Assorted SM and MM Patchcords             |             |
| PART #            | DESCRIPTION                               |             |
| F1-00UNBTKITSMPFL | Universal Bobtail Kit for both SM & MM    |             |



F1-00UNBTKITSMPFL

# **CONNECTIVITY** | SPLICE-ON CONNECTORS



#### **FIS CHEETAH SOC™**

The FIS Cheetah SOC™ is the quickest pre-polished factory terminated piqtail to prepare, splice and install. The Cheetah SOC™ 27mm splice protection sleeve is encapsulated and protected by the strain relief boot eliminating the need for splice trays, chips and extra cabinets. When used with the required universal holder it allows for the SOC to be used within a variety of fiber optic fusion splicers. ndad Duct Can OMum Root, and Eusion Splice Sleeve Fach 900 . . . . . . . . ~ D . . . . . . . . .

| 900µm Cheetan | <b>JC<sup>III</sup> Includes:</b> Connector, Cleave Protector, Extended Dust Cap, 900µm Boot, and Fusion |
|---------------|--|
|               |  |

| Each 900µm Cheetal     | <b>1 SOC'''' Includes:</b> Connector, Cleave Protector, Extended Dust Cap, 900µm Boot, and Fusion Splice S | leeve 🥿  |
|------------------------|--|--|
| PART #                 | DESCRIPTION  |  |
| F1-LCAPC-SOC-X         | LC/APC Singlemode, Green 900µm Boot  |  |
| F1-LCUPC-SOC-X         | LC/UPC Singlemode, Blue 900µm Boot   |  |
| F1-LC62-SOC-X          | LC/PC 62.5µm Multimode (OM1), Beige 900µm Boot   |  |
| F1-LC50-SOC-X          | LC/PC 50µm Multimode (OM2), Black 900µm Boot   | 100 Bulk   |
| F1-LCOM3-SOC-X         | LC/PC 50µm Multimode (OM3), Aqua 900µm Boot  | Pack   |
| F1-LCOM4-SOC-X         | LC/PC 50µm Multimode (OM4), Magenta 900µm Boot   |  |
| F1-LCOM4-SOCAQ-X       | LC/PC 50µm Multimode (OM4), Aqua 900µm Boot  |  |
| F1-SCAPC-SOC-X         | SC/APC Singlemode, Green 900μm Boot  |  |
| F1-SCUPC-SOC-X         | SC/UPC Singlemode, Blue 900μm Boot   |  |
| F1-SC62-SOC-X          | SC/PC 62.5µm Multimode (OM1), Beige 900µm Boot   |  |
| F1-SC50-SOC-X          | SC/PC 50μm Multimode (OM2), Black 900μm Boot   |  |
| F1-SCOM3-SOC-X         | SC/PC 50μm Multimode (OM3), Aqua 900μm Boot  | 1  |
| F1-SCOM4-SOC-X         | SC/PC 50μm Multimode (OM4), Magenta 900μm Boot   |  |
| F1-STUPC-SOC-X         | ST/UPC Singlemode, Blue 900μm Boot   |  |
| F1-ST62-SOC-X          | ST/PC 62.5µm Multimode (OM1), Beige 900µm Boot   | F1-LCOM3-SOC   |
| F1-ST50-SOC-X          | ST/PC 50μm Multimode (OM2), Black 900μm Boot   | Inc  |
| F1-STOM3-SOC-X         | ST/PC 50μm Multimode (OM3), Aqua 900μm Boot  | and the  |
| F1-FCAPC-SOC-X         | FC/APC Singlemode, Green 900μm Boot  |  |
| F1-FCUPC-SOC-X         | FC/UPC Singlemode, Blue 900µm Boot   |  |
| F1-FC62-SOC-X          | FC/PC 62.5μm Multimode (OM1), Beige 900μm Boot   | state inter USA  |
| F1-FC50-S0C-X          | FC/PC 50μm Multimode (OM2), Black 900μm Boot   |  |
| F1-FC0M3-SOC-X         | FC/PC 50μm Multimode (OM3), Aqua 900μm Boot  |  |
| *When ordering replace | the "X" to specify 12= 12packs, 100= 100packs.   | and a second sec |
| 900µm CHEETAH SO       |  | the state of the second  |
| Soopin Cheelan So      | CE   |  |

#### 900µm CHEETAH SOC™ ACCESSORIES

| PART #        | DESCRIPTION   |
|---------------|---|
| F1-SOC-OVEN   | Cheetah Splice-On Connector Sleeve Oven   |
| F1-SOCHOLDER  | SOC Universal Holder  |
| F1-SOCMTL-FIS | FIS Metal SOC Holder for the FIS Super Cougar   |
| F1-SOCMTL-AR  | FIS Metal SOC Holder for AFL Splicers (11S, 60R12, 18R, 11R, 17S-FH, 50R, 17R)                                |
| F1-SOCMTL-A   | FIS Metal SOC Holder for the AFL 60S and 18S Splicers   |
| F1-SOCMTL-F   | FIS Metal SOC Holder for the OFS Fitel Splicers (S122, S123C, S123M4, S123M8, S123M12, S178A, S153A)          |
| F1-SOCMTL-S   | FIS Metal SOC Holder for the Sumitomo Splicers (TYPE-39FH, TYPE-25, Quantum Q101-CA, TYPE-<br>66, TYPE-65M24) |
| F1-FTLSHELF   | FIS Utility/SOC Oven Shelf for Fitel Splicers (See page 49)   |
| F1-AFL7SHELF  | FIS Utility/SOC Oven Shelf for AFL Splicers   |
|               |   |



**F1SOCMTLS** 

F1-SOC-OVEN

New SOC Metal Holde



3mm FIS Cheetah SOC™



12-Pack FIS Cheetah SOC™



F1-SOC-30FTLHLDR

#### **FIS KEYED LC CONNECTORS & ADAPTERS**

- The solution to managing multiple networks with reduced risks
- Connectors and Adapters prevent improper connection of separate networks with common access points
- 2 color-coded, keyed designs to limit improper network connections
- Each connector/adapter will mate only with same-color adapter/connector



F1-LCADPTKYSL

#### NEW 3mm CHEETAH SOC™

Using a factory-terminated and pre-polished connector, the 3.0mm Cheetah Splice-On Connector™ (SOC) provides a connection that meets or exceeds industry standards for loss and back reflection. The Splice-On Connector is provided with a factory-cleaved 900um fiber stub to ensure ease of use and optimal performance.

The unique 3mm boot allows the entire splice to be concealed and protected, and provides a simpler cable management system within the rack or enclosure. The 3.0mm SOC is designed to work with the Fitel family of fusion splicers and the Fitel S325A Cleaver (cordage fiber holder required). The unique UV Cure Protection Sleeve can be cured in 30 seconds using the UV Cure Station. • Splice-On solution for 3mm applications

- Splice protection encapsulated and protected by the strain relief boot
- Same ease of use as the 900µm SOC

Each 3.0mm Cheetah SOC™ Includes: Connector, Cleave Protector, Extended Dust Cap, 3.0mm Boot, and UV Splice Protection Sleeve

| PART #  | DESCRIPTION                                    |  |
|---|--|--|
| F1-LCAPC-SOC-30-X   | LC/APC Singlemode, Green 3.0mm Boot            |  |
| F1-LCUPC-SOC-30-X   | LC/UPC Singlemode, White 3.0mm Boot            |  |
| F1-LC62-SOC-30-X  | LC/PC 62.5µm Multimode (OM1), Beige 3.0mm Boot |  |
| F1-LC50-SOC-30-X  | LC/PC 50µm Multimode (OM2), Black 3.0mm Boot   |  |
| F1-LCOM3-SOC-30-X   | LC/PC 50µm Multimode (OM3), Aqua 3.0mm Boot    |  |
| F1-LCOM4-SOC-30-X   | LC/PC 50µm Multimode (OM4), Magenta 3.0mm Boot |  |
| F1-LCOM4-SOCAQ-X  | LC/PC 50µm Multimode (OM4), Aqua 3.0mm Boot    |  |
| F1-SCAPC-SOC-30-X   | SC/APC Singlemode, Green 3.0mm Boot            |  |
| F1-SCUPC-SOC-30-X   | SC/UPC Singlemode, White 3.0mm Boot            |  |
| F1-SC62-SOC-30-X  | SC/PC 62.5µm Multimode (OM1), Beige 3.0mm Boot |  |
| F1-SC50-SOC-30-X  | SC/PC 50µm Multimode (OM2), Black 3.0mm Boot   |  |
| F1-SCOM3-SOC-30-X   | SC/PC 50µm Multimode (OM3), Aqua 3.0mm Boot    |  |
| F1-SCOM4-SOC-30-X   | SC/PC 50µm Multimode (OM4), Magenta 3.0mm Boot |  |
| F1-STUPC-SOC-30-X   | ST/UPC Singlemode, White 3.0mm Boot            |  |
| F1-ST62-SOC-30-X  | ST/PC 62.5µm Multimode (OM1), Beige 3.0mm Boot |  |
| F1-ST50-SOC-30-X  | ST/PC 50µm Multimode (OM2), Black 3.0mm Boot   |  |
| F1-STOM3-SOC-30-X   | ST/PC 50µm Multimode (OM3), Aqua 3.0mm Boot    |  |
| *When ordering replace the "X" to specify 12= 12 packs, 100= 100 packs. |  |  |

#### TALL COCTM ACCECCODIE

| 3.0mm CHEETAH SUC   | ···· ACCESSURIES                                  |
|---------------------|---|
| PART #              | DESCRIPTION                                       |
| F1-9775             | UV Cure Station                                   |
| F1-NOA81            | UV Adhesive 6cc Syringe                           |
| F1-SOC-30FTLHLDR    | FIS 3.0mm SOC Cordage Holder for Fitel Splicers   |
| F1-SOC-30AFLHLDR    | FIS 3.0mm SOC Cordage Holder for AFL Splicers     |
| F1-SOC-30CRIMPDIE   | FIS Crimp Die for the 3.0mm SOC (Crimp Die Only)  |
| F1-SOC-30CRIMPTOOL  | FIS Crimp Tool (Die and Handle) for the 3.0mm SOC |
| F1-SOC-30STRIPCHART | 3mm SOC Strip Chart                               |

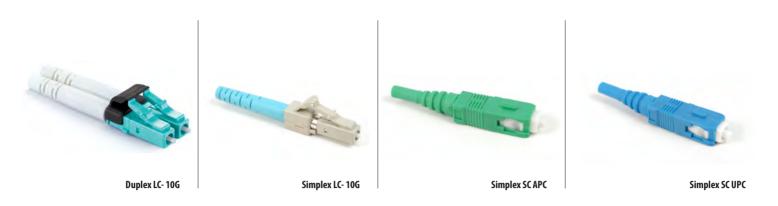


CE

F1-9775

| Manufacturer                                  | Splicer Model     | SOC Cordage Size<br>Compatability | Metal Holder<br>Compatability | Metal Holder<br>Part Number | Universal Holder<br>Compatability<br>All Versions |  |
|---|-------------------|-----------------------------------|-------------------------------|-----------------------------|---|--|
| FIS   | Super Cougar      | 900µm only                        | All Versions                  | F1SOCMTLFIS                 |   |  |
|   | FSM-11(S/M)       |                                   | All.) (                       | F1SOCMTLAR                  | All.) (and an a                                   |  |
| -   | FSM-12S           |                                   | All Versions                  |                             | All Versions                                      |  |
| AFL/Fujikura                                  | FSM-17S           |                                   | SC & LC Only                  |                             |   |  |
|   | FSM-18S           | 900µm and 3.0mm                   |                               | F1SOCMTLA                   |   |  |
|   | FSM-19S           |                                   | CC I C I CT O I               | FISOCIVITLA                 | N/A   |  |
|   | FSM-60(S/R)       |                                   | SC, LC & ST Only              |                             |   |  |
|   | FSM-70(S/R)       |                                   |                               |                             |   |  |
| e   | S122 (A/C/M)      | 900µm and 3.0mm                   | All Versions                  |                             |   |  |
| a/Fit   | S121 (A/M)        |                                   |                               | F1SOCMTLF                   | All Versions                                      |  |
| awa,  | S123 (C/M)        |                                   |                               |                             |   |  |
| ruk   | S153              |                                   |                               |                             |   |  |
| INNO Sumitomo Furukawa/Fitel AFL/Fujikura FIS | S178A             |                                   |                               |                             |   |  |
|   | Type-25e (U/S/M)  |                                   |                               |                             | All Versions                                      |  |
| om  | Type-39FH         |                                   |                               |                             | N/A   |  |
| Sumito  | Туре-46           | 900µm only                        | All Versions                  | F1SOCMTLS                   | All Versions                                      |  |
|   | Туре-66           |                                   |                               |                             | N/A   |  |
|   | Quantum (Q101-CA) |                                   |                               |                             | N/A   |  |
| 07  | IFS 10            | 000um only                        | All Versions                  | F1SOCMTLIFS10               | N/A   |  |
| N   | IFS 15            | 900µm only                        | All versions                  | FISUCMILIESTU               | N/A   |  |
| Greenlee                                      | 910FS             | 900µm only                        | All Versions                  | GREENSOCHLDR                | N/A   |  |

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The LC connector licensed by Lucent Technologies provides a pull-proof design and small size perfect for high-density applications. Available in simplex or duplex versions. The LC connector is provided with a 1.25mm zirconia ferrule. The LC also incorporates a unique latching mechanism providing stability in system rack mounts.

\_\_\_\_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

| LC EPOXY CONNECTORS |                           |           |              |          |  |  |  |  |
|---------------------|---------------------------|-----------|--------------|----------|--|--|--|--|
| PART #              | ТҮРЕ                      | BOOT SIZE | FERRULE SIZE | FERRULE  |  |  |  |  |
| F1-5066             | Simplex-MM                | 3.0mm     | 128µm        | Zirconia |  |  |  |  |
| F1-5066AQ           | Simplex-MM 10 Gig         | 3.0mm     | 126µm        | Zirconia |  |  |  |  |
| F1-506616AQ         | Simplex-MM 10 Gig         | 1.6-2.0mm | 128µm        | Zirconia |  |  |  |  |
| F1-506616           | Simplex-MM                | 1.6-2.0mm | 128µm        | ZIrconia |  |  |  |  |
| F1-5066900          | Simplex-MM                | 900µm     | 128µm        | Zirconia |  |  |  |  |
| F1-5069             | Simplex-SM                | 3.0mm     | 126µm        | Zirconia |  |  |  |  |
| F1-506916           | Simplex-SM                | 1.6-2.0mm | 126µm        | Zirconia |  |  |  |  |
| F1-5069900          | Simplex-SM                | 900µm     | 126µm        | Zirconia |  |  |  |  |
| F1-5069APC          | Simplex APC               | 3.0mm     | 126µm        | Zirconia |  |  |  |  |
| F1-5069900APC       | Simplex APC               | 900µm     | 126µm        | Zirconia |  |  |  |  |
| F1-6066             | Duplex-MM                 | 3.0mm     | 128µm        | Zirconia |  |  |  |  |
| F1-606616           | Duplex-MM                 | 1.6-2.0mm | 128µm        | Zirconia |  |  |  |  |
| F1-6069             | Duplex-SM                 | 3.0mm     | 126µm        | Zirconia |  |  |  |  |
| F1-606916           | Duplex-SM                 | 1.6-2.0mm | 126µm        | Zirconia |  |  |  |  |
| F1-6069900          | Duplex-SM                 | 900µm     | 126µm        | Zirconia |  |  |  |  |
| F1-5066AR           | Anaerobic-MM              | 3.0mm     | 128µm        | Zirconia |  |  |  |  |
| F1-6067             | Duplex Mini LC-SM - Blue  | 1.6mm     | 126µm        | Zirconia |  |  |  |  |
| F1-6068AQ           | Duplex Mini LCMM - 10 Gig | 1.6mm     | 127µm        | Zirconia |  |  |  |  |
| F1-6068             | Duplex Mini LC-MM - Beige | 1.6mm     | 127µm        | Zirconia |  |  |  |  |

The Mini LC Connector is designed with a narrow ferrule pitch (5.25mm) to work with the Mini SFP (mSFP) transceiver.

The SC is a non-optical disconnect connector with a 2.5mm pre-radiused zirconia ferrule. Available in simplex and duplex styles, this connector features a push-pull connection design for quick patching of cables into rack or wall mounts. Utilize the reusable duplex holding clip to create duplex connections.

#### **SC EPOXY CONNECTORS**

| PART #        | ТҮРЕ                  | FERRULE SIZE                  | FERRULE         | <b>BOOT SIZE</b> |
|---------------|-----------------------|-------------------------------|-----------------|------------------|
| F1-3066       | Multimode             | 127µm                         | ZIrconia        | 3mm              |
| F1-306620     | Multimode             | 127µm                         | Zirconia        | 2mm              |
| F1-3066900    | Multimode             | 127µm                         | Zirconia        | 900µm            |
| F1-3061       | Multimode             | 127µm                         | Stainless Alloy | 3mm              |
| F1-3069       | Singlemode            | 126µm                         | Zirconia        | 3mm              |
| F1-306920     | Singlemode            | 126µm                         | Zirconia        | 2mm              |
| F1-3069900    | Singlemode            | 126µm                         | Zirconia        | 900µm            |
| F1-3069APC    | Singlemode APC        | 126µm                         | Zirconia        | 3mm              |
| F1-3069900APC | Singlemode APC        | 126µm                         | Zirconia        | 900µm            |
| F1-3069APC20  | Singlemode APC        | 126µm                         | Zirconia        | 2mm              |
| F1-3066AR     | Multimode (Anaerobic) | 125µm                         | Zirconia        | 3mm              |
| F1-3066AQ     | Multimode 10 Gig      | 127µm                         | Zirconia        | 3.0mm            |
| F1-3066AQ20   | Multimode 10 Gig      | 127µm                         | Zirconia        | 1.6/ 2.0mm       |
| F1-3066AQ900  | Multimode 10 Gig      | 127µm                         | Zirconia        | 900µm            |
| F1-CLBK       | Dupl                  | ex Clip (Black for Multimode) |                 |                  |
| F1-CLBL       | Dupl                  | ex Clip (Blue for Singlemode) |                 |                  |

## **CONNECTIVITY | STANDARD CONNECTORS**



The ST connector utilizes a bayonet twist-lock connection with 2.5mm ferrule. Available in Singlemode and Multimode, the ST connector features reliable and durable field installation. The design of the ST connector enables installers to crimp the back of the body directly onto the cable jacket and Kevlar<sup>®</sup>. This eliminates cable pull-away, ensuring a strong termination. Upon request, FIS ST connectors can be supplied without FIS markings. Stainless alloy ferrules can be custom drilled.

#### **ST EPOXY CONNECTORS**

| PART #        | ТҮРЕ                  | FERRULE SIZE | FERRULE         | BOOT  |
|---------------|-----------------------|--------------|-----------------|-------|
| F1-0066       | Multimode             | 127µm        | Zirconia        | 3mm   |
| F1-006620     | Multimode             | 127µm        | Zirconia        | 2mm   |
| F1-0066900BLK | Multimode             | 127µm        | Zirconia        | 900µm |
| F1-0067       | Multimode             | 140µm        | Zirconia        | 3mm   |
| F1-0069       | Singlemode            | 126µm        | Zirconia        | 3mm   |
| F1-006920     | Singlemode            | 126µm        | Zirconia        | 2mm   |
| F1-0069900    | Singlemode            | 126µm        | Zirconia        | 900µm |
| F1-0061       | Multimode             | 127µm        | Stainless Alloy | 3mm   |
| F1-0061R      | Multimode             | 125µm        | Stainless Alloy | 3mm   |
| F1-006120     | Multimode             | 127µm        | Stainless Alloy | 2mm   |
| F1-0063       | Multimode             | 140µm        | Stainless Alloy | 3mm   |
| F1-0064       | Multimode             | 230µm        | Stainless Alloy | 3mm   |
| F1-0065       | Plastic Fiber         | 1000µm       | Stainless Alloy | 3mm   |
| F1-1066AR     | Multimode (Anaerobic) | 125µm        | Zirconia        | 3mm   |
| F1-0066AQ     | Multimode - 10 Gig    | 127µm        | Zirconia        | 3mm   |
| F1-0066AQ20   | Multimode - 10 Gig    | 127µm        | Zirconia        | 2mm   |
| F1-0066AQ900  | Multimode - 10 Gig    | 127µm        | Zirconia        | 900µm |

FC connectors are specifically designed for telecommunication applications and provide non-optical disconnect performance. Designed with a threaded coupling for durable connections. The ferrule is PC finished to a pre-radius, which ensures low back reflection. Stainless alloy ferrules can be custom drilled to your specifications. All FIS FC connectors use narrow key (2.0mm).

| FC EPOXY CONNECTORS |                    |              |                 |       |  |  |  |  |
|---------------------|--------------------|--------------|-----------------|-------|--|--|--|--|
| PART #              | ТҮРЕ               | FERRULE SIZE | FERRULE         | BOOT  |  |  |  |  |
| F1-2073             | Multimode          | 127µm        | Zirconia        | 3mm   |  |  |  |  |
| F-1207320           | Multimode          | 127µm        | Zirconia        | 2mm   |  |  |  |  |
| F1-2073900          | Multimode          | 127µm        | Zirconia        | 900µm |  |  |  |  |
| F1-2777             | Multimode          | 140µm        | Zirconia        | 3mm   |  |  |  |  |
| F1-2771             | Multimode          | 128µm        | Stainless Alloy | 3mm   |  |  |  |  |
| F1-2772             | Multimode          | 140µm        | Stainless Alloy | 3mm   |  |  |  |  |
| F1-2774             | Multimode          | 230µm        | Stainless Alloy | 3mm   |  |  |  |  |
| F1-2070             | Singlemode         | 126µm        | Zirconia        | 3mm   |  |  |  |  |
| F1-207020           | Singlemode         | 126µm        | Zirconia        | 2mm   |  |  |  |  |
| F1-2070900          | Singlemode         | 126µm        | Zirconia        | 900µm |  |  |  |  |
| F1-2070APC          | Singlemode - APC   | 126µm        | Zirconia        | 3mm   |  |  |  |  |
| F1-2070APC20        | Singlemode - APC   | 126µm        | Zirconia        | 2mm   |  |  |  |  |
| F1-2070900APC       | Singlemode - APC   | 126µm        | Zirconia        | 900µm |  |  |  |  |
| F1-2073AQ           | Multimode - 10 Gig | 127µm        | Zirconia        | 3mm   |  |  |  |  |
| F1-2073AQ900        | Multimode - 10 Gig | 127µm        | Zirconia        | 900µm |  |  |  |  |

# **BULK CONNECTORS & ADAPTERS**





FIS Multimode and Singlemode ST, SC, LC and FC connectors utilize a high quality 2.5mm zirconia ferrule. Bulk packaged in lots of 100 pieces, these connectors offer the best value in performance and cost savings. Provided with 3mm boots.

#### **BULK CONNECTORS**

| PART #        | DESCRIPTION                      |
|---------------|----------------------------------|
| F1-0066-100   | FIS MM ST Conn - (100 pk.)       |
| F1-0069-100   | FIS SM ST Conn - (100 pk.)       |
| F1-5066-100   | FIS MM LC Conn - (100 pk.)       |
| F1-5069-100   | FIS SM LC Conn - (100 pk.)       |
| F1-2073-100   | FIS MM FC Conn - (100 pk.)       |
| F1-2070-100   | FIS SM FC Conn - (100 pk.)       |
| F1-3066-100   | FIS MM SC Conn - (100 pk.)       |
| F1-3069-100   | FIS SM SC Conn - (100 pk.)       |
| F1-3066AQ-100 | FIS MM 10 Gig SC Conn- (100 pk.) |
| F1-5066AQ-100 | FIS MM 10 Gig LC Conn- (100 pk.) |

FIS Multimode and Singlemode ST, SC, LC and FC adapters bulk packaged in lots of 100 pieces. These adapters offer the best value in performance and cost savings.

## BULK ADAPTERS

| PART #        | DESCRIPTION                     |
|---------------|---------------------------------|
| F1-8102SS-100 | FIS MM ST - (100 pk.)           |
| F1-8200A-100  | FIS SM ST - (100 pk.)           |
| F1-8020-100   | FIS MM LC Duplex - (100 pk.)    |
| F1-8010-100   | FIS SM LC Duplex- (100 pk.)     |
| F1-8520-100   | FIS SM FC Style 2 - (100 pk.)   |
| F1-3800BC-100 | FIS MM SC Beige - (100 pk.)     |
| F1-3810BC-100 | FIS SM SC Blue - (100 pk.)      |
| F1-4800BC-100 | FIS SM SC/APC Green - (100 pk.) |
| F1-8600ET-100 | FIS MM SC Duplex - (100 pk.)    |

# **CUSTOM DRILLING SERVICES FROM FIS**

FIS offers a fast turnaround on custom micro drilling services. FIS can accommodate almost any fiber size for special applications. We are capable of drilling FC and SC style stainless alloy connectors that range from 250µm to 900µm. ST and SMA style stainless alloy connectors can be drilled up to 1550µm. However we cannot drill to odd sizes or stainless steel ferrules.

#### **Minimum Order Quantity – Ten connectors**

|                     | 250μm - 490μm Hole Sizes:   |               |
|---------------------|-----------------------------|---------------|
| Hole Size Tolerance |                             | +10μm / -4μm  |
| Concentricity       |                             | 15µm or less  |
|                     | 500μm - 990μm Hole Sizes:   |               |
| Hole Size Tolerance |                             | +20μm / -5μm  |
| Concentricity       |                             | 20µm or less  |
|                     | 1000µm - 1550µm Hole Sizes: |               |
| Hole Size Tolerance |                             | +30μm / -10μm |
| Concentricity       |                             | 25µm or less  |

There are many factors that can affect the performance of very small drill bits. Hole sizes below 250µm and above 900µm drilled in-house will be done on a "best effort" basis. However, we cannot guarantee the performance of these parts in your customer's application. FIS recommends that you first order a small sample batch of drilled parts to evaluate for your application.

| 250µm | 450µm | 650µm | 920µm  |
|-------|-------|-------|--------|
| 260µm | 460µm | 660µm | 930µm  |
| 270µm | 470µm | 670µm | 970µm  |
| 280µm | 480µm | 680µm | 1000µm |
| 300µm | 490µm | 710µm | 1010µm |
| 310µm | 500µm | 730µm | 1040µm |
| 330µm | 510µm | 750µm | 1080µm |
| 340µm | 520µm | 770µm | 1100µm |
| 350µm | 530µm | 800µm | 1200µm |
| 360µm | 540µm | 810µm | 1300µm |
| 380µm | 550µm | 830µm | 1370µm |
| 400µm | 570µm | 840µm | 1500µm |
| 410µm | 600µm | 860µm | 1550µm |
| 420µm | 610µm | 880µm | Drill  |
| 430µm | 630µm | 900µm |        |
| 440µm | 640µm | 910µm | Sizes  |

.25dB

.25dB

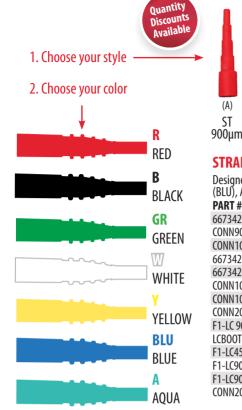
.25dB

#### **SMA 905 AND 906 CONNECTORS AND MATING SLEEVES**

The SMA 905 and 906 Multimode connectors are available with stainless alloy. Ferrules and connectors are supplied with 3mm boots and may be custom drilled. When installing 906 SMA's into 905 SMA mating sleeves, a provided 1/2 sleeve must be installed on the 906 ferrule.

|     | -           |      |                   |                 |                     |
|-----|-------------|------|-------------------|-----------------|---------------------|
|     | PART #      | TYPE | <b>FIBER SIZE</b> | FERRULE         | <b>TYPICAL LOSS</b> |
|     | F1-93336    | MM   | 127µm             | Stainless Alloy | .25dB               |
| 905 | F1-93336140 | MM   | 140µm             | Stainless Alloy | .25dB               |
|     | F1-93336230 | MM   | 230µm             | Stainless Alloy | .25dB               |
|     |             |      |                   | ,               |                     |

# **CONNECTIVITY** | BOOTS & ACCESSORIES



| (A)      | B) (C)      | (D)    | (E)    | (F)    | (6) | (H) |        | ()  |  |
|----------|-------------|--------|--------|--------|-----|-----|--------|-----|--|
| ST 90∘   | FC/SC FC/SC | FIS ST | FIS FC | FIS SC | LC  | FIS | FIS LC | CCS |  |
| 900µm 3i | nm 900µm    | 3mm    | 3mm    | 3mm    | 90° | LC  | 50°    | 90° |  |

## **STRAIN RELIEF BOOTS**

Designed to be utilized on .128, .151, and .190 crimp sleeves. FIS boots are available in Red (R), Black (B), Green (GR), Blue (BLU), Agua (A), White (W), and Yellow (Y). Replace X with abbreviation of color in parenthesis.

| PART #           | DESCRIPTION (See Strain Relief Boot style chart above) | ID    | Length | Crimp Size |
|------------------|--|-------|--------|------------|
| 667342900-25-X   | FIS ST 900µm Boot (A) (25 pk.)                         | 0.15  | 1.13″  | 0.128      |
| CONN90-25-X      | FIS SC & FC 3mm 90° Boot (B) (25 pk.)                  | 0.20  | 1.40″  | 0.190      |
| CONN107900-25-X  | FIS SC & FC 900µm Boot (C) (25 pk.)                    | 0.17  | 1.13″  | 0.179      |
| 667342-BC-25-X   | FIS ST 3mm Boot (D) (25 pk.)                           | 0.15  | 1.47″  | 0.128      |
| 6673422-BC-25-X  | FIS ST 2mm Boot (25 pk.)                               | 0.15  | 1.47″  | 0.128      |
| CONN107BC-25-X   | FIS FC 3mm Boot (E) (25 pk.)                           | 0.20  | 1.25″  | 0.190      |
| CONN1072-BC-25-X | FIS FC 2mm Boot (25 pk.)                               | 0.20  | 1.25″  | 0.190      |
| CONN205-25-X     | FIS SC 3mm Boot (F) (25 pk.)                           | 0.20  | 1.47″  | 0.190      |
| F1-LC 90-BLK-25  | FIS LC 90° 2mm Boot Black (G) (25 pk.)                 | 0.137 | 1.44″  | 0.128      |
| LCBOOTBL25       | FIS LC 3mm Boot Black (H) (25 pk.)                     | 0.137 | 1.10″  | 0.128      |
| F1-LC45BL25      | FIS LC 50° 2mm Boot Black (I) (25 pk.)                 | 0.137 | 1.0″   | 0.128      |
| F1-LC90M2590     | FIS LC 90° 2mm Boot White (not shown) (25 pk.)         | 0.137 | 1.40″  | 0.128      |
| F1-LC90GR25      | FIS LC 90° 2mm Boot Green (not shown) (25 pk.)         | 0.137 | 1.40″  | 0.128      |
| CONN205-XX-M20   | FIS SC 2mm Boot (not shown) (25pk.)                    | 0.20  | 1.47″  | 0.190      |

#### **SPIRAL BOOT**

The Spiral Cut Boot is designed for the times when you forget to put the boot on your cable before you terminated a connector. The unique spiral cut allows you to wrap the boot around the cable and then slide it up behind the connector. No need to cut off a good connector because of a forgotten boot. Boot is straight when relaxed. PART # DESCRIPTION

SPIRALBOOT25 Spiral Cut 3mm Boot, 25-Pack

#### FERRULE PROTECTION CAPS

FIS Protection Caps are designed to provide protection against various elements that could damage either the ferrule or fiber. The universal clear protection caps fit ST, FC and SC style 2.5mm ferrules.

| PART #        | DESCRIPTION   |
|---------------|---|
| CPCYGR-B      | Green Dust Cap Covers FC Housing (A) (100 pk.)                                  |
| CPCY-B        | Yellow Dust Cap Covers FC Housing (B) (100 pk.)                                 |
| CAPB-B        | Universal Clear Cap for 2.5mm Ferrules (C) (100 pk.)                            |
| F1-0125       | Universal Dust Cap for 1.25mm Ferrules (D) (100 pk.)                            |
| F1-0125SA-100 | Universal Dust Cap for 1.25mm Ferrules with jacket strap Aqua (E) (100 pk.) NEW |
| F1-0125SB-100 | Universal Dust Cap for 1.25mm Ferrules with jacket strap Black (100 pk.) NEW    |
| F1-90010M     | Universal Dust Cap for 2.5mm Ferrules with jacket strap (100 pk.)               |

#### **ALIGNMENT SPLIT SLEEVES**

Split sleeves are designed to align 2.5mm ferrules with precision. The Phosphor Bronze version provides the precision you require on Multimode fiber applications. The split sleeves have an outside diameter of 3.2mm and a length of 11.4mm. NOT AVAILABLE INDIVIDUALLY

| PART #        | DESCRIPTION                    |
|---------------|--------------------------------|
| F1-8300SSC-25 | Zirconia Split Sleeve (25 pk.) |
| 54 000000 05  |                                |

| 11-030033C-23 | Zirconia Spirc Siecve (ZS pk.)        |
|---------------|---------------------------------------|
| F1-8300SS-25  | Phosphor Bronze Split Sleeve (25 pk.) |

#### FERRULES

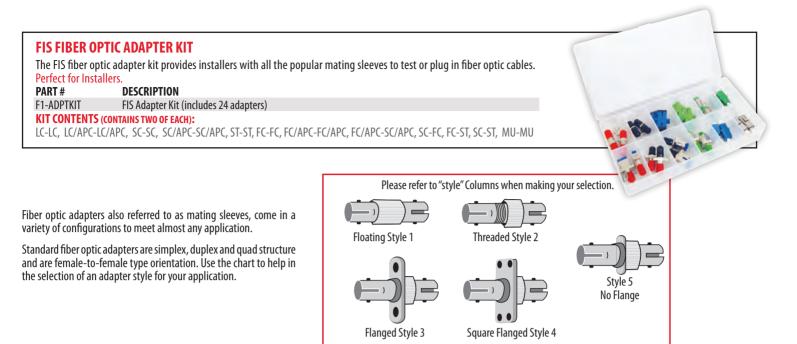
FIS offers a variety of 2.5mm Zirconia and Stainless Alloy ferrules for Multimode and Singlemode applications. Zirconia ferrules have a standard PC radius. Stainless Alloy ferrules are suitable for many laboratory or other specialty applications. NOT AVAILABLE INDIVIDUALLY

| PART #        | DESCRIPTION                                  | LENGTH |
|---------------|--|--------|
| F1-TSMM127-25 | 127µm Zirconia Ferrule (Multimode) (25 pk.)  | 10.5mm |
| F1-SM126-25   | 126µm Zirconia Ferrule (Singlemode) (25 pk.) | 10.5mm |
| F1-140K-25    | 140µm Zirconia Ferrule (Multimode) (25 pk.)  | 10.5mm |
| F1-0061F-25   | 125µm Stainless Alloy Ferrule (25 pk.)       | 12.7mm |
| F1-0063F-25   | 140µm Stainless Alloy Ferrule (25 pk.)       | 12.7mm |
| F1-0064F-25   | 230µm Stainless Alloy Ferrule (25 pk.)       | 12.7mm |





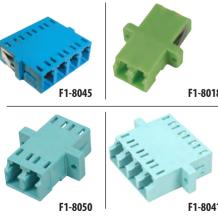




| No Flange Nor    | w Available | PART #    |
|------------------|-------------|-----------|
| Adapters         |             | F1-3800NF |
|                  |             | F1-8350NF |
|                  |             | F1-3810NF |
|                  |             | F1-4800NF |
|                  |             | F1-8600NF |
| 1                |             | F1-8650NF |
|                  |             | F1-8601NF |
|                  |             | F1-8701NF |
|                  |             | F1-3800BC |
| F1-8620NF        | F1-SCRD     | F1-8320   |
| 1                |             | F1-8350   |
|                  |             | F1-3810BC |
|                  |             | F1-4800BC |
|                  |             | F1-8600ET |
|                  |             | F1-8620   |
|                  |             | F1-8650   |
| <b>51</b> 2010DC | 51 0350     | F1-8601   |
| F1-3810BC        | F1-8350     | F1-SCRD   |

#### **SC ADAPTERS** TYPE HOUSING SLEEVE STYLE Multimode - Beige (No Flange) Polymer Phos. Bronze 5 Multimode - 10 Gig - Agua (No Flange) 5 Polymer Zirconia Singlemode - Blue (No Flange) Polymer 5 Zirconia Singlemode APC - Green (No Flange) 5 Polymer Zirconia Duplex Multimode - Beige (No Flange) 5 Polymer Phos. Bronze Duplex Multimode - 10 Gig - Aqua (No Flange) Polymer 5 Zirconia Duplex Singlemode - Blue (No Flange) 5 Polymer Zirconia Duplex Singlemode APC - Green (No Flange) 5 Polymer Zirconia Multimode - Beige 3 Polymer Phos. Bronze Multimode - Black Phos. Bronze 3 Polymer Multimode - 10 Gig - Aqua 3 Polymer Phos. Bronze Singlemode - Blue 3 Polymer Zirconia Singlemode APC - Green Polymer Zirconia 3 **Duplex Multimode - Beige** 3 Polymer Phos. Bronze Duplex Multimode - Black 3 Polymer Phos. Bronze Duplex Multimode -10 Gig - Aqua 3 Polymer Phos. Bronze Duplex Singlemode - Blue 3 Polymer Zirconia F1-SCRD Duplex Singlemode - Blue (No Flange) 5 with Shutter Polymer Zirconia F1-8701 Duplex APC - Green 3 Polymer Zirconia

**LC ADAPTERS** 



|         | PART #     | ТҮРЕ                                       | STYLE           | HOUSING | SLEEVE       |
|---------|------------|--|-----------------|---------|--------------|
| 1       | F1-8000A   | Multimode - Beige                          | 1               | Polymer | Phos. Bronze |
| 1       | F1-8005    | Singlemode - Blue                          | 1               | Polymer | Zirconia     |
|         | F1-8008    | Singlemode - APC - Green                   | 1               | Polymer | Zirconia     |
|         | F1-8030    | Duplex Multimode - Beige                   | SC Footprint    | Polymer | Phos. Bronze |
|         | F1-8050    | Duplex MM -10 Gig - Aqua                   | SC Footprint    | Polymer | Phos. Bronze |
| F1-8018 | F1-8035    | Duplex Singlemode - Blue                   | SC Footprint    | Polymer | Zirconia     |
|         | F1-8018    | Duplex APC - Green                         | SC Footprint    | Polymer | Zirconia     |
| -       | F1-LCAD02R | Duplex Singlemode - Blue                   | 1 with Shutter  | Polymer | Zirconia     |
| 10      | F1-8040    | Quad Multimode - Beige                     | SC Dup ftpt     | Polymer | Phos. Bronze |
| 3       | F1-8041    | Quad Multimode -10 Gig - Aqua              | SC Dup ftpt     | Polymer | Phos. Bronze |
| -       | F1-8045    | Quad Singlemode - Blue (No Flange)         | 5 - SC Dup ftpt | Polymer | Zirconia     |
| 1       | F1-8020NF  | Duplex Multimode - Beige(No Flange)        | 5               | Polymer | Phos. Bronze |
|         | F1-8050NF  | Duplex Multimode - 10 Gig Aqua (No Flange) | 5               | Polymer | Zirconia     |
|         | F1-8010NF  | Duplex Singlemode - Blue (No Flange)       | 5               | Polymer | Zirconia     |
| F1-8041 | F1-8015NF  | Duplex Singlemode APC - Green (No Flange)  | 5               | Polymer | Zirconia     |
|         |            |  |                 |         |              |

#### @FiberExperts | F /FiberExperts | www.fiberinstrumentsales.com | 1.800.5000.FIS (347)

F1-9229-LC

F1-9229-SC

F1-9229-ST

# **CONNECTIVITY** | STANDARD ADAPTERS

LASER SAFETY CAPS FOR MATING SLEEVES WITH METAL TILE

F1-890M

106102-0000

FIS has created a solution to the problem of laser light emitted from fiber optic bulkhead adapters. Our new Laser Safety Caps come with a warning symbol on each to visually alert people to potentially harmful exposure to laser light and cap has a built-in metal tile to stop laser light up to +18dBm. They are available for SC, LC, ST and FC style. Replace X with the color desired: BL=Black, BU=Blue, GR=Green, BE=Beige, AO=Agua

| the color desired. D | DL—DIACK, DU– | -blue, dr—dieeli | i, de—deige, AQ–   | -Aqua.           |          |         |  |
|----------------------|---------------|------------------|--------------------|------------------|----------|---------|--|
| PART #               |               | DESCRIPTI        | ION                |                  |          |         |  |
| F1-BLSCST-X25        |               | ST Bulkhea       | d Laser Safety Cap | o - (25 pk.) (A) |          |         |  |
| F1-BLSCSC-X25        |               | SC Bulkhea       | d Laser Safety Cap | o - (25 pk.) (B) |          |         |  |
| F1-BLSCFC-X25        |               | FC Bulkhea       | d Laser Safety Cap | o - (25 pk.) (C) |          |         |  |
| F1-BLSCLC-X25        |               | LC Bulkhea       | d Laser Safety Cap | ) - (25 pk.) (D) |          |         |  |
|                      |               |                  |                    |                  |          |         |  |
| CL-Clear             | BU-Blue       | BL-Black         | SL-Slate           | BE-Beige         | GR-Green | AQ-Aqua |  |

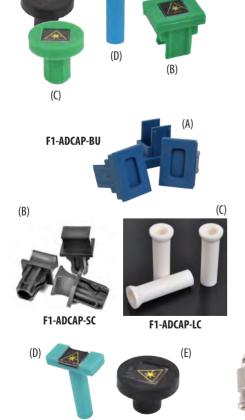
## **MATING SLEEVE ADAPTER CAPS**

The dust caps for adapters are easy to misplace and now FIS makes them just as easy to replace. Available in multiple colors, see chart above. Replace XX with the color desired: BL=Black, BU=Blue, GR=Green, BE=Beige, AQ=Agua. PART # DESCRIPTION

| PAKI #          | DESCRIPTION   |
|-----------------|---|
| F1-ADCAP-100-BU | SC Mating Sleeve Adapter Dust Cap, Blue - 100 pk. (A)               |
| F1-ADCAP-100-CL | SC Mating Sleeve Adapter Cap, Clear - 100pk                         |
| F1-ADCAP-SC     | SC Mating Sleeve Click-in Style Adapter Cap, Black - 100pk. (B)     |
| F1-ADCAP-LC     | LC Mating Sleeve Round Head Adapter Cap, White - 100pk. (C)         |
| F1-ADCAP-LCS-XX | LC Mating Sleeve Square Head with Laser Warning Sticker - 100pk (D) |
| F1-ADCAP-FCS-XX | FC Mating Sleeve Round Head with Laser Warning Sticker - 100pk      |
| F1-ADCAP-STS-XX | ST Mating Sleeve Round Head with Laser Warning Sticker - 100pk (E)  |
|                 |   |

## **METAL CAP & CHAINS**

| PART #     | DESCRIPTION                         |
|------------|-------------------------------------|
| F1-9229-LC | Cap and Chain for LC Mating Sleeves |
| F1-9229-LC | Cap and Chain for SC Mating Sleeves |
| F1-9229-ST | Cap and Chain for ST Mating Sleeves |
| F1-9229-CH | Cap and Chain for FC Mating Sleeves |



| Linconna     | 11 05 10              | martimout        | -   | metai          | 1 HODI DI ONLEC |
|--------------|-----------------------|------------------|-----|----------------|-----------------|
|              | F1-8520               | SM / MM          | 2   | Metal          | Zirconia        |
|              | F1-8521S              | Singlemode - APC | 4   | Metal          | Zirconia        |
| Phos. Bronze | F1-8525               | Singlemode - APC | 2   | Metal          | Zirconia        |
| Zirconia     | 3 <b>M</b> ™          | -                |     |                |                 |
| Phos. Bronze |                       | Cinalanaada      | h   | Matal          | 7:              |
| Zirconia     | 8211                  | Singlemode       | 2   | Metal          | Zirconia        |
|              | 8211APC               | Singlemode - APC | 2   | Metal          | Zirconia        |
|              | MOLEX                 |                  |     |                |                 |
| Polymer      | 106152-0100           | SM / MM          | 4   | Metal          | Zirconia        |
| Zirconia     | 106152-1000           | SM / MM          | 2   | Metal          | Zirconia        |
| Zirconia     | 106152-3000           | Singlemode - APC | 2   | Metal          | Zirconia        |
|              | MU ADAPTERS<br>Part # | ТҮРЕ             |     | HOUSING        | SLEEVE          |
|              | F1-5910S              | Singlemode       | Sim | plex - Polymer | Zirconia        |
|              | F1-5915               | Singlemode       | Dup | olex - Polymer | Zirconia        |
|              | <b>MT-RJ ADAPTERS</b> |                  |     | (T)/  F        |                 |
|              | PART #                | ТҮРЕ             |     | STYLE          | HOUSING         |
|              |                       |                  |     |                |                 |

SM / MM

SM / MM

TYPF

Multimode

Multimode

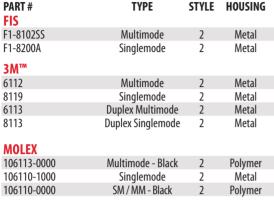


Phos. Bronze

Zirconia

F1-8501

F1-8510



DESCRIPTION

MTP Adapter, Front Panel, Standard

MTP Adapter, Screw Mount 30° angle MTP Adapter, Reduced Flange, Standard



MTP<sup>®</sup> ADAPTERS (Not Shown)

PART # MTP-ADPT

MTP-9299

(A)

MTP-RFADPT

**ST ADAPTERS** 





STYLE HOUSING

Metal

Metal

SC Footprint

3

4

2

**SLEEVE** 

Phos. Bronze

Phos. Bronze

Polymer

Polymer

## **CONNECTIVITY** | HYBRID ADAPTERS



| PART #      | STYLE           | HOUSING | SLEEVE   |
|-------------|-----------------|---------|----------|
| F1-4732     | SMA 905 - ST    | Metal   | Zirconia |
| F1-19202    | SC - ST         | Metal   | Zirconia |
| F1-29202    | FC-ST           | Metal   | Zirconia |
| 106172-0000 | FC-ST           | Metal   | Zirconia |
| F1-34202    | SC-FC           | Metal   | Zirconia |
| F1-2821CC   | FC/APC - SC/APC | Metal   | Zirconia |
| F1-2822CC   | FC/APC - SC/APC | Metal   | Zirconia |
| 106143-0300 | ESCON-ST        | Polymer | Polymer  |
| 106133-0600 | FDDI-ST         | Polymer | Polymer  |
| F1-SCLFF    | SC-LC           | Polymer | Zirconia |
| F1-LCMUFF   | LC-MU           | Polymer | Zirconia |
| F1-SCMUFF   | SC-MU           | Polymer | Zirconia |





#### **MALE – FEMALE ADAPTERS**

| Note: When purchasir | ng these adapters be aware of the fiber size | indicated and match | to your application. |
|----------------------|--|---------------------|----------------------|
| PART #               | DESCRIPTION                                  | HOUSING             | SLEEVE               |
| W1FSCA-SCU*          | SC/APC Female to SC/UPC Male<br>(Singlemode) | Metal               | Zirconia             |
| W1FSCU-SCA*          | SC/UPC Female to SC/APC Male<br>(Singlemode) | Metal               | Zirconia             |

\* Traditionally UPC and APC connectors have been incompatiable to mate together due to the air-gap created between the two mating ferrules. This air-gap creates both undesirable high attenuation and high reflection in your network. The FIS M/F UPC-APC adapters allow UPC and APC fiber optic links to be mated together, adding flexibility to your network, while creating less than 1.0dB of Insertion Loss and -50dB of Return Loss.

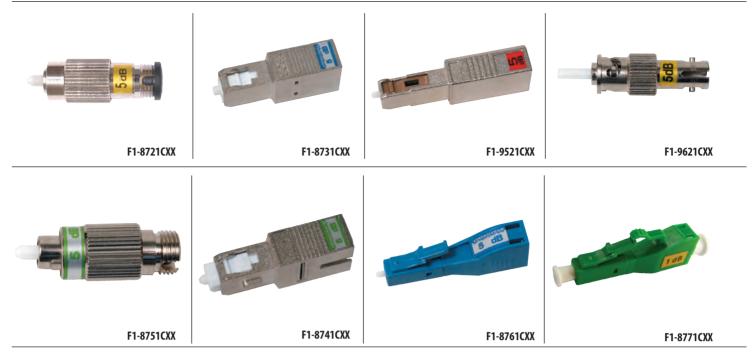
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|-----------------------|---|----------|----------|
| F1-8705-FCFCS         | FC-FC (Singlemode)                                | Metal    | Zirconia |
| F1-8705-SCSC          | SC-SC (62.5/125µm)                                | Polymer  | Zirconia |
| F1-8705-SCSCS         | SC-SC (Singlemode)                                | Polymer  | Zirconia |
| F1-8705-STST          | ST-ST (62.5/125µm)                                | Polymer  | Zirconia |
| F1-8705-SMA           | SMA-ST (62.5/125µm)                               | Polymer  | Zirconia |
| F1-8705-CSCST         | SC-ST (62.5/125µm)                                | Polymer  | Zirconia |
| F1-8705-CFCSCS        | FC-SC (Singlemode)                                | Polymer  | Zirconia |
| F1-8705-CSTFCS        | ST-FC (Singlemode)                                | Polymer  | Zirconia |
| F1-8705-CSTSCS        | ST-SC (Singlemode)                                | Polymer  | Zirconia |
| F1-8705-CSCFCS        | SC-FC (Singlemode)                                | Polymer  | Zirconia |
| F1-8705-CSCSTS        | SC-ST (Singlemode)<br>*50µm and 62.5µm available! | Polymer  | Zirconia |
| F1-SCLCMF             | SC-LC (Singlemode)                                | Polymer  | Zirconia |
| F1-LCSCMF             | LC-SC (Singlemode)                                | Polymer  | Zirconia |
| F1-FCLCMF             | FC-LC (Singlemode)                                | Polymer  | Zirconia |
|                       |   | DIDEED C |          |

#### **BUFFERED FIBER ADAPTERS**

A Buffered Fiber Adapter (bare fiber adapter) enables you to make a quick, temporary connection to a cleaved bare fiber without the need to connectorize. ST, FC, SC and SMA style adapters available. Not recommended for use with test equipment.

| PART #  | DESCRIPTION  |  |
|---------|--|--|
| F1-8194 | ST Buffered Fiber Adapter (For Use 900µm buffer)     |  |
| F1-8294 | FC Buffered Fiber Adapter (For Use 900µm buffer)     |  |
| F1-8494 | SC Buffered Fiber Adapter (For Use 900µm buffer)     |  |
| F1-8394 | SM 905 Buffered Fiber Adapter (For Use 900µm buffer) |  |

# **CONNECTIVITY | ATTENUATORS - FILTERED**



#### **MALE-TO-FEMALE ATTENUATORS**

FIS male-to-female attenuators contain doped fiber suitable for both 1310nm and 1550nm operation. Fixed attenuation values are available in 1dB increments from 1 to 20dB. FIS stocks standard 5, 10, 15, 20dB attenuation levels in most styles.

To specify attenuation level replace "xx" with desired attenuation level ex. 01=1Db, 02=2db etc. 03=3Db, 04=4db,etc.

| PART #     | DESCRIPTION                      |
|------------|----------------------------------|
| F1-8721CXX | FC/UPC Male to Female Attenuator |
| F1-8751CXX | FC/APC Male Female Attenuator    |
| F1-8731CXX | SC/UPC Male to Female Attenuator |
| F1-8741CXX | SC/APC Male Female Attenuator    |
| F1-9621CXX | ST/UPC Male to Female Attenuator |
| F1-8761CXX | LC/UPC Male to Female Attenuator |
| F1-8771CXX | LC/APC Male to Female Attenuator |
| F1-9521CXX | MU/UPC Male to Female Attenuator |

#### FIS BULKHEAD FEMALE-TO-FEMALE ATTENUATORS

FIS Bulkhead Attenuators utilize a wavelength sensitive neutral density filter to achieve attenuation. Available in 5, 10, 15 and 20dB values. Select from 1310nm or 1550nm options.

#### **ST ATTENUATOR 1310nm**

| PART #   | DESCRIPTION                       |  |
|----------|-----------------------------------|--|
| F1-8121S | FIS 5dB ST Attenuator for 1310nm  |  |
| F1-8122S | FIS 10dB ST Attenuator for 1310nm |  |
| F1-8123S | FIS 15dB ST Attenuator for 1310nm |  |
| F1-8124S | FIS 20dB ST Attenuator for 1310nm |  |
|          |                                   |  |

#### FC ATTENUATOR 1310nm

| PART #   | DESCRIPTION                       |
|----------|-----------------------------------|
| F1-8221S | FIS 5dB FC Attenuator for 1310nm  |
| F1-8222S | FIS 10dB FC Attenuator for 1310nm |
| F1-8223S | FIS 15dB FC Attenuator for 1310nm |
| F1-8224S | FIS 20dB FC Attenuator for 1310nm |
|          |                                   |

#### **SC ATTENUATOR 1310nm** DADT # DECODIDITION

| DESCRIPTION                       |
|-----------------------------------|
| FIS 5dB SC Attenuator for 1310nm  |
| FIS 10dB SC Attenuator for 1310nm |
| FIS 15dB SC Attenuator for 1310nm |
| FIS 20dB SC Attenuator for 1310nm |
|                                   |



#### **ST ATTENUATOR 1550nm**

| PART #   | DESCRIPTION                       |  |
|----------|-----------------------------------|--|
| F1-8125S | FIS 5dB ST Attenuator for 1550nm  |  |
| F1-8126S | FIS 10dB ST Attenuator for 1550nm |  |
| F1-8127S | FIS 15dB ST Attenuator for 1550nm |  |
| F1-8128S | FIS 20dB ST Attenuator for 1550nm |  |
|          |                                   |  |



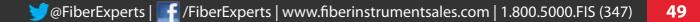
### FC ATTENUATOR 1550nm

| PART #   | DESCRIPTION                       |
|----------|-----------------------------------|
| F1-8225S | FIS 5dB FC Attenuator for 1550nm  |
| F1-8226S | FIS 10dB FC Attenuator for 1550nm |
| F1-8227S | FIS 15dB FC Attenuator for 1550nm |
| F1-8228S | FIS 20dB FC Attenuator for 1550nm |
|          |                                   |



| <b>SC ATTENUA</b> | TOR 1550nm  |
|-------------------|-------------|
| PART #            | DESCRIPTION |

| $\mathbf{I} \mathbf{A} \mathbf{N} \mathbf{I} \pi$ |                                   |
|---|-----------------------------------|
| F1-8325S  | FIS 5dB SC Attenuator for 1550nm  |
| F1-8326S  | FIS 10dB SC Attenuator for 1550nm |
| F1-8327S  | FIS 15dB SC Attenuator for 1550nm |
| F1-8328S  | FIS 20dB SC Attenuator for 1550nm |



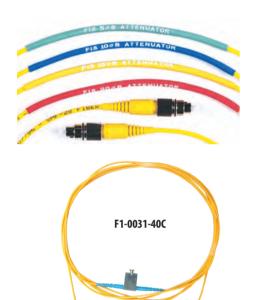
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# **CONNECTIVITY** | ATTENUATORS - MECHANICAL





F1-10015





F1-2250



#### **FIS CLIP-ON VARIABLE ATTENUATOR**

The Clip-On Variable Attenuator is a completely passive device, which works by physical attenuation of a 3mm jacketed Singlemode cable. May be used with smaller jacket sizes however, attenuation performance may vary. It can be attached at any point in a cable, providing attenuation levels from 0 to >47dB at 1550nm (0 to >21dB at 1310nm) and low back reflection. Good for hundreds of uses, and leaves no lasting effects on the cable. Dimensions: Length = 1-1/2", Diameter = 3/4". **PART # DESCRIPTION** 

| ł | DESCRIPTION                 |
|---|-----------------------------|
| 5 | Clip-On Variable Attenuator |

#### **FIS 3-STEP ATTENUATORS**

F1-004

The FIS 3-Step Attenuator is a completely passive device and achieves attenuation by exceeding the recommended bend radius specifications of the fiber cable without introducing back-reflections. This unit is designed for 3mm jacket types and a wavelength of 1310nm, but can also be used with various jacket sizes and wavelengths with varying attenuation levels. Use any combination of the three loops to achieve desired attenuation levels.

| PART #   | DESCRIPTION                                  |
|----------|--|
| F1-10007 | 3-Step Attenuator 2-7dB (1310nm Singlemode)  |
| F1-10015 | 3-Step Attenuator 5-15dB (1310nm Singlemode) |
| F1-10020 | 3-Step Attenuator 5-20dB (1310nm Singlemode) |

#### **FIS IN-LINE FIXED ATTENUATORS**

The FIS In-Line Fixed Attenuator is built to meet your low reflection attenuation requirements. Each cord is custom built to accommodate up to 10 meters of cable and the connector styles of your choice. The 5dB and 10dB versions hold a +/-.5dB tolerance with the 15dB and 20dB holding a 1dB tolerance. Please specify operating wavelength. The in-line attenuator provides negligible back reflection and is therefore recommended for use with UPC or APC style patch cable.

| PART #                | DESCRIPTION        |
|-----------------------|--------------------|
| F1-ATS + 5dB or 10dB  | In-line Attenuator |
| F1-ATS + 15dB or 20dB | In-line Attenuator |

#### VARIABLE ATTENUATORS

This Variable Attenuator uses collimator lens technology enabling the user to change attenuation through the twist of a top-mounted screw. Use this variable attenuator to simulate the loss in a fiber system or testing your system's dynamic range. A power meter and light source can be used to determine the fixed attenuation value your system requires. The attenuator has a 0.8dB typical insertion loss and is available in a 2 meter length and may be connectorized. A low back reflection style is prepared with ultra PC connectors maintaining the internal low back reflection characteristics. Attenuation range: 0.8dB to 60dB.

| PART #      | DESCRIPTION  |
|-------------|--|
| F1-0031-40C | SM Attenuator 8-9µm Core (2 Meter Unconnectorized) Return Loss <-40dB      |
| F1-1033-35C | MM Attenuator 62.5µm Core (2 Meter Unconnectorized) Return Loss <-35dB     |
| F1-0031-LBR | SM Low Back Reflection Attenuator with FC/UPC Connector Return Loss <-50dB |

#### **AIR-GAP VARIABLE ATTENUATORS**

The Air-Gap Variable Attenuator has a ceramic alignment sleeve that provides a low insertion loss of .15dB and can be used on both Multimode and Singlemode applications. Included tool provides ability to increase attenuation to desired "level". Device may replace mating sleeve at the patch panel, enabling variable attenuation levels to be introduced to the system. Attenuation range is 0dB to 20dB.

| PART #  | DESCRIPTION                    |
|---------|--------------------------------|
| F1-2250 | Air-Gap Variable ST Attenuator |
| F1-2251 | Air-Gap Variable FC Attenuator |

#### FIS ST, SMA OR FDDI FIXED ATTENUATORS

The washer style attenuator is placed at the light source, spacing the mated connectors to cause attenuation. The attenuators of various thicknesses are not assigned specific dB values, several factors will dictate actual loss.

| PART #    | DESCRIPTION                              |
|-----------|--|
| A450-FIS  | ST Attenuators (Qty. 5), 1 Each Color    |
| A40D-FIS  | SMA Attenuators (Qty. 5), 1 Each Color   |
| A450-FDDI | FDDI Attenuators (Qty. 10), 2 Each Color |
| A450-20   | ST Attenuators (Qty. 10), State Color    |
| A40D-20   | SMA Attenuators (Qty. 10), State Color   |

| TYPICAL ATTENUATION LEVELS<br>(Installed At Light Source) |            |             |  |  |
|---|------------|-------------|--|--|
| COLOR   | 850nm (dB) | 1300nm (dB) |  |  |
| Red   | 2.5        | 7.4         |  |  |
| Blue  | 3.6        | 9.1         |  |  |
| Green   | 4.8        | 10.2        |  |  |
| Gold  | 5.5        | 11.3        |  |  |
| Silver  | 6          | 11.7        |  |  |

# **CABLE** | CUSTOM MANUFACTURED CABLE

# CABL



**RE-SPOOLING SERVICE** We cut and spool fiber or cable to your specified lengths

Fiber Instrument Sales, Inc. (FIS) is able to provide UL approved and RoHS custom manufactured fiber optic cable. These cables are available in a variety of standard configurations and can be custom built to your specifications. Standard fiber optic cable including simplex, duplex and multifiber styles are instock for quick delivery. In addition, our extrusion machines are capable of manufacturing fiber optic cable with different jacket colors, coating diameters, fiber counts, tight buffer diameters, jacket materials and more. To request additional information regarding cable, call your FIS sales representative today! Please note: Cable is printed with only core/clad, fiber length and UL markings.

#### **CABLE BUYING GUIDELINES**

- 1. Allowable cable length for shipping and billing is -0/+10%.
- 2. Cut fees will apply on simplex and duplex cable orders less than 305 meters (1,000 ft.). \$10 each cut/spool.
- 3. Specialty cut and hand coiled fees will apply on multiple simplex and duplex bulk cable orders, \$5 each.

PAR' F1-1 F1-1 F1-1

- 4. Cut fees will apply on multifiber bulk cable orders less than 100 meters (328 ft.) \$20 each cut/spool.
- 5. Cut charges do not apply when cable reels that are in stock are offered and accepted.





#### **THREE-PIECE SPOOL**

The three-piece spool features plastic flanges bolted to a kraft barrel, creating a durable, dimensionally true and splinter-free reel. Flange diameter is 18" while the barrel diameter 8.25", making it perfect for bulk cable or long assemblies.

| Τ#     | DESCRIPTION   |
|--------|---|
| 2SPOOL | Three Piece Spool - 1.75 Arobor Hole - 12"x 9" x 6"       |
| 4SPOOL | Three Piece Spool - 1.75 Arobor Hole - 14"x 9" x 6"       |
| 8SPOOL | Three Piece Spool - 1.75 Arobor Hole - 18"x 15.5" x 7.75" |
|        |   |



Fiber-to-the-Home and Desk (FTTx) applications have resulted in the creation of several new grades of Multimode fiber. The use of Gigabit and 10 Gig fibers can help future proof your network. New bend insensitive fibers are also becoming very popular. These fibers can be bent down to very small diameters without affecting the optical signal. FTTx applications use bend insensitive fiber because of its ease and flexibility of installation.

Gigabit Cables are designed with Corning<sup>®</sup> InfiniCor<sup>®</sup> ClearCurve<sup>®</sup> Laser-Optimized<sup>™</sup> Optical Fiber, engineered specifically for laser-based local area network protocols such as Gigabit Ethernet. Singlemode fibers are Corning® SMF-28e+®, ClearCurve® ZBL and ClearCurve® XB optical fibers. FIS will also customize materials and constructions to meet your individual requirements.

## Nhat is OM1, OM2, OM3 & OM4 MULTIMODE CABLE?

|            |                         | MAXIMUM ATTENUATION<br>(dB/km) |       | TRANSMISSION<br>DISTANCE FOR<br>(in meters) |        | MINIMAL MODAL BANDWIDTH<br>(MHz/km) |                               |                                |
|------------|-------------------------|--------------------------------|-------|---|--------|-------------------------------------|-------------------------------|--------------------------------|
| FIBER TYPE | STANDARD<br>DESIGNATION | JACKET COLOR<br>(typical)      | 850nm | 1300nm                                      | 1 Gb/s | 10 Gb/s                             | OVERFILLED<br>LAUNCH<br>850nm | OVERFILLED<br>LAUNCH<br>1300nm |
| 62.5/125   | 0M1                     | Orange                         | 3.5   | 1.5   | 300    | 30                                  | 200                           | 500                            |
| 50/125     | 0M2                     | Orange                         | 3.5   | 1.5   | 600    | 150                                 | 500                           | 500                            |
| 50/125     | 0M3                     | Aqua                           | 3.5   | 1.5   | 1,000  | 300                                 | 1500                          | 500                            |
| 50/125     | 0M4                     | Aqua/Magenta                   | 3.5   | 1.5   | 1,110  | 550                                 | 3500                          | 500                            |

ClearCurve® fibers are fully compliant with ITU-T G.652.D and G.657 standards. These fibers are designed to meet a wide array of applications including both inside and outside plant installations. Network designers, operators, and installers choose ClearCurve® fibers for their superior bending performance, backward compatibility with the G.652.D standard and their ability to minimize bend-loss throughout any installation. Use the chart, right, to aid in selecting the right ClearCurve® fiber for your application.

| ClearCurve®<br>Singlemode                     | Application   | ITU-T               | Radius | Corning<br>Spec   |
|---|---|---------------------|--------|-------------------|
| ClearCuve <sup>®</sup> ZBL                    | Virtually no bend-loss in most indoor applications     Very low in extreme (5mm) bend environments  | Exceeds             | 5mm    | <0.10 dB/         |
| -Ultra low bend loss                          | Enables smaller components and flexible yet     A3/B3   |                     | 7.5mm  | turn              |
| ClearCuve® XB<br>-Enhanced bend<br>capabitily | <ul> <li>Improved performance vs. standardSinglemode<br/>fiber</li> <li>Appropriate for outside plant and some high-fiber<br/>count and tight buffer indoor applications</li> <li>Enables a broader range of cable design options<br/>and deployment flexibility</li> </ul> | Exceeds<br>G.657.A1 | 10mm   | <0.50 dB/<br>turn |



## Made in the USA

By joining our Cable Assembly Partners you will be able to take advantage of incredible Cable and Polish Film Price Savings.

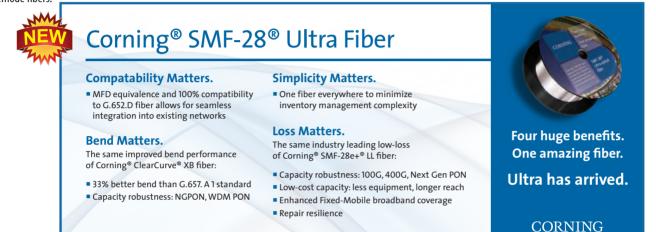




FIS supplies the industry's broadest array of Fiber Optic Cable and Tubing for all Access and Premises Network Applications. These include Standard and Customized Simplex, Duplex, Tight Buffer, Distribution, Loose Tube, Indoor/Outdoor and Ribbon Cable, as well as furcation tubing to fit the varied fanout applications.



Corning's new SMF-28<sup>®</sup> Ultra optical fiber is the first in the market to combine the benefit of industry-leading attenuation and improved macrobend performance in one fiber. This premium Singlemode fiber is designed for long-haul, metro, access, and fiber-to-the-home (FTTH) applications, and is fully backward compatible with the installed base of legacy Singlemode fibers.



## 9/125µm - OS2 SINGLEMODE

Corning<sup>®</sup> SMF-28<sup>®</sup> Ultra fiber

|   | IDI | LEX | CA | DII |   |
|---|-----|-----|----|-----|---|
| υ | Jri | LEA | LA | DLI | E |

|                        | SIMPLEX CABLE |                    |
|------------------------|---------------|--------------------|
| <b>1.2mm</b><br>PART # | DESCRIPTION   | <b>BUFFER SIZE</b> |
| S09-SX01-CZNRP12       | Plenum Yellow |                    |
| 3.0mm                  |               |                    |
| S09-SX01-CZNRY         | Riser Yellow  | 900µm              |
| S09-SX01-CZNRR         | Riser Red     | 900µm              |
| S09-SX01-CZNPY         | Plenum Yellow | 900µm              |
| S09-SX01-CZNRB         | Riser Blue    | 900µm              |
| 2.0mm                  |               |                    |
| S09-SX01-CZNRY20       | Riser Yellow  | 900µm              |
| S09-SX01-CZNPY20       | Plenum Yellow | 900µm              |
| S09-SX01-CZNRB20       | Riser Blue    | 900µm              |
| 1.6mm                  |               |                    |
| S09-SX01-CZNRY16       | Riser Yellow  | 650µm              |
| S09-SX01-CZNPY16       | Plenum Yellow | 650µm              |
| S09-SX01-CZNRB16       | Riser Blue    | 650µm              |

CIMPLEY CADLE

| <b>3.0mm</b><br>PART # | DESCRIPTION   | <b>BUFFER SIZE</b> |
|------------------------|---------------|--------------------|
| S09-DX02-CZNRY         | Riser Yellow  | 900µm              |
| S09-DX02-CZNRR         | Riser Red     | 900µm              |
| S09-DX02-CZNPY         | Plenum Yellow | 900µm              |
| 2E51-311-31            | Riser Yellow  | 900µm              |
| S09-DX02-CZNRB         | Riser Blue    | 900µm              |
| 2.0mm                  |               |                    |
| S09-DX02-CZNRY20       | Riser Yellow  | 900µm              |
| S09-DX02-CZNPY20       | Plenum Yellow | 900µm              |
| S09-DX02-CZNRB20       | Riser Blue    | 900µm              |
| 1.6mm                  |               |                    |
| S09-DX02-CZNRY16       | Riser Yellow  | 650µm              |
| S09-DX02-CZNPY16       | Plenum Yellow | 650µm              |
| S09-DX02-CZNRB16       | Riser Blue    | 650µm              |

#### 9/125µm - SINGLEMODE ULTRA LOW BEND OPTIMIZED

#### Corning® ClearCurve® ZBL fiber (5mm Radius) G657.B3

| SIMPLEX CABLE                |                     |                    | DUPLEX CABLE     |                     |                    |  |
|------------------------------|---------------------|--------------------|------------------|---------------------|--------------------|--|
| <mark>3.0mm</mark><br>Part # | DESCRIPTION         | <b>BUFFER SIZE</b> | 3.0mm<br>PART #  | DESCRIPTION         | <b>BUFFER SIZE</b> |  |
| S09-SX01-CCNRB               | Riser Blue          | 900µm              | S09-DX02-CCNRB   | Riser Blue          | 900µm              |  |
| S09-SX01-CCNRY               | Riser Yellow        | 900µm              | S09-DX02-CCNRY   | Riser Yellow        | 900µm              |  |
| 1.6mm                        |                     |                    | 1.6mm            |                     |                    |  |
| S09-SX01-CCNRB16             | Riser Blue          | 650µm              | S09-DX02-CCNRB16 | Riser Blue          | 650µm              |  |
| S09-SX01-CCNRY16             | <b>Riser Yellow</b> | 650µm              | S09-DX02-CCNRY16 | <b>Riser Yellow</b> | 650µm              |  |

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#### 62.5/125µm - 0M1 MULTIMODE InfiniCor<sup>®</sup> 300 fiber

|                              | SIMPLEX CABLE |                    |                        | DUPLEX CABLE  |                    |
|------------------------------|---------------|--------------------|------------------------|---------------|--------------------|
| <mark>3.0mm</mark><br>PART # | DESCRIPTION   | <b>BUFFER SIZE</b> | <b>3.0mm</b><br>PART # | DESCRIPTION   | <b>BUFFER SIZE</b> |
| M62-SX01-C3NR0               | Riser Orange  | 900µm              | M62-DX02-C3NRO         | Riser Orange  | 900µm              |
| M62-SX01-C3NP0               | Plenum Orange | 900µm              | M62-DX02-C3NP0         | Plenum Orange | 900µm              |
|                              |               |                    | 2K51-311-41            | Riser Orange  | 900µm              |
| 2.0mm                        |               |                    | 2.0mm                  |               |                    |
| M62-SX01-C3NR020             | Riser Orange  | 900µm              | M62-DX02-C3NR020       | Riser Orange  | 900µm              |
| M62-SX01-C3NPO20             | Plenum Orange | 900µm              | M62-DX02-C3NP020       | Plenum Orange | 900µm              |
| 1.6mm                        |               |                    | <b>1.6mm</b>           |               |                    |
| M62-SX01-C3NR016             | Riser Orange  | 650µm              | M62-DX02-C3NR016       | Riser Orange  | 650µm              |
| M62-SX01-C3NP016             | Plenum Orange | 650µm              | M62-DX02-C3NP016       | Plenum Orange | 650µm              |

#### 50/125µm - OM2 MULTIMODE

#### Corning<sup>®</sup> ClearCurve<sup>®</sup> OM2 fiber

|                  |               | Corning <sup>®</sup> Cie | arcurve° OM2 fiber |               |                    |
|------------------|---------------|--------------------------|--------------------|---------------|--------------------|
|                  | SIMPLEX CABLE | -                        |                    | DUPLEX CABLE  |                    |
| 3.0mm<br>PART #  | DESCRIPTION   | <b>BUFFER SIZE</b>       | 3.0mm<br>PART #    | DESCRIPTION   | <b>BUFFER SIZE</b> |
| M50-SX01-C2NR0   | Riser Orange  | 900µm                    | M50-DX02-C2NRO     | Riser Orange  | 900µm              |
| M50-SX01-C2NPO   | Plenum Orange | 900µm                    | M50-DX02-C2NPO     | Plenum Orange | 900µm              |
|                  |               |                          | 002T51-311-3124    | Plenum Orange | 900µm              |
| 2.0mm            |               |                          | 2.0mm              |               |                    |
| M50-SX01-C2NR020 | Riser Orange  | 900µm                    | M50-DX02-C2NR020   | Riser Orange  | 900µm              |
| M50-SX01-C2NPO20 | Plenum Orange | 900µm                    | M50-DX02-C2NPO20   | Plenum Orange | 900µm              |
| 1.6mm            |               |                          | 1.6mm              |               |                    |
| M50-SX01-C2NR016 | Riser Orange  | 650µm                    | M50-DX02-C2NR016   | Riser Orange  | 650µm              |
| M50-SX01-C2NP016 | Plenum Orange | 650µm                    | M50-DX02-C2NP016   | Plenum Orange | 650µm              |
|                  |               |                          |                    |               |                    |

## 50/125µm - OM3 MULTIMODE - 10 Gig

Corning® ClearCurve® OM3 fiber

#### **DUPLEX CABLE**

DIIPI FX CARLE

| 3.0mm<br>PART #  | DESCRIPTION | <b>BUFFER SIZE</b> | <mark>3.0mm</mark><br>PART # | DESCRIPTION | <b>BUFFER SIZE</b> |
|------------------|-------------|--------------------|------------------------------|-------------|--------------------|
| M50-SX01-CGNRA   | Riser Aqua  | 900um              | M50-DX02-CGNRA               | Riser Aqua  | 900um              |
| M50-SX01-CGNPA   | Plenum Aqua | 900µm              | M50-DX02-CGNPA               | Plenum Aqua | 900µm              |
| 2.0mm            |             |                    | 2.0mm                        |             |                    |
| M50-SX01-CGNRA20 | Riser Aqua  | 900µm              | M50-DX02-CGNRA20             | Riser Aqua  | 900µm              |
| M50-SX01-CGNPA20 | Plenum Aqua | 900µm              | M50-DX02-CGNPA20             | Plenum Aqua | 900µm              |
| 1.6mm            |             |                    | 1.6mm                        |             |                    |
| M50-SX01-CGNRA16 | Riser Aqua  | 650µm              | M50-DX02-CGNRA16             | Riser Aqua  | 650µm              |
| M50-SX01-CGNPA16 | Plenum Aqua | 650µm              | M50-DX02-CGNPA16             | Plenum Aqua | 650µm              |

### 50/125µm - OM4 MULTIMODE - 10 Gig

Corning<sup>®</sup> ClearCurve<sup>®</sup> OM4 fiber

#### SIMPLEX CARLE

**SIMPLEX CABLE** 

|                  | JIMPLEA CADLE  |             |                  | DUPLEA CADLE   |             |
|------------------|----------------|-------------|------------------|----------------|-------------|
| 3.0mm            |                |             | 3.0mm            |                |             |
| PART #           | DESCRIPTION    | BUFFER SIZE | PART #           | DESCRIPTION    | BUFFER SIZE |
| M50-SX01-C4NRA   | Riser Aqua     | 900µm       | M50-DX02-C4NRA   | Riser Aqua     | 900µm       |
| M50-SX01-C4NPA   | Plenum Aqua    | 900µm       | M50-DX02-C4NPA   | Plenum Aqua    | 900µm       |
| M50-SX01-C4NRM   | Riser Magenta  | 900µm       | M50-DX02-C4NRM   | Riser Magenta  | 900µm       |
| M50-SX01-C4NPM   | Plenum Magenta | 900µm       | M50-DX02-C4NPM   | Plenum Magenta | 900µm       |
| 2.0mm            |                |             | 2.0mm            |                |             |
| M50-SX01-C4NRA20 | Riser Aqua     | 900µm       | M50-DX02-C4NRA20 | Riser Aqua     | 900µm       |
| M50-SX01-C4NPA20 | Plenum Aqua    | 900µm       | M50-DX02-C4NPA20 | Plenum Aqua    | 900µm       |
| M50-SX01-C4NRM20 | Riser Magenta  | 900µm       | M50-DX02-C4NRM20 | Riser Magenta  | 900µm       |
| M50-SX01-C4NPM20 | Plenum Magenta | 900µm       | M50-DX02-C4NPM20 | Plenum Magenta | 900µm       |
| 1.6mm            |                |             | 1.6mm            |                |             |
| M50-SX01-C4NRA16 | Riser Aqua     | 650µm       | M50-DX02-C4NRA16 | Riser Aqua     | 650µm       |
| M50-SX01-C4NPA16 | Plenum Aqua    | 650µm       | M50-DX02-C4NPA16 | Plenum Aqua    | 650µm       |
| M50-SX01-C4NRM16 | Riser Magenta  | 650µm       | M50-DX02-C4NRM16 | Riser Magenta  | 650µm       |
| M50-SX01-C4NPM16 | Plenum Magenta | 650µm       | M50-DX02-C4NPM16 | Plenum Magenta | 650µm       |



### **DISTRIBUTION CABLE**

Distribution Cable (compact building cable) packages individual 900µm buffered fiber, reducing size and cost when compared to breakout cable. The connectors may be installed directly on the 900µm buffered fiber at the breakout box location. The space saving (OFNR) rated cable may be installed wherever breakout cable is used.



### 9/125µm - OS2 SINGLEMODE Corning<sup>®</sup> SMF-28<sup>®</sup> Ultra fiber

| PART #          | <b>FIBER COUNT</b> | DESCRIPTION   | PART #          | FIBER COUNT | DESCRIPTION   |
|-----------------|--------------------|---------------|-----------------|-------------|---------------|
| S09-DI06-CZNRY  | 6                  | Riser Yellow  | S09-DI24-CZNPY  | 24          | Plenum Yellow |
| S09-DI12-CZNRY  | 12                 | Riser Yellow  | M9W606          | 48          | Riser Yellow  |
| S09-DI12-CZNPY  | 12                 | Plenum Yellow | 048R-816-113124 | 48          | Riser Yellow  |
| 012R-813-313124 | 12                 | Riser Yellow  | M9W609          | 72          | Riser Yellow  |
| S09-DI06-CZNPB  | 6                  | Plenum Blue   | S09-DI12-CZNPB  | 12          | Plenum Blue   |

#### 62.5/125μm 0M1 MULTIMODE

| InfiniCor <sup>®</sup> 300 fiber |             |               |                |             |               |  |
|----------------------------------|-------------|---------------|----------------|-------------|---------------|--|
| PART #                           | FIBER COUNT | DESCRIPTION   | PART #         | FIBER COUNT | DESCRIPTION   |  |
| M62-DI04-C3NR0                   | 4           | Riser Orange  | M62-DI12-C3NRO | 12          | Riser Orange  |  |
| M62-DI04-C3NP0                   | 4           | Plenum Orange | M62-DI12-C3NPO | 12          | Plenum Orange |  |
| M62-DI06-C3NR0                   | 6           | Riser Orange  | M62-DI24-C3NRO | 24          | Riser Orange  |  |
| M62-DI06-C3NP0                   | 6           | Plenum Orange | M62-DI24-C3NPO | 24          | Plenum Orange |  |

#### 50/125µm - OM2 MULTIMODE

| Corning <sup>®</sup> ClearCurve <sup>®</sup> 0M2 fiber |             |               |                |             |               |  |
|--|-------------|---------------|----------------|-------------|---------------|--|
| PART #   | FIBER COUNT | DESCRIPTION   | PART #         | FIBER COUNT | DESCRIPTION   |  |
| M50-DI04-C2NR0   | 4           | Riser Orange  | M50-DI12-C2NRO | 12          | Riser Orange  |  |
| M50-DI04-C2NPO   | 4           | Plenum Orange | M50-DI12-C2NPO | 12          | Plenum Orange |  |
| M50-DI06-C2NR0   | 6           | Riser Orange  | M50-DI24-C2NRO | 24          | Riser Orange  |  |
| M50-DI06-C2NPO   | 6           | Plenum Orange | M50-DI24-C2NPO | 24          | Plenum Orange |  |

#### 50/125µm - OM3 MULTIMODE - 10 Gig

| Corning <sup>®</sup> ClearCurve <sup>®</sup> OM3 fiber |             |             |                |             |             |  |
|--|-------------|-------------|----------------|-------------|-------------|--|
| PART #   | FIBER COUNT | DESCRIPTION | PART #         | FIBER COUNT | DESCRIPTION |  |
| M50-DI02-CGNRA   | 2           | Riser Aqua  | M50-DI06-CGNPA | 6           | Plenum Aqua |  |
| M50-DI02-CGNPA   | 2           | Plenum Aqua | M50-DI12-CGNRA | 12          | Riser Aqua  |  |
| M50-DI04-CGNRA   | 4           | Riser Aqua  | M50-DI12-CGNPA | 12          | Plenum Aqua |  |
| M50-DI04-CGNPA   | 4           | Plenum Aqua | M50-DI24-CGNRA | 24          | Riser Aqua  |  |
| M50-DI06-CGNRA   | 6           | Riser Aqua  | M50-DI24-CGNPA | 24          | Plenum Aqua |  |

# 50/125μm - OM4 MULTIMODE - 10 Gig

| Corning" ClearCurve" OM4 fiber |             |                |                |             |                |  |
|--------------------------------|-------------|----------------|----------------|-------------|----------------|--|
| PART #                         | FIBER COUNT | DESCRIPTION    | PART #         | FIBER COUNT | DESCRIPTION    |  |
| M50-DI06-C4NRA                 | 6           | Riser Aqua     | M50-DI12-C4NRA | 12          | Riser Aqua     |  |
| M50-DI06-C4NPA                 | 6           | Plenum Aqua    | M50-DI12-C4NPA | 12          | Plenum Aqua    |  |
| M50-DI06-C4NRM                 | 6           | Riser Magenta  | M50-DI12-C4NRM | 12          | Riser Magenta  |  |
| M50-DI06-C4NPM                 | 6           | Plenum Magenta | M50-DI12-C4NPM | 12          | Plenum Magenta |  |

MICRO DISTRIBU

#### **MICRO-DISTRIBUTION INDOOR CABLE**

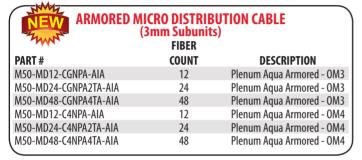
FIS is proud to offer their line of Micro-Distribution Cables for the Data Center market. These cables are offered in Riser. Plenum or LSZH. They are available in OS2 Singlemode, OM1 62.5µm Multimode, OM2 50µm Multimode or OM3 50µm Multimode and OM4 50µm Multimode. Numbered sub units available in 6 and 12 fiber counts.

#### 9/125um - OS2 SINGLEMODE

#### Corning<sup>®</sup> SMF-28<sup>®</sup> Ultra fiber

| PART #  | - | FIBER COUNT | DESCRIPTION   |  |
|---|---|-------------|---------------|--|
| S09-MD12-CZNRY20  |   | 12          | Riser Yellow  |  |
| S09-MD12-CZNPY20  |   | 12          | Plenum Yellow |  |
| *S09-MD24-CZNRY2T20-Y   |   | 24          | Riser Yellow  |  |
| *S09-MD24-CZNPY2T20-Y   |   | 24          | Plenum Yellow |  |
| *S09-MD48-CZNRY4T20-Y   |   | 48          | Riser Yellow  |  |
| *S09-MD48-CZNPY4T20-Y   |   | 48          | Plenum Yellow |  |
| *S09-MD72-CZNRY6T20-Y   |   | 72          | Riser Yellow  |  |
| *S09-MD72-CZNPY6T20-Y   |   | 72          | Plenum Yellow |  |
| When the state of the set of the |   | Valler      |               |  |

\*Indicates all buffers are colored Vallow



#### 50/125µm - 0M3 MULTIMODE

#### Corning® ClearCurve® OM3 fiber

| PART #                 | FIBER COUNT | DESCRIPTION |
|------------------------|-------------|-------------|
| M50-MD12-CGNRA20       | 12          | Riser Aqua  |
| M50-MD12-CGNPA20       | 12          | Plenum Aqua |
| *M50-MD24-CGNRA2TA20-A | 24          | Riser Aqua  |
| *M50-MD24-CGNPA2TA20-A | 24          | Plenum Áqua |
| *M50-MD48-CGNRA4TA20-A | 48          | Riser Aqua  |
| *M50-MD48-CGNPA4TA20-A | 48          | Plenum Áqua |
| *M50-MD72-CGNRA6TA20-A | 72          | Riser Aqua  |
| *M50-MD72-CGNPA6TA20-A | 72          | Plenum Aqua |

#### 50/125µm - 0M4 MULTIMODE

| Corning <sup>®</sup> ClearCurve <sup>®</sup> OM4 fiber |             |             |  |
|--|-------------|-------------|--|
| PART #   | FIBER COUNT | DESCRIPTION |  |
| M50-MD12-C4NRA20                                       | 12          | Riser Aqua  |  |
| M50-MD12-C4NPA20                                       | 12          | Aqua Plenum |  |
| *M50-MD24-C4NRA2TA20-A                                 | 24          | Riser Aqua  |  |
| *M50-MD24-C4NPA2TA20-A                                 | 24          | Aqua Plenum |  |
| *M50-MD48-C4NRA4TA20-A                                 | 48          | Riser Aqua  |  |
| *M50-MD48-C4NPA4TA20-A                                 | 48          | Agua Plenum |  |
| *Indicates all buffers are colo                        | red Arma    | ·           |  |

### NDOOR/OUTDOOR CAB



Interlocking Indoor/Outdoor Armored Cable



#### **INDOOR/OUTDOOR CABLE**

FIS offers indoor/outdoor cable in a distribution construction in both Riser and Plenum. These cables are flexible, easy to handle and simple to install. Since they do not use gel, the connectors can be terminated directly onto the 900µm fiber without breakout kits. This provides an easy and overall less expensive installation. Note: When used in a burial application this cable must be placed in a conduit or innerduct and is not recommended for lashing applications.

NEW

**2mm Subunits and** 

**Smaller Diameter** 

Cable

|                    |  | •                             | -                     |  |   |
|--------------------|--|-------------------------------|-----------------------|--|---|
| PART #             | FIBER COUNT                                | DESCRIPTION                   | PART #                | FIBER COUNT                                | DESCRIPTION                             |
| SINGLEMODE 9/125µm | Corning <sup>®</sup> SMF-28 <sup>®</sup> U | ltra fiber                    | MULTIMODE 62.5/125µm  | InfiniCor <sup>®</sup> 300 fibe            | r                                       |
| S09-I006-CZNRBL    | 6  | Riser SM 9/125µm - OS2        | M62-I002-C3NRBL       | 2  | Riser MM 62.5/125µm - 0M1               |
| S09-I012-CZNRBL    | 12   | Riser SM 9/125µm - OS2        | M62-I004-C3NRBL       | 4  | Riser MM 62.5/125µm - 0M1               |
| S09-I024-CZNRBL    | 24   | Riser SM 9/125µm - OS2        | M62-I006-C3NRBL       | 6  | Riser MM 62.5/125µm - 0M1               |
| S09-I006-CZNPBL    | 6  | Plenum SM 9/125µm - 0S2       | M62-I012-C3NRBL       | 12   | Riser MM 62.5/125µm - 0M1               |
| S09-I012-CZNPBL    | 12   | Plenum SM 9/125µm - 0S2       | M62-I024-C3NRBL       | 24   | Riser MM 62.5/125µm - 0M1               |
|                    |  |                               | M62-I002-C3NPBL       | 2  | Plenum MM 62.5/125µm - 0M1              |
| MULTIMODE 50/125µm | Corning <sup>®</sup> ClearCurv             |                               | M62-I004-C3NPBL       | 4  | Plenum MM 62.5/125µm - 0M1              |
| M50-I002-CGNRBL    | 2  | Riser 50/125 10 Gig MM - 0M3  | M62-I006-C3NPBL       | 6  | Plenum MM 62.5/125µm - 0M1              |
| M50-I004-CGNRBL    | 4  | Riser 50/125 10 Gig MM - 0M3  | M62-I012-C3NPBL       | 12   | Plenum MM 62.5/125µm - 0M1              |
| M50-I006-CGNRBL    | 6  | Riser 50/125 10 Gig MM - 0M3  | M62-I024-C3NPBL       | 24   | Plenum MM 62.5/125µm - 0M1              |
| M50-I012-CGNRBL    | 12   | Riser 50/125 10 Gig MM - 0M3  | MULTIMODE 50/125µm Co | rning <sup>®</sup> ClearCurve <sup>®</sup> | ° OM2 fiber                             |
| M50-I024-CGNRBL    | 24   | Riser 50/125 10 Gig MM - 0M3  | M50-I002-C2NRBL       | 2  | Riser 50/125µm MM - 0M2                 |
| M50-I006-CGNPBL    | 6  | Plenum 50/125 10 Gig MM - 0M3 | M50-1006-C2NRBL       | 6  | Riser 50/125µm MM - 0M2                 |
| M50-I012-CGNPBL    | 12   | Plenum 50/125 10 Gig MM - 0M3 | M50-I012-C2NRBL       | 12   | Riser 50/125µm MM - 0M2                 |
| M50-I024-CGNPBL    | 24   | Plenum 50/125 10 Gig MM - 0M3 |                       |  |   |
|                    |  |                               | INTERLOCKING INDOOR/O | JIDOOK ARMORED                             |   |
| MULTIMODE 50/125µm | Corning <sup>®</sup> ClearCurv             |                               | S09-I006-CZNPBL-AIA   | 6  | Plenum SM 9/125µm Armored - OS2         |
| M50-I006-C4NRBL    | 6  | Riser 50/125 10 Gig MM - 0M4  | S09-I012-CZNPBL-AIA   | 12   | Plenum SM 9/125µm Armored - OS2         |
| M50-1006-C4NPBL    | 6  | Plenum 50/125 10 Gig MM - 0M4 | M62-I006-C3NPBL-AIA   | 6  | Plenum MM 62.5/125µm Armored - 0M1      |
| M50-I012-C4NRBL    | 12   | Riser 50/125 10 Gig MM - 0M4  | M62-I012-C3NPBL-AIA   | 12   | Plenum MM 62.5/125µm Armored - 0M1      |
| M50-I012-C4NPBL    | 12   | Plenum 50/125 10 Gig MM - 0M4 | M50-I006-CGNPBL-AIA   | 6  | Plenum MM 50/125µm 10 Gig Armored - OM3 |
|                    |  |                               | M50-I012-CGNPBL-AIA   | 12   | Plenum MM 50/125µm 10 Gig Armored - OM3 |
|                    |  |                               | M50-I024-CGNPBL-AIA   | 24   | Plenum MM 50/125µm 10 Gig Armored - OM3 |

#### ALUMINUM INTERLOCKING ARMORED DISTRIBUTION CABLE

Tight Buffered Aluminum Interlocking Armored Cable consists of PVC overall jacket, PVC inner jacket with 2 to 24 tight buffered fibers surrounded by yarn acting as a strength member. The core is protected by a spirally wrapped aluminum strip that offers easy installation and high crush resistance. These cables are available in OFCP rated constructions.

| PART #              | <b>FIBER COUNT</b> | DESCRIPTION                         | CABLE DIA. |
|---------------------|--------------------|-------------------------------------|------------|
| S09-DI06-CZNPY-AIA  | 6                  | SM 9/125µm - Yellow Plenum - OS2    | 16mm       |
| S09-DI12-CZNPY-AIA  | 12                 | SM 9/125µm - Yellow Plenum - OS2    | 16mm       |
| S09-D124-CZNPNY-AIA | 24                 | SM 9/125µm - Yellow Plenum - OS2    | 17.4mm     |
| S09-D148-CZNPNY-AIA | 48                 | SM 9/125µm - Yellow Plenum - OS2    | 23.50mm    |
| M62-DI06-C3NPO-AIA  | 6                  | MM 62.5/125µm - Orange Plenum - OM1 | 16mm       |
| M62-DI12-C3NPO-AIA  | 12                 | MM 62.5/125µm - Orange Plenum - OM1 | 17.4mm     |
| M50-DI06-CGNPA-AIA  | 6                  | MM 50/125um - Aqua Plenum - OM3     | 16mm       |
| M50-DI12-CGNPA-AIA  | 12                 | MM 50/125um - Aqua Plenum - OM3     | 16mm       |
| M50-DI24-CGNPA-AIA  | 24                 | MM 50/125um - Aqua Plenum - OM3     | 17.4mm     |



#### **TACTICAL CABLE**

Fiber Optic Tactical Cable consists of a rugged, flexible polyurethane outer jacket and either two or four 900µm tight-buffered fibers surrounded by aramid yarn and an aramid ripcord. The jacket is pressure extruded over the strength member which allows the pulling device to be attached directly to the cable's outer jacket. This will transfer the pulling force directly to the strength members with no slippage.

| PART #            | FIBER COUNT | DESCRIPTION                        |
|-------------------|-------------|------------------------------------|
| FB-SM-TACCABLE-6  | 6           | SM 9/125µm Tactical Cable - OS2    |
| FB-SM-TACCABLE-12 | 12          | SM 9/125µm Tactical Cable - OS2    |
| FB-MM-TACCABLE-6  | 6           | MM 62.5/125µm Tactical Cable - 0M1 |
| FB-MM-TACCABLE-12 | 12          | MM 62.5/125µm Tactical Cable - 0M1 |
| FB-50-TACCABLE-6  | 6           | MM 50/125µm Tactical Cable - 0M3   |
| FB-50-TACCABLE-12 | 12          | MM 50/125µm Tactical Cable - 0M3   |

#### **INDOOR/OUTDOOR BREAKOUT CABLE**

Breakout cable consists of 2mm subunits with 900mm tight buffers. Combining strength, flexibility and no need for fan-out kits or tubing when terminating, these rugged cables are ideal for indoor and indoor/outdoor applications. Offering Breakout cables from 2-12 fiber constructions with Plenum and Riser ratings.

| PART #             | FIBER COUNT | DESCRIPTION         |
|--------------------|-------------|---------------------|
| S09-BK06CZNPY-20-Y | 6           | SM 9/125µm - OS2    |
| S09-BK12CZNPY-20-Y | 12          | SM 9/125µm - 0S2    |
| M62-BK06C3NP0-20-0 | 6           | MM 62.5/125µm - 0M1 |
| M62-BK12C3NPO-20-0 | 12          | MM 62.5/125µm - 0M1 |



#### **GEL-FREE INDOOR/OUTDOOR CABLE**

This cable has no gel fill to complicate the connectorization process. Instead, water swellable yarn replaces the gel. Each tube contains colored bare fibers, making your installation simple and fast. Available in 2 to 72 fibers. Fiber counts 2-12 are in one subunit and larger fiber counts are in seperate subunits in multiples of 12. Jackets are available in Riser and Plenum. The FIS Fan Out Kits are a perfect match with this cable.

| PART #           | FIBER COUNT | DESCRIPTION                       |
|------------------|-------------|-----------------------------------|
| S09-DL06-CZNRBL  | 6           | SM 9/125µm Riser PVC Black - OS2  |
| S09-DL12-CZNRBL  | 12          | SM 9/125µm Riser PVC Black - OS2  |
| S09-DL24-CZNRBL  | 24          | SM 9/125µm Riser PVC Black – OS2  |
| S09-DL48-CZNRBL  | 48          | SM 9/125µm Riser PVC Black - OS2  |
| S09-DL72-CZNRBL  | 72          | SM 9/125µm Riser PVC Black - OS2  |
| M62-DL-06-C3NRBL | 6           | MM 62.5µm Riser PVC Black - OM1   |
| M62-DL-12-C3NRBL | 12          | MM 62.5µm Riser PVC Black - OM1   |
| M50-DL06-CGNRBL  | 6           | MM 50/125µm Riser PVC Black - OM3 |
| M50-DL12-CGNRBL  | 12          | MM 50/125µm Riser PVC Black - OM3 |

#### FLAT RIBBON - Bare 245µm

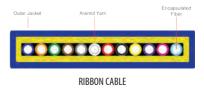
| PART #      | DESCRIPTION  |  |
|-------------|--|--|
| S09-RB012-C | 12 Fiber Singlemode 9/125µm Bare 245µm - OS2             |  |
| M62-RB012-C | 12 Fiber Multimode 62.5/125µm Bare 245µm - 0M1           |  |
| M50-RB12-CG | 12 Fiber Multimode 50/125µm ClearCurve® Bare 245µm - OM3 |  |

#### FLAT RIBBON CABLE

| PART #         | DESCRIPTION   |
|----------------|---|
| S09-RB012-CNRY | 12 Fiber Singlemode 9/125μm Riser Yellow - OS2                          |
| M62-RB12-C3NR0 | 12 Fiber Multimode 62.5/125µm Riser Jacketed Orange - OM1               |
| M62-RB12-C3NP0 | 12 Fiber Multimode 62.5/125µm Plenum Jacketed Orange - OM1              |
| M50-RB12-C2NRO | 12 Fiber Multimode 50/125µm Riser Jacketed Orange - OM2                 |
| M50-RB12-CGNRA | 12 Fiber Multimode 50/125µm Corning® ClearCurve® OM3 Riser Jacket Aqua  |
| M50-RB12-CGNPA | 12 Fiber Multimode 50/125µm Corning® ClearCurve® OM3 Plenum Jacket Aqua |
|                |   |

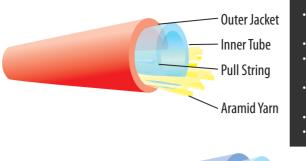






/FiberExperts

## **CABLE** | FURCATION TUBE





#### KEY FEATURES INCLUDE

- Designed to terminate to a wide range of connector styles.
- Accommodates bare or tight buffered fibers.
  Provides durable fiber protection and
- emulates standard simplex and duplex cable. • Consists of an inner tube surrounded by
- aramid fibers and a PVC jacket.
- 12 standard colors for easy identification.
- ONLY 3.0mm has a pull string

#### **OTHER COLORS AVAILABLE**





#### 900µm FURCATION TUBE

This 900 $\mu$ m furcation tube accepts 250 $\mu$ m diameter coated fiber. Standard material is Hytrel and other colors are available.

| PART #           | DESCRIPTION |                 |
|------------------|-------------|-----------------|
| F00-FR900R-CLEAR | Clear       | (Accepts 250µm) |
| F00-FR900-HN     | Opaque      | (Accepts 250µm) |
| F00-FR900-HW     | White       | (Accepts 250µm) |
| F00-FR900-HY     | Yellow      | (Accepts 250µm) |
| F00-FR900-H0     | Orange      | (Accepts 250µm) |
| F00-FR900-HA     | Aqua        | (Accepts 250µm) |

#### 2.0mm FURCATION TUBE

Our 2.0mm furcation tubing has an inner tube surrounded by aramid fibers. The inner tube accepts  $250\mu m$  and  $900\mu m$  (1.5mm OD inner tube for  $900\mu m$ ) bare fiber. Other colors available.

| PART #         | DESCRIPTION |                 |
|----------------|-------------|-----------------|
| F00-FR2NU0-900 | Orange      | (Accepts 250µm) |
| F00-FR2NUY-900 | Yellow      | (Accepts 250µm) |
| F00-FR2NUA-900 | Aqua        | (Accepts 250µm) |
| F00-FR2-NU0    | Orange      | (Accepts 900µm) |
| F00-FR2-NUY    | Yellow      | (Accepts 900µm) |
| F00-FR2-NUR    | Red         | (Accepts 900µm) |
| F00-FR2-NUB    | Blue        | (Accepts 900µm) |
| F00-FR2-NUG    | Green       | (Accepts 900µm) |
| F00-FR2-NUA    | Aqua        | (Accepts 900µm) |

#### **3.0mm FURCATION TUBE**

Our 3.0mm furcation tube has an inner hollow tube with a **pull string** and will receive a 250 $\mu$ m buffered fiber.

The 900µm inner hollow tube, the same tube found in FIS Universal Breakout Kits, may now be purchased separately.

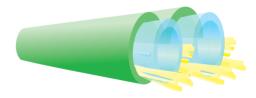
Includes aramid yarn strength member. Other colors available.

| PART #         | DESCRIPTI | ON              |
|----------------|-----------|-----------------|
| F00-FR3NU0-900 | Orange    | (Accepts 250µm) |
| F00-FR3NUY-900 | Yellow    | (Accepts 250µm) |
| F00-FR3NUA-900 | Aqua      | (Accepts 250µm) |
| F00-FR3-NUO    | Orange    | (Accepts 900µm) |
| F00-FR3-NUY    | Yellow    | (Accepts 900µm) |
| FOO-FR3-NUR    | Red       | (Accepts 900µm) |
| F00-FR3-NUB    | Blue      | (Accepts 900µm) |
| F00-FR3-NUG    | Green     | (Accepts 900µm) |
| F00-FR3-NUA    | Aqua      | (Accepts 900µm) |

#### **RIBBON FURCATION TUBE**

FIS offers ribbon furcation tubing for protection of bare ribbon fibers. Standard size fits fiber counts of 4, 6, 8 and 12 fibers. There is no inner tube or strength member.

| PART #       | DESCRIPTION |
|--------------|-------------|
| F00-FRRB-NRO | Orange      |
| F00-FRRB-NRY | Yellow      |
| F00-FRRB-NRA | Aqua        |



#### **DUPLEX FURCATION TUBE**

2.0mm and 3.0mm duplex furcation tubing consists of an inner tube surrounded by aramid fibers, and a PVC jacket sized for the industry standard connectors. The duplex design allows for professional termination of connector pairs.

| DESCRIPTIO | N   |
|------------|---|
| Orange     | (Accepts 250µm)                                       |
| Yellow     | (Accepts 250µm)                                       |
| Aqua       | (Accepts 250µm)                                       |
|            |   |
| Orange     | (Accepts 900µm)                                       |
| Yellow     | (Accepts 900µm)                                       |
| Green      | (Accepts 900µm)                                       |
| Agua       | (Accepts 900µm)                                       |
|            | Orange<br>Yellow<br>Aqua<br>Orange<br>Yellow<br>Green |

#### **TECH TIP:**

Rosin is useful when working with loose tube fiber. When furcating this type of fiber, you must first remove the loose tube buffers and use solvents to clean off the cable filling grease or "Ickypic" that surrounds the fibers. Applying rosin to the exposed and cleaned fibers will remove stickiness caused by any unremoved Ickypic. This will help prevent your cable from getting stuck and breaking fibers as you pull it through a cable run.

# **MAX LENGTHS CHART**

\*Lengths are in meters

# **SPOOL DIMENSIONS:**

| (Flange x Traverse x Drum) |                    |  |
|----------------------------|--------------------|--|
| 18" – 18 x 15 x 8          | 42" – 42 x 24 x 18 |  |
| 24" – 24 x 15 x 16.5       | 48" – 48 x 24 x 24 |  |
| 30" – 30 x 24 x 18         |                    |  |

| CABLE                   | SPOOL SIZES |      |       |      |
|-------------------------|-------------|------|-------|------|
|                         | 18"         | 24"  | 30"   | 42"  |
|                         |             |      |       |      |
| 2 FIBER (RISER/PLENUM)  | X           | 1800 | 6477  | Х    |
| 2 FIBER (RISER/PLENUM)  | X           | 1500 | 5216  | X    |
| 6 FIBER (RISER/PLENUM)  | Х           | 1235 | 4291  | Х    |
| 8 FIBER (RISER/PLENUM)  | Х           | 1033 | 3592  | Х    |
| 12 FIBER (RISER/PLENUM) | Х           | 878  | 3050  | Х    |
| 24 FIBER (RISER/PLENUM) | Х           | 509  | 1787  | X    |
| 48 FIBER (RISER)        | Х           | Х    | 430   | 734  |
| 48 FIBER (PLENUM)       | Х           | Х    | 430   | 633  |
| 72 FIBER (RISER)        | Х           | Х    | Х     | 580  |
| 72 FIBER (PLENUM)       | Х           | Х    | Х     | 520  |
| Micro-Distribution      | 18"         | 24"  | 30"   | 42"  |
| 12 FIBER (RISER/PLENUM) | X           | 3900 | 12695 | X    |
| 24 FIBER (RISER)        | X           | 540  | 1872  | 3315 |
| 24 FIBER (PLENUM)       | X           | 540  | 1872  | 2766 |
| 48 FIBER (RISER)        | X           | 479  | 1667  | 2600 |
| 48 FIBER (PLENUM)       | X           | 479  | 1667  | 2400 |
| 72 FIBER (RISER)        | X           | X    | 1152  | 1900 |
| 72 FIBER (PLENUM)       | X           | X    | 1152  | 1600 |
| 96 FIBER (RISER)        | X           | X    | 748   | 1400 |
| 96 FIBER (PLENUM)       | X           | X    | 748   | 1200 |
|                         | Λ           | Λ    | 740   | 1200 |
| Simplex                 | 18"         | 24"  | 30"   | 42"  |
| SIMPLEX 1.6MM           | 5000        | Х    | Х     | Х    |
| SIMPLEX 2MM             | 5000        | Х    | Х     | Х    |
| SIMPLEX 3MM             | 4000        | Х    | Х     | Х    |
| Duplex                  | 18"         | 24"  | 30"   | 42"  |
| DUPLEX 1.6MM            | 3500        | X    | X     | X    |
| DUPLEX 2MM              | 3500        | X    | X     | X    |
| DUPLEX 3MM              | 2000        | X    | X     | X    |
|                         | 2000        | Λ    | Λ     | Λ    |
| Breakout                | 18"         | 24"  | 30"   | 42"  |
| 2 FIBER (RISER)         | Х           | 500  | 1574  | 3200 |
| 2 FIBER (PLENUM)        | Х           | 500  | 1574  | 2900 |
| 4 FIBER (RISER)         | Х           | 453  | 1574  | 3000 |
| 4 FIBER (PLENUM)        | Х           | 453  | 1574  | 2700 |
| 6 FIBER (RISER)         | Х           | 453  | 1574  | 2400 |
| 6 FIBER (PLENUM)        | Х           | 453  | 1574  | 2200 |
| 8 FIBER (RISER)         | Х           | 385  | 1338  | 2000 |
| 8 FIBER (PLENUM)        | Х           | 385  | 1338  | 1700 |
| 12 FIBER (RISER)        | Х           | 316  | 1098  | 1700 |
| 12 FIBER (PLENUM)       | Х           | 316  | 1098  | 1500 |
| Ribbon Cable            | 18"         | 24"  | 30"   | 42"  |
| 4 FIBER                 | 5734        | 6809 | Х     | Х    |
| 6 FIBER                 | 5734        | 6809 | Х     | Х    |
| 8 FIBER                 | 5734        | 6809 | Х     | Х    |
| 12 FIBER                | 5734        | 6809 | Х     | Х    |



| CABLE   | SPOOL SIZES    | 5    |      |      |
|---|----------------|------|------|------|
| Dry Loose Tube (I/O)                            | 18"            | 24"  | 30"  | 42"  |
| 6 FIBER (RISER)                                 | X              | 951  | 2650 | 2650 |
| 6 FIBER (PLENUM)                                | X              | 951  | 2400 | 2400 |
| 12 FIBER (RISER)                                | X              | 951  | 2650 | 2650 |
| 12 FIBER (PLENUM)                               | X              | 951  | 2400 | 2400 |
| 24 FIBER (RISER)                                | X              | 394  | 1271 | 2650 |
| 24 FIBER (PLENUM)                               | X              | 582  | 1878 | 2400 |
| 48 FIBER (RISER)                                | X              | 394  | 1271 | 2650 |
| 48 FIBER (PLENUM)                               | X              | 394  | 1271 | 2400 |
| 72 FIBER (RISER)                                | X              | 253  | 879  | 1750 |
| 72 FIBER (PLENUM)                               | X              | X    | 879  | 1600 |
| 72 FIBER (PLENUM)                               | X              | X    | 879  | 1600 |
| Dry Loose Tube (PE-OSP)                         | 18"            | 24"  | 30"  | 42"  |
| 6 FIBER   | X              | X    | 879  | 2300 |
| 12 FIBER  | X              | X    | 879  | 2300 |
| 24 FIBER  | X              | X    | 879  | 2300 |
| 36 FIBER  | Х              | X    | 879  | 2300 |
| 48 FIBER  | X              | 270  | 879  | 2300 |
| 72 FIBER  | X              | 270  | 879  | 2300 |
|   | • • •          |      |      | 401  |
| Armored Products (Armo                          | •              |      |      | 48"  |
| 2 AND 4 FIBER DISTRIBUTIO                       |                |      |      | 3208 |
| 6 AND 12 FIBER DISTRIBUT                        |                |      |      | 2320 |
| 24 FIBER DISTRIBUTION AN                        |                |      |      | 1940 |
| 48 FIBER DISTRIBUTION AN                        |                |      |      | 811  |
| 2-12 FIBER DRY LOOSE TUBE (OFNR/OFNP)           |                |      | 2320 |      |
| 24-48 FIBER DRY LOOSE TUBE (OFNR)               |                |      | 1502 |      |
| 72 FIBER DRY LOOSE TUBE (OFNR) 1196             |                |      |      |      |
| 24-36 FIBER DRY LOOSE TU                        |                |      |      | 1940 |
| 48 FIBER DRY LOOSE TUBE (                       |                |      |      | 1502 |
|   |                |      | 1196 |      |
| 2-12 FIBER MICRO-DISTRIB                        |                |      |      | 3208 |
| 24-48 FIBER MICRO-DISTRIBUTION (OFNR/OFNP)      |                | 1940 |      |      |
| 72 FIBER MICRO-DISTRIBUTION (OFNR/OFNP) 1502    |                |      |      |      |
| Armored Products (AIA-Ja                        | acketed)       |      |      | 48"  |
| 2 AND 4 FIBER DISTRIBUTION AND I/O 2156         |                |      |      |      |
| 6 AND 12 FIBER DISTRIBUTION AND I/O             |                |      | 1674 |      |
| 24 FIBER DISTRIBUTION AND I/O                   |                |      | 1375 |      |
| 48 FIBER DISTRIBUTION AND I/O 657               |                |      | 657  |      |
| 2-12 FIBER DRY LOOSE TUBE (OFNR/OFNP) 1647      |                |      | 1647 |      |
| 24-48 FIBER DRY LOOSE TUBE (OFNR)               |                |      | 1135 |      |
|   |                |      | 930  |      |
| 24-36 FIBER DRY LOOSE TUBE (OFNP) 1375          |                |      | 1375 |      |
| 48 FIBER DRY LOOSE TUBE (OFNP) 1135             |                |      | 1135 |      |
| 72 FIBER DRY LOOSE TUBE (OFNP) 1025             |                |      | 1025 |      |
| 2-12 FIBER MICRO-DISTRIBUTION (OFNR/OFNP) 2080  |                |      | 2080 |      |
| 24-48 FIBER MICRO-DISTRIBUTION (OFNR/OFNP) 1375 |                |      | 1375 |      |
| 72 FIBER MICRO-DISTRIBUT                        | TION (OFNR/OFN | IP)  |      | 1135 |
|   |                |      |      |      |

# CONSUMABLES



F1-8326

#### **FIBER OPTIC DISPOSAL UNIT**

A handy and safe solution for disposing of cleaved fiber ends. Perfect for on-site installers. Choose from three sizes to accommodate any tool kit and splice/connector station. The large unit has a snap on hinge cover, while the standard and mini snap containers have traditional slide tops for easy opening and closing.

| PART #   | DESCRIPTION   |
|----------|---|
| F1-8328C | Large Fiber Optic Disposal Unit with Snap Top (3-1/2"W x 5-1/2"H)     |
| F1-8327  | Standard Fiber Optic Disposal Unit with Slide Top (1-7/8"W x 4-3/8"H) |
| F1-8326  | Mini Fiber Optic Disposal Unit with Slide Top (1-5/8"W x 1-1/2"H)     |



#### **FIS FIBER OPTIC CLEANING PEN**

Use this cleaning pen to apply solution to cleaning wipe for removal of contaminants from optical fiber. Cleaner can be used with swabs to clean adapters, too.

| PART #  | DESCRIPTION                  |
|---------|------------------------------|
| F1-6709 | FIS Fiber Optic Cleaning Pen |



**PIANO WIRE** 

F1-8265

A smart way to save a connector when a fiber breaks inside a ferrule during connectorization. Also an excellent tool to remove broken fiber from bare fiber adapters. The 0.004" (110µm) diameter wire is also used in connectorization process to apply epoxy to protruding fiber at ferrule. Sticky colored tabs provided to hold wire.

| PART #  | DESCRIPTION    |
|---------|----------------|
| F1-8265 | FIS Piano Wire |



#### **CANNED AIR**

Before removing a fiber optic connector for inspection or cleaning, make sure the area around the connector is free from dust. The FIS Micro Duster includes an extension nozzle to provide a powerful blast of air to remove particles from areas that are otherwise inaccessible. Shipping restrictions and fees may apply.

| PART #   | DESCRIPTION            |  |
|----------|------------------------|--|
| F1-1007S | FIS Canned Air (10oz.) |  |



F1-0001V

#### **MATCHING GEL**

To reduce optical loss within fiber optic mechanical splices and connectors, apply optical couplant at the interface of the two mated fibers. This minimizes loss by reducing the difference in the index of refraction between the mated fibers.

| PART #   | DESCRIPTION                |
|----------|----------------------------|
| F1-0001V | FIS Matching Gel (0.40oz.) |



#### **FIS DISPENSING BOTTLE**

| PART #   | DESCRIPTION  |
|----------|--|
| F1-007PL | 8 oz. Automatic Alcohol Dispensing Bottle, Plastic (A)     |
| F1-007P  | 8 oz. Automatic Alcohol Dispensing Bottle, Amber Glass (B) |

# **CONSUMABLES** CLEANING SOLUTIONS / WIPES / CLEANING





#### **ISOPROPYL ALCOHOL PRODUCTS**

This 99% reagent grade isopropyl is used in cleaning fiber or connector endfaces for better transmission performance. Also offered are pre-filled foam swabs and 4 oz. dispensing bottles available in glass or plastic. Ground Shipping Only. Hazmat Fees May Apply.

-500-034

en Dru Wi

F1-1010

| PART #     | DESCRIPTION  |  |
|------------|--|--|
| F1-0068    | 1 Case of 6 (4 oz.) Canned Alcohol                 |  |
| F1-0007SP  | 1 Case of 6 (4 oz.) Alcohol Bottles with Spray Top |  |
| F1-0007    | 1 Case of 6 (4 oz.) Alcohol Squeeze Bottles        |  |
| F1-000728  | Bottled Alcohol (28 oz.)                           |  |
| F1-1007-GA | 1 Case Alcohol (4 gallons per case)                |  |

### FIBER OPTIC CLEANING SOLUTION

This fast-acting cleaner can be used with dry fiber wipes or tissues to remove dust, dirt and contaminants from optical fiber prior to termination and splicing or to clean the end of connector ferrules.

| PART #  | DESCRIPTION                           |
|---------|---------------------------------------|
| F1-6706 | Fiber Optic Cleaning Solution (2 oz.) |



FIBER OPTIC WIPES

#### PRE-MOISTENED ALCOHOL WIPES

Fast evaporating Pre-Moistened Alcohol Wipes can be used on optical fiber to remove dirt, dust and oils. Contains Isopropanol.

| PART #  | DESCRIPTION                              |
|---------|--|
| F1-1004 | FIS Pre-Moistened Alcohol Wipes (50 pk.) |

#### PRE-MOISTENED DEGREASER WIPES (ICKY-PIC CLEANER)

FIS new Icky-Clean wipes can be used with outside plant optical or copper cables. Utilize to remove Icky-Pic or gels from cables prior to splicing or termination. Great to clean up tools, as well.

| PART #      | DESCRIPTION                                 |
|-------------|---|
| F1-1010     | FIS Pre-Moistened Degreaser Wipes (12 pk.)  |
| F1-1010-100 | FIS Pre-Moistened Degreaser Wipes (100 pk.) |

#### **FIS FIBER OPTIC WIPES**

F1-

The FIS low lint tissues can be used dry or with cleaning solvents to clean ferrule endfaces or prepare fibers for termination and/or splicing.

#### PART # DESCRIPTION F1-

| 5705  | Low Lint Wipes (280 wipes per box) |
|-------|------------------------------------|
| 5705C | Case of (60 Boxes)                 |

#### FIS FIBER OPTIC 4"x4" NON-WOVEN CLOTH WIPES

Non-Woven Cloth Wipes can be used alone or with alcohol or solvents. Provide superior cleaning of fiber optic connector ferrules without risk of scratching or lint residue.

| PART #  | DESCRIPTION                                  |
|---------|--|
| F1-6702 | Non-Woven Dry Wipes, 100 per pack, 4" x 4"   |
| F1-6704 | Non-Woven Dry Wipes, 1,200 per pack, 4" x 4" |

#### **FIS FIBER SWIPE500**

This unique handheld connector ferrule endface cleaner removes dust, dirt and contaminates prior to mating a fiber optic connection. The fiber optic cleaner fits well in the technician's hand with a convenient trigger that automatically opens the top cleaning window to expose a single microfiber cleaning slot. Simply swipe the ferrule endface with light pressure against the microfiber with the directional arrow and then release the trigger.

| PART #  | DESCRIPTION        |
|---------|--------------------|
| F1-6712 | FIS Fiber Swipe500 |
| F1-6713 | Replacement Reel   |

#### **FIS HAND HELD CONNECTOR CLEANER**

Choose the FIS Hand Held Connector Cleaner as an alternative to alcohol or solvent and wipes. The cartridge offers lint-free, clean room-grade cleaning media, which effectively removes dirt, dust, oil, grease and debris from connector endfaces. A new resilient rubber pad beneath the cleaning surface prevents scratching, and a sliding cover protects the cleaning media from contamination when not in use. Reel refills available

| PART #   | DESCRIPTION  |
|----------|--|
| F1-7020C | FIS Hand Held Connector Cleaner Universal (400 cleans) |
| F1-7021C | FIS Cleaning Media Replacement Reel (20 ft.)           |



F1-6705 F1-6702





#### **FIS BULKHEAD FERRULE CLEANER**

The FIS Bulkhead Ferrule Cleaner is an easy-to-use option for cleaning connectors in adapters. Simply insert the FIS Bulkhead Ferrule Cleaner into an adapter and push until an audible "click" is heard. The FIS Bulkhead Ferrule Cleaner uses the mechanical push action to advance and optical grade cleaning tape while the cleaning tip is rotated to ensure the fiber end-face is effectivly, but gently cleaned. The FIS Bulkhead Ferrule Cleaner is a must-have for technicians. Small enough to fit in a shirt pocket and a great addition to cleaning kits. **PART**# DESCRIPTION

FIS 2.5mm Bulkhead Ferrule Cleaner

FIS 1.25mm Bulkhead Ferrule Cleaner



BULKHEAD FERMILLE CLEANER

## **FIS ROTOSWIPE**

F1-6715

F1-6716

The FIS Rotoswipe ferrule cleaner is convenient for cleaning connector endfaces from inside bulkheads or mating sleeves without removing connectors from the back panel. Simply choose from the 2.5 or 1.25mm ferrule version, insert into the mating sleeve until cleaning tip with fabric gently touches the ferrule endface, then turn the gray rotator dial 2-3 clicks clockwise. Inspect for cleanliness if desired, with a video microscope. You can utilize this cleaner for patch cable endfaces as well as, with use of female mating sleeves for correct gender type.

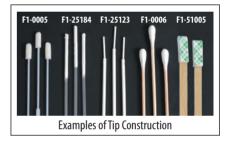
| PART #  | DESCRIPTION                     |
|---------|---------------------------------|
| F1-6710 | FIS 2.5mm ROTOSWIPE Cleaner     |
| F1-6711 | FIS 1.25mm ROTOSWIPE LC Cleaner |



#### **FIBER OPTIC SWABS**

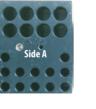
When cleaning connector endfaces inside bulkheads, mating sleeves and other recessed areas, you'll appreciate the extended reach that our 2.5mm and 1.25mm swabs provide. Choose from wrapped swabs, foam swabs or general purpose cotton swabs. NOTE: The general purpose cotton swabs do not fit into 2.5mm or 1.25mm adapters.

| PART #     | DESCRIPTION                                    |
|------------|--|
| F1-25184   | 2.5mm Wrapped Swabs (5pk)                      |
| F1-25183   | 2.5mm Wrapped Swabs (100pk)                    |
| F1-25123   | 1.25mm Wrapped Swabs (5pk)                     |
| F1-25123B  | 1.25mm Wrapped Swabs (100 pk)                  |
| F1-0005    | 2.5mm Mini Foam Swabs (50 pk)                  |
| F1-51005   | Debris Removal Swab - with Adhesive (5 pack)   |
| F1-5100100 | Debris Removal Swab - with Adhesive (100 pack) |
|            |  |





9091 MU/LC





#### **FIS CONNECTOR HEAT OVEN**

To prevent epoxy "out gassing" that can cause fiber fractures and other connector problems, it is important that a connector curing oven provide reliable operation. The FIS Connector Oven is preferred by many installers because it is simple, dependable, and easy-to-use.

| PART #    | DESCRIPTION  |
|-----------|--|
| F1-9772   | 24 Port Heat Oven (FC/ST/D4/SMA/SC) 4011-0000 Included                   |
| F1-977220 | 24 Port Heat Oven (220 V) (FC/ST/D4/SMA/SC) 4011-0000 Included           |
| 9091      | MU/LC Holding Block  |
| 9090      | Universal Holding Block (side A - ST, FC, SMA, D4, side B - Biconic, SC) |
| 9092      | MTRJ/MTP Ferrule Holding Block   |
| 4011-0000 | 24 Port Block (FC,ST,D4,SMA,SC)  |
| 94515     | Curing Stand   |
| 8032-0000 | Thermometer  |

#### **OVEN PROTECTION SLEEVES**

Use to prevent breakage of protruding fiber during connector heat oven curing process. These oven protection sleeves are reusable. PART # DESCRIPTION 80879000M **Oven Protection Sleeve 2.5mm Ferrules** Molex Oven Protection Sleeve 1.25mm Ferrules 867730011

CE

**OPTIONAL CURING** STAND SHOWN

80879000M

F1-9772



#### **EPOXY APPLICATION SYRINGE**

When assembling multiple fiber optic connectors, these Epoxy Syringes enable you to work quickly and efficiently. The included dispensers (needles) enable you to easily inject epoxy into connectors. Economically priced, they can be replaced the moment the epoxy is no longer easily workable. A larger diameter 1.1mm applicator needle is also available, F1-4012, which can be used with the 501473-3IR empty syringe.

| PART #         | DESCRIPTION  |
|----------------|--|
| 501473-3IRC5   | Empty Syringe with .9mm Needle (5 pk.)             |
| 501473-3IRC25  | Empty Syringe with .9mm Needle (25 pk.)            |
| 501473-3IRC100 | Empty Syringe with .9mm Needle (100 pk.)           |
| F1-4012        | 1.1mm Applicator Needle for 3M Connectors (25 pk.) |





EPOXY





#### **FIS EPOXY FOR CONNECTORIZATION**

Each pre-measured two-part packet contains the proper ratio for connectorization. Every packet includes specific directions for use with fiber optic connectors.

| PART #         | STYLE                    |
|----------------|--------------------------|
| H05-100-RX     | Quick Cure - Single Pack |
| T60-065-BX     | Blue Dye - Single Pack   |
| T120-023-CX    | Room Cure - Single Pack  |
| H15-080-RX     | Heat Cure - Single Pack  |
| H05-100-RX-50  | Quick Cure - 50 Pack     |
| T60-065-BX-50  | Blue Dye - 50 Pack       |
| T120-023-CX-50 | Room Cure - 50 Pack      |
| H15-080-RX-50  | Heat Cure - 50 Pack      |
| 501202-1       | Epoxy Mixer (Roller)     |
|                |                          |

#### Replace "X" with "2" for 2 Gram Package or "4" for 4 Gram Package.

F1-001261

Low Viscosity Blue Dye Epoxy (4 oz.)





#### CYANOCRYLATE ADHESIVE

This quick set cyanocrylate adhesive is provided for terminating FIS Bobtail Connectors. An accelerant provides even faster cure time, less than 60 seconds. PART # DESCRIPTION

| F1-BTXY | Adhesive (For Bobtail Connectors) |
|---------|-----------------------------------|
|         |                                   |

#### **HYSOL EPOXY**

Contained in two separate tubes or packets, the Hysol Epoxy can be heat or time cured. Hysol Epoxy is excellent for general connector use. A quick dry, 4 gram, mini packet is available for individual connector repair.

| PART #    | DESCRIPTION                                  |
|-----------|--|
| F1-707010 | Hysol Epoxy (3.4 oz.) (10 sets in each case) |
| F1-608    | Mini Packet (4gm) Fast Cure Epoxy            |

#### **ANAEROBIC ADHESIVE**

This two-part system self cures in minutes with no heat required. The retaining compound is injected into the connector with a syringe needle. Dip or spray the fiber with primer and connectorize as usual. Sets up in seconds, fully cured in minutes. Domestic ground shipment only! For use when recommended by connector manufacturer.

| PART #          | DESCRIPTION                                       |
|-----------------|---|
| 680             | Anaerobic Adhesive Hardener                       |
| 7649            | Primer  |
| F1-ANAEROBICKIT | Kit (Anaerobic Adhesive, Primer and Syringe Tips) |



#### HAND POLISHING DISCS

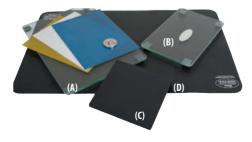
The metal fiber optic polishing discs are especially durable and are machined to close tolerances. They are designed to hold your fiber optic endface at exactly the correct angle to the polishing film during the polishing process. The plastic fiber optic polishing disks are also very useful. The ST Plastic Polish Disc is so affordable that you can purchase several of them to keep handy in your toolbox, truck or in the shop.

| PART #       | DESCRIPTION  |
|--------------|--|
| F1-6925UN    | ST/SC/FC Universal 2.5mm Polish Disc               |
| F1-6925ST    | ST Polish Disc (G)                                 |
| F1-6977ST    | ST 4 Position Polish Disc (I)                      |
| F1-6928SC    | SC Polish Disc (C)                                 |
| F1-6928APC   | SC/APC Polish Disc                                 |
| F1-6925FC    | FC/PC Polish Disc (D)                              |
| F1-6925FCAPC | FC/APC Polish Disc (H)                             |
| F1-6930UN    | MU/LC Polish Disc (F)                              |
| F1-6900APC   | LC/APC Polish Disc                                 |
| F1-6925SMA   | SMA Polish Disc                                    |
| F1-6926      | D4 Polish Disc                                     |
| F1-6927      | Biconic Polish Disc (may not work with all brands) |









#### **FIS ONE-STEP POLISH FILM**

- Achieve Higher Yields
- Lower Your Material Costs

Save on Labor Cost

#### Eliminate Multiple Diamond Films Improve Efficiency and Productivity

A revolutionary process has resulted in a truly remarkable polish film. This new film offers super performance and is ideal for any production polish machines. Try this film to see how it improves efficiency and profitability of your operation. You will be impressed! Call your FIS Sales Representative for details today.

| PART #    | DESCRIPTION                    |  |
|-----------|--------------------------------|--|
| F1-0NE04  | One Step 4" Diamond Disc       |  |
| F1-0NE05  | One Step 5" Diamond Disc       |  |
| F1-ONE6X6 | One Step 6" X 6" Diamond Sheet |  |

#### FIS POLISH FILM SOLD IN PACKS OF 25 SHEETS

When choosing polish film, you want to achieve two things; a high-quality endface finish, and maximum value for your money. FIS Polish Films provide both! Carefully graded abrasives are bonded with quality adhesives, enabling you to polish more connectors per sheet. As low as 36 cents per sheet!

| LARGE SHEETS   | 9″ X 13″        |              |             |
|----------------|-----------------|--------------|-------------|
| PART #         | MATERIAL        | GRIT         | COLOR       |
| F1-0109-03     | Aluminum Oxide  | .3µm         | White       |
| F1-0109-1      | Aluminum Oxide  | 1µm          | Lt. Green   |
| F1-0109-2      | Aluminum Oxide  | 2µm          | Aqua        |
| F1-0109-3      | Aluminum Oxide  | 3µm          | Pink        |
| F1-0109-5      | Silicon Carbide | 5µm          | Black       |
| F1-0109-9      | Aluminum Oxide  | 9µm          | Lt. Blue    |
| F1-0109-12     | Aluminum Oxide  | 12µm         | Dark Yellow |
| F1-0109-15     | Silicon Carbide | 15µm         | Dark Grey   |
| F1-0109-5-1-03 | 3 in 1 Film     | (5, 1, .3µm) |             |
| STANDARD SHE   | ETS 9" X 6.5"   |              |             |
| F1-0102-03     | Aluminum Oxide  | .3μm         | White       |
| F1-0102-03     | Aluminum Oxide  | 1µm          | Lt. Green   |
| F1-0102-2      | Aluminum Oxide  | 2μm          | Aqua        |
| F1-0102-3      | Aluminum Oxide  | 3µm          | Pink        |
| F1-0102-5      | Silicon Carbide | 5µm          | Black       |
| F1-0102-9      | Aluminum Oxide  | 9µm          | Lt. Blue    |

#### FIS DIAMOND POLISH FILM SHFFTS

Aluminum Oxide

Silicon Carbide

| PART #      | DESCRIPTION   | GRIT | COLOR  | QTY |
|-------------|---------------|------|--------|-----|
| F1-0107-1S  | 3" x 6" Sheet | 1µm  | Violet | 1   |
| F1-0107-3S  | 3" x 6" Sheet | 3µm  | Pink   | 1   |
| F1-0107-30S | 3" x 6" Sheet | 30µm | Green  | 1   |

12µm

15µm

Dark Yellow

Dark Grey

#### **FIS MACHINE POLISHING DISCS**

F1-0102-12

F1-0102-15

| PART #      | SIZE        | TYPE           | GRIT  | COLOR  | QTY. |  |
|-------------|-------------|----------------|-------|--------|------|--|
| F1-010705D  | 4" diameter | Aluminum Oxide | .05µm | Yellow | 25   |  |
| F1-01071DD  | 4″ diameter | Diamond        | 1µm   | Violet | 1    |  |
| F1-01073DD  | 4" diameter | Diamond        | 3µm   | Pink   | 1    |  |
| F1-01076DD  | 4" diameter | Diamond        | 6µm   | Grey   | 1    |  |
| F1-010730DD | 4" diameter | Diamond        | 30µm  | Green  | 1    |  |
| F1-010805D  | 5″ diameter | Aluminum Oxide | .05µm | Yellow | 25   |  |
| F1-01081DD  | 5″ diameter | Diamond        | 1µm   | Violet | 1    |  |
| F1-01083DD  | 5″ diameter | Diamond        | 3µm   | Pink   | 1    |  |
| F1-01086DD  | 5″ diameter | Diamond        | 6µm   | Brown  | 1    |  |
| F1-010830DD | 5″ diameter | Diamond        | 30µm  | Green  | 1    |  |
|             |             |                |       |        |      |  |

#### **POLISH PLATES, PADS & MATS**

The polishing of fiber optic connectors calls for both a hard flat surface and a cushioned pad. The 9" x 13" or 6" x 9" polish plate is available in safety glass and mounted on four rubber feet for support. When polishing PC style pre-radius connectors, use the soft polish pad on the glass plate. Placing the lapping film over the pad assures the removal of epoxy and proper polish of fiber without destroying the pre-radius of the ferrule.

| PART #   | DESCRIPTION   |
|----------|---|
| F1-9111  | FIS Polish Glass Plate (9" x 13") (A)                             |
| F1-9111A | FIS Polish Glass Plate (6" x 9") (B)                              |
| PP-575   | 5.75" Square Polishing Pad, 1/16", Thick 70 Durometer (C)         |
| F1-0024  | Large Black Work Mat (22" x 14") (D)                              |
| PPG-575  | 5.75" Square Polishing Pad with 1/4" Acrylic Plate (not pictured) |

# TOOLS **FULLY CUSTOMIZABLE FIS TOOL KITS!**



#### **FIS BASIC FIBER OPTIC TOOL KIT**

- PVC Electrical Tape (F1-0008)
- 2 oz. Cleaning Solvent (F1-6706)
- Trihole Fiber Štripper (F1-1301T)
- FIS Connector Cleaner (F1-7020C)
- Kevlar Scissors (F1-KS1)

Test Set Kit and Fusion Splicing Kit.

- Jacket Stripper (F1-0016)
- Buffer Tube Stripper (F1-0017)
- Round Cable Slitter (MK02)
- 6" Side Cutting Pliers (THT-2140C)
- (50) Foam Swabs (F1-0005) Cleaning Tissue (F1-6705)
- Utility Knife (F1-0023BLK) Tweezers (F1-0019)
- Needle Nose Pliers (THT-1840C)
- Piano Wire (F1-8265K)
- Fiber Optic Wipes (F1-6705)

F1-0053P-G

PART # DESCRIPTION **Basic Tool Kit (Pictured)** F1-0053 F1-0053C F1-0053P F1-0053SB F1-0053-G

- 4 Bit Screwdriver (F1-0027)
- Black Marker (F1-9104)
- Safety Glasses (F1-513390)
- (5) Dégreaser Wipes (F1-1010)
- (5) Fusion Splice Sleeves 60mm (F1-1002C)

Look For Green Part Numbers

Non-

Hazardous

Ships Air!

- Black Work Mat (F1-0024)
- Fiber Disposal Unit (F1-8328C)
- Ruler (RMC-6)
- Fabric Tape Measure (F1-8273) • 1/2" Nut Driver (1UG30)
- (3) Economy Tie Labels (P50LABELKIT)
- Rugged Carry Case (F10053HARD)
- Shrink Tube Kit (P50TUBEKIT)
- 1Mtr 3mm Furcation (F00FR3R0)
  - 1Mtr 900µm Furcation (F00FR900HW)
- **Replacement Consumables** Basic Tool Kit with PVFL (F1-9000) Basic Tool Kit with Soft Case
  - Basic Tool Kit with Greenlee Tools (8 Tools See Left)
    - Basic Tool Kit with PVFL (F1-9000) and Greenlee Tools (See Left)

Basic Fiber Optic Kit - F1-0053

#### **Supplied Greenlee Tools:**

- Jacket Stripper 26-16AWG (1917) Replaces (F1-0016)
- 6" Side Cut Pliers (0251-06M) Replaces (THT-2140C) • 6" Needle Nose Pliers (0351-06D) - Replaces (THT-18404C)
- Utility Knife (0652-11) Replaces (F1-0023BLK)
- 6 in 1 Screwdriver (0153-42C) Replaces (F1-0027)
- •24' /7.5 Meter Tape Measure (0155-7MA) Replaces (F1-8273)
- 1/2" Nut Driver (0253-17C) Replaces (1UG30) •7/16" Nut Driver (0253-16C) - Addition

#### **CONNECTORIZATION EPOXY TOOL KIT (LC, MU)**

#### Includes all items in FIS Basic Tool Kit (F1-0053) plus:

- Glass Polish Plate (F1-9111)
- Carbide Scribe (F1-9773)
- LC/MU Crimp Tool (F1-8825)
- Rubber Polish Pad (PP-575)
- (5) Syringes (5014733IRC5) • LC Adapter for Scope (F1-MA1.25)
- (5) 1.5µm Diamond Polish Film Sheet
  - (DLF6X61.5661X)
    - Instructions for FIS Connectors LC (F217)

• FIS Universal Microscope (F1-MS200X)

• (5) FIS 4gr. Blue Dye Epoxy (T60-065-B4)

LC/MU Universal Polish Puck (F1-6930UN)

• (5) 0.5µm Diamond Film Sheet (DLF6X6.5661X)

#### PART # DESCRIPTION

F1-0053LM Universal 1.25mm Epoxy Connectorization Tool Kit (LC/MU)

#### **CONNECTORIZATION EPOXY TOOL KIT (SC, FC, ST)**

#### Includes all items in FIS Basic Tool Kit (F1-0053) plus:

 Carbide Scribe (F1-9773) (5) 0.3um Polish Film Sheet (F1-0102-03S) FIS Universal Crimp Tool (F1-3227) (5) 1µm Polish Film Sheet (F1-0102-1S) Rubber Polish Pad (PP-575) • (5) 5µm Polish Film Sheet (F1-0102-55) Instructions for FIS Connectors ST, FC & SC (F217) Glass Polish Plate (F1-9111) (5) Syringes (5014733IRC5) • (5) FIS 4ar. Blue Dve Epoxy (T60-065-B4) • FIS Universal Microscope (F1-MS200X) Universal Polish Puck (F1-6925UN)

#### DESCRIPTION PART #

| F1-0053U     | Universal 2.5mm Epoxy Connectorization Tool Kit (SC, FC, ST)     |
|--------------|--|
| F1-0053U0    | Universal Epoxy Connectorization Tool Kit with 24-Port Heat Oven |
| F1-0053U0220 | Universal Epoxy Connectorization Tool Kit with 24-Port Heat Oven |
| F1-0053U-G   | Universal Epoxy Tool Kit with Greenlee Tools (8 Tools)           |
| F1-0053D     | Replacement Consumables  |

#### **FIS MINI BASIC FIBER OPTIC TOOL KIT**

 Mini Soft Case (F1-0053BSC) • PVC Electrical Tape (F1-0008)

Kevlar Scissors (F1-KS1)

Tri-Hole Fiber Stripper (F1-1301T)

Buffer Tube Stripper (F1-0017)

• 6" Side Cutting Pliers (THT-2140C)

Round Cable Slitter (MK02)

(50) Foam Swabs (F1-0005)

Utility Knife (F1-0023BLK)

- Tweezers (F1-0019)
- Needle Nose Pliers (THT-1840C)
- FIS Connector Cleaner (F1-7020-C)
  - Fabric Tape Measure (F1-8273)

#### PART #

#### **FIS BACKPACK TOOL KIT**

#### All the great products you are accustomed to in the FIS Tool Kit now in a smaller, lightweight, and durable backpack. (Special custom kits are available.) DESCRIPTION DADT #

| PAKI#             | DESCRIPTION   |
|-------------------|---|
| F1-0053PACK       | FIS Backpack Basic Fiber Optic Tool Kit                     |
| F1-0053PACKFS     | FIS Backpack Fusion Splicing Tool Kit                       |
| F1-0053PACKFSC    | FIS Backpack Splicing Tool Kit with Lynx Precision Cleaver  |
| F1-0053PACKFSCVFL | FIS Backpack Splicing Tool Kit with PFL and Lynx Cleaver    |
| F1-0053PACKFSVFL  | FIS Backpack Splicing Tool Kit with Pocket Fault Locator    |
| F1-0053PACKG      | FIS Backpack Basic Fiber Optic Tool Kit with Greenlee Tools |
| F1-0053PACKLM     | FIS Backpack Universal 1.25mm Epoxy Tool Kit (LC/MU)        |
| F1-0053PACKU      | FIS Backpack Universal SC, FC, ST Epoxy Tool Kit            |
| F1-0053PACKUG     | FIS Backpack Universal Epoxy Tool Kit with Greenlee Tools   |
|                   |   |

### **FIS FIBER OPTIC CLEANING KIT**

| Canned Air (10oz) (F1-1007S)     Fiber Optic Wipes (F1-6702)     2.5mm Foam Swabs (5pk) (F1-25184)     1.25mm Wrapped Swabs (5pk) (F1-25123)     PART # DESCRIPTION |                          | <ul> <li>Alcohol Wipes (50pk) (F1-1004)</li> <li>FIS Connector Cleaner (F1-7020-C)</li> <li>4 oz. Bottle of Alcohol (F1-0007SP)</li> </ul> |
|---|--------------------------|--|
| F1-0053CK   | Fiber Optic Cleaning Kit |  |
| F1-0053CKM  | With 200X Microscope     |  |
| F1-0053CKC  | Replacement Consumables  |  |

#### **FIS UNIVERSAL MM TEST SET TOOL KIT**

#### Includes all items in FIS Universal Epoxy Tool Kit (F1-0053U) plus:

| <ul> <li>FIS Power Meter with Adapter (F1-8513HR)</li> </ul>     | • (1) ST-FC 50µm 1 mtr. Patchcord             |
|--|---|
| <ul> <li>FIS MM 850/1300nm Light Source (9052-0000)</li> </ul>   | (S187M1FISĊ)                                  |
| • (2) ST-ST 62.5µm MM 1 mtr Patchcord (S288M1FISC)               | <ul> <li>ST-ST Adapter (F1-8102SS)</li> </ul> |
| • (1) ST-SC 62.5µm MM 1 mtr Patchcord (S28YM1FISC)               | SC-SC Adapter (F1-8300)                       |
| • (1) ST-FC 62.5µm MM 1 mtr Patchcords(S287M1FIS)                |   |
| <ul> <li>(1) ST-ST 50µm 1 mtr. Patchcord (S188M1FISC)</li> </ul> | Visual Fault Locator (F1-9000)                |
| <ul> <li>(1) ST-SC 50µm 1 mtr. Patchcord (S18YM1FISC)</li> </ul> |   |

SC-SC Adapter (F13810BC)

• SC-FC Adapter (F1-34202)

• (5) 0.3µm Polish Film Sheet (F1-0102-03S)

2.5mm Universal Polish Puck (F1-6925UN)

• (5) 1.5um Diamond Film Sheet

• (5) 0.5um Diamond Film Sheet

Glass Polish Plate (F1-9111)

(DLF6X61.5661X)

(DLF6X6.5661X)

| • (1) ST-SC 50µn | n 1 mtr. Patchcord (S18YN |
|------------------|---------------------------|
| PART #           | DESCRIPTION               |
| F1-0053TS-ST     | MM Test Set Tool Kit      |

#### **FIS UNIVERSAL SM TEST SET TOOL KIT**

#### Includes all items in FIS Universal Epoxy Tool Kit (F1-0053U) plus: Visual Fault Locator (F1-9000)

- FIS Power Meter with Adapter (F1-8513HR) • FC-FC Adapter (F1-520)
- FIS SM 1310/1550nm Light Source (9055-0000)
- (1) FC-SC SM 1 mtr Patchcord (S37YS1FISC)
- (1) ST-FC SM 1 mtr Patchcord (S378S1FISC)
- (1) SC-SC SM 1 mtr Patchcord (S3YYS1FISC)

#### PART # DESCRIPTION

| F1-0053TS-FC   | SM Test Set Tool Kit                            |
|----------------|---|
| F1-0053TS-CATV | SM Test Set Tool Kit with CATV PM and SC/APC LS |

#### FIS ANAEROBIC TOOL KIT (SC & LC)

#### Includes all items in FIS Basic Tool Kit (F1-0053) plus:

- Anaerobic Adhesive Hardener (680)
- Anaerobic Primer (7649)
- (10) Syringe Tips (5014733IRC5)
- Carbide Scribe (F1-9773)
- Universal Crimp Tool (F1-3227)
- LC/MU Crimp Die (F1-8825LM)
- Rubber Polish Pad (PP-575)
- (5) 1µm Polish Film Sheet (F1-0102-1S) LC Universal Polish Puck (F1-6930UN)
- (5) 5µm Polish Film Sheet (F1-0102-55) FIS Universal Microscope (F1-MS200X)

#### DESCRIPTION PART #

F1-0053AH FIS Anaerobic Tool Kit

#### **FIS FUSION SPLICING TOOL KIT**

#### Includes all items in FIS Basic Tool Kit (F1-0053) plus:

- Cable Cutters (F1-1817) 50 Pack Protection Sleeves 60mm Flashlight (F1-605) (F1-S25C) Optional Lynx Cleaver (F1-LYNX) Spatula (10033301)
- (12) Degreaser Wipes (F1-1010) Optional Pocket Visual Fault Locator (F1-9000) PART # DESCRIPTION

| F1-0053FS       | Fusion Splicing Tool Kit    |
|-----------------|-----------------------------|
| F1-0053FS-C     | with Lynx Cleaver (F1-LYNX) |
| F1-0053FS-VFL   | with PVFL (F1-9000)         |
| F1-0053FS-C-VFL | with PVFL and Cleaver       |
| F1-0053FS-G     | with Greenlee Tools         |
|                 |                             |

#### **FIS MINI CLEANING KIT**

#### The FIS Mini Cleaning Kit provides all of the essential cleaning supplies needed for fiber splicing. Kit includes:

- FIS Connector Cleaner (10) (F1-7020C)
- 2.5mm Mini Foam Swabs (50) (F1-0005)
- Cleaning Pen (F1-MXCP)
- (100) 4" x 4" Woven Dry Wipes (F1-6702)

#### PART # DESCRIPTION

#### FIS Mini Fiber Optic Cleaning Kit F1-0053FSMINI

• FIS Icky Clean (F1-1010) • Carry Case (F1-77631)

• (10) 4" x 6" Alcohol Towelettes (F1-1004)

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- (5) Fusion Splice Sleeve 60mm (F1-1002C) • 4 Bit Screwdriver (F1-0027) Black Marker (F1-9104) • Ruler (RMC-6)
  - 2 oz. Cleaning Solvent (F1-6706)
  - Piano Wire (F1-8265)
- Fiber Optic Wipes (F1-6702) DESCRIPTION

F1-0053MSB Mini Basic Fiber Optic Tool Kit

k) (F1-1004) ner (F1-7020-C)



FIS Fusion Splicing Tool Kit - F1-0053FS-C



Universal Connectorization Epoxy Kit F1-0053U / F1-0053LM



Mini Basic Tool Kit - F1-0053MSB







FIS Universal MM Test Set Tool Kit - F1-0053TS-ST

FIS Mini Cleaning Kit - F1-0053FSMINI

FIS Fiber Optic Cleaning Kit - F1-6714MP0

# TOOLS | CLEANING STATION / HAND TOOLS

F1-IRD5-35

#### DATA CENTER CLEANING STATION

The FIS Fiber Optic Cleaning Station is a unique new product that provides immediate access to cleaning supplies for technicians. These cleaning kits are wall mountable, similar to First Aid kits found throughout many facilities. Open the top cover and find cleaning notes for technicians not familiar with fiber optics. Kits include cleaning instruments for both 2.5mm and 1.25mm ferrules on patchcords and through adapters in the back plane of enclosures. Optional MPO/MTP cleaning can be added to kit as well. Special edition and custom kits are available. Standard kit contents: (100) 4″x4″ Clean Dry Wipes, 2 oz. Cleaning Solution, Auto-Advance Connector Cleaner, 2.5mm and 1.25mm back plane ferrule cleaning tools. Optional kits with MPO/MTP cleaning tool or choice of IBC<sup>™</sup> Cleaners/AFL One Click Cleaners.



| PART #        | DESCRIPTION   |
|---------------|---|
| F1-6714       | Fiber Optic Cleaning Station, Standard Kit  |
| F1-6714MP0    | Fiber Optic Cleaning Station, Standard Kit with MPO/MTP cleaning tool   |
| F1-6714IBC    | Fiber Optic Cleaning Station, Special Edition Kit with IBC™ cleaning tools for 2.5/1.25mm adapters                        |
| F1-6714IBCMP0 | Fiber Optic Cleaning Station, Special Edition Kit with IBC™ cleaning tools for 2.5/1.25mm adapters and MPO/MTP cleaner    |
| F1-6714AFL    | Fiber Optic Cleaning Station, Special Edition Kit with AFL cleaning tools for 2.5/1.25mm adapters                         |
| F1-6714AFLMP0 | Fiber Optic Cleaning Station, Special Edition Kit with AFL cleaning tools for 2.5/1.25mm adapters and IBC MPO/MTP cleaner |

F1-IRD5-36

F1-1301T

F1-0016



These high quality safety glasses employ superior laser safety lens technology. Laser protective dyes are molded into the plastic and will not scratch off, photobleach or degrade over time. The lenses protect from light wavelengths in the range of 800-1790nm. Glasses come with a protective carry case, lanyard and cleaning cloth. There are 2 styles to choose from: standard wrap-around and over-the-glasses. These are proudly made in the USA. **PART # DESCRIPTION** 

| F1-IRD5-35 | FIS Laser Safety Glasses, Wrap Around Style, Adjustable Frames |
|------------|--|
| F1-IRD5-36 | FIS Laser Safety Glasses, Medium Style, Adjustable Frames      |

#### **FIS PRECISION FIBER STRIPPERS**

Choose from strippers that remove the 3mm jacket, 900µm and 250µm buffer coating. Precision blades produce consistent clean strips. Tool length: 6.25".

| PART #   | DESCRIPTION   |
|----------|---|
| F1-1301T | 250µm, 900µm and 3mm Fiber Optic Stripper, Three Hole |
| F1-1520  | 250µm, 900µm Outside Plant Buffer Stripper            |
| F1-1500  | Duplex Zipcord 900um and 250um Buffer Coating Strippe |

T-Style Stripper, 16-20 AWG

F1-1212 Ribbon Stripper (outside jacket) (not pictured)

#### **T-STYLE JACKET STRIPPER**

The dual "V" notch blade allows the quick removal of outer jacket. Plier nose, along with cushion grips and spring release are additional features making this stripper comparable to the Ideal T-Type<sup>®</sup> Stripper. PART # DESCRIPTION

| F13<br>F1-0020 | F1-KS1 | 925(5      |
|----------------|--------|------------|
|                |        | $\bigcirc$ |

F1-0016

#### **KEVLAR® CUTTERS**

When cutting Kevlar®, you need a cutting tool with very durable blades. You also want the tool to cut cleanly, and to fit comfortably in your hand. FIS offers cutters that fit the bill.

| PART #  | DESCRIPTION  |
|---------|--|
| F1-0020 | Economy Kevlar® Cutter (Metal Blade)                                     |
| F1-KS1  | Kevlar <sup>®</sup> Scissor (Carbon Molybdenum and Vanadium Steel Blade) |
| 925CS   | Traditional Serrated Scissor   |

### **FIS SCRIBE TOOLS**

#### **FIS DELUXE DIAMOND SCRIBE**

| Housed in a deluxe metal casi | ng. The Deluxe Diamond Scribe offers a retractable 60° cone point. |
|-------------------------------|--|
| PART #                        | DESCRIPTION  |
| W0-1223                       | FIS Deluxe Diamond Scribe  |

#### **FIS ECONOMY DIAMOND SCRIBE**

| This Economy Scrib | e has a 60° cone point and is housed in a rugged white plastic housing. |
|--------------------|---|
| PART #             | DESCRIPTION   |
| F0-90-C            | FIS Economy Diamond Scribe  |

#### **FIS SAPPHIRE SCRIBE**

| For a wider cutting surface, th | is scribe offers a 90° wedge. Housed in a deluxe metal casing. |
|---------------------------------|--|
| PART #                          | DESCRIPTION  |
| F0-90-S                         | FIS Sapphire Scribe  |

#### **FIS 90° WEDGE DIAMOND SCRIBE**

| Provides for a wider cut | ting surface. The 90° Wedge Diamond Scribe is packaged in a rugged blue plastic housing. |  |
|--------------------------|--|--|
| PART #                   | DESCRIPTION  |  |
| F0-90-W                  | FIS 90° Wedge Diamond Scribe   |  |

#### **FIS CARBIDE SCRIBE**

| This Carbide Scribe offers a wide cutting surface in a plastic pen-like housin |                    |  |
|--|--------------------|--|
| PART #   | DESCRIPTION        |  |
| F1-9773  | FIS Carbide Scribe |  |





F1-3227





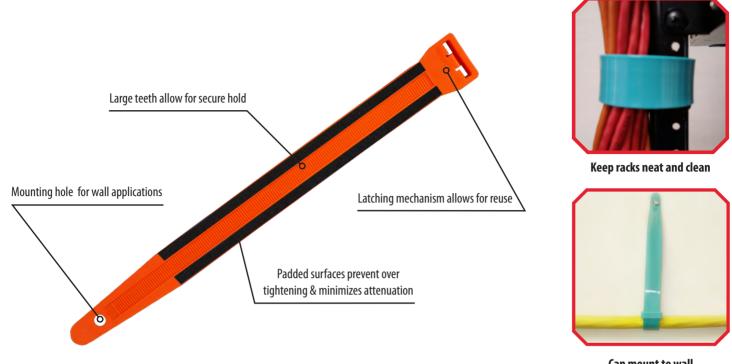
F1-3227M

#### **FIS FIBER OPTIC CRIMP TOOLS**

Fiber optic connectors call for precision crimping which must meet non-optical disconnect requirements and increased pull strength demands. The FIS Crimp Tool is designed to successfully assemble a variety of connector styles for maximum optical performance and mechanical strength. The FIS Crimp Tool, part number F1-3227, contains 4 crimp sizes; .128, .137, .151 and .190 inches.

| PART #              | DESCRIPTION   |
|---------------------|---|
| F1-3227             | FIS Crimp Tool (Die and Handle) ST/FC/SC              |
| F1-8888             | FIS MT-RJ Crimp Tool (.151 round, .190 round)         |
| F1-8825             | FIS MU/LC Crimp Tool and Die (.120 round, .128 round) |
| F1-1302             | FIS Crimp Tool Handle                                 |
| PA-1330             | SMA Triple Hex Tool and Die (.151, .178, .213)        |
| PA-1331             | Triple Round Tool and Die (.133, .160, .195)          |
| FIS CRIMP TOOL DIES |   |

| PART #    | DESCRIPTION                                 |
|-----------|---|
| F1-8825LM | FIS MU/LC Crimp Die (.120 Round, .128 Hex)  |
| F1-3227M  | FIS Crimp Tool Die (.128, .137, .151, .190) |
| PA-2051   | Triple Hex Die (.068, .128, .178)           |
|           |   |



Can mount to wall for easy placement

It's easy for installers to over-cinch thin zip ties, resulting in macrobends that attenuate fiber optic cables. With copper cables, the weight of cables pressing against thin ties can damage or deform them enough to create crosstalk issues. To solve these problems, FIS has created the "Universal Cable Strap," the widest cable tie designed for communications cable. A padded version is available for fiber optic cable.

FIS Tie Wraps are 1" wide and 12" long and are available with or without protective foam padding. Sold in convenient packs of 6, 50, 100 pieces. Replace "X" with color of your choice: AQ=Aqua, BK=Black, BL=Blue, GR=Green, OR=Orange, YE=Yellow

#### **FIS FIBER OPTIC TIE WRAPS**

| PART #     | DESCRIPTION                      |  |
|------------|----------------------------------|--|
| FOTW-X-6   | Tie Wrap with Foam (Pack of 6)   |  |
| FOTW-X-50  | Tie Wrap with Foam (Pack of 50)  |  |
| FOTW-X-100 | Tie Wrap with Foam (Pack of 100) |  |
|            |                                  |  |
|            |                                  |  |

#### **FIS BASIC TIE WRAPS**

| BTW-X-6   | Basic Tie Wrap (Pack of 6)   |
|-----------|------------------------------|
| BTW-X-50  | Basic Tie Wrap (Pack of 50)  |
| BTW-X-100 | Basic Tie Wrap (Pack of 100) |



#### **FIS FIBER OPTIC PULLING EYE & CABLE NETTING**

The FIS pulling eye will protect connectors while providing a pulling point with properly distributed tensions on cable assemblies. Available as a stand-alone component or installed by FIS on your custom cable assembly. The pulling eye has a rotating end clip to minimize cable twisting and the connectors are protected with cable netting.

| PART #    | DESCRIPTION  |
|-----------|--|
| F1-1001   | FIS Pulling Eye Kit for Multifibers                  |
| F1-1001BR | FIS Pulling Eye Kit for Simplex and Duplex           |
| F1-1001A  | Pulling Eye Installed by FIS                         |
| F1-5700   | Cable Netting (Expands uo tp 2", pulls down to 1/2") |

# **NETWORK EQUIPMENT**

# Small Form Pluggable (SFP)

A small form pluggable (SFP) module is a compact, hot-pluggable transceiver used in Ethernet LAN applications. The SFP is used to configure an undefined network port for your specific application (Multimode, Singlemode or Copper (UTP). The SFP transceiver is not standardized by any official standards body, but rather is specified by a multi-source agreement (MSA) between competing manufacturers. Most Ethernet devices follow the MSA format however Cisco, Avava, Juniper, Extreme and Enterasys devices use their own proprietary SFP modules and must be ordered as such.

# **BUILD YOUR OWN CUSTOM SFP**

|           | ITEM NUMBER INITIALIZER | INTERFACE         | DISTANCE   | PROTOCOL   | COMPATIBILITY  |
|-----------|-------------------------|-------------------|--|--|--|
|           | F1-SFP                  | S                 | 20   | 1G   | CS   |
|           |                         |                   | 1 = <10km (SR, LRM)<br>10 = 10km (LX, LH, LR)                        | 40G = 40 Gigabit Ethernet<br>10G = 10 Gigabit Ethernet | MS = MSA Standard<br>CS = Cisco Systems                      |
| EXAMPLE : | : F1-SFP-S-10-1G-CS     | FIS COST: \$60.00 | 15 = 15km<br>40 = 40km (EX, ER)<br>80 = 80km (ZX, ZR)<br>120 = 120km | 1G = Gigabit Ethernet<br>FE = Fast Ethernet            | AV = Avaya<br>JN = Juniper<br>EX = Extreme<br>ET = Enterasys |

120 + = > 120 km

## FIBER INSTRUMENT SALES SFP MODULES DESIGNED SPECIFICALLY FOR YOUR NETWORK

The FIS SFP fiber modules are custom built to order to fit your network's specifications. Use the chart above to create your custom part number. When ready contact a FIS sales rep for ordering information.

| PART #             | DESCRIPTION   |
|--------------------|---|
| F1-SFP-M-1-FE-XX   | 100 Mbps LC/MM 850nm 2km range "Choose Compatibility"   |
| F1-SFP-S-10-FE-XX  | 100 Mbps LC/SM 1310nm 10km range "Choose Compatibility" |
| F1-SFP-M-1-1G-XX   | 1 Gbps LC/MM 850nm 550m range "Choose Compatibility"    |
| F1-SFP-S-10-1G-XX  | 1 Gbps LC/SM 1310nm 10km range "Choose Compatibility"   |
| F1-SFP-S-40-1G-XX  | 1 Gbps LC/SM 1310nm 40km range "Choose Compatibility"   |
| F1-SFP-S-80-1G-XX  | 1 Gbps LC/SM 1550nm 80km range "Choose Compatibility"   |
| F1-SFP-M-1-10G-XX  | 10 Gbps LC/MM 850nm 300m range "Choose Compatibility"   |
| F1-SFP-S-10-10G-XX | 10 Gbps LC/SM 1310nm 10km range "Choose Compatibility"  |
|                    |   |

## **FIS FIBER OPTIC VIDEO TRANSMITTERS & RECEIVERS**

Fiber optic video transmitters and receivers include the ability to convert video signals from coaxial cameras so that they can be transmitted over fiber optic cable. These low-profile standalone devices can be placed anywhere needed. They require no field adjustments during installation or additional maintenance thereafter. These devices are designed to be transparent to cameras and monitoring equipment regardless of the manufacturer. The receiver includes an indicator light that provides guick verification of system status.

• Electronic-to-photonic signal conversion • Low-profile standalone devices • NTSC/PAL signal

- No field adjustments required
- Transparent to cameras and monitoring equipment

## **FIS FIBER OPTIC VIDEO TRANSMITTERS**

| PART #   | DESCRIPTION                              | FIBER MODE | MAX. DISTANCE |
|----------|--|------------|---------------|
| S-850TX  | Standalone Fiber Optic Video Transmitter | MM 850nm   | 4 Km          |
| S-1300TX | Standalone Fiber Optic Video Transmitter | MM 1300nm  | 8 Km          |
| S-1310TX | Standalone Fiber Optic Video Transmitter | SM 1300nm  | 20 Km         |

#### **FIS FIBER OPTIC VIDEO RECEIVERS**

| PART #   | DESCRIPTION                           | FIBER MODE   |  |
|----------|---------------------------------------|--------------|--|
| S-850RX  | Standalone Fiber Optic Video Receiver | MM 850nm     |  |
| S-1300RX | Standalone Fiber Optic Video Receiver | SM/MM 1300nm |  |

## **FIS FIBER OPTIC TRANSMITTER & RECEIVER KIT**

Our single channel 850nm converter is designed to provide a high-performance, low-cost solution for the transmission of video circuits. Connects with ST style connectors.

| PART #      | DESCRIPTION   | FIBER MODE |
|-------------|---|------------|
| S-MR-850-TR | FIS Standalone Fiber Optic Video Transmitter with Receiver and Power Supply | MM 850nm   |



**Fiber Optic Receiver** 







S-850SATX



F1-0EC32M2-2

#### **SILENT ALARM TRANSMITTERS & RECEIVERS**

Our single channel 850nm converter is designed to provide a high performance, low cost solution for the transmission of Normally Open/Normally Closed contacts (NO/NC) over a single MM fiber. Alarm installers can now take a dry contact closure and wire it to our Fiber Optic transmitter and when the contact alarms it will convert that signal to light and send it to a receiver. This system allows for longer runs using pure light which can't be defeated by jumping.

DESCRIPTION Silent Alarm TX with power supply S-850SATX S-850SARX Silent Alarm RX with power supply

#### **FIS BRIDGE MEDIA CONVERTERS**

PART #

These Ethernet Media Converters meet IEEE Standards and are 10/100Base-TX and 100Base-FX with MDI/MDI-X auto negotiation. Full set of LED Indicators and 10/100Mbps and full/half duplex automatically configured in twisted pair port. Multimode converter has a range of 2km and Singlemode converter has a range of 20km. External power supply included.

| PART #         | DESCRIPTION                                     |
|----------------|---|
| F1-0EC32M1-2   | 10/100 Base-T/TX to 100 Base-FX MM/SC Converter |
| F1-0EC32M2-2   | 10/100 Base-T/TX to 100 Base-FX MM/ST Converter |
| F1-0EC32S1-202 | 10/100 Base-T/TX to 100 Base-FX SM/SC Converter |

#### **FIS MEDIA CONVERTER RACK**

FIS Media Converter Rack, MCR-1400 is designed to accommodate fourteen separate and independent media converters within a rack-mountable chassis. The rack is fitted with two switching power supplies for enhanced reliability. This means that if one supply should fail, the other is capable of taking over immediately. The MCR-1400 can also be installed in a standard 19-inch site rack; provision has been made for the appropriate connecting brackets.

| PART #   | DESCRIPTION  |
|----------|--|
| MCR-1400 | Media Converter Rack Mount with redundant power (not pictured) |

#### **FIS THREE-PORT MINI SWITCHES**

FIS mini-switches provide a simple and inexpensive way to add additional computers to a network. The 3-Port Mini Switch has (2) 100 Mbs fiber ports and (1) 10/100 Mbs twisted pair copper port. Meets IEEE 802.3, 802.3u and 802.3X Standards. This switch provides media conversion for TP and fiber optic media types and extends network spans and has 10/100 Mbps, auto-negotiation on the twisted pair port. External power supply included. DESCRIPTION ΡΛRT #

| F1-SWMM1 | 3-Port Mini Switch with (2) 100 Base-FX MM/SC and One 10/100 Base-T/TX Port |
|----------|---|
| F1-SWSM1 | 3-Port Mini Switch with (2) 100 Base-FX SM/SC and One 10/100 Base-T/TX Port |



## **Mini Switches**

#### FIS EIGHT-PORT DESKTOP SWITCHES

This 8-Port Switch is an inexpensive way to connect remote LAN devices using existing fiber backbone. FIS has 8-Port Desktop Switches with one fiber port in each. The 8-port switch has (1)100 Base-FX and (7) 10/100 Base-T/TX ports. Multimode units support up to 2km and Singlemode up to 20km. External power supply included. DESCRIPTION PART # with 1 MM/SC Eibor Port and (7) 10/100 Twistod Pair Port F1-JC08A-MS

| I-JCU8A-IMS | 8-Port Switch with 1 MM/SC Fiber Port and (7) 10/100 Iwisted Pair Ports |
|-------------|---|
| I-JC08A-MT  | 8-Port Switch with 1 MM/ST Fiber Port and (7) 10/100 Twisted Pair Ports |
| I-JC08A-S2  | 8-Port Switch with 1 SM/SC Fiber Port and (7) 10/100 Twisted Pair Ports |
|             |   |



F1 F1

# **SERVICES**



Stay compliant with industry standards by taking advantage of our full service calibration lab. All equipment is inspected, calibrated to NIST traceable standards, and verified to be in conformance with the manufacturer's specifications. All calibration services include a calibration / verification certificate. Turn around time is typically 10 days for standard services. All calibration services include a NIST traceable calibration certificate. Rental units are available for extended service or repairs.

# Call 1–800–5000–FIS (347) to Speak with a Calibration Representative About Pricing



**Power Meter & Light Source** 

# OTDR VERIFICATION SERVICE FEATURES:

- NIST traceable calibration
- Verification of conformance
- with the manufacturer's specification
- Ensure correct operation and performance
- All calibration services include a
   NIST traceable calibration certificate

#### BRAND

| FIS                          |
|------------------------------|
| EXFO                         |
| AFL/NOYES                    |
| Anritsu                      |
| Platform OTDR and 1 Module   |
| Additional Modules Available |
| Other Models Available       |

## POWER METER & LIGHT SOURCES SERVICE FEATURES:

- NIST traceable calibration
- Verification of conformance
- with the manufacturer's specification
- Ensure correct operation and performance
- All calibration services include a
- NIST traceable calibration certificate

#### BRAND

| FIS       |  |
|-----------|--|
| EXFO      |  |
| AFL/NOYES |  |
| Anritsu   |  |



FIRECAT

# TEST SET KIT VERIFICATION SERVICE FEATURES:

- NIST traceable calibration
- Verification of conformance
- with the manufacturer's specification
- Ensure correct operation and performance
- All calibration services include a
- NIST traceable calibration certificate

#### BRAND

FIS EXFO AFL/NOYES Anritsu



# FUSION SPLICER MAINTENANCE

- Replace Electrodes
- Clean Optical Components
- Detailed Cleaning
- Diagnostic and Performance Tests
   Splicer Maintenance and Evaluation



## **CLEAVER MAINTENANCE**

- Blade Adjustment
- Adjust Blade Height
- Verify Proper Performance
- Cleaver Maintenance and Evaluation
- Replacement Blade<sup>\*</sup>

\*Subject to Program Availability



# **OTDR RENTALS**

Choice of adapter and launch cable, if required



FIS DELUXE (MM ONLY)

**ANRITSU MT9083A** 

1 Week

2 Weeks

4 Weeks

1 Week

2 Week

4 Weeks



DUAL WAVELENGTH 850/1300nm or 1310/1550nm

1 Week

2 Weeks

4 Weeks

1 Week

2 Week

4 Weeks

**EXFO FTB 200** 

Call for pricing

EXFO AXS 110/Anritsu MT9090C

**NOYES C860** 

**QUAD CERTIFICATION** 

**TESTERS** 

Call for pricing







NOYES M210

# 

850/1300/1310/1550nm

MT9090C

| EXFO FTB 200                | /2/ FTB 1                            | FIS DELUXE / E   | XFO AXS 110                          |
|-----------------------------|--------------------------------------|------------------|--------------------------------------|
| 1 Week                      | Call for pricing                     | 1 Week           | Call for pricing                     |
| 2 Weeks                     | Call for pricing                     | 2 Weeks          | Call for pricing                     |
| 4 Weeks                     | Call for pricing                     | 4 Weeks          | Call for pricing                     |
| ANRITSU MT9                 | )83A                                 | NOYES M210       |                                      |
|                             |                                      |                  |                                      |
| 1 Week                      | Call for pricing                     | 1 Week           | Call for pricing                     |
|                             | Call for pricing<br>Call for pricing | 1 Week<br>2 Week | Call for pricing<br>Call for pricing |
| 1 Week<br>2 Week<br>4 Weeks |                                      |                  |                                      |

# Call 1–800–5000–FIS (347) and Ask For Our Rental Department For Pricing



C860 Kit

# **CERTIFICATION KITS**



#### NOYES C880 QUAD CERTIFICATION TESTERS

| 1 Week  | Call for pricing |
|---------|------------------|
| 2 Week  | Call for pricing |
| 4 Weeks | Call for pricing |

# **Anritsu Fiber Visualizer**



Anritsu rental equipment will be upgraded to include the Anritsu Fiber Visualizer software. Users will be able to see the trace as a graph and toggle to an icon format including distance and loss at each event. Formatting reports and printing trace will be easy. Traces will be saved and downloaded in PDF format eliminating the need for special software on your computer.

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# **FUSION SPLICER RENTALS**

Includes cleaver, 1 spare set of electrodes, battery and charge cord



FITEL S123C





FITEL S178A



**AFL FSM-60R** 





AFL FSM-60S

F1-COUGAR2000

# **V-GROOVE**

FITEL S153

| FITEL S123C                   |                  | FITEL S153C            |                  |
|-------------------------------|------------------|------------------------|------------------|
| 1 Week                        | Call for pricing | 1 Week                 | Call for pricing |
| 2 Weeks                       | Call for pricing | 2 Weeks                | Call for pricing |
| 4 Weeks                       | Call for pricing | 4 Weeks                | Call for pricing |
| <b>Cheetah SOC Compatible</b> |                  | Cheetah SOC Compatible |                  |

# **MASS FUSION SPLICER**

#### AFL FSM-60R / AFL FSM - 70R

| 1 Week  | Call for pricing |
|---------|------------------|
| 2 Weeks | Call for pricing |
| 4 Weeks | Call for pricing |

LYNX CLEAVER

Weekly



# **CORE ALIGNMENT**

### **FIS SUPER COUGAR SPLICER**

| 1 Week  | Call for pricing |
|---------|------------------|
| 2 Weeks | Call for pricing |
| 4 Weeks | Call for pricing |

#### FITEL S178A

| 1 Week                 | Call for pricing | 1 Wee |
|------------------------|------------------|-------|
| 2 Weeks                | Call for pricing | 2 Wee |
| 4 Weeks                | Call for pricing | 4 Wee |
| Cheetah SOC Compatible |                  | Cheet |
|                        |                  | C     |

#### AFL FSM-60S / AFL FSM - 70S

| ng | 1 Week     | Call for pricing       |
|----|------------|------------------------|
| ng | 2 Weeks    | Call for pricing       |
| ng | 4 Weeks    | Call for pricing       |
| -  |            | tible, AFL FuseConnect |
|    | Compatible |                        |

## SPLICE-ON OVEN / 3mm CURING STATION

| 1 Week  | Call for pricing |
|---------|------------------|
| 2 Weeks | Call for pricing |
| 4 Weeks | Call for pricing |
|         |                  |

F1-SOC-OVEN

#### **FIS PROTECTION SLEEVE OVEN**

| 1 Week  | Call for pricing |   |
|---------|------------------|---|
| 2 Weeks | Call for pricing | 6 |
| 4 Weeks | Call for pricing |   |
|         |                  |   |



# Call 1–800–5000–FIS (347) and Ask For Our Rental Department For Pricing

# HAND HELD RENTALS

| EXFO 500/600          |                          |         |                  |
|-----------------------|--------------------------|---------|------------------|
| PM & LS               | Singlemode or Multimode  | 1 Week  | Call for pricing |
|                       | Downloadable Power Meter | 2 Weeks | Call for pricing |
|                       |                          | 4 Weeks | Call for pricing |
|                       |                          |         |                  |
| EXFO                  |                          |         |                  |
| MaxTester (pair)      | Singlemode               | 1 Week  | Call for pricing |
|                       |                          | 2 Weeks | Call for pricing |
|                       |                          | 4 Weeks | Call for pricing |
|                       |                          |         |                  |
| AFL SMLP5-5           |                          |         |                  |
| PM & LS               | Singlemode or Multimode  | 1 Week  | Call for pricing |
|                       | Downloadable Power Meter | 2 Weeks | Call for pricing |
|                       |                          | 4 Weeks | Call for pricing |
|                       |                          |         |                  |
| <b>FLUKE NETWORKS</b> |                          |         |                  |
| DTX-1800120           | Copper Cable Analyzer    | 1 Week  | Call for pricing |
|                       | ,                        | 2 Weeks | Call for pricing |
|                       |                          | 4 Weeks | Call for pricing |
|                       |                          |         |                  |





EXFO FOT-930 Max Tester



NOYES PM & LS

Fluke DTX-1800

# **EQUIPMENT FINANCING**

Lease your equipment purchase to strengthen your financial status. Keep more of your cash - Stay Liquid - Maintain Cash Flow



- Get everything you need **now**
- Take up to **5 years** to pay
- End of lease buyout for \$1
- Leases starting at \$1,000

| Amount                   | \$5,000     |
|--------------------------|-------------|
| Term                     | 36 Months   |
| Estimate Payment         | \$190/month |
| Cost (Lease Fees)        | \$45/month  |
| *All terms are estimates | •           |

| Lasca Daymont Estimator*              | TERM IN MONTHS |          |          |          |         |
|---------------------------------------|----------------|----------|----------|----------|---------|
| Lease Payment Estimator*              | 12             | 24       | 38       | 48       | 60      |
| For every \$1,000 you need , you pay: | \$101/mo.      | \$52/mo. | \$38/mo. | \$31/mo. | \$27/mo |



F1-COUGAR2000 FIS Super Cougar



FTB-200v2



SFP-550S



FSM-70S Fusion Splicer



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Wavelengths Editor FIS Marketing Department 161 Clear Road. Oriskany, NY 13424

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IF YOU ARE A CUSTOMER OF FIS, YOU QUALIFY FOR A FREE "BUSINESS CARD" AD IN OUR **WAVELENGTHS** MAGAZINE.

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# **Color Identification**

Unless color coding is used for some other purpose, the connector strain relief and adapter housing should be identifiable by the following colors:

a) 850-nm laser-optimized 50/125 mm fiber - aqua

- b) 50/125 mm fiber black
- c) 62.5/125 mm fiber beige
- d) Singlemode fiber blue
- e) Angled physical contact Singlemode connectors green

# Fiber Optic Splices - Fusion or Mechanical

- Maximum insertion loss 0.3 dB
- Minimum return loss:
  - Multimode: 20 dB
  - Singlemode: 26 dB
  - Singlemode: 55 dB (analog CATV)
- **Optical Fiber Connector** (mated pair)
- Maximum insertion loss 0.75 dB

# MAXIMUM DISTANCE FOR TWISTED PAIR CABLING

| APPLICATION         | MEDIA                 | DISTANCE M (FT.) | NOTES   |
|---------------------|-----------------------|------------------|---|
| Ethernet 10BASE-T   | Category 3, 5e, 6, 6A | 100 (328)        |   |
| Ethernet 100BASE-TX | Category 5e, 6, 6A    | 100 (328)        |   |
| Ethernet 1000BASE-T | Category 5e, 6, 6A    | 100 (328)        |   |
| Ethernet 10GBASE-T  | Category 6            | 100 (328)        |   |
| ASDL                | Category 3, 5e, 6, 6A | 5,000 (16,404)   | 1.5 Mbps to 9 Mbps  |
| VDSL                | Category 3, 5e, 6, 6A | 5,000 (16,404)   | 1,500 m (4,900 ft.) for 12.9 Mbps;<br>300 m (1,000 ft.) for 52.8 Mbps |
| Analog Phone        | Category 3, 5e, 6, 6A | 800 (2,625)      |   |
| Fax                 | Category 3, 5e, 6, 6A | 5,000 (16,404)   |   |
| ATM 25.6            | Category 3, 5e, 6, 6A | 100 (328)        |   |
| ATM 51.84           | Category 3, 5e, 6, 6A | 100 (328)        |   |
| ATM 155.52          | Category 5e, 6, 6A    | 100 (328)        |   |
| ATM 1.2G            | Category 6, 6A        | 100 (328)        |   |
| ISDN BRI            | Category 3, 5e, 6, 6A | 5,000 (16,404)   |   |
| ISDN PRI            | Category 3, 5e, 6, 6A | 5,000 (16,404)   |   |

## MINIMUM BEND RADIUS & MAXIMUM PULLING TENSION FOR FIBER OPTIC CABLE

| Cable Type and Installation Details                                    | Maximum Tensile<br>Load<br>During Installation | Minimum Bend Radii<br>While Subjected To<br>Maximum Tensile Load<br>(During Installation) | No Tensile Load<br>(After Installation) |
|--|--|---|---|
| Inside Plant Cable with 2 or 4 Fibers Installed in Cabling Subsystem 1 | 220 N  | 2 inches  | 1 inch                                  |
| Inside Plant Cable with more than 4 Fibers                             | Per Manufacturer                               |   |   |
| Indoor/Outdoor Cable with up to 12 Fibers                              | 1335 N   |   |   |
| Indoor/Outdoor Cable with more than 12 Fibers                          | 2670 N   | 20x 0.D.  | 10x 0.D.                                |
| Outside Plant Cable  | 2670 N   | 20X 0.D.  | TUX U.D.                                |
| Drop Cable Installed by Pulling  | 1335 N   |   |   |
| Drop Cable Installed by Directly Buried, Trenched or Blown into Ducts  | 440 N  |   |   |

# TRANSMISSION PERFORMANCE FOR FIBER OPTIC CABLE

| Optical Fiber and Cable Type         | Wavelength (nm) | Maximum<br>Attenuation (dB/km) | Minimum Overfilled<br>Modal Bandwidth<br>(MHz•km) | Minimum Effective<br>Modal Bandwidth<br>(MHz•km) |
|--------------------------------------|-----------------|--------------------------------|---|--|
|                                      | 850             | 3.5                            | 200   | Not Required                                     |
| 62.5/125 µm Multimode (0M1)          | 1300            | 1.5                            | 500   | Not Required                                     |
| 50/125 µm Multimode (OM2)            | 850             | 3.5                            | 200   | Not Required                                     |
|                                      | 1300            | 1.5                            | 500   | Not Required                                     |
| 850-nm Laser-Optimized 50/125 µm     | 850             | 3.5                            | 1,500   | 2,000  |
| Multimode (OM3)                      | 1300            | 1.5                            | 500   | Not Required                                     |
| Singlemente Indeer/Outdeer (OC1/OC2) | 1310            | 0.05                           | N/A   | N/A  |
| Singlemode Indoor/Outdoor (OS1/OS2)  | 1550            | 0.05                           | N/A   | N/A  |
|                                      | 1310            | 1.00                           | N/A   | N/A  |
| Singlemode Indoor (OS1/OS2)          | 1550            | 1.00                           | N/A   | N/A  |
| Singlemente Outdeer (OS1/OS2)        | 1310            | 0.50                           | N/A   | N/A  |
| Singlemode Outdoor (OS1/OS2)         | 1550            | 0.50                           | N/A   | N/A  |

# FIS UNIVERSITY | TRAINING CLASSES

# **FIS UNIVERSITY**



# Bicsi

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     Earn a Certification Diploma!



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## DAY ONE | FIBER OPTIC COURSE

## **Basic Fiber Optic Theory**

- Advantages of Fiber Optics
- Components in a Link
- Layers of a Simplex Cable
- Singlemode vs. Multimode
- Multifiber Cable Configurations
- Fiber Optic Connectors

### FIS SC, LC Connectorization Workshop

- Cable Preparation
- Curing and Scribing
- Polishing

#### Microscope Operation & Connector Polish Analysis

## DAY TWO | ADVANCED FIBER OPTICS

### Fiber Optic Review and Self Test

- Power Meter & Light Source Theory and Workshop • PM & LS Operation
- Hands-On Instruction

### **OTDR Theory and Workshop**

- How an OTDR Works
- Events and Trace Analysis
- Reflections and ORL
- OTDR Workshop

#### Mechanical Splicing Theory & Workshop • Assembly of SC Bobtail Quick Term Connector

- Fusion Splicing Theory & Workshop
- Hands-On Instruction / Troubleshooting

# Cheetah Splice-On Connector Certification • SOC Installation

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The FIS Training Department can develop customized trainings to meet your specific needs. Training staff is well versed in a variety of topics related to the fiber and copper cabling industries. Class lengths and topics can be tailored to your specifications. FIS has conducted customized classes for many Fortune 500 companies. The following are just some examples of possible course subjects.

- Troubleshooting and Cleaning
- SMPTE and Tactical Cables
- OTDR
- Equipment Components
   Testing Techniques
- Outside Plant
- Trace Interpretation
   Trace Analysis
  - Report Generation
     FTTx

## TRAINEE TESTIMONIAI

"Last December I had the pleasure of working with John Bruno, Training Specialist for Fiber Instrument Sales. John was able to tailor FIS Basic and Advanced Fiber courses to meet our time restrictions and focus on fiber for our broadcast facility. We covered basic theory, fiber/connector type and usage, then care, cleaning and troubleshooting. To top it off, all trainees were given ample time to properly fusion splice pigtails and 'fuse-on' connectors. He is very effective in imparting his vast knowledge of the subject matter in a concise, yet easy to understand format – this is not only my opinion, but that of all the trainees." — Paul Winter, Project Engineer, NBC Universal



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By offering high quality LED light bulbs and fixtures, Energy Efficient Products, Inc. (EEP), consistently provides solutions for commercial, industrial and municipal lighting projects.

# LED FIXTURE

BIM

Content

**Available** 

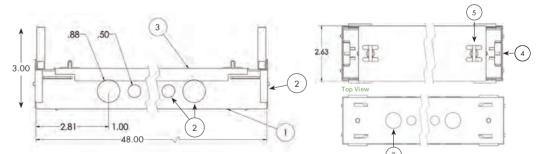
The Energy Efficient Products, Inc., LED light fixture is the only UL-listed, made-in-the-U.S. product of its kind. The fixture is designed exclusively for an LED four-foot tube light, with a G13 bi-pin base. The fixture is designed to house one four-foot tube light, is pre-wired and eliminates the need for a ballast, as is necessary with a fluorescent tube light.

The fixture comes in aluminum, or steel for those fixtures that are painted white or other colors, as ordered.

The fixture has punch outs that allow wiring and mounting through the top of the fixture and punch outs on both ends if back-to-back mounting is required. Also, punch outs on both sides and on both ends allow for side-to-side mounting.

Fixture Specifications Interior Use Only, For LED Bulbs Only Material: 22-Gauge Aluminum or 22-Gauge Steel Dimensions: Length 48.125", Width 2.63", Depth 3" Weight: Aluminum - 1.44 lb., without bulb; Steel - 4.5 lb., without bulb Voltage Range: 85V to 277V Powder Coat Colors: Aluminum (no coat), White, Eggshell, Blue, Gray Green. Other colors available upon reguest.

- Aluminum or Steel Base
   Punch Outs (14 places)
- ③ Cover
- ④ Socket
- ⑤ Base Cover Release
- Dimensions shown in inches



|                   |             | (2)      |
|-------------------|-------------|----------|
| PART #            | DESCRIPTION | <u> </u> |
| EEP-110UL-4FX-1A  | Aluminum    |          |
| EEP-110UL-4FX-1S  | Steel       |          |
| EEP-110UL-4FX-1SW | White       |          |
| EEP-110UL-4FX-1SE | Eggshell    |          |
| EEP-110UL-4FX-1SB | Blue        |          |
| EEP-110UL-4FX-1SG | Gray Green  |          |

## T8 4-FOOT TUBE LIGHT G13 BI-PIN BASE

Replacing conventional 85-277 volt fluorescent-style light bulbs with high-tech LED lights is as easy as swapping the light bulb. This LED tube light does not use a ballast and requires disconnection of the ballast, except in one bulb per ballast fixtures. (2ft and 8ft tubes available upon request)

| PART #           | DESCRIPTION                               |
|------------------|---|
| EEP-110UL-W34-4  | 20W Replacing 34-40W Color Temp: Warm     |
| EEP-110UL-D34-4  | 20W Replacing 34-40W Color Temp: Daylight |
| EEP-110UL-C34-4  | 20W Replacing 34-40W Color Temp: Cool     |
| EEP-110DLC-D34-4 | 18W Replacing 34-40W Color Temp: Daylight |

for "Data Center" Lighting

Recommended

White Eggshell

no coa

Gray Green Other colors

available upon request

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