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# Fiber Optic Closures, Trays and Accessories

|   |            |
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# 3M™ Fiber Optic Splice Case 2178 Series and Accessories



## Fiber Optic Splice Closure 2178-XSB

As more fiber is deployed in the distribution network, more severe and compact environments are encountered. The compact 2178-XSB closure features a rugged closure tested under harsh, real-world conditions to stand up to even the most severe conditions of moisture, vibration, and extreme temperatures.

The closure is the smallest member of the successful 2178 series of fiber optic splice closures. The design concept, appearance, and method of installation are almost identical to the other members of the 2178-series family, so no special tools or complicated training procedures are



### PRODUCT REFERRAL GENERATOR

3M™ Fibrlok™ II Optical Splicing . . . . . pg. 218  
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required for installation. The 3M™ Fiber Optic Splice Closure 2178-XSB is easily reenterable to allow access to splices and the addition of drops or small diameter cables. It can be installed in any OSP environment: buried and underground (pedestal, handhole, and manhole) aerial (strand and pole mount) and wall mount applications.

The compact size of the 2178-XSB closure (14.56" x 10.1" x 4.62") makes it ideal for pedestal and handhole splicing, particularly for FTTP applications. Specifically designed for butt splicing applications only, the closure has 3 cable entry ports (two 1.0" ports and one 1.4" ports). The multi-port grommets feature provides for simple, flexible and future-proof drop or small diameter branch cable additions.

The 2178-XSB closure offers a flexible fiber management system for splicing and storage with both stackable and hinged trays that accommodate various types of splices (single or mass fusion and mechanical). The maximum single fusion and mass fusion splice capacity for the 2178-XSB is 72 and 144 fibers, respectively.

| <b>FEATURES</b>                                     | <b>BENEFITS</b>  |
|---|--|
| Constructed of a highly chemical-resistant material | Can be deployed in all environments: buried, underground and aerial  |
| Gasket seal   | Easy reentry and reusable seal   |
| Unique strength member clamp assembly               | Prevents cable sheath movement with temperature changes  |
| Compact size  | Easily fits into most pedestals and handholes  |
| Spacious fiber management area                      | Bottom half of the closure provides separate area for routing, protecting, and "expressing" buffer tubes and ribbon fibers |
| Flexible drop or cable addition                     | Multiport grommet provides entry for up to 6 drops or small diameter cables.   |
| No special tools required                           | Easy installation and reentry  |
| Pressurization valve                                | Provides ability to flash test   |

## 3M™ FIBER OPTIC SPLICE CASE 2178-L/S SERIES

### Fiber Optic Splice Case 2178-L/S Series



The 2178-L/S series is made of a tough chemical-resistant material and a new gasket seal that make this the ideal splice case for outside plant, underground, aerial and pedestal applications.

The 2178-L/S series is designed with larger and smaller interchangeable closure halves so you can select the size case that meets your needs today but with the flexibility to expand for the future. Cable ports and space for trays can be added at reentry with the Cable Addition Kit 2181-L/S series.

The ease of installation is unsurpassed, requiring no special tools or complicated training procedures. The closures are easily reenterable to allow access to the splices.

The 2178-L/S series features a tough, rigid non-filled case, tested under real-world conditions, that stands up to even the most severe conditions of moisture, vibration and extreme temperatures. The closure will withstand up to 90.7 kg (200 lbs.) compression.

Design improvements to the 2178-L/S series include changes to improve the cable strain relief and a movable tray support. The closures hold cables of various sizes and provides flexibility to add ports on both ends with the cable addition kit. The 2178-L/S series splice cases can be used with the 3M splice organizer trays 2522, 2523, 2527 and 2524 and most other commercially available trays.

#### FEATURES

#### BENEFITS

|   |  |
|---|--|
| Gasket seal   | Easy reentry and reusable seal   |
| Constructed of a highly chemically resistant material | Use in buried applications   |
| Unique strength member clamp assembly                 | Prevents cable sheath movement with temperature changes                            |
| Several sizes with interchangeable parts              | Expandable system to fit capacity and space requirements                           |
| Multiple cable entry options                          | Butt or in-line configuration for splicing   |
| No special tools required                             | Easy installation and reentry  |
| Non-filled closure                                    | No compound required; easy reentry   |
| Multiple ground studs                                 | Isolated grounding capability  |
| Pressurization valve                                  | Provides ability to flash test   |
| Varying cable port sizes                              | Accommodates all common feeder and distribution cable sizes                        |
| Expandable from two cable entries per end up to eight | Add cable with minimum disturbance; eliminates splice rebuilding when adding lines |

## 3M™ FIBER OPTIC SPLICE CASE 2178 SERIES

### Flame Retardant Fiber Optic Splice Case 2178-L/S-FR Series

Designed for use in vault and building applications, the 2178-L/S-FR series splice cases are molded with a flame retardant material that allows these closures to pass Telcordia Technologies (Bellcore), UL and various global specifications that require a flame retardant rating.

#### Meet your changing network needs

The 2178-L/S-FR series cases are designed with larger and smaller interchangeable closure halves so that you can select the size and case that meets your needs today with the flexibility to expand in the future. Cable ports and space for trays can be added at reentry with the 3M Cable Addition Kit 2181-L/S-FR.

#### The ultimate protection for fiber optic connections

The 2178-L/S-FR series features tough, rigid non-filled cases, tested under real-world conditions, that stand up to even the most severe conditions of moisture, vibration and extreme temperatures.

Design improvements to the 2178-L/S-FR series include changes to improve the cable strain relief and a movable tray support. The closures hold cables of varying sizes and provide flexibility to add ports to both ends with the cable addition kit. Both the 2178-L/S series and the 2178-L/S-FR series splice cases can be used with the 3M splice organizer trays 2522, 2523, 2527 and 2524 and most other commercially available trays.

#### FEATURES

#### BENEFITS

|  |  |
|--|--|
| Constructed of flame retardant materials                 | Increases resistance of closure to effects of sprays and release agents            |
| Gasket seal  | Easy reentry and reusable seal   |
| Unique strength member clamp assembly                    | Prevents cable sheath movement with temperature changes                            |
| Several sizes with interchangeable parts                 | Expandable system to fit capacity and space requirements                           |
| Multiple cable entry options                             | Butt or in-line configuration for splicing   |
| No special tools required                                | Easy installation and reentry  |
| Non-filled closure                                       | No compound required; easy reentry   |
| Multiple ground studs                                    | Isolated grounding capabilities  |
| Pressurization valve                                     | Provides ability to flash test   |
| Expandable from two cable entries per end up to eight    | Add cable with minimum disturbance; eliminates splice rebuilding when adding lines |
| Same design and installation practice as 2178-L/S series | Use in vault and building applications   |

## MAXIMUM SPLICE CAPACITIES WITH SPLICE ORGANIZER TRAYS

### 3M™ FIBER OPTIC SPLICE CASE 2178-L/S SERIES

| CONFIGURATION                  | CLOSURE  | TRAY    | QTY. | 3M™ FIBRLOK™<br>SPLICES | FIBRLOK<br>MULTI-FIBER SPLICES | SINGLE<br>FUSION | MASS<br>FUSION    | COMMENTS                        |
|--------------------------------|----------|---------|------|-------------------------|--------------------------------|------------------|-------------------|---------------------------------|
| 2178-S w/2 2522*               | 2178-S   | 2522    | 2    | 24                      | 16 (192 fibers)                | 48               | 20 (240 fibers)** |                                 |
| 2178-S w/2 2523*               | 2178-S   | 2523    | 2    | 48                      | 24 (288 fibers)                | 96               | 24 (288 fibers)** |                                 |
| 2178-S w/2 2524*               | 2178-S   | 2524    | 2    | 48                      |                                |                  |                   |                                 |
| 2178-S w/2 2524-FT*            | 2178-S   | 2524-FT | 2    | 48                      |                                |                  |                   |                                 |
| 2178-S w/2 2524-MF*            | 2178-S   | 2524-MF | 2    | 4                       | 6 (72 fibers)                  |                  |                   |                                 |
| 2178-S w/4 2522*               | 2178-S   | 2522    | 4    | 48                      | 32 (384 fibers)                | 96               | 40 (480 fibers)   | One 2181-LS cable addition kit  |
| 2178-S w/4 2523*               | 2178-S   | 2523    | 4    | 96                      | 48 (576 fibers)                | 192              | 48 (576 fibers)   | One 2181-LS cable addition kit  |
| 2178-S w/4 2524*               | 2178-S   | 2524    | 4    | 96                      |                                |                  |                   | One 2181-LS cable addition kit  |
| 2178-S w/4 2524-FT*            | 2178-S   | 2524-FT | 4    | 96                      |                                |                  |                   | One 2181-LS cable addition kit  |
| 2178-S w/4 2524-MF*            | 2178-S   | 2524-MF | 4    | 8                       | 12 (144 fibers)                |                  |                   | One 2181-LS cable addition kit  |
| 2178-LS w/5 2522*              | 2178-LS  | 2522    | 5    | 60                      | 40 (480 fibers)                | 120              | 50 (600 fibers)   |                                 |
| 2178-LS w/5 2523*              | 2178-LS  | 2523    | 5    | 120                     | 60 (720 fibers)                | 240              | 60 (720 fibers)   |                                 |
| 2178-LS w/7 2524-FT*           | 2178-LS  | 2524-FT | 7    | 168                     |                                |                  |                   |                                 |
| 2178-LS w/7 2524-MF*           | 2178-LS  | 2524-MF | 7    | 14                      | 21 (252 fibers)                |                  |                   |                                 |
| 2178-LL*                       | 2178-LL  | —       | —    |                         |                                |                  |                   | Same splice capacity as the LS  |
| 2178-LS w/8 2522*              | 2178-LS  | 2522    | 8    | 96                      | 64 (768 fibers)                | 192              | 80 (960 fibers)   | One 2181-LS cable addition kit  |
| 2178-LS w/8 2523*              | 2178-LS  | 2523    | 8    | 192                     | 96 (1152 fibers)               | 384              | 96 (1152 fibers)  | One 2181-LS cable addition kit  |
| 2178-LS w/10 2524-A*           | 2178-LS  | 2524-A  | 10   | 240                     | 40 (480 fibers)                |                  |                   | One 2181-LS cable addition kit  |
| 2178-LS w/10 2524-FT*          | 2178-LS  | 2524-FT | 10   | 240                     |                                |                  |                   | One 2181-LS cable addition kit  |
| 2178-LS w/10 2524-MF*          | 2178-LS  | 2524-MF | 10   | 20                      | 30 (360 fibers)                |                  |                   | One 2181-LS cable addition kit  |
| 2178-LS w/10 2522*             | 2178-LS  | 2522    | 10   | 120                     | 80 (960 fibers)                | 240              | 100 (1200 fibers) | Two 2181-LS cable addition kits |
| 2178-LS w/13 2524-FT*          | 2178-LS  | 2524-FT | 13   | 312                     |                                |                  |                   | Two 2181-LS cable addition kits |
| 2178-LS w/13 2524-MF*          | 2178-LS  | 2524-MF | 13   | 26                      | 39 (468 fibers)                |                  |                   | Two 2181-LS cable addition kits |
| 2178-XL-2524*                  | 2178-XL  | 2524    | 7    | 168                     | —                              | 192              | —                 |                                 |
| 2178-XL-2524-FT*               | 2178-XL  | 2524-FT | 7    | 168                     | —                              | 192              | —                 |                                 |
| 2178-XL-2522                   | 2178-XL  | 2522    | 6    | 84                      | 504                            | 192              | 840               |                                 |
| 2178-XL-2523                   | 2178-XL  | 2523    | 6    | 168                     | 1008                           | 336              | 1680              |                                 |
| 2178-XL-2527                   | 2178-XL  | 2527    | 7    | 192                     | 576                            | 384              | 1152              |                                 |
| 2178-XL-2527<br>(Double Stack) | 2178-XL  | 2527    | 14   | 384                     | 1152                           | 768              | 2304              |                                 |
| 2178-XSB-EG-IT-6PGA            | 2178-XSB | 2532    | 2    | 12                      | —                              | 48               | 144               |                                 |
| 2178-XSB-EG-IT                 | 2178-XSB | 2532    | 2    | 12                      | —                              | 48               | 144               |                                 |

\*Flame Retardant

\*\*With 2521-RF

NOTE: 2178-LL has the same splice capacity as 2178-L/S with additional space for buffer storage. Capacity may be affected by the cable size and number of cables installed. Please call Customer Service for more information.

## 3M™ FIBER OPTIC SPLICE CASE 2178 SERIES

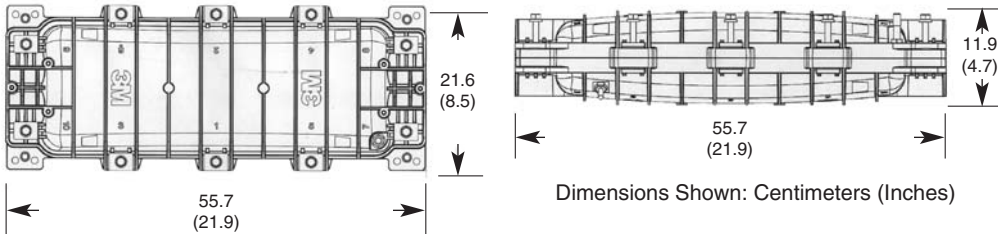
### Small Fiber Optic Splice Case 2178-S and 2178-S/FR

PRODUCT NUMBER: **2178-S** PKG. (LBS.): 1 EACH (12.00) MIN. ORDER: 1 EACH UPC: 051138-57777

Contains materials for installation of 3 cables.

PRODUCT NUMBER: **2178-S/FR** PKG. (LBS.): 1 EACH (12.00) MIN. ORDER: 1 EACH UPC: 051138-70841

Contains materials for installation of 3 cables, gray.



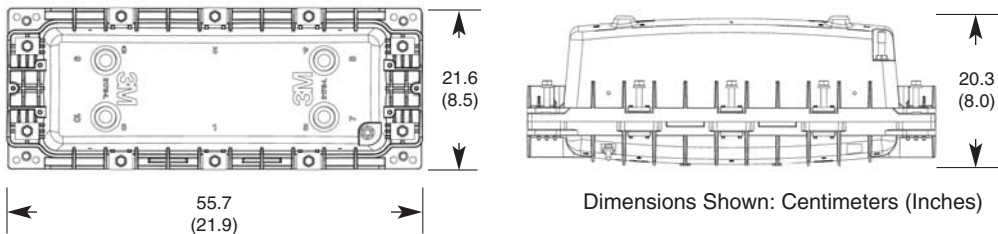
### Large Fiber Optic Splice Case 2178-LS and 2178-LS/FR

PRODUCT NUMBER: **2178-LS** PKG. (LBS.): 1 EACH (14.00) MIN. ORDER: 1 EACH UPC: 051138-57778

Contains materials for initial installation of 4 cables.

PRODUCT NUMBER: **2178-LS/FR** PKG. (LBS.): 1 EACH (14.00) MIN. ORDER: 1 EACH UPC: 051138-70840

Contains material for installation of 4 cables, gray.



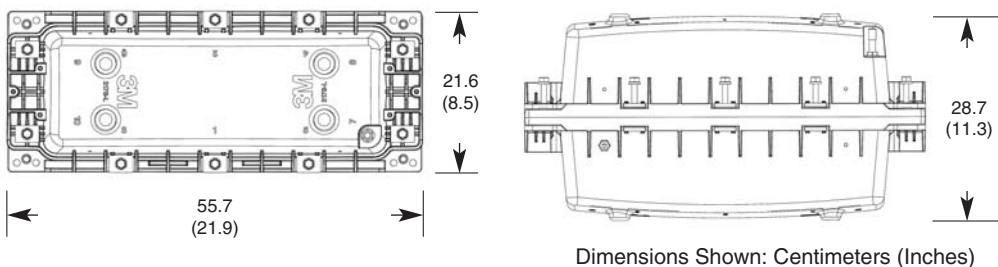
### Extra-Large Fiber Optic Splice Case 2178-LL and 2178-LL/FR

PRODUCT NUMBER: **2178-LL** PKG. (LBS.): 1 EACH (12.00) MIN. ORDER: 1 EACH UPC: 051138-57926

Contains materials for initial installation of 4 cables.

PRODUCT NUMBER: **2178-LL/FR** PKG. (LBS.): 1 EACH (12.00) MIN. ORDER: 1 EACH UPC: 051138-70842

Contains material for installation of 4 cables, gray.





## 3M™ FIBER OPTIC SPLICE CASE 2178 SERIES



### Fiber Optic Splice Case 2178-XL and 2178-XL/FR

PRODUCT NUMBER: **2178-XL** PKG (LBS.): 1 EACH (28.00) MIN. ORDER: 1 EACH UPC: 051138-88927

Contains material for initial installation of 4 cables.

PRODUCT NUMBER: **2178-XL/FR** PKG (LBS.): 1 EACH (28.00) MIN. ORDER: 1 EACH UPC: 051138-88929

Contains material for initial installation of 4 cables, gray.



### Fiber Optic Splice Closure 2178-XSB and 2178-XSB/FR

PRODUCT NUMBER: **2178-XSB** PKG: 1 EACH MIN. ORDER: 1 EACH UPC: 051115-16219

Contains material for initial installation of 2 cables.

PRODUCT NUMBER: **2178-XSB/FR** PKG: 1 EACH MIN. ORDER: 1 EACH UPC: 051115-16221

Contains material for initial installation of 2 cables, gray.

## SPECIFICATIONS

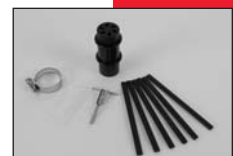
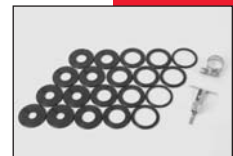
### 2178 FIBER OPTIC SPLICE CLOSURE PRODUCT FAMILY CONFIGURATIONS

| PRODUCT NUMBER      | DESCRIPTION   | CABLE ENTRY PORTS |      |     | TRAYS |      | GROUND LUGS | FLAME RETARDANT |
|---------------------|---|-------------------|------|-----|-------|------|-------------|-----------------|
|                     |   | INLINE            | BUTT | MPG | TYPE  | QTY* |             |                 |
| 2178-LL             | Extra large fiber optic splice case                               | 4                 | 2    | 0   | N/A   | 0    | 2           |                 |
| 2178-LL/FR          | Flame retardant fiber optic splice case                           | 4                 | 2    | 0   | N/A   | 0    | 2           | x               |
| 2178-LLC/FR         | Flame retardant fiber optic splice case                           | 4                 | 2    | 0   | N/A   | 0    | 2           | x               |
| 2178-LS             | Large fiber optic splice case                                     | 4                 | 2    | 0   | N/A   | 0    | 2           |                 |
| 2178-LS/4 LUG       | Fiber optic splice case with 4 ground plugs                       | 4                 | 2    | 0   | N/A   | 0    | 4           |                 |
| 2178-LS/FR          | Large, flame retardant, fiber optic splice case                   | 4                 | 2    | 0   | N/A   | 0    | 2           | x               |
| 2178-LS/FR-27T      | Small, flame retardant, fiber optic splice case, GND, 1 2527 tray | 4                 | 2    | 0   | 2527  | 1    | 2           | x               |
| 2178-LS-27T         | Large fiber optic splice case, GND, 1 2527 tray                   | 4                 | 2    | 0   | 2527  | 1    | 2           |                 |
| 2178-LS+81-27T      | Fiber optic splice case, 2181, GND, 1 2527 tray                   | 8                 | 4    | 0   | 2527  | 1    | 2           |                 |
| 2178-LS+81          | Fiber optic splice case, 2181, GND, NO tray                       | 8                 | 4    | 0   | N/A   | 0    | 2           |                 |
| 2178-S              | Small fiber optic splice case                                     | 4                 | 2    | 0   | N/A   | 0    | 2           |                 |
| 2178-S/4 LUG        | Fiber optic splice case with 4 ground plugs                       | 4                 | 2    | 0   | N/A   | 0    | 4           |                 |
| 2178-S/FR           | Small, flame retardant, fiber optic splice case                   | 4                 | 2    | 0   | N/A   | 0    | 2           | x               |
| 2178-S/FR-27T       | Small, flame retardant, fiber optic splice case, GND, 1 2527 tray | 4                 | 2    | 0   | 2527  | 1    | 2           | x               |
| 2178-S-27T          | Small fiber optic splice case, GND, 1 2527 tray                   | 4                 | 2    | 0   | 2527  | 1    | 2           |                 |
| 2178-XL             | Fiber optic splice case   | 8                 | 4    | 0   | N/A   | 0    | 0           |                 |
| 2178-XL/FR          | Flame retardant fiber optic splice case                           | 8                 | 4    | 0   | N/A   | 0    | 0           | x               |
| 2178-XSB-0G-0T      | Fiber optic splice closure, no GND, no tray                       | 0                 | 3    | 0   | N/A   | 0    | 0           |                 |
| 2178-XSB/FR-0G-0T   | Flame retardant fiber optic splice closure                        | 0                 | 3    | 0   | N/A   | 0    | 2           | x               |
| 2178-XSB-EG-0T      | Fiber optic splice closure, GND, no tray                          | 0                 | 3    | 0   | N/A   | 0    | 2           |                 |
| 2178-XSB-EG-0T-6PGA | Fiber optic splice closure, GND, no tray, MPG                     | 0                 | 3    | 1   | N/A   | 0    | 2           |                 |
| 2178-XSB-EG-1T-6PGA | Fiber optic splice closure, GND, 1 2532 tray, MPG                 | 0                 | 3    | 1   | 2532  | 1    | 2           |                 |
| 2178-XSB-EG-1T      | Fiber optic splice closure, GND, 1 2532 tray                      | 0                 | 3    | 0   | 2532  | 1    | 2           |                 |

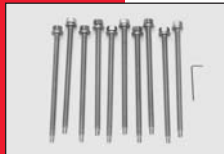
\*For maximum splice capacity, see pg. 234.

## 3M™ SPLICE CASE 2178 ACCESSORIES

| PRODUCT NUMBER/<br>PACKAGING INFO  | DESCRIPTION  |
|--|--|
| <b>2170</b><br>PKG (LBS.): 50 EACH (0.10)<br>MIN. ORDER: 50 EACH<br>UPC: 054007-17676          | <b>Fiber Optic Splice Sleeve</b><br>Transparent plastic tube and stainless steel rod designed to prevent stress and protect fusion fiber optic splices in field and factory operations.  |
| <b>2171</b><br>PKG (LBS.): 50 EACH<br>MIN. ORDER: 50 EACH<br>UPC: 054007-14547                 | <b>BPEO Fiber Optic Splice Sleeve</b><br>Transparent plastic tube and stainless steel rod designed to prevent stress and protect fusion fiber optic splices in field and factory operations.   |
| <b>2172</b><br>PKG: 100 EACH<br>MIN. ORDER: 100 EACH<br>UPC: 051138-36612                      | <b>Strength Member Clamp for Fiber Cable</b><br>Clamps strength member to cable sheath.  |
| <b>2178-EGI</b><br>PKG (LBS.): 5 EACH<br>MIN. ORDER: 5 EACH<br>UPC: 051138-57930               | <b>External Ground Isolation Kit</b><br>Provides a means to ground each cable shield with waterproof isolation. The 2178-EGI housing can be used with any of the LL series 2178-L/S fiber optic splice cases and 2178-L/S-FR Series, and is placed in the cable port. Contents of 2178-EGI kit: two 2178-EGI housing assemblies and caps, two ground wire assemblies, two O-rings, two bolts and two 4460-O/FO shield bond connectors. |
| <b>2178-LS/GSKT</b><br>PKG (LBS.): 10 KITS (19.00)<br>MIN. ORDER: 10 KITS<br>UPC: 051138-57929 | <b>Gasket Kit for 2178-LS/FR Series</b><br>Provides isolated grounds when using ground with sheath.  |
| <b>2178-XSB-1.4B</b><br>PKG: 5 EACH<br>MIN. ORDER: 5 EACH<br>UPC: 051115-19058                 | <b>Cable Branch Port Kit</b><br>Single cable entry for 1.4" cable entry port.  |
| <b>2178-125</b><br>PKG (LBS.): 8 EACH (5.00)<br>MIN. ORDER: 8 EACH<br>UPC: 054007-91019        | <b>Mastic Sealing Tape, Reenterable*</b><br>For use with splice cases 2178 and 2178-G.<br><br>*For use only with 2178 classic.   |
| <b>2178-281</b><br>PKG: 14 EACH<br>MIN. ORDER: 14 EACH<br>UPC: 051138-58633                    | <b>CORD Reenterable Mastic*</b><br>For use with splice cases 2178 and 2178-G.<br><br>*For use only with 2178 classic.  |
| <b>2178-4PGA</b><br>PKG: 5 EACH<br>MIN. ORDER: 5 EACH<br>UPC: 051115-19057                     | <b>4-Port Grommet</b><br>For Corning Cable SST-Drop Cable (RB4-141-01A20).   |
| <b>2178-6PGA</b><br>PKG: 5 EACH<br>MIN. ORDER: 5 EACH<br>UPC: 051115-19056                     | <b>6-Port Grommet</b><br>For Corning Cable SST-Drop Cable (RB4-141-01A20).   |



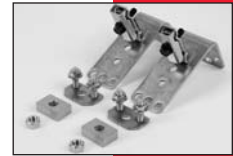
## 3M™ SPLICE CASE 2178 ACCESSORIES



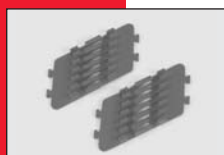
| PRODUCT NUMBER/<br>PACKAGING INFO   | DESCRIPTION  |
|---|--|
| <p><b>2180</b><br/>PKG (LBS.): 1 EACH (1.90)<br/>MIN. ORDER: 1 EACH<br/>UPC: 054007-17533</p>       | <p><b>Cable Kit*</b><br/>Mastic tape and cord, and other materials to reenter 3M Splice Case 2178.</p> <p>All materials required for reentry into 2178 splice case. Includes plugs, washers and sealing materials.</p> <p>Kit includes two plugs, two hose clamps, four green cable ties, four blue cable ties, one hex key, 48 sealing washers, one box sealing cord and one box sealing tape.</p> <p>*For use only with 2178 classic.</p>  |
| <p><b>2181</b><br/>PKG (LBS.): 1 EACH (14.00)<br/>MIN. ORDER: 1 EACH<br/>UPC: 051138-89321</p>      | <p><b>Cable Addition Kit*</b><br/>Contains mastic, cable adapter and materials for installing additional cables in 2178 splice case.</p> <p>For use with 2178 and 2178-G splice cases. Contains mastic, cable adapter and materials for installing additional cables in 2178 splice case. This kit permits butt splicing of multiple cables from a single and after initial plant construction. Splice rearranging, branch cables and customer premise drop can be added with minimal disturbance to plant in service.</p> <p>Kit includes one cable adapter, three plugs, four hose clamps, four green cable ties, four blue cable ties, one spacer clamp assembly, one box sealing cord, one box sealing tape, ten bolts and eight sealing washer trees.</p> <p>*For use only with 2178 classic.</p> |
| <p><b>2181-B</b><br/>PKG (LBS.): 1 KIT (1.20)<br/>MIN. ORDER: 1 KIT<br/>UPC: 054007-17678</p>       | <p><b>Fiber Optic Double Butt Adapter Bolt Kit</b><br/>Contains bolts for installation of two 3M Cable Addition Kits 2181-LS.</p>  |
| <p><b>2181-C</b><br/>PKG (LBS.): 1 KIT (1.20)<br/>MIN. ORDER: 1 KIT<br/>UPC: 054007-92597</p>       | <p><b>Triple Adapter Kit</b><br/>Contains bolts for installation of three 2181-LS cable addition kits.</p>   |
| <p><b>2181-LS</b><br/>PKG (LBS.): 1 EACH (8.30)<br/>MIN. ORDER: 1 EACH<br/>UPC: 051138-57927</p>    | <p><b>Cable Addition Kit*</b><br/>Contains gasket and materials for installing additional cables.</p> <p>*For use with 2178-L/S series closures.</p>   |
| <p><b>2181-LS/FR</b><br/>PKG (LBS.): 1 EACH (8.00)<br/>MIN. ORDER: 1 EACH<br/>UPC: 051138-75414</p> | <p><b>Cable Addition Kit*</b><br/>Contains gasket and materials for installing additional cables and is flame retardant.</p> <p>*For use with 2178-L/S series closures.</p>  |

## 3M™ SPLICE CASE 2178 ACCESSORIES

| PRODUCT NUMBER/<br>PACKAGING INFO   | DESCRIPTION   |
|---|---|
| <b>2183-UHB</b><br>PKG (LBS.): 1 KIT (1.10)<br>MIN. ORDER: 1 EACH<br>UPC: 051138-34602  | <b>Universal Aerial Hanger Bracket Kit</b><br>Hardware for aerial installation.<br><br>The 2183 universal aerial hanger kit can be used with 2178, 2178-G or 2178-L/S and 2178-L/S-FR series splice cases for use in aerial applications. The kit also accommodates the 2178 splice case with one or two 3M Cable Addition Kits 2181. Contents of 2183 hanger kit: four nylon stop nuts, two corner inserts with studs, two universal hanger bracket assemblies.  |
| <b>2197</b><br>PKG (LBS.): 1 KIT (1.60)<br>MIN. ORDER: 1 EACH<br>UPC: 054007-92222      | <b>Aerial Hanger Bracket Kit</b><br>Contains hardware for aerial installation with hinged cover.<br><br>The 2197 aerial hanger/hinge kit can be used with 2178, 2178-G or 2178-L/S and 2178-L/S-FR series splice cases for use in aerial applications. The kit also accommodates the 2178 splice case with one or two 2181 cable addition kits. The 3M Aerial Hanger/Hinge Kit 2197 provides additional hardware to attach the splice case cover to its base. Contents of 2197 kit: six corner inserts, 12 nuts, two flexible hinges, two "L" brackets, two bonding/hanger brackets and two bolts with washers. |
| <b>2198</b><br>PKG: 1 KIT<br>MIN. ORDER: 1 KIT<br>UPC: 051138-36613                     | <b>Wall Mount Bracket</b><br>For use with 2178-S, LS, MS and M/LS fiber cases.  |
| <b>2199</b><br>PKG (LBS.): 1 KIT (4.00)<br>MIN. ORDER: 1 KIT<br>UPC: 051138-57928       | <b>Wall Mount Bracket</b><br>For use with 2178-LL and M/LL fiber cases.   |
| <b>25T-BBE6</b><br>PKG (LBS.): 1 EACH (3.00)<br>MIN. ORDER: 1 EACH<br>UPC: 054007-32671 | <b>Bond Braid</b><br>With 6" eyelets.   |
| <b>2519</b><br>PKG: 10 KITS<br>MIN. ORDER: 10 KITS<br>UPC: 051138-57722                 | <b>Cable Fanout Kit</b><br>Transitions cable buffer tubes or single tube to fiber tube.   |
| <b>2519-X</b><br>PKG: 10 KITS<br>MIN. ORDER: 10 KITS<br>UPC: 051138-57723               | <b>Cable Fanout Expander Kit</b><br>Transitions one fiber tube to two fiber tubes.  |



## 3M™ SPLICE CASE 2178 ACCESSORIES



| PRODUCT NUMBER/<br>PACKAGING INFO  | DESCRIPTION   |
|--|---|
| <b>2520</b><br>PKG (LBS.): 50 EACH (0.90)<br>MIN. ORDER: 50 EACH<br>UPC: 051138-36414      | <b>Fiber Tube Transport Tubing, 1 ft</b><br>Protects single or ribbon fiber between trays;<br>cut in one-foot lengths.  |
| <b>2521-F</b><br>PKG (LBS.): 12 PKGS. (0.55)<br>MIN. ORDER: 12 PKGS.<br>UPC: 051138-36412  | <b>Fusion Splice Insert, 2 Pack</b><br>Holds 12 single fusion splices in each insert, used in 3M Fiber Splice Organizer Trays 2522/2523.  |
| <b>2521-FL</b><br>PKG (LBS.): 12 (0.40)<br>MIN. ORDER: 12 PKGS.<br>UPC: 051138-36413       | <b>3M™ Fibriok™ Splice Insert, 2 Pack</b><br>Holds six splices in each insert, used in 2522/2523 trays.   |
| <b>2521-MF</b><br>PKG (LBS.): 12 PKGS. (0.50)<br>MIN. ORDER: 12 PKGS.<br>UPC: 051138-36411 | <b>Fibriok Multi-Fiber Splice Insert</b><br>Holds four multi-fiber splices in each insert, used in 2522/2523 trays.   |
| <b>2521-RF</b><br>PKG (LBS.): 12 PKGS. (1.00)<br>MIN. ORDER: 12 PKGS.<br>UPC: 051138-36415 | <b>Ribbon Fusion Splice Insert</b><br>Holds five ribbon fusion splices in each insert, used in 2522/2523 trays.   |
| <b>2522</b><br>PKG (LBS.): 3 EACH (3.00)<br>MIN. ORDER: 3 EACH<br>UPC: 051138-36522        | <b>Small Fiber Splice Organizer Tray</b><br>Holds two 3M Splice Inserts 2521 Series (sold separately).*<br><br>The 2522 tray stores and protects discrete and mass, mechanical and fusion fiber optic splices in closures and fiber distribution units. The 2521 series splice inserts are easily added to either tray to secure splices into the trays. Fibers are routed into the trays using 3M Fiber Tube Transition Tubing 2520 that zips over the fibers.<br><br>*Splice inserts must be ordered separately. See above. |
| <b>2523</b><br>PKG (LBS.): 3 EACH (4.00)<br>MIN. ORDER: 3 EACH<br>UPC: 051138-36523        | <b>Large Fiber Splice Organizer Tray</b><br>Holds four 2521 series splice inserts (sold separately).*<br><br>The 2523 tray stores and protects discrete and mass, mechanical and fusion fiber optic splices in closures and fiber distribution units. The 2521 inserts are easily added to either tray to secure splices into the trays. Fibers are routed into the trays using 2520 tubing that zips over the fibers.<br><br>*Splice inserts must be ordered separately. See above.  |

## 3M™ SPLICE CASE 2178 ACCESSORIES

| PRODUCT NUMBER/<br>PACKAGING INFO  | DESCRIPTION  |
|--|--|
| <p><b>2524</b><br/>           PKG (LBS.): 3 EACH (2.80)<br/>           MIN. ORDER: 3 EACH<br/>           UPC: 051138-11514</p>     | <p><b>Splice Organizer Tray</b><br/>           Holds 24 3M™ Fibrlok™ Splices and eight buffer tubes.</p> <p>The 3M Fibrlok Splice Organizer Tray 2524 holds 24 Fibrlok splices (2525, 2590, 2599, 2529) and accommodates up to eight buffer tubes holding up to 48 fibers (900 μm or 250 μm). The tubes are secured with channel snaps so that cable ties are not required. The fibers all enter the tray in one corner eliminating the need for figure 8's in the fiber.</p> <p>An important design feature of these stackable trays is the snap-on hinge cover on each tray. Individual trays may be accessed without disassembly of the trays above or below — and without kinking buffer tubes.</p> <p>The 2524 tray can be adapted for fusion splice storage using the 2524F insert. The 2524 tray fits and mounts in the 3M Fiber Optic Splice Closure 2177, the 2178 and the 2178-S splice cases.</p> |
| <p><b>2524-A</b><br/>           PKG (LBS.): 3 EACH (0.96)<br/>           MIN. ORDER: 3 EACH<br/>           UPC: 054007-92320</p>   | <p><b>Splice Organizer Tray</b><br/>           Holds four mass fusion or 24 single fusion splices, or a combination of 20 single fusion and four mass fusion.</p>  |
| <p><b>2524-F</b><br/>           PKG (LBS.): 24 EACH (0.40)<br/>           MIN. ORDER: 24 EACH<br/>           UPC: 054007-57150</p> | <p><b>Fusion Splice Insert</b><br/>           Adapts the 2524 tray for fusion splices.</p> <p>Contains gasket and materials for installing additional cables and is flame retardant.</p>   |
| <p><b>2524-FT</b><br/>           PKG (LBS.): 3 EACH (0.96)<br/>           MIN. ORDER: 3 EACH<br/>           UPC: 051138-11513</p>  | <p><b>Fusion Splice Organizer Tray</b><br/>           Holds 24 single fusion splices.</p> <p>The Fibrlok splice organizer tray 2524 holds 24 Fibrlok splices (2525, 2590, 2599, 2529) and accommodates up to eight buffer tubes holding up to 48 fibers (900 μm or 250 μm). The tubes are secured with channel snaps so that cable ties are not required. The fibers all enter the tray in one corner eliminating the need for figure 8's in the fiber.</p> <p>An important design feature of these stackable trays is the snap-on hinge cover on each tray. Individual trays may be accessed without disassembly of the trays above or below — and without kinking buffer tubes.</p> <p>The 2524-FT tray holds up to 24 fusion splices.</p> <p>The 2524-FT tray fits and mounts in the 2177 fiber optic splice closure, the 2178 splice case and the 2178-S splice case.</p>                                |
| <p><b>2524-MF</b><br/>           PKG (LBS.): 3 EACH (3.00)<br/>           MIN. ORDER: 3 EACH<br/>           UPC: 051138-34352</p>  | <p><b>Fibrlok Multi-Fiber Splice Organizer Tray</b><br/>           Holds three Fibrlok multi-fiber and four single Fibrlok splices.</p>  |



## 3M™ SPLICE CASE 2178 ACCESSORIES



**2526**  
 PKG: 24 KITS  
 MIN. ORDER: 24 KITS  
 UPC: 051138-36648

**Strap Kit for Organizer Trays**  
 Holds 2522 and 2523 trays in place in closure.



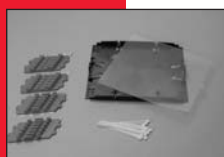
**2527**  
 PKG: 3 EACH  
 MIN. ORDER: 3 EACH  
 UPC: 051168-89008

**Fiber Splice Organizer Tray**  
 The 2527 tray will store a variety of splices. It stores up to 24 single fusion or 144 mass fusion splices and has entry from all corners. It maintains the minimum bend radius of fiber. It will accommodate 3M Fiber Tube Transport Tubes and all buffer tubes. The tray has a clear cover and splice holders included.



**2532**  
 PKG: 2 EACH  
 MIN. ORDER: 2 EACH  
 UPC: 051115-16220

**Fiber Splice Organizer Tray for 2178-XS Closures**  
 Tray is stackable and accommodates 24 single and 72 mass fusion splices.



**2538-24-DF/72-MF**  
 PKG: 2 EACH  
 MIN. ORDER: 2 EACH  
 UPC: 051115-19208

**Fiber Optic Splice Tray w/24 Discrete/72 Mass Fusion**  
 Stackable tray that will store both discrete and mass fusion splices.



**2539-12-DF**  
 PKG: 2 EACH  
 MIN. ORDER: 2 EACH  
 UPC: 051115-19209

**Fiber Optic Splice Tray w/12 Discrete Fusion Splices**  
 Hinged tray.



**2540-12-DF/36-MF**  
 PKG: 2 EACH  
 MIN. ORDER: 2 EACH  
 UPC: 051115-19210

**Fiber Optic Splice Tray w/12 Discrete/72 Mass Fusion**  
 Hinged tray.



**4414**  
 PKG (LBS.): 1 EACH (1.40)  
 MIN. ORDER: 1 EACH  
 UPC: 054007-57218

**Cable Cleaning Kit**  
 Provides all the necessary materials for cleaning the filling compound from filled copper and fiber optic cables in an easy-to-transport kit.



**4460-D/FO**  
 PKG (LBS.): 100 EACH (7.95)  
 MIN. ORDER: 100 EACH  
 UPC: 054007-92757

**3M™ Scotchlok™ Shield Bond Connector Assembly**  
 Provides grounding and strength and member clamp.



**5025-KIT**  
 PKG (LBS.): 1 KIT (6.05)  
 MIN. ORDER: 1 KIT  
 UPC: 054007-34385

**Reflective Lettering System Kit**  
 1" x 3" lettering kit.

## 3M™ FIBER OPTIC SPLICE CLOSURE 2177 SERIES

### Fiber Optic Splice Closure 2177/2177-R

PRODUCT NUMBER: **2177** PKG (LBS.): 1 EACH (9.00) MIN. ORDER: 1 EACH UPC: 054007-63137  
 PRODUCT NUMBER: **2177-R** PKG (LBS.): 1 EACH (9.00) MIN. ORDER: 1 EACH UPC: 051138-57595

This closure consists of a double shell designed to protect an organizer when the closure is filled with reenterable compound. Cable entry ports can be field trimmed for butt or inline splicing. A sealed inner protective shield provides added moisture protection and protects fiber from direct contact with encapsulant.



### SPECIFICATIONS

#### FIBER OPTIC SPLICE CLOSURE 2177

|                                      |   |   |
|--------------------------------------|---|---|
| <b>Applications</b>                  | Recommended for buried splicing only  |   |
| <b>Capacity</b>                      | Maximum closure capacity  |   |
|                                      | 48 mechanical splices, 64 fusion splices, 10.1 to 25.3 mm (0.4 to 1.0") diameter cables |   |
| <b>Additional Materials Required</b> | Universal Organizer Bracket 2196  | Scotch™ Sealing Tape 2900R, 37.9 mm (1 1/2")          |
|                                      | Splice trays  | LR tape   |
|                                      | 4442 reenterable encapsulant, 2-3000 gram cans  | Sheath scuff  |
|                                      | Shield connectors   | 4430 spacer web, 76.1 mm (3") wide (for reentry only) |
|                                      | Ground braid or strap   |   |

### Universal Organizer Bracket 2196

PKG (LBS.): 1 EACH (1.80) MIN. ORDER: 1 EACH UPC: 054007-63992

The 2196 universal organizer bracket accommodates up to three 3M Optical Fiber Splice Organizer Trays 2524 or 2524-FT or other compatible trays to be used in the 2177 fiber optic closure.



Used to terminate and hold the fiber optic cable sheaths while bonding and grounding the metallic member. Up to three cables and their grounds may be isolated and externally connected in applications where separation of grounds is required without closure reentry. Tube splitters are included for splitting fibers out of buffer tubes to multiple trays.

### FEATURES

### BENEFITS

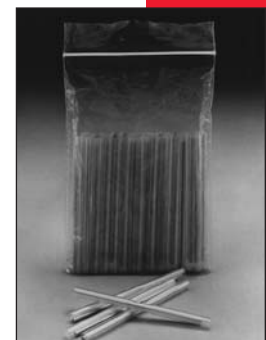
#### UNIVERSAL ORGANIZER BRACKET 2196

|                               |  |
|-------------------------------|--|
| Universal                     | Accommodates different trays   |
| Ground isolation              | Isolates up to three cable grounds   |
| Tube splitters                | Facilitates splitting fibers out of buffer tubes to trays                            |
| Dual-lock pads                | Up to three trays  |
| Capacity                      | Three 2524 or 2524-FT trays or other trays compatible with 3M closures               |
| Additional materials required | Shield bond connectors, 50.77mm (2") wide rubber tape, 9.0 mm (3/4") wide vinyl tape |

### Fiber Optic Splice Sleeve 2170

PKG (LBS.): 50 EACH (0.10) MIN. ORDER: 50 EACH UPC: 054007-17676

Transparent plastic tube and stainless steel rod designed to prevent stress and protect fusion fiber optic splices in field and factory operations. Sleeves are made of ethylene vinyl acetate (EVA) with heat-activated memory which causes them to shrink under heat. Sleeves shrink tightly to exclude air and hold the rod firmly, preventing abrasion of delicate glass fibers.





## 3M™ Fiber Optic Dome Splice Closure FD Series



3M Dome Splice Closure FD protects fiber optic splices from the elements while providing fast and easy no-cost reentry. These closures can be installed in above-ground pedestals, hand-holes, and mounted on poles and strands. The closure utilizes proven sealing technology and over 30 years of experience with copper protection.

Fiber splices are enclosed in a polypropylene dome that is clamped together with a stainless steel latch and sealed with an O-ring. Pre-stretched tubing is slipped over the base of the closure and onto a gel sealing collar. Pulling the plastic rip cord shrinks the tubing to an air and water tight seal around the collar. No special tools, power supply or torches are required for assembly. To reenter, simply pull the latch.

Available in two sizes, the closure accommodates various cable constructions and splice capacities. Each tray holds two splice inserts. Four types of inserts are available to hold 3M™ Fibrlok™ Splices or multi-fiber splices, fusion or mass fusion splices.

For quick installation and field-proven performance specify 3M fiber protection products.

## FEATURES

## BENEFITS

### 3M™ FIBER OPTIC DOME SPLICE CLOSURE FD SERIES

|  |  |
|--|--|
| Proven 3M sealing technology                                       | Helps reduce maintenance costs                       |
| Easy installation required "reentry"                               | No special tools, torch or power supply              |
| Ready access   | No-cost reentry to splices; craft friendly           |
| Flexible fiber management  | Accommodates a variety of cable sizes                |
| Flexible splice capability 4 - 432 fibers in ribbon splices        | 1 - 96 fibers in discrete splices                    |
| Minimal training   | Can help provide cost savings                        |
| Gel end seal technology multiple cable configurations              | No compounds to mix; air tight seal over             |
| 100 lb. strain relief with shield bond connector assembly          | Long product life; craft friendly — no exposed metal |
| Rugged and versatile design installed in a variety of environments | One system fits all; can help reduce inventory costs |

## SPECIFICATIONS

| TYPE                             | FD06  | FD08   |
|----------------------------------|---|--|
| <b>Dome size</b><br>cm (in.)     | 57.15 x 14.2 x 9.4<br>(22.5 x 5.6 x 3.7)  | 59.7 x 17.8 x 13.71<br>(23.5 x 7.0 x 5.4)  |
| Number of trays                  | 2   | 4  |
| Number of cables                 | 6   | 6  |
| <b>Splicing capacity</b>         |   |  |
| 3M™ Fibrok™ Universal Splice     | 24  | 48   |
| Fibrok™ Multi-Fiber Splice       | 16 (192 fibers)   | 32 (384 fibers)  |
| Fusion                           | 48*   | 96*  |
| Mass fusion                      | 20 (240 fibers)   | 36 (432 fibers)  |
| <b>Express capacity</b>          |   |  |
| Single tube discrete<br>cm (in.) | 228.6 (90) length<br>192 fibers stored in trays   | 228.6 (90) length<br>192 fibers stored in trays  |
| Buffer tube<br>cm (in.)          | 228.6 (90) length<br>120 fibers maximum<br>(4 buffer tubes or 120 fibers stored in trays) | 228.6 (90) length<br>216 fibers maximum<br>(8 buffer tubes and 120 fibers stored in trays) |
| Ribbon<br>cm (in.)               | 172.7 (68) length<br>288 fibers maximum<br>(24 ribbons stored in trays)                   | 172.7 (68) length<br>288 fibers maximum<br>(24 ribbons stored in trays)                    |
| <b>Cable capacity</b>            |   |  |
| Main port (2)<br>mm (in.)        | 8.9 - 21.1<br>(0.35-0.83)   | 12.5 - 33.0<br>(0.49-1.30)   |
| Drop port (4)<br>mm (in.)        | 8.9 - 17.5<br>(0.35-0.69)   | 8.9 - 20.1<br>(0.35-0.79)  |
| *Double stacked fusion sleeves   |   |  |



### PRODUCT REFERRAL GENERATOR

Pedestal Cabinets . . . . . pg. 120  
3M™ Fibrok™ II Optical Splicing . . . pg. 218





# 3M™ FIBER OPTIC DOME SPLICE CLOSURE FD SERIES

## ORDERING INFORMATION

### FOLLOW 5 EASY STEPS FOR ORDERING

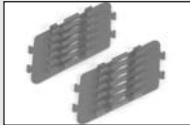

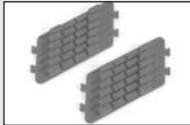
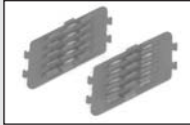
1

For complete installation choose one of these:

| PRODUCT NUMBER | DESCRIPTION   | PKG. (LBS.)  | MIN. ORDER | UPC 051138- |  |
|----------------|---|--------------|------------|-------------|--|
| <b>FD06</b>    | <b>FD Closure Kit</b>   |              |            |             |  |
|                | Contains transition tray and one splice tray; capacity for one more splice tray.  | 1 kit (7.30) | 1 each     | 36404       |   |
| <b>FD08</b>    | <b>FD Closure Kit</b>   |              |            |             |  |
|                | Contains transition tray and one splice tray; capacity for three more splice trays.   | 1 kit (8.95) | 1 each     | 36405       |   |
| <b>FD06-D</b>  | <b>FD Closure Kit with Discrete Splices</b>   |              |            |             |  |
|                | Contains transition tray, one splice tray, two 3M™ Shield Bond Connectors 4460-D/F0, two 3M™ Splice Inserts 2521-F for fusion splices, and two 3M™ Splice Inserts 2521-FL for 3M™ Fibriok™ splices. | 1 kit (8.00) | 1 each     | 36645       |   |
| <b>FD08-D</b>  | <b>FD Closure Kit with Discrete Splices</b>   |              |            |             |  |
|                | Contains transition tray, one splice tray, two 4460-D/F0 shield bond connectors, two 2521-F splice inserts for fusion splices, and two 2521-FL splice inserts for Fibriok splices.                  | 1 kit (9.50) | 1 each     | 36646       |  |








2

Choose one package for each splice tray:

| PRODUCT NUMBER | DESCRIPTION  | PKG. (LBS.)     | MIN. ORDER | UPC 051138- |   |
|----------------|--|-----------------|------------|-------------|---|
| <b>2521-FL</b> | <b>3M™ Fibriok™ Splice Insert, 2-Pack</b>            |                 |            |             |   |
|                | Holds six single mechanical splices in each insert.  | 12 pkgs. (0.40) | 12 pkgs.   | 36413       |  |
| <b>2521-MF</b> | <b>Fibriok Multi-Fiber Splice Insert</b>             |                 |            |             |   |
|                | Holds four multi-fiber splices in each insert.       | 12 pkgs. (0.50) | 12 pkgs.   | 36411       |  |
| <b>2521-F</b>  | <b>Fusion Splice Insert, 2-Pack</b>                  |                 |            |             |   |
|                | Holds twelve discrete fusion splices in each insert. | 12 pkgs. (0.55) | 12 pkgs.   | 36412       |  |
| <b>2521-RF</b> | <b>Ribbon Fusion Splice Insert</b>                   |                 |            |             |   |
|                | Holds five ribbon fusion splices in each insert.     | 12 pkgs. (1.00) | 12 pkgs.   | 36415       |  |

# 3M™ FIBER OPTIC DOME SPLICE CLOSURE FD SERIES

## ORDERING INFORMATION

| <b>3</b>  |   |                    |            |             |   |
|---|---|--------------------|------------|-------------|---|
| Choose one shield bond connector or strength member clamp for each cable: |   |                    |            |             |   |
| PRODUCT NUMBER  | DESCRIPTION   | PKG. (LBS.)        | MIN. ORDER | UPC 051138- |   |
| 4460-D/FO   | <b>3M™ Scotchlok™ Shield Bond Connector Assembly</b><br>Provides grounding and central strength member clamp.   | 100 each<br>(7.95) | 100 each   | 92757*      |    |
| FD110   | <b>FD Ground Kit for Fiber Optic Cable</b><br>Includes two 4460-D/FO shield bond connector assemblies and two ground straps.  | 12 kits<br>(6.46)  | 12 kits    | 36416       |    |
| 2172  | <b>Strength Member Clamp for Fiber Cable</b><br>Clamps strength member to cable sheath.   | 100 each           | 100 each   | 36612       |    |
| <b>4</b>  |   |                    |            |             |   |
| For complete installation choose one of these:                            |   |                    |            |             |   |
| PRODUCT NUMBER  | DESCRIPTION   | PKG. (LBS.)        | MIN. ORDER | UPC 051138- |   |
| FD100   | <b>FD Splice Tray Kit</b><br>Contains splice tray, cover, cable ties and fiber tube transition tubing.  | 3 kits<br>(2.25)   | 3 each     | 36408       |  |
| <b>5</b>  |   |                    |            |             |   |
| Choose additional accessories as necessary:                               |   |                    |            |             |   |
| PRODUCT NUMBER  | DESCRIPTION   | PKG. (LBS.)        | MIN. ORDER | UPC 051138- |   |
| FD106   | <b>FD Cable Addition Kit</b><br>Contains pull and shrink tubing, gel strip, cable ties, sheath scuff, fiber tube transition tubing; for reentry into FD06 closure.  | 1 kit<br>(4.00)    | 1 kit      | 36409       |  |
| FD108   | <b>FD Cable Addition Kit</b><br>Contains pull and shrink tubing, gel strips, cable ties, sheath scuff, fiber tube transition tubing; for reentry into FD08 closure. | 1 kit<br>(4.55)    | 1 kit      | 36410       |  |
| 2520  | <b>Fiber Tube Transition Tubing, 1 ft</b><br>Protects fibers between trays; accommodates ribbon fibers; cut in one-foot lengths.                                    | 50 each<br>(0.90)  | 50 each    | 36414       |  |

\*UPC prefix 054007-

# 3M™ FIBER OPTIC DOME SPLICE CLOSURE FD SERIES

## ORDERING INFORMATION

| PRODUCT NUMBER  | DESCRIPTION  | PKG. (LBS.)       | MIN. ORDER | UPC 051138- |   |
|-----------------|--|-------------------|------------|-------------|---|
| <b>2520-3FT</b> | <b>Fiber Tube Transition Tubing</b><br>Protects fibers outside trays; accommodates ribbon fibers; cut in three-foot lengths.       | 24 each           | 24 each    | 36647       |    |
| <b>4600-GSS</b> | <b>Gel Sealant Strip</b><br>Gel strip seals cables and gel core in 3M Fiber Dome Closures FD06 or FD08.                            | 50 each           | 50 each    | 92221*      |    |
| <b>FD120</b>    | <b>FD Mounting Bracket</b><br>Mounting bracket for FD06/FD08 closures.   | 1 kit<br>(1.60)   | 1 kit      | 36454       |   |
| <b>FD130</b>    | <b>FD Strand Mount Bracket Kit</b><br>Strand mounting bracket for FD06/FD08 closures with three clamps.                            | 1 kit<br>(1.80)   | 1 kit      | 36455       |   |
| <b>FD130-S</b>  | <b>FD Strand Mount Bracket, Single Clamp</b><br>Strand mounting bracket for FD06/FD08 closures with one clamp around closure base. | 1 kit             | 1 each     | 36677       |   |
| <b>FD06-PST</b> | <b>FD Pull and Shrink Tubing</b><br>Pull and shrink tubing for FD06.   | 5 each<br>(13.85) | 5 each     | 36402       |  |
| <b>FD08-PST</b> | <b>FD Pull and Shrink Tubing</b><br>Pull and shrink tubing for FD08.   | 5 each<br>(18.35) | 5 each     | 36403       |  |

\*UPC prefix 054007-

## 3M™ SLiC™ Fiber Aerial Closures and Terminals



New SLiC fiber closures and terminals are designed for strand-mount FTTH in-line, butt or taut sheath applications. This weather-tight product is a single piece construction that can be installed very easily. The single piece construction permits complete splice access after placement without removal of the closure or terminal from the cable.

The double-walled, blow-molded body protects fiber splices and resists cracking or breaking even in harsh environments. Almost all parts are attached to the closure/terminal. Because of the interlocking ends, the closures or terminals can be extended to protect damaged cable sheaths.

The new SLiC fiber terminal features a two-closure-in-one housing design which separates the drop chamber from splice chamber. This allows the terminal to be accessed for fiber drop terminations without opening the splice chamber. SLiC fiber closures and terminals are tested to Bellcore GR-771-CORE mechanical and environmental requirements for free-breathing closures as well as drop pullout requirements from Bellcore TR-TSY-000949.

# 3M™ SLiC™ FIBER AERIAL CLOSURES AND TERMINALS

## SLiC Fiber Aerial Closure 533 and 733

3M's SLiC fiber aerial closures are designed to enable service providers to cost-effectively deploy aerial fiber networks in the access network (FTTN, HFC, and FTTP). The SLiC fiber aerial closure is a weather-tight, single-piece aerial closure that can be installed very easily for new construction or maintenance situations. The single-piece construction permits complete splice access after placement without the removal of the closure from the cable. These free-breathing closures (FBCs) are designed for strand-mount in-line, butt or taut sheath single or ribbon fiber applications.

The durable double-walled, blow-molded body resists cracking or breaking even in the harshest environments, providing the ultimate protection for the fibers and splices.

The SLiC fiber closure portfolio consists of the 533 and the 733 units. The maximum splice capacity of the SLiC 533 closure is 144 and 432 for single and mass fusion. The SLiC 733 closure can accommodate up to 288 single and 864 mass fusion splices.

### FEATURES      BENEFITS

|                                   |  |
|-----------------------------------|--|
| One-piece construction            | Easy installation and permits access to the cable splice without removing the closure or the terminal                |
| Double-walled molded construction | Durable protection from bending and cracking in the most extreme environments  |
| Spacious fiber management area    | Slack storage basket provides separate area for routing, protecting, and "expressing" buffer tubes and ribbon fibers |
| Multiple splicing applications    | Accommodates in-line and butt end span and midspan as well taut sheath applications                                  |
| Quick-release clamps              | Easy installation and reentry without the need for special tools   |
| Interlocking ends                 | Permits the closure chamber to be extended to protect damaged sheath   |

### SPECIFICATIONS

|                                     | SLiC 533<br>FIBER AERIAL CLOSURE TAUT SHEATH                     | SLiC 533<br>FIBER AERIAL CLOSURE                                 | SLiC 733<br>FIBER AERIAL CLOSURE                                 |
|-------------------------------------|--|--|--|
| Product Number                      | SLFC-533-TS  | SLFC-533-SP  | SLFC-733-SP  |
| Dimensions (LxHxW) inches           | 33.0" x 5.0"   | 33.0" x 5.0"   | 33.0" x 7.0"   |
| Cable entry ports and size (inches) | 3 ports per end<br>Port 1: 0.6 - 2.2"<br>Port 2 and 3: 0.2 -1.4" | 3 ports per end<br>Port 1: 0.6 - 2.2"<br>Port 2 and 3: 0.2 -1.4" | 3 ports per end<br>Port 1: 0.6 - 2.2"<br>Port 2 and 3: 0.2 -1.4" |
| Configuration                       | Inline (taut sheath)   | Inline and butt (express)  | Inline and butt (express)  |
| Taut-sheath application             | Yes; 26" sheath opening  | No   | No   |

NOTE: The SLiC fiber aerial closures are tested to Bellcore GR-771-CORE mechanical and environmental requirements for free-breathing closures.

### SPECIFICATIONS

| SPLICE TRAY CAPACITY |   | SLiC 533                               |                          | SLiC 733                       |                                 |                                |                                 |
|----------------------|---|--|--------------------------|--------------------------------|---------------------------------|--------------------------------|---------------------------------|
| PRODUCT NUMBER       | DESCRIPTION   | SPLICES ACCOMMODATED                   | SPLICE CAPACITY PER TRAY | MAXIMUM # OF TRAYS PER CLOSURE | MAXIMUM CLOSURE SPLICE CAPACITY | MAXIMUM # OF TRAYS PER CLOSURE | MAXIMUM CLOSURE SPLICE CAPACITY |
| 2522                 | Stackable hinged tray, fiber entry/exit at any corner of the tray | Single fusion (45 or 60mm)             | 24                       | 3                              | 72                              | 6                              | 144                             |
|                      |   | Single mechanical (3M™ Fibrlok splice) | 12                       |                                | 36                              |                                | 72                              |
|                      |   | Mass fusion                            | 144                      |                                | 432                             |                                | 864                             |
|                      |   | Mass mechanical (Fibrlok splice)       | 96                       |                                | 288                             |                                | 576                             |
| 2523                 | Stackable hinged tray, fiber entry/exit at any corner of the tray | Single fusion (45 or 60mm)             | 48                       | 3                              | 144                             | 6                              | 288                             |
|                      |   | Single mechanical (Fibrlok splice)     | 24                       |                                | 72                              |                                | 144                             |
|                      |   | Mass fusion                            | 144                      |                                | 432                             |                                | 864                             |
|                      |   | Mass mechanical (Fibrlok splice)       | 144                      |                                | 432                             |                                | 864                             |
| 2527                 | Stackable hinged tray, fiber entry/exit at any corner of the tray | Single fusion (45 or 60mm)             | 24                       | 3                              | 72                              | 6                              | 144                             |
|                      |   | Single mechanical (Fibrlok splice)     | 12                       |                                | 36                              |                                | 72                              |
|                      |   | Mass fusion                            | 144                      |                                | 432                             |                                | 864                             |
|                      |   | Mass mechanical (Fibrlok splice)       | 72                       |                                | 216                             |                                | 432                             |

# 3M™ SLIC™ FIBER AERIAL CLOSURES AND TERMINALS

## CONFIGURATION GUIDE

|                             | SLFC | — | XXX | — | XX | — | XX   |
|-----------------------------|------|---|-----|---|----|---|------|
| <b>Size</b>                 |      |   |     |   |    |   |      |
| 5" x 33"                    |      |   | 533 |   |    |   |      |
| 7" x 33"                    |      |   | 733 |   |    |   |      |
| <b>Splicing Application</b> |      |   |     |   |    |   |      |
| Taut sheath                 |      |   |     |   | TS |   |      |
| Midspan or endspan          |      |   |     |   | SP |   |      |
| <b>Trays</b>                |      |   |     |   |    |   |      |
| Number of trays             |      |   |     |   |    |   | 0..6 |
| <b>Tray Type</b>            |      |   |     |   |    |   |      |
| None                        |      |   |     |   |    |   | X    |
| 2527                        |      |   |     |   |    |   | A    |

### Closures

PRODUCT NUMBER: **SLFC-533-TS-1A** DESCRIPTION: FIBER AERIAL CLOSURE, TAUT SHEATH, ONE 2527 TRAY  
 PKG: 1 EACH MIN. ORDER: 1 EACH UPC: 051115-19040



PRODUCT NUMBER: **SLFC-533-TS-0X** DESCRIPTION: FIBER AERIAL CLOSURE, TAUT SHEATH, NO TRAY  
 PKG: 1 EACH MIN. ORDER: 1 EACH UPC: 051115-19041



PRODUCT NUMBER: **SLFC-533-SP-1A** DESCRIPTION: FIBER AERIAL CLOSURE, ONE 2527 TRAY  
 PKG: 1 EACH MIN. ORDER: 1 EACH UPC: 051115-19038



PRODUCT NUMBER: **SLFC-733-SP-1A** DESCRIPTION: FIBER AERIAL CLOSURE, ONE 2527 TRAY  
 PKG: 1 EACH MIN. ORDER: 1 EACH UPC: 051115-19042



PRODUCT NUMBER: **SLFC-533-SP-0X** DESCRIPTION: FIBER AERIAL CLOSURE, NO TRAY  
 PKG: 1 EACH MIN. ORDER: 1 EACH UPC: 051115-19039



PRODUCT NUMBER: **SLFC-733-SP-0X** DESCRIPTION: FIBER AERIAL CLOSURE, NO TRAY  
 PKG: 1 EACH MIN. ORDER: 1 EACH UPC: 051115-19043





## 3M™ SLIC™ FIBER AERIAL CLOSURES AND TERMINALS



### SLIC FIBER AERIAL TERMINAL CLOSURE 530

The SLiC fiber aerial terminal closure is an aerial, strand mount, free breathing (breathable) fiber terminal for FTTP (fiber to the premises) applications. It can be used for inline, taut sheath, and butt splicing configurations.

The SLiC 530 terminal closure is comprised of two separate chambers: a distribution cable splice chamber and a drop termination chamber. The distribution cable splice chamber houses the fiber splices and stores buffer tube or ribbon fiber slack while the drop termination chamber is used to house all drop terminations.

This craft separation feature allows the installer (landR craftsman) to terminate and maintain the drop without entering the splice chamber. The 530 terminal closure has the capability of handling up to 12 external\* or internal (non-hardened preterminated, direct spliced, and spliced pigtailed) drop cable terminations.

\*FONS RC™, Corning OptiTap™ and AFOP SCOUT for SC only.

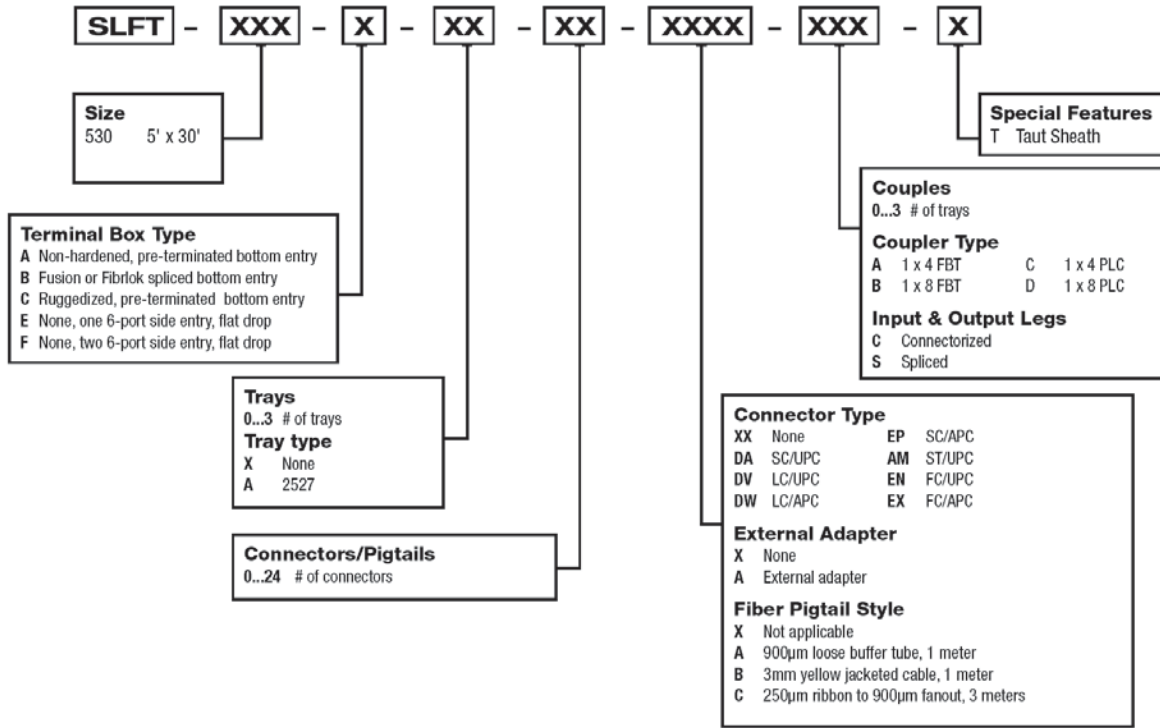
#### FEATURES

#### BENEFITS

|   |  |
|---|--|
| One-piece construction  | Easy installation and permits access to the cable splice without removing the closure or the terminal  |
| Separate splice and drop termination chambers                               | Allows easy and secure access for service connections and drop maintenance (cleaning and testing) without having to enter the closure splice chamber   |
| Double-walled construction  | Durable protection from bending and cracking in the most extreme environments  |
| Drop termination chamber accommodates external and internal drop interfaces | Flexible nature of the terminal box permits the usage of external or internal, hardened or non-hardened, pre-terminated or field terminated, pigtail spliced or direct spliced drop cable terminations |
| Spacious fiber management area  | Slack storage basket provides separate area for routing, protecting, and "expressing" buffer tubes and ribbon fibers   |
| Multiple splicing applications  | Accommodates inline and butt end span and midspan as well as taut sheath applications  |
| Quick-release latches   | Easy installation and reentry without the need for special tools   |
| Interlocking ends   | Permits the closure chamber to be extended to protect damaged sheath   |
| Adaptable to both centralized and distributed splitting networks            | Splitters/couplers for distributed splitting applications can be easily added  |

# 3M™ SLIC™ FIBER AERIAL CLOSURES AND TERMINALS

## CONFIGURATION GUIDE



## ORDERING INFORMATION

| SLIC FIBER AERIAL TERMINAL CLOSURE 530 |   |        |            |             |
|--|---|--------|------------|-------------|
| PRODUCT NUMBER                         | DESCRIPTION                                   | PKG.   | MIN. ORDER | UPC 051115- |
| SLFT-530-D-1A-04-EPAA                  | Fiber optic terminal 4 SCAPC external         | 1 each | 1 each     | 19052       |
| SLFT-530-D-1A-06-EPAA                  | Fiber optic terminal 6 SCAPC external         | 1 each | 1 each     | 19053       |
| SLFT-530-D-1A-08-EPAA                  | Fiber optic terminal 8 SCAPC external         | 1 each | 1 each     | 19054       |
| SLFT-530-D-1A-12-EPAA                  | Fiber optic terminal 12 SCAPC external        | 1 each | 1 each     | 19055       |
| SLFT-530-A-1A-06-DAXA                  | Fiber optic terminal 6 SCUPC internal         | 1 each | 1 each     | 19075       |
| SLFT-530-A-1A-08-DAXA                  | Fiber optic terminal 8 SCUPC internal         | 1 each | 1 each     | 19076       |
| SLFT-530-A-1A-12-DAXA                  | Fiber optic terminal 12 SCUPC internal        | 1 each | 1 each     | 19077       |
| SLFT-530-D-1A-04-EPAC                  | Fiber optic terminal 4 SCAPC ribbon external  | 1 each | 1 each     | 19117       |
| SLFT-530-D-1A-06-EPAC                  | Fiber optic terminal 6 SCAPC ribbon external  | 1 each | 1 each     | 19118       |
| SLFT-530-D-1A-08-EPAC                  | Fiber optic terminal 8 SCAPC ribbon external  | 1 each | 1 each     | 19119       |
| SLFT-530-D-1A-12-EPAC                  | Fiber optic terminal 12 SCAPC ribbon external | 1 each | 1 each     | 19120       |
| SLFT-530-A-1A-24-DAXA                  | Fiber optic terminal 24 SCUPC internal        | 1 each | 1 each     | 19164       |
| SLFT-530-A-1A-06-EPXA                  | Fiber optic terminal 6 SCAPC internal         | 1 each | 1 each     | 19165       |
| SLFT-530-A-1A-08-EPXA                  | Fiber optic terminal 8 SCAPC internal         | 1 each | 1 each     | 19166       |
| SLFT-530-A-1A-12-EPXA                  | Fiber optic terminal 12 SCAPC internal        | 1 each | 1 each     | 19167       |
| SLFT-530-A-1A-24-EPXA                  | Fiber optic terminal 24 SCAPC internal        | 1 each | 1 each     | 19168       |