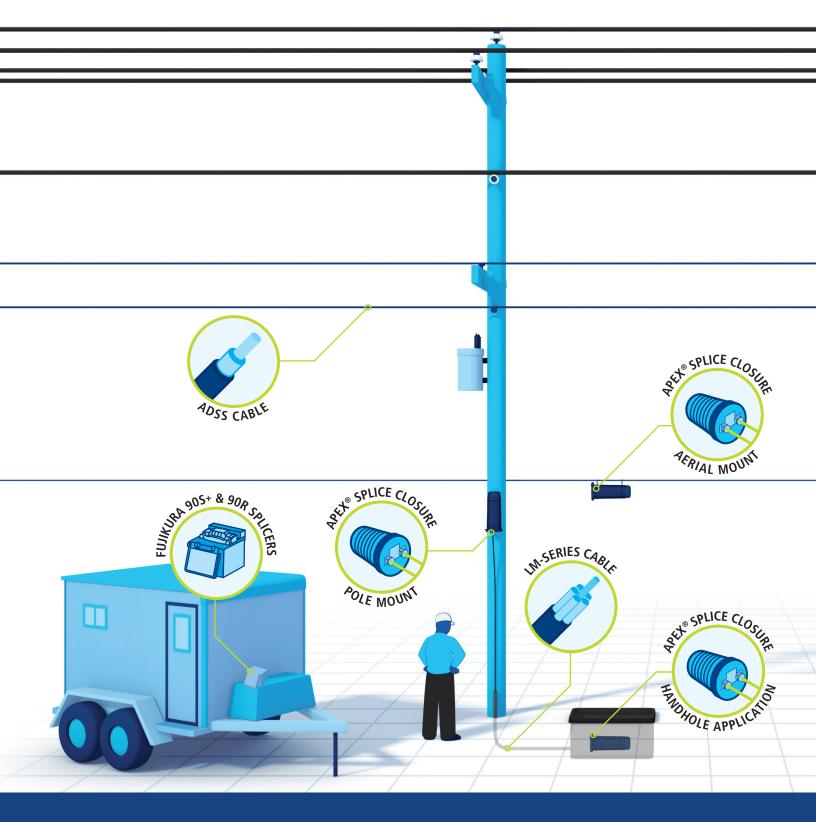


FIBER OPTIC SPLICE CLOSURES

Easier. Faster. Better.







MAXIMIZE

AVAILABLE SPACE

Utilize higher fiber counts in smaller handholes, especially with high density cable solutions



GENERATE REVENUE FASTER

Quick and easy to install, bring customers online faster than ever, while also reducing costs on installation time and labor



IMPROVE NETWORK RELIABILITY

Individual cable seals ensure later cable installations don't disturb original cable seals and lower potential for water ingress



FUTURE-PROOF YOUR NETWORK

Capable of low fiber count solutions today, and high splice density allows for higher fiber counts tomorrow



REDUCE COSTS

Higher splice densities and capabilities than comparatively priced products on the market



LESS-COMPLEX SUPPLY CHAIN

Fewer specialized parts or materials improve lead time performance

If you've been making closures for over 25 years, you learn a thing or two. You can keep doing what you've been doing, or you can change everything. At AFL, we've listened. Our new Apex closures are smaller, easier and ready for whatever the future brings. Smaller size saves money and can still handle high-density fiber. Cables can be installed in seconds, not minutes. Universal splice holder modules accommodate a wide range of fiber counts. We've improved every aspect of our closures.





Gel Sealing

Our Apex Fiber Optic Splice Closures feature individual cable sealing ports with tool-less release mechanism and gel sealing. This allows for faster and easier installations.



Slack Storage for Wrapping Tube Cable

A molded slack storage basket in the Apex Fiber Optic Splice Closure allows use of the entire cross section of the closure to maximize storage.



Splice Modules for Single and Mass Fusion Splicing

The Apex universal splice module eliminates the need for specifying and stocking multiple splice trays for multiple applications.



High Splice Density

The Apex Fiber Optic Splice Closure allows for higher fiber splice counts in a reduced form factor, especially when paired with AFL's Wrapping Tube Cable.





The Apex X-2 is a sealed splice closure designed for protecting optical fiber splices in both above- or below-grade applications in a butt configuration. The Apex X-2 is capable of up to 432 single fusion, 864 mass fusion with standard ribbon, or 3456 (200 µm, 1728 max for 250 µm) mass fusion with "rollable ribbon" fiber types such as AFL's SpiderWeb Ribbon® (SWR®). Cables are sealed by a unique wedge system spaced evenly around the circumference of the closure's base. Each cable seal is opened by a press-to-release lever and sealing is completed by actuating a single screw for each cable. Each cable is sealed individually, ensuring original craftsmanship when cables may be added at a later date. Up to 6 splice trays are attached and hinge off a central organizer. A plastic slack storage basket resides underneath the trays with ample tie down points for managing tube and fiber slack.

Features

- Individual cable sealing ports with tool-less release mechanism and gel sealing
- Hinging, lockable splice trays
- Plastic slack storage basket with optional segmented basket to separate ribbon and loose tube slack storage
- Six cable ports with up to six ground lugs
- Capable of up to 16 drop cables with an expressed distribution cable using multi-drop entry kits
- Splice trays with universal splice modules capable of holding single fusion, mass fusion and mechanical splices as well as other devices such as passive optical splitters
- Dome-to-base O-ring seal retained into dome to prevent loss or damage, but is still replaceable if necessary

Specifications

PARAMETER	VALUE
Dimensions – L x D, in (cm)	25.0 x 12.0 (64 x 30)
Weight, No Trays – lb (kg)	25 (11.3)
Splice Capacity – Single, Mass (SWR), Mass (Standard)	432, 3456, 864
Splice Tray Capacity	6
Cable Diameter, Single Port, in (mm)	0.40" - 1.10" (10.0 - 28.0)
Cable Diameter, Multi-Drop Kit, in (mm)	0.20" - 0.39" (5.0 - 9.9) or flat drop
Application	Direct Bury, Handhole, Aerial, Pole/Wall





Apex® X-2 Sealed Splice Closure Gel Sealing

Individual wedges located evenly around the circumference of the base are removed with the press of a button. When cables are in place and ready to be sealed, the gel is compressed by a single screw, decreasing installation time. Individual port seals ensure cables never become unsealed when adding new cables at a later date.



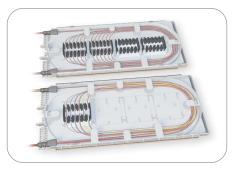
Cable Entry Ports and Strain Relief

The cable entry ports surrounding the circumference of the base accept single cables from 0.4" to 1.1" in diameter. These ports can be expanded through the use of optional drop cable entry kits, allowing up to 4 flat drops or cables from 0.2" to 0.39" to use a single port. Additionally, each port has the capability to be paired with its own grounding lug if necessary. Closures can be configured with enough strain relief kits for 2 to 6 cables from the factory. For closures with less than 6, additional cables can be added through the use of additional cable strain relief kits sold separately.



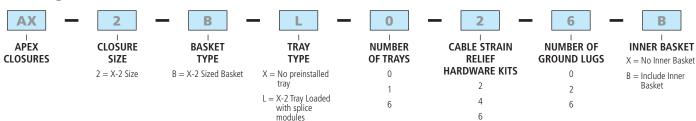
Slack Storage

A molded slack storage basket allows for use of the entire cross section of the closure to maximize storage. An optional segmented hinging basket is available to separate ribbon and loose tube slack, and can be locked in the upward position for access to expressed fibers below.



Splice Trays with Modular Splice Holders

Splice trays are organized in a hinging array that automatically lock when tilted to the upward position for easy access to the splice trays and slack storage below. The universal splice module holds up to 18 single fusion, 6 mass fusion or 12 mass fusion double-stacked when using SWR, or 6 mechanical splices as well as devices such as PLC splitters. This eliminates the need for specifying and stocking multiple splice trays for multiple applications.





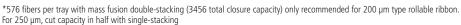
Splice Trays and Splice Modules

Apex X-2 closures utilize X-2 size splice trays. Trays can be ordered fully loaded or half loaded with splice modules. For "rollable" type ribbon such as AFL's SpiderWeb Ribbon®, trays can be fully loaded for 48 double-stacked mass splices, or 576 fibers per tray. For standard ribbon, AFL recommends half loaded for 12 mass splices single-stacked, or 144 fibers. Adapter kits available to install FOSC® A-B optical trays.



Ordering Information

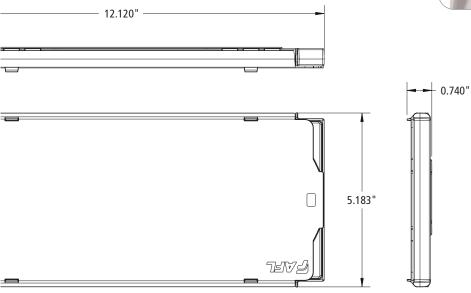
	TRAY CAPACITY		
DESCRIPTION	SINGLE	MASS	AFL NO.
X-2 Tray Loaded with Two Splice Modules	36	144	AX-TRAY-2-2
X-2 Tray Fully Loaded with Four Splice Modules (576 fibers per tray only recommended for rollable ribbon, e.g. AFL SWR)	72	576	AX-TRAY-2-4
Additional splice module (18 single fusion triple stacked, 12 mass fusion double stacked, 6 mechanical) – Pack of 20	-	-	AX-TRAY-MOD-20
X-2 Tray Empty	-	-	AX-TRAY-2-E
KIT, APEX, A-B TRAY ADAPTER, 1 Kit of 6 pieces	-	-	AX-ADPTR-ABTRAY-6
KIT, APEX, A-B TRAY ADAPTER, 10 Kits of 6 pieces	-	-	AX-ADPTR-ABTRAY-60







Dimensions





Slack Storage Basket and Accessories

The Apex X-2 slack storage basket is molded with a rounded cross section to efficiently maximize space inside of the cylindrical dome closure. The basket has optional accessories such as the segmented basket, which provides a "basket within a basket" to manage ribbon and loose tube slack separately.





Ordering Information

DESCRIPTION	AFL NO.
Clear segmented basket for X-2. Can be used in combination with the basket cover	AX-KIT-SBASKET-2
Replacement slack storage basket tabs – Pack of 25	AX-KIT-BTAB-25

Slack Length

CABLE/COMPONENT	TYPE OF OPENING	STRIP LENGTH (INCHES)	
	Mid Sheath	**111-134	
WTC/SWR® or Non-Matrix Ribbon	End Cut	**54-90	
	Mid Sheath	*108-110	
Flat Matrix Ribbon Cable	End Cut	*54-57	
	Mid Sheath	**111-134	
***Loose Tube Cable	End Cut	**54-90	
STORAGE			
Each additional basket storage loop		23-27	
Each additional splice tray service loop		26-27	
Sheath to basket for tube retention		8-11	
DEFINITION			
Midsheath	Slack loop in basket, service loop in tray, center cut		
End cut	Slack loop in basket, service loop in tray, to far splice		
* Ribbon minimum is slack loop in basket, no			
** Minimum no service loop in splice tray – M			
*** LT storage max tubes	Additional tubes will decrease cable lengths	18 (432/24 per tube)	



Installation Accessories and Kits

The AFL Apex closure line has a variety of installation accessories kits to fit many applications. Additional accessories not listed here may be available by contacting AFL.







Apex™ Pole/Wall Mount



Mesh Transition Tubing



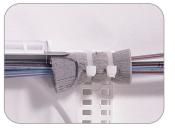
Ring Clamp Replacement Kit



Wedge Replacement Kit



Installation Stand



Foam Retention



Silicone Spiral Wrap

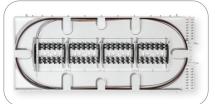
DESCRIPTION	AFL NO.
Aerial strand mount hanger kit	AX-KIT-AERIAL-1
Pole/wall mount kit	AX-BR30
1/4" Colored Mesh Transition Tubing, 250' Spool	AX-KIT-TUBE-014-XX*
Single Cable Strain Relief/Attachment Kit	AX-KIT-CBLSTRN
Multi-Drop Cable Entry Kit (fits up to 4 cables 0.20" to 0.39" in diameter or flat drop cable)	AX-KIT-DROP-4
X-2 and X-2S Dome to Base O-Ring Replacement Kit	AX-KIT-ORING-2
X-2 and X-2S O-Ring Grease, Pack of 10	AX-KIT-GREASE-10
X-2 and X-2S Dome to Base Locking Ring Clamp Replacement Kit	AX-KIT-CLAMP-2
X-2 and X-2S Wedge Replacement Kit	AX-KIT-WEDGE-2
X-2 and X-2S Installation Stand	FC104649
Apex X-2 and X-2S Inner Base Gel Replacement Kit	AX-KIT-GEL-2
Apex X-2 Dome Replacement Kit	AX-KIT-DOME-2
WTC-SWR Bundle Splice Tray Retention Kit - Includes 25 foam grommets for retaining SWR bundles to splice trays	HW000406
Silicone Spiral Wrap, 5.5 Foot Length	FC001657
Velcro, 75 Foot Length Roll – For securing SWR bundles in the slack basket	FC001759
Apex Cable Bonding Kit (Bonds armored cable sheath to ground) – Alligator clip on one end, eyelet on other end – Pack of 10	AX-KIT-GROUND-10

^{*}Replace "XX" with any of the following for colors per the TIA-598 color code - BL, OR, GR, BR, SL, WH, RD, BK, YL, VI, RS or AQ



Splitter Splice Trays

Passive optical splitters, or PLCs (Planar Lightwave Circuits), can be provided preinstalled into the Apex X-2 splice tray. PLCs can either be installed and spliced within the same tray, or provided with a separate dedicated tray for splicing, with fibers routed between trays using protective tubing. A third option provides one additional tray to separate input and output fiber splicing.





Ordering Information

DESCRIPTION	SPLIT RATIO	AFL NO.
X-2 Tray with Four Splice Modules, (1) 1x2 PLC Splitter	1x2	AX-TRAY-2-12-1
X-2 Tray with Four Splice Modules, (1) 1x4 PLC Splitter	1x4	AX-TRAY-2-14-1
X-2 Tray with Four Splice Modules, (1) 1x8 PLC Splitter	1x8	AX-TRAY-2-18-1
X-2 Tray with Four Splice Modules, (1) 1x16 PLC Splitter	1x16	AX-TRAY-2-116-1
X-2 Tray with Four Splice Modules, (1) 1x32 PLC Splitter	1x32	AX-TRAY-2-132-1
X-2 Tray with (1) 1x2 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x2	AX-TRAY-2-12-2
X-2 Tray with (1) 1x4 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x4	AX-TRAY-2-14-2
X-2 Tray with (1) 1x8 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x8	AX-TRAY-2-18-2
X-2 Tray with (1) 1x16 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x16	AX-TRAY-2-116-2
X-2 Tray with (1) 1x32 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x32	AX-TRAY-2-132-2
X-2 Tray with (1) 1x2 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x2	AX-TRAY-2-12-3
X-2 Tray with (1) 1x4 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x4	AX-TRAY-2-14-3
X-2 Tray with (1) 1x8 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x8	AX-TRAY-2-18-3
X-2 Tray with (1) 1x16 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x16	AX-TRAY-2-116-3
X-2 Tray with (1) 1x32 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x32	AX-TRAY-2-132-3

Relevant Standards

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771









The Apex X-2S is a sealed splice closure designed for protecting optical fiber splices in both above- or below-grade applications in a butt configuration. The Apex X-2S is capable of up to 216 single fusion, 432 mass fusion with standard ribbon, or 1728 (200 µm, 864 max for 250 µm) mass fusion with "rollable ribbon" fiber types such as AFL's SpiderWeb Ribbon® (SWR®). Cables are sealed by a unique wedge system spaced evenly around the circumference of the closure's base. Each cable seal is opened by a press-to-release lever and sealing is completed by actuating a single screw for each cable. Each cable is sealed individually, ensuring original craftsmanship when cables may be added at a later date. Up to 6 splice trays are attached and hinge off a central organizer. A plastic slack storage basket resides underneath the trays with ample tie down points for managing tube and fiber slack.

Features

- Individual cable sealing ports with tool-less release mechanism and gel sealing
- Hinging, lockable splice trays
- Plastic slack storage basket with optional segmented basket to separate ribbon and loose tube slack storage
- Six cable ports with up to six ground lugs
- Capable of up to 16 drop cables with an expressed distribution cable using multi-drop entry kits
- Splice trays with universal splice modules capable of holding single fusion, mass fusion and mechanical splices as well as other devices such as passive optical splitters
- Dome-to-base O-ring seal retained into dome to prevent loss or damage, but is still replaceable if necessary

Specifications

PARAMETER	VALUE
Dimensions – L x D, in (cm)	20.0 x 12.0 (51 x 30)
Weight, No Trays – lb (kg)	22 (10)
Splice Capacity – Single, Mass (SWR), Mass (Standard)	216, 1728, 432
Splice Tray Capacity	6
Cable Diameter, Single Port, in (mm)	0.40" - 1.10" (10.0 - 28.0)
Cable Diameter, Multi-Drop Kit, in (mm)	0.20" - 0.39" (5.0 - 9.9) or flat drop
Application	Direct Bury, Handhole, Aerial, Pole/Wall





Gel Sealing

Individual wedges located evenly around the circumference of the base are removed with the press of a button. When cables are in place and ready to be sealed, the gel is compressed by a single screw, decreasing installation time. Individual port seals ensure cables never become unsealed when adding new cables at a later date.



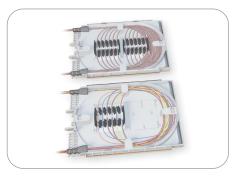
Cable Entry Ports and Strain Relief

The cable entry ports surrounding the circumference of the base accept single cables from 0.4" to 1.1" in diameter. These ports can be expanded through the use of optional drop cable entry kits, allowing up to 4 flat drops or cables from 0.2" to 0.39" to use a single port. Additionally, each port has the capability to be paired with its own grounding lug if necessary. Closures can be configured with enough strain relief kits for 2 to 6 cables from the factory. For closures with less than 6, additional cables can be added through the use of additional cable strain relief kits sold separately.



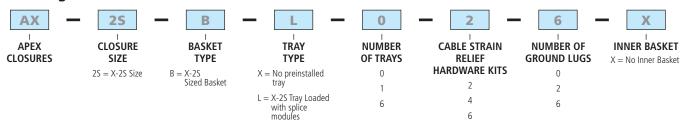
Slack Storage

A molded slack storage basket allows for use of the entire cross section of the closure to maximize storage.



Splice Trays with Modular Splice Holders

Splice trays are organized in a hinging array that automatically lock when tilted to the upward position for easy access to the splice trays and slack storage below. The universal splice module holds up to 18 single fusion, 6 mass fusion or 12 mass fusion double-stacked when using SWR®, or 6 mechanical splices as well as devices such as PLC splitters. This eliminates the need for specifying and stocking multiple splice trays for multiple applications.





Splice Trays and Splice Modules

Apex X-2S closures utilize X-2S size splice trays. Trays can be ordered fully loaded or half loaded with splice modules. For "rollable" type ribbon such as AFL's SpiderWeb Ribbon®, trays can be fully loaded for 24 mass splices, or 288 fibers per tray. For standard ribbon, AFL recommends half loaded for 6 mass splices single-stacked, or 72 fibers. Adapter kits available to install up to four FOSC® A optical trays.

Ordering Information

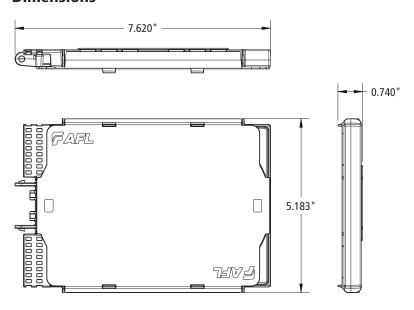
	TRAY CAPACITY		
DESCRIPTION	SINGLE	MASS	AFL NO.
X-2S Tray Loaded with One Splice Module	18	72	AX-TRAY-2S-1
X-2S Tray Fully Loaded with Two Splice Modules (288 fibers per tray only recommended for rollable ribbon, e.g. AFL SWR)	36	288	AX-TRAY-2S-2
Additional splice module (18 single fusion triple stacked, 12 mass fusion double stacked, 6 mechanical) – Pack of 20	-	-	AX-TRAY-MOD-20
X-2S Tray Empty	-	-	AX-TRAY-2S-E
KIT, APEX, A-B TRAY ADAPTER, 1 Kit of 6 pieces	-	-	AX-ADPTR-ABTRAY-6
KIT, APEX, A-B TRAY ADAPTER, 10 Kits of 6 pieces	-	-	AX-ADPTR-ABTRAY-60

^{*288} fibers per tray with mass fusion double-stacking (1728 total closure capacity) only recommended for 200 µm type rollable ribbon. For 250 µm, cut capacity in half with single-stacking

PROPERTY.



Dimensions





Slack Storage Basket and Accessories

The Apex X-2S slack storage basket is molded with a rounded cross section to efficiently maximize space inside of the cylindrical dome closure.



Ordering Information

DESCRIPTION	AFL NO.
Replacement slack storage basket tabs – Pack of 25	AX-KIT-BTAB-25

Slack Length

CABLE/COMPONENT	TYPE OF OPENING	STRIP LENGTH (INCHES)
	Mid Sheath	**80 - 98
WTC/SWR® or Non-Matrix Ribbon	End Cut	**40 - 66
	Mid Sheath	*80 - 82
Flat Matrix Ribbon Cable	End Cut	*40 - 42
	Mid Sheath	**80 - 98
***Loose Tube Cable	End Cut	**40 - 66
STORAGE		
Each additional basket storage loop		16 - 18
Each additional splice tray service loop		17 - 18
Sheath to basket for tube retention		7 - 9
DEFINITION		
Midsheath	Slack loop in basket, service loop in tray, center cut	
End cut	Slack loop in basket, service loop in tray, to far splice	
* Ribbon minimum is slack loop in basket, no		
** Minimum no service loop in splice tray – M		
*** LT storage max tubes	Additional tubes will decrease cable lengths	12 (288/24 per tube)



Installation Accessories and Kits

The AFL Apex closure line has a variety of installation accessories kits to fit many applications. Additional accessories not listed here may be available by contacting AFL.







Apex™ Pole/Wall Mount



Mesh Transition Tubing



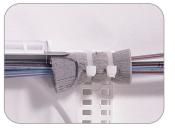
Ring Clamp Replacement Kit



Wedge Replacement Kit



Installation Stand



Foam Retention



Silicone Spiral Wrap

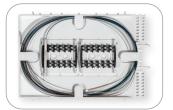
DESCRIPTION	AFL NO.
Aerial strand mount hanger kit	AX-KIT-AERIAL-1
Pole/wall mount kit	AX-BR30
1/4" Colored Mesh Transition Tubing, 250' Spool	AX-KIT-TUBE-014-XX*
Single Cable Strain Relief/Attachment Kit	AX-KIT-CBLSTRN
Multi-Drop Cable Entry Kit (fits up to 4 cables 0.20" to 0.39" in diameter or flat drop cable)	AX-KIT-DROP-4
X-2 and X-2S Dome to Base O-Ring Replacement Kit	AX-KIT-ORING-2
X-2 and X-2S O-Ring Grease, Pack of 10	AX-KIT-GREASE-10
X-2 and X-2S Dome to Base Locking Ring Clamp Replacement Kit	AX-KIT-CLAMP-2
X-2 and X-2S Wedge Replacement Kit	AX-KIT-WEDGE-2
X-2 and X-2S Installation Stand	FC104649
Apex X-2 and X-2S Inner Base Gel Replacement Kit	AX-KIT-GEL-2
Apex X-2S Dome Replacement Kit	AX-KIT-DOME-2S
WTC-SWR Bundle Splice Tray Retention Kit - Includes 25 foam grommets for retaining SWR bundles to splice trays	HW000406
Silicone Spiral Wrap, 5.5 Foot Length	FC001657
Velcro, 75 Foot Length Roll – For securing SWR bundles in the slack basket	FC001759
Apex Cable Bonding Kit (Bonds armored cable sheath to ground) – Alligator clip on one end, eyelet on other end – Pack of 10	AX-KIT-GROUND-10

^{*}Replace "XX" with any of the following for colors per the TIA-598 color code - BL, OR, GR, BR, SL, WH, RD, BK, YL, VI, RS or AQ



Splitter Splice Trays

Passive optical splitters, or PLCs (Planar Lightwave Circuits), can be provided preinstalled into the Apex X-2S splice tray. PLCs can either be installed and spliced within the same tray, or provided with a separate dedicated tray for splicing, with fibers routed between trays using protective tubing. A third option provides one additional tray to separate input and output fiber splicing.





Ordering Information

DESCRIPTION	SPLIT RATIO	AFL NO.
X-2S Tray with Four Splice Modules, (1) 1x2 PLC Splitter	1x2	AX-TRAY-2S-12-1
X-2S Tray with Two Splice Modules, (1) 1x4 PLC Splitter	1x4	AX-TRAY-2S-14-1
X-2S Tray with Two Splice Modules, (1) 1x8 PLC Splitter	1x8	AX-TRAY-2S-18-1
X-2S Tray with Two Splice Modules, (1) 1x16 PLC Splitter	1x16	AX-TRAY-2S-116-1
X-2S Tray with Two Splice Modules, (1) 1x32 PLC Splitter	1x32	AX-TRAY-2S-132-1
X-2S Tray with (1) 1x2 PLC Splitter and Separate Splicing Tray with Four Splice Modules	1x2	AX-TRAY-2S-12-2
X-2S Tray with (1) 1x4 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x4	AX-TRAY-2S-14-2
X-2S Tray with (1) 1x8 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x8	AX-TRAY-2S-18-2
X-2S Tray with (1) 1x16 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x16	AX-TRAY-2S-116-2
X-2S Tray with (1) 1x32 PLC Splitter and Separate Splicing Tray with Two Splice Modules	1x32	AX-TRAY-2S-132-2
X-2S Tray with (1) 1x2 PLC Splitter and 2 Separate Splicing Trays with Four Splice Modules each	1x2	AX-TRAY-2S-12-3
X-2S Tray with (1) 1x4 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x4	AX-TRAY-2S-14-3
X-2S Tray with (1) 1x8 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x8	AX-TRAY-2S-18-3
X-2S Tray with (1) 1x16 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x16	AX-TRAY-2S-116-3
X-2S Tray with (1) 1x32 PLC Splitter and 2 Separate Splicing Trays with Two Splice Modules each	1x32	AX-TRAY-2S-132-3

Relevant Standards

GOVERNING BODY	STANDARD CODE
Telcordia	GR-771





APEX



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