# **Optical Connectivity**







# **Apex® X-2S Sealed Splice Closure**

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 288 single fusion, 576 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 convenient multiple tie-down points with Velcro or tie wraps
- 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)	288, 1728, 576
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
Testing	Test to and Passed GR-771-CORE 20 ft. Waterhead test
Temperature Operating	-40°F to 149°F -40°C to 65°C

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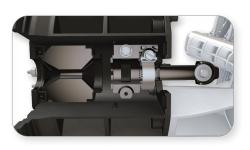




# **Apex® X-2S Sealed Splice Closure**

# 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.

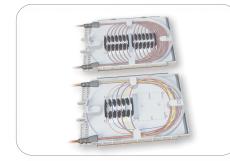


### **Cable Entry Ports and Strain Relief**

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 0 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.



**Ordering Information** 

### 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 24 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 and OADM devices. This eliminates the need for specifying and stocking multiple splice trays for multiple applications.

AX APEX CLOSURES	- 2S CLOSURE SIZE	BASKET TYPE	- L - TRAY TYPE	0 NUMBER OF TRAYS	CABLE STRAIN RELIEF	NUMBER OF GROUND LUGS	Inner Basket X = No Inner Basket
	2S = X-2S Size	B = X-2S Sized Basket	X = No preinstalled tray	0	HARDWARE KITS	0	
			L = X-2S Tray Loaded	2	1	2	
			with splice modules	3	2	3	
				4	3	4	
				5	4	5	
				6	5	6	
					6		





# Apex<sup>®</sup> X-2S Sealed Splice Closure

## 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<sup>®</sup>, 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<sup>®</sup> A optical trays.

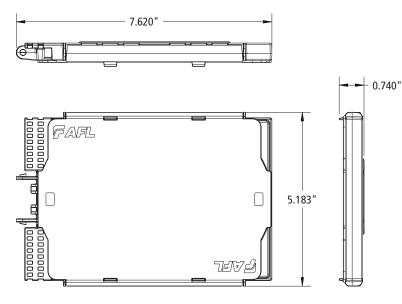
## **Ordering Information**

	TRAY CAPACITY		
DESCRIPTION	SINGLE	MASS	AFL NO.
X-2S Tray Loaded with One Splice Module	24**	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)	48**	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
FP-40 40 mm Single Fiber Slim Protection Sleeve	-	_	S018262
FP-60 60 mm Single Fiber Slim Protection Sleeve	-	_	S018263

\* 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.

\*\* When using AFL's Slim Protection Sleeves

## Dimensions















# **Apex® X-2S Sealed Splice Closure**

#### Installation Kits and Accessories

The AFL Apex closure line has a variety of installation accessories kits to fit many applications. Additional accessories may be available. Contact AFL.











CAU Kit

Ring Clamp Replacement Kit

O-Ring Grease Kit

Wedge Replacement Kit

Foam Retention

#### **Ordering Information — Replacement Kits**

DESCRIPTION	AFL NO.
REPLACEMENT KITS	
X-2 and X-2S Single Cable Strain Relief/Cable Attachment Unit (CAU) Kit	AX-KIT-CBLSTRN
X-2 and X-2S Dome to Base O-Ring Replacement Kit	AX-KIT-ORING-2
Apex 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 Inner Base Gel Replacement Kit	AX-KIT-GEL-2
X-2S Basket and Yoke Assembly Kit. Can be used in combination with the basket cover.	AX-KIT-BASKET-2S
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
Velcro, 75 Foot Length Roll – For securing SWR bundles in the slack basket	FC001759





Apex Aerial Hanger Bracket

Apex Pole/Wall Mount



Adjustable Aerial Hanger Bracket



X-2 and X-2S Installation Stand



Universal Installation Stand

## **Ordering Information — Accessories**

DESCRIPTION	AFL NO.	
ACCESSORIES		
Aerial strand mount hanger kit	AX-KIT-AERIAL-1	
Pole/wall mount kit	AX-BR30	
Adjustable Aerial Strand Mount Hanger kit	AX-KIT-AERIAL-ADJ	
ADSS Aerial hanger brackets	AX-KIT-AERIAL-ADSS	
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 Installation Stand	FC104649	
Apex Universal Installation Stand	AX-KIT-U-STAND	



# Apex<sup>®</sup> X-2S Sealed Splice Closure

### Installation Accessories (cont.)









AFRS Kit 1



AFRS Kit 2



Splice Closures & Accessories

A-B Tray Adapter Kit

Mesh Transition Tubing



SC Bulkhead Adapter Kit



Replacement Slack Storage Basket Tabs

### Ordering Information — Accessories (cont.)

DESCRIPTION	AFL NO.	
ACCESSORIES		
1/4" Colored Mesh Transition Tubing, 250' Spool (*Replace "XX" with color per TIA-598 color code - BL, OR, GR, BR, SL, WH, RD, BK, YL, VI, RS or AQ)	AX-KIT-TUBE-014-XX*	
Silicone Spiral Wrap, 5.5 Foot Length	FC001657	
Apex Cable Bonding Kit (Bonds armored cable sheath to ground) – Pack of 10	AX-KIT-GROUND-10	
Apex Internal Multiple Ground Bonding Kit	AX-KIT-GNDLD-5	
Apex Advanced Fiber Retention System (AFRS) Kit 1 – Used for Ribbon Cable (Flat Matrix, SWR, Tubed, Central Core). Kit includes: Mesh Basket Adapter (2 ea.), Mesh Housing (2 ea.), Mesh Insert (24 ea.), V-Clips (12 ea.), and Clean Cut Gray Mesh (13 ft.).	AX-KIT-AFRSRBN	
Apex AFRS Kit 2 – Used for Loose Tube Cable. Kit includes: V-Clip (24 ea.) and Retention Pads (6 sheets of 8 pads)	AX-KIT-AFRSLT	
Apex AFRS Kit 3 – V-Clip bulk kit. Includes: V-Clips (120 ea.) and Mesh Inserts (120 ea.)	AX-KIT-AFRSVC-120	
Apex AFRS Kit 4 – Mesh bulk kit. Includes: Clean Cut Gray Mesh (100 ft.)	AX-KIT-AFRSMESH-100FT	
Apex AFRS Kit 5 – Mesh Housing bulk kit. Includes: Mesh Basket Adapter (10 ea.) and Mesh Housing (10 ea.)	AX-KIT-AFRSAH-10	
Apex AFRS Kit 6 – Mesh Basket Adapter bulk kit. Includes: Mesh Basket Adapter (10 ea.)	AX-KIT-AFRSA-10	
Apex Restoration Kit, 1000' of 144F Non-Armored Wrapping Tube Cable (Apex X-2S is in Restoration Kit)	AX-2S-B-L-4-4-4-X-1R1000F	
Apex A-B Tray Adapter Kit, 1 Kit of 6 pieces	AX-ADPTR-ABTRAY-6	
Apex A-B Tray Adapter Kit, 10 Kits of 6 pieces	AX-ADPTR-ABTRAY-60	
Apex Bulkhead Kit with Plate SC/APC Adapters, 1 kit	AX-TRAY-ASC	
Apex Bulkhead Kit with Plate with SC/UPC Adapters, 1 kit	AX-TRAY-USC	
Apex Bulkhead Kit with Plate SC/APC Adapters, 6 pc kit	AX-TRAY-ASC-6	
Apex Bulkhead Kit with Plate SC/UPC Adapters, 6 pc kit	AX-TRAY-USC-6	
Apex Replacement Slack Storage Basket Tabs – Pack of 25	AX-KIT-BTAB-25	

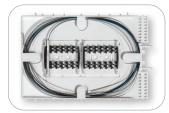




#### **Splitter Splice Trays**

FAFL

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 splice 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.
SPLITTER MODULES FOR SPLICE TRAYS		
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 Two 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 Two 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