



## FIBERLIGN® In-Span (FIS) Storage Non-Metallic (FIS) and Aluminum (FISA) Versions

For All Dielectric Self-Supporting (ADSS) Cables and Lashed Messenger Cable Systems

**Be sure to read and completely understand this procedure before applying product. Be sure to select the proper size PREFORMED™ product before application.**



12" FISA

16" FIS

FIBERLIGN In-Span Non-Metallic Storage (FIS) Sizes and Base Kit Catalog Numbers			
Storage Bracket Size Inches (mm)	Max Cable OD <sup>1</sup> Inches (mm)	Base Catalog Number	
		Messenger Kit	ADSS Kit
12 (305)	0.6 (15.2)	FIS12M	FIS12A
16 (406)	0.8 (20.3)	FIS16M	FIS16A
18 (508)	1.0 (25.4)	*	

<sup>1</sup>For most Loose Tube Buffer Tube OD cables. Verify minimum cable bend diameter for Ribbon Cable applications.  
\*FIBERLIGN CLAS Storage Base - Catalog No. 710012375 for cables up to 1".

FIBERLIGN In-Span Aluminum Storage (FISA) Sizes and Base Kit Catalog Numbers			
Storage Bracket Size Inches (mm)	Max Cable OD <sup>2</sup> Inches (mm)	Base Catalog Number	
		Messenger Kit	ADSS Kit
10 (254)	0.5 (12.7)	FISA10MB	FISA10AB
12 (305)	0.6 (15.2)	FISA12MB	FISA12AB
		FISA12MBW*	FISA12ABW*
16 (406)	0.8 (20.3)	FISA16MB	FISA16AB
		FISA16MBW*	FISA16ABW*
18 (457)	0.9 (22.9)	FISA18MB	FISA18AB
		FISA18MBW*	FISA18ABW*
20 (508)	1.0 (25.4)	FISA20MB	FISA20AB
24 (609)	1.2 (30.5)	FISA24MB	FISA24AB
30 (762)	1.5 (38.1)	FISA30MB	FISA30AB

<sup>2</sup>For most Loose Tube Buffer Tube OD cables. Verify minimum cable bend diameter for Ribbon Cable applications.  
\*Wide Multi-Cable Channel available for these sizes.

**DESCRIPTION:** The FIBERLIGN In-Span Storage system is used for storing aerial slack fiber optic cable. Always refer to the cable manufacturer's spec sheet to determine minimum bend radius requirements. Hanger brackets are available for use with either ADSS cable or cable that is lashed to a messenger strand. See catalog for ordering options. PLP recommends using only Heavy Duty UV Resistant Cable Ties to secure the slack cable loop to the storage brackets. Additional Cable Tie Kits are available from PLP® if required.

### Assemble the Hanger Brackets

**NOMENCLATURE for Hanger Brackets for ADSS**

1. ADSS Hanger Brackets (4)
2. Cable Cushions (4)
3. Carriage Bolts (4)
4. Lock Nuts (4)
5. Cable Ties (4)

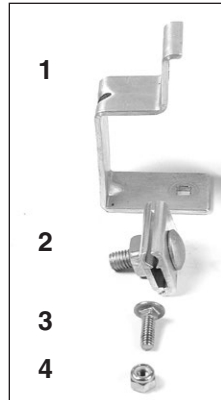
**Step #1a Assemble the Hanger Brackets for ADSS.**

Press fit cable cushions into hanger brackets.

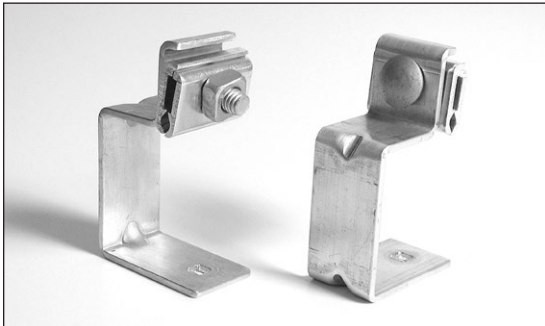
## Assemble the Hanger Brackets (continued)

### NOMENCLATURE for Hanger Brackets for Messenger Strand:

1. Messenger Hanger Brackets (4)
2. Tap Bracket (Bug Nut) (4)
3. Carriage Bolts (4)
4. Lock Nuts (4)



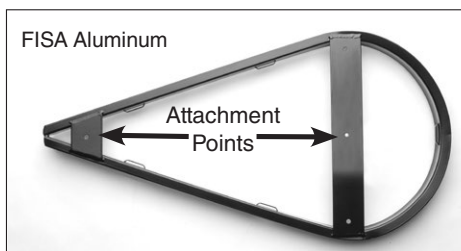
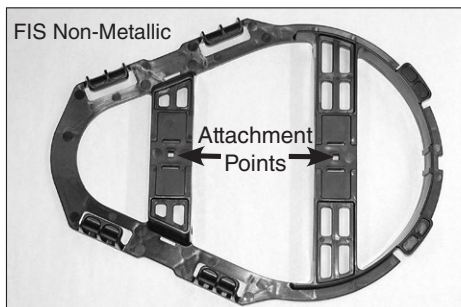
### Step #1b Assemble the Hanger Brackets for Messenger Strand



Loosely assemble tap brackets to hanger brackets.

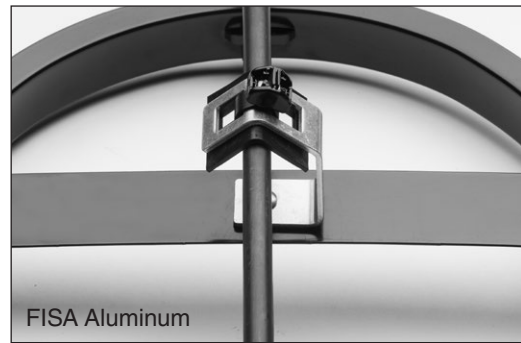
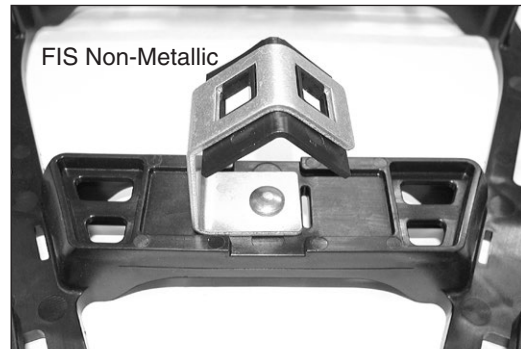
### Attach Hanger Brackets to Cable Storage Bracket

Secure hanger brackets in the locations shown using the carriage bolts and lock nuts. Do not over tighten nuts.



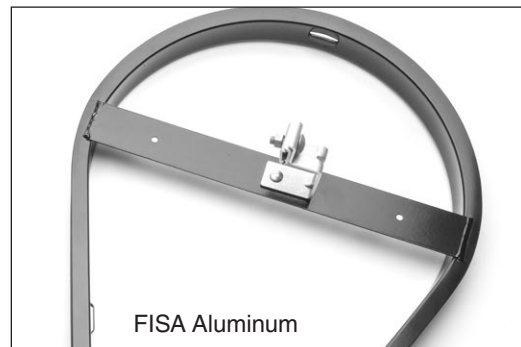
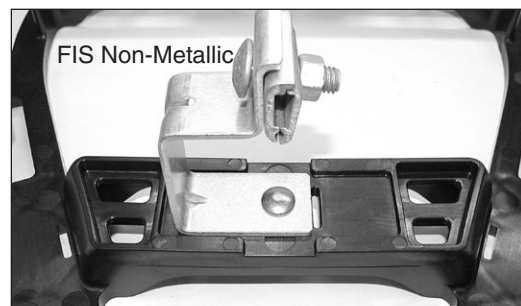
### ADSS Hanger Bracket Attachment

Completed (from Step 1a) Hanger Bracket Assembly for ADSS cable applications.



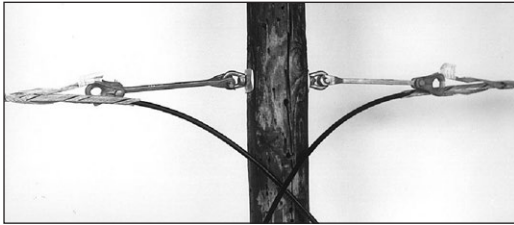
### Messenger Hanger Bracket Attachment

Completed (from Step 1b) Hanger Bracket Assembly for lashed messenger cable applications.



## Step #2 Determine Routing of Slack Cable Loop

When using ADSS cable all slack loops are located at the structure between two dead-ends as shown.

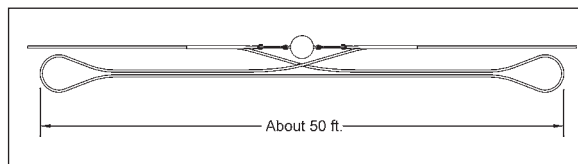
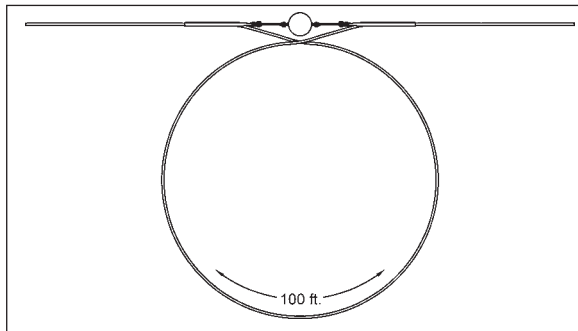


For lashed messenger cable systems, the slack cable is typically stored mid-span, but it may also be located at the structure as ADSS cables.

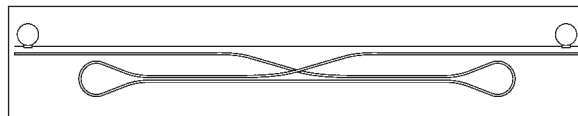
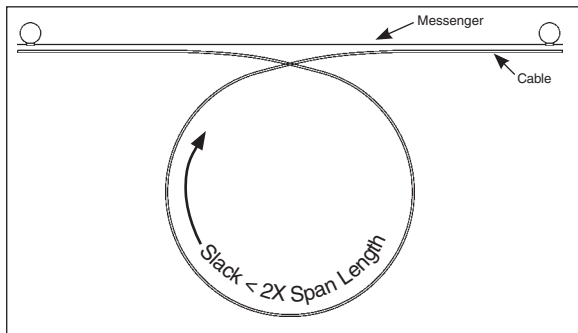
### Step #2a Storing Slack Cable Only

The distance between the storage brackets will be approximately  $\frac{1}{2}$  the total length of cable being stored. In the example, a 100 ft (30.5m) cable loop is stored between two storage brackets about 50 ft (15.2m) apart.

Begin by securing the middle of the slack loop to the main cable and then work in both directions towards the storage brackets.



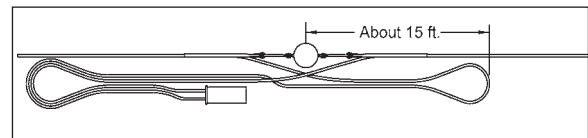
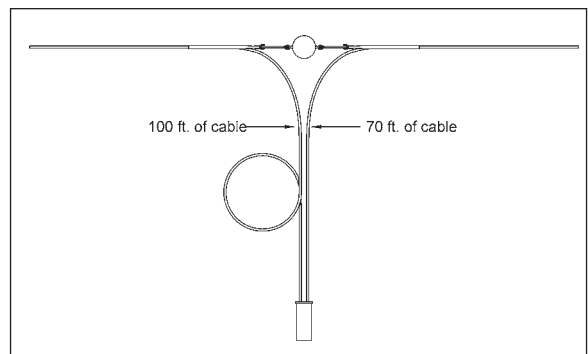
### Messenger Slack Storage Option



## Step #2b Storing Splice Closure and Slack Cable

Slack cable length is determined by the required distance to reach the splicing location. One cable requires extra length in order to loop around in the correct direction. In the example, 70 ft (21.3m) of length is required to reach the splicing location. The second cable is 30 ft (9.1m) longer and will loop around the second storage bracket located about 15 ft (4.6m) from the center of the splice point.

Begin by hanging the splice closure. For ADSS, the closure will always hang on the rods of the dead-end. Work towards the storage bracket in the direction that the cables are coming out of the closure end plate first. The location of the splice closure and the first storage bracket, along with the lengths of the cables will determine the location of the second storage bracket.



The cable lengths shown in the examples in Step 3 are for illustration purposes only. Actual cable lengths will vary based on project requirements.

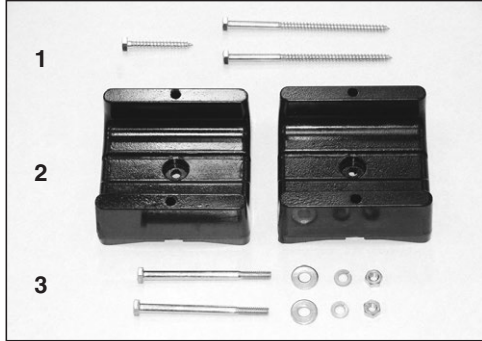
## Step #2c Messenger Application

Use the appropriate closure hanger bracket for direct attachment to the messenger.

## Installation of Pole Pass Protection

### NOMENCLATURE for Uni-Group Cable (UCG) Guide:

1. Lag Screws for wood pole (3)
2. Uni-Group Cable Guide (2 halves)
3. Machine screws w/nuts and washers for concrete or steel poles (2)



### Step #3 For Uni-Group Cable Pole Pass Protection

(Skip this step if not using pole pass protection).

### Step #3a Installation on Wood Poles

Install UCG on the pole 3" – 12" (76mm – 305mm) below the main cable run.

Secure back half of UCG to pole using short lag bolt.

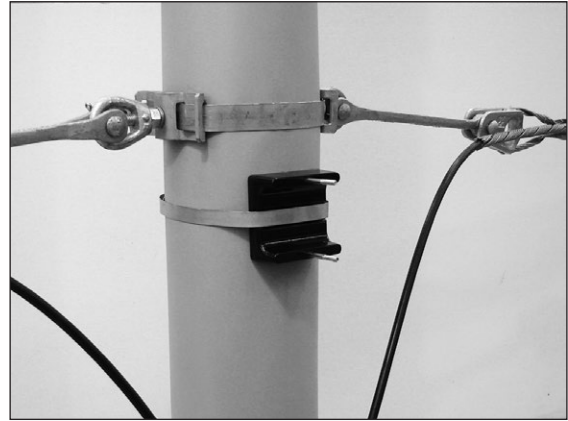


Group cables and install front half of the UCG with long lag bolts.

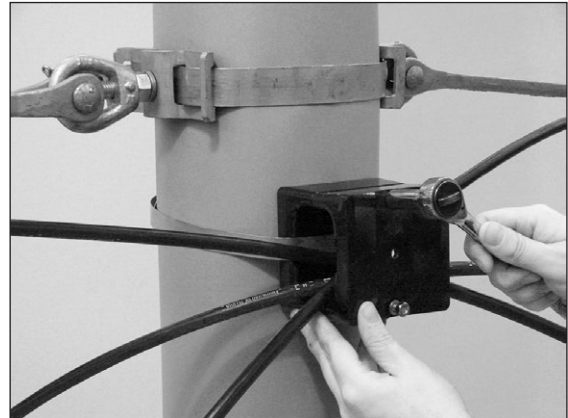


### Step #3b Installation on Steel Poles

Insert machine bolts through the back half of the UCG and band to the pole using 3/4" (19mm) wide banding.



Group cables and install front half of the UCG with washers and nuts.



### NOTE: Abrasion Protectors

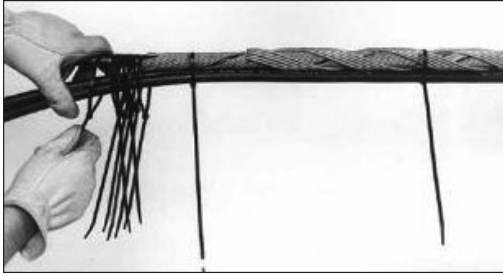
Use the smaller abrasion protectors for cables up to 0.50" (12.7mm). Use the larger abrasion protectors for cable greater than 0.50". Group cables and secure together with cable ties.





#### Step #4 Secure Slack Cable to Main Cable

Secure slack cable loop to main cable by placing heavy duty cable ties every 3 – 5 ft (0.9m – 1.5m), or lash the cable to the messenger strand per approved company practices.



#### Step #5a Secure Slack Loop to FIS

Nearing the end of the slack loop, clip the cable into the Cable Capture Tabs.



Pull the FIS to the back of the slack loop.



For ADSS: Hang the FIS on the main cable.

FIS Non-Metallic

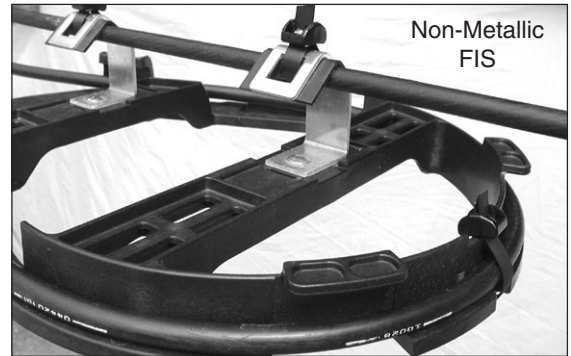


FISA Aluminum



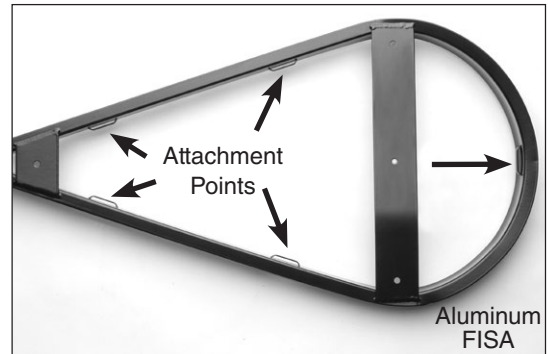
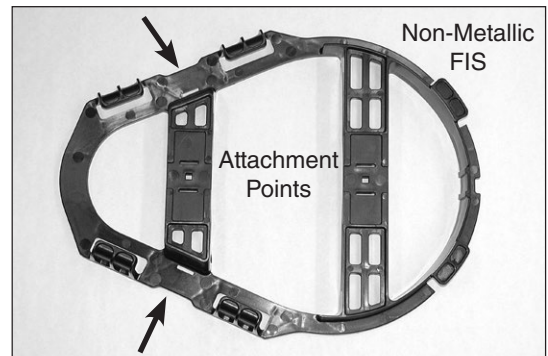
#### Step #5b (continued)

Secure the cable loop at the back of the FIS and FISA using a cable tie. (FIS shown)



FIS optional cable tie locations are located between the Cable Capture Tab.

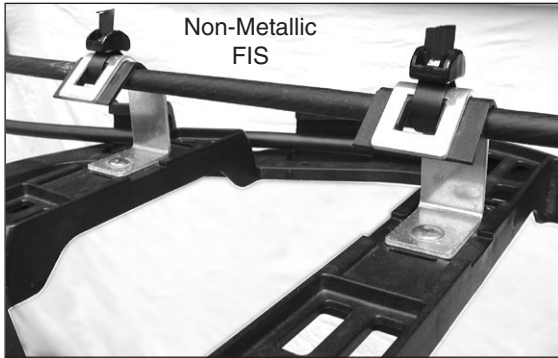
PLP recommends using these cable tie locations when storing multiple cables, or in high wind areas.



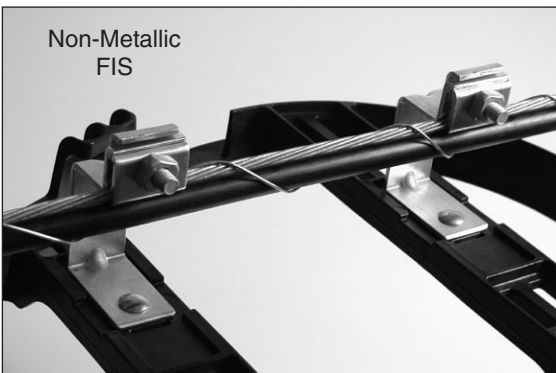
FISA brackets include 5\* attachment points for cable ties – use all to properly secure the cable. \*NOTE: Only the 10" cable storage bracket has fewer attachment points – in this case, attach cable to all 4 points.

## Step #6 Secure FIS to Main Cable

For ADSS Cable secure Hanger Bracket with included Cable Ties, see below.



For messenger applications, clamp tap brackets onto the messenger strand, see below.





## **SAFETY CONSIDERATIONS**

This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. **FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.**

This product may be removed and reinstalled during the initial installation if it is in good condition. After extended service life, it is recommended the product not be reused once removed from service.

**Do not modify this product under any circumstances.**

This product is intended for use by trained technicians only. **This product should not be used by anyone who is not familiar with, and not trained to use it.**

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



# **PREFORMED** LINE PRODUCTS

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