



FIBERLIGN® Aluminum Support for ADSS



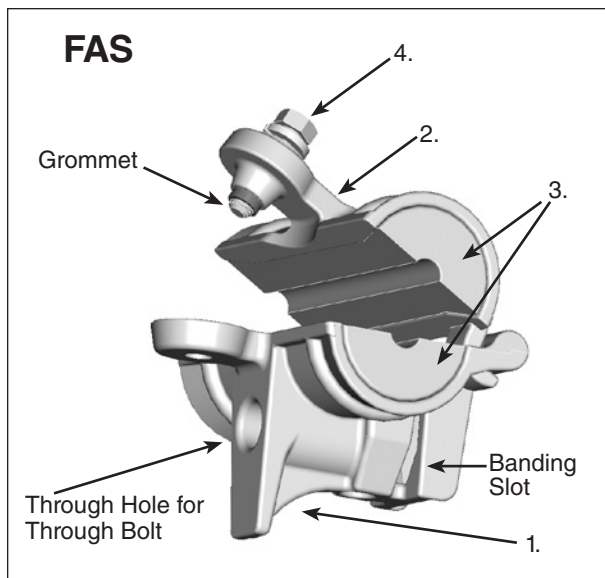
Through-Bolt Mounted



Band Mounted



Multi-Cable Stacking



PATENT PENDING

NOMENCLATURE

1. Base
2. Keeper
3. Cushion Inserts
4. Captured Bolt, Lock Washer & Flat Washer
(Captured with grommet)

Base and Keeper:

The aluminum alloy base and keeper have an **interlocking hinge** allowing easy access for pulling-in rope and ADSS cable. Closing the keeper captures the cable during stringing and subsequently secures the cable and cushion inserts for permanent installation. The base is designed to accept a 1-1/4" wide x .040" thick (32 mm x 1 mm) band or a 5/8" through bolt (M16) for mounting to the structure. **In multi-cable installations**, modular base surfaces at the mounting bolt and band entry areas provide stable engagement and stacking.

Captured Bolt and Bevel Washer:

Galvanized steel bolt, lock washer and washer captured with an elastomer grommet.

Cushion Inserts:

A soft pliable dielectric material that gently grips the ADSS cable. FAS is the acronym for FIBERLIGN Aluminum Support.

APPLICATION

The FIBERLIGN Aluminum Support (FAS) is designed to gently, but firmly support All-Dielectric Self-Supporting (ADSS) cable. The FAS features the following: Integrated bolt or band mount design, Hinged keeper and base, Single-bolt clamping, and Stackability for multi-cable installations. For higher voltages (where track resistant ADSS cables are required), longer spans and/or higher loads, use either the FIBERLIGN Aluminum Suspension w/rods or the FIBERLIGN Dielectric Suspension – both products appear later in this section.

Maximum Span Lengths:

The FAS was designed for short span applications where vertical loading does not exceed 1000# (4.4 kN). The maximum vertical load typically factors-in span length, cable OD, initial cable tension, ice and wind loading district (NESC), multi-cable stacking, etc. As a general idea, the following recommendations are approximate maximum span lengths for the FDS under NESC Heavy conditions:

- 600' (183 m) for < 1.00" (25 mm) OD cable (NESC Heavy)
- 300' (91 m) for > 1.00" (25 mm) OD cable (NESC Heavy)

Mounting:

The FAS can be bolted or banded to a structure. For mounting to wood poles (or other structures with through holes) a 5/8"-11 (M16) through-bolt or double-arming bolt may be used to capture the FAS against the structure. The width of the FAS accounts for about 3.2" (81 mm) of bolt length.

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For mounting to concrete or steel structures without through holes, the FAS may be banded via the band slot cast in the base of the FAS. The band slot is designed to accept a 1-1/4" wide x 0.040" thick (32 mm x 1 mm) high strength band. Banding materials with 45,000 psi (310 MPa) yield strength and 95,000 psi (655 MPa) ultimate strength are recommended to achieve rated vertical load.

Line Angles:

For most applications, the maximum line angle recommended is 20° – consult PLP® for exceptions that allow 30° angles. When angles exceed 20° (or 30°) the FIBERLIGN Aluminum Suspension (found later in this section) as a single or double attachment may be considered as an alternative.

Longitudinal Holding Capability:

The cushioned inserts are designed to gently grip the cable – providing modest longitudinal holding strength without causing cable damage. Specific performance will depend upon the cable brand, internal construction, and outer diameter.

Stringing Operations:

The cable cavity of the FAS is contoured and smooth to allow the product to be used as a stringing traveler during stringing and sagging operations. The line angles during stringing may go up to 10° (20° in certain cases – consult PLP).

For stringing, the inserts are removed and the keeper should be fully closed with the bolt fully engaged.



STRINGING

Torque Level:

The keeper is fastened to the base with the 3/8" – 16 captured bolt and should be tightened until the lock washer is flat for proper torque level. This will require 10 foot pounds (120 inch-pounds or 13.5 Newton-meters) of force. DO NOT OVER-TORQUE.

Stacking – Multi-Cable Installation:

Multi-cable installations with the FAS save pole space as the first unit mounts against the pole and added units extend horizontally – captured with a common 5/8" (M16) bolt. The length of the bolt must accommodate the stacked FAS units – each width approximately 3.2" (81 mm). For installations of more than two cables, a brace should be used to help support the cantilever load on the through-bolt or band.

The FAS units stack in such a way that keep adjacent cables in staggered formation, thus reducing the possibility of cable collision due to wind induced cable sway.

ORDERING INSTRUCTIONS

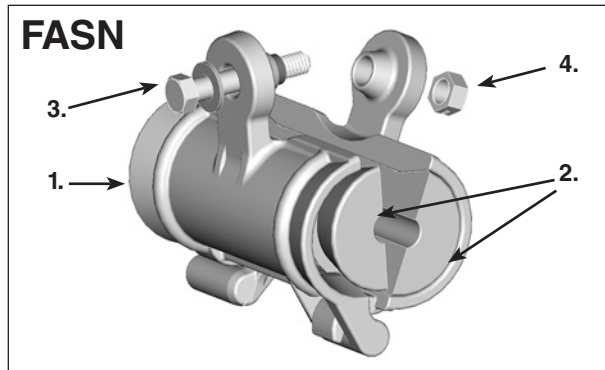
Refer to the catalog table and select the appropriate FAS for the ADSS cable's outside diameter.

FIBERLIGN® Aluminum Support					
Catalog Number		ADSS Cable Range			
Complete Assembly	Inserts Only (2 Required)	Min. (in)	Max. (in)	Min. (mm)	Max. (mm)
4450095	00070241	0.226	0.275	5.7	6.9
4450096	00070236	0.276	0.325	7	8.2
4450097	00070237	0.326	0.375	8.3	9.4
4450098	00070238	0.376	0.425	9.5	10.7
4450099	00070239	0.426	0.475	10.8	12
4450100	00070125	0.476	0.525	12.1	13.3
4450101	00070126	0.526	0.575	13.4	14.6
4450102	00070127	0.576	0.625	14.7	15.9
4450103	00070128	0.626	0.675	16	17.1
4450104	00070129	0.676	0.75	17.2	19.1
4450105	00070130	0.751	0.825	19.2	21
4450106	00070131	0.826	0.9	21.1	22.9
4450107	00070132	0.901	0.975	23	24.8
4450108	00070133	0.976	1.05	24.9	26.7
4450109	00070134	1.051	1.25	26.8	28.6
4450110	00070135	1.126	1.2	28.7	30.5
4450111	00070136	1.201	1.275	30.6	32.4
4450112	00070137	1.276	1.35	32.5	34.3
4450113	00070138	1.351	1.425	34.4	36.2

Quantity 2 Inserts Required per Support
For Housing Only - Order #4450000



FIBERLIGN® Aluminum Suspension for ADSS



NOMENCLATURE

1. Keeper
2. Cushion Inserts (With or Without Grit)
3. Captured Bolt and Washer (Captured with Grommet)
4. Lock Nut
5. Anchor Shackle with Eye-nut (Optional not shown)
6. Structural Reinforcing Rods (optional, not shown)

Keeper:

The aluminum alloy keepers have an interlocking hinge for simple access and cable installation. Closing the keeper captures and secures the cushion inserts and ADSS cable. The keepers join together to form a clevis for attachment to the structure via Cat. No. AS-5L anchor shackle fitting or equivalent.

Cushion Inserts:

A soft pliable dielectric material that gently grips the ADSS cable – supplied either with or without grit on the inner diameter bore. Gritted inserts are applied over optional Structural Reinforcing Rods for medium span applications. The gritted inserts have a conductive aluminum strip located near the center for higher voltage environments.

Captured Bolt, Washer, and Lock Nut:

Galvanized steel bolt and washer captured with an elastomer o-ring. The galvanized steel Lock Nut has a stiff wire locking mechanism designed to engage with the thread of the mating bolt.

Structural Reinforcing Rods (SRR):

are preformed galvanized steel rods – subsetting and gritted. They are intended to provide additional protection to the cable jacket and increase longitudinal holding abilities of the unit.

FASN is the acronym for FIBERLIGN Aluminum Suspension.

APPLICATION

The FIBERLIGN Aluminum Suspension (FASN) is designed to gently, but firmly support All-Dielectric Self-Supporting (ADSS) cable. The FASN features the following: Interlocking Hinge, Single-bolt clamping, Short to

Medium Span Option, Low to High Voltage Environment acceptance. The addition of SRR allows the versatile FASN to go from a distribution environment to a transmission environment. Fittings and brackets are available for wood pole and concrete or metal structure applications.

Span Length Capability

1. For short spans without SRR:
<600' (183 m) maximum recommended span lengths.
2. For Intermediate spans with SRR:
<1200' (366 m) maximum recommended span lengths.

For additional cable jacket protection, longer spans and higher longitudinal holding requirements, the dual rod layer FIBERLIGN Dielectric Suspension (found later in this section) is recommended.



Anchor Shackle w/Eye Nut Option



FASN with Rods

Vertical Load Limit

The FASN has an ultimate vertical load capability of 7000 (31 kN) pounds.

Longitudinal Cable Holding Capabilities

Without SRR, modest longitudinal holding capabilities are provided via compression of the non-gritted inserts on the cable. Specific values are dependent upon cable brand, internal construction and diameter. Consult PLP for specifics. With SRR, substantial longitudinal holding capabilities are provided via insert compression and are enhanced by the grit on both the inserts and SRR. Contact PLP for specifics.

Rod End Treatment

In order to avoid scratching, gouging or nicking of the plastic jacket during installation, unbalanced loading, or cable motion, the ends of the SRR's are factory formed to flare away from the cable surface.

FIBERLIGN® Aluminum Suspension for ADSS

Grounding and Corona Protection:

If positive grounding of the cable and metallic components of the FASN is desired, a grounding wire can be attached to the 3/8" captured bolt. PLP can supply a 4' (1.2m) long #4 copper or 4/0 aluminum grounding wire assembly (Cat. No. 710010016 or 710010294 respectively).

For the FASN, the SRRs have been designed to accept the ADSS-CORONA™ Coil. The ADSS CORONA Coil reduces electrical stress at the ends of the metal rods. Further catalog information about this product can be found later in this section.

Mounting

- Bolted (Wood Poles): Adding suffix code "S" provides an anchor shackle with 5/8"-11 eye nut accessory (Cat. No. 710010357) for attachment to double arm bolts. The anchor shackle (Cat. No. AS-5L) may be purchased separately to attach to eyebolts.
- Banded (Steel, Concrete Poles): Banding Bracket (Cat. No. 710010577) is offered for low tension/short span support application only. The kit includes a 5/8"-11x 2-1/2" long bolt, lockwasher, hex nut and banding bracket. The bracket is rated for 1,200# (5.3 kN) vertical load and should be used with a high strength 1-1/4" (32 mm) steel band (band purchased separately).

Line Angles

The FASN maximum recommended line angle for a single suspension unit is 30° depending on cable brand. Two units can be combined to turn larger angles up to 60°, although double dead-ending is another option for large angles. Contact PLP for details.

Torque Level

The 3/8" captured bolt should be tightened UNTIL THE LOCK WASHER IS FLAT and the clevis halves are joined flush. This will require about 10 foot-pounds (120 inch-pounds or 13.5 Newton-meters) of force. DO NOT OVER-TORQUE.

FASN Kit with Structural Reinforcing Rods					
Catalog Number*	Min. (mm)	ADSS Cable Range			Color Code
		Max. (mm)	Rod Length (mm)	Rod Dia. (mm)	
4470199	0.426" (10.8)	0.475" (12.0)	30" (762)	.100" (2.5)	Green
4470200	0.476" (12.1)	0.500" (12.7)	33" (838)	.100" (2.5)	Red
4470201	0.501" (12.8)	0.550" (14.0)	34" (864)	.100" (2.5)	Blue
4470202	0.551" (14.1)	0.625" (15.9)	34" (864)	.100" (2.5)	Black
4470203	0.626" (16.0)	0.700" (17.8)	35" (889)	.100" (2.5)	Orange
4470204	0.701" (17.9)	0.737" (18.7)	36" (914)	.119" (3)	Green
4470205	0.738" (18.9)	0.812" (20.6)	36" (914)	.119" (3)	Pink
4470206	0.813" (20.7)	0.887" (22.5)	37" (940)	.119" (3)	Purple
4470207	0.888" (22.6)	0.962" (24.4)	37" (940)	.119" (3)	White
4470208	0.963" (24.5)	1.037" (26.3)	37" (940)	.119" (3)	Yellow
4470209	1.038" (26.4)	1.112" (28.2)	38" (965)	.119" (3)	Brown
4470210	1.113" (28.3)	1.187" (30.1)	39" (991)	.119" (3)	Red

*Add Suffix "S" to Catalog No. to include one #AS-5L Anchor Shackle

FIBERLIGN® Aluminum Suspension Without Structural Reinforcing Rods					
Catalog Number*		ADSS Cable Range			
Complete Assembly	Inserts Only (2 Required)	Min. (in)	Max. (in)	Min. (mm)	Max. (mm)
4450195	00070241	0.226	0.275	5.7	6.9
4450196	00070236	0.276	0.325	7	8.2
4450197	00070237	0.326	0.375	8.3	9.4
4450198	00070238	0.376	0.425	9.5	10.7
4450199	00070239	0.426	0.475	10.8	12
4450200	00070125	0.476	0.525	12.1	13.3
4450201	00070126	0.526	0.575	13.4	14.6
4450202	00070127	0.576	0.625	14.7	15.9
4450203	00070128	0.626	0.675	16	17.1
4450204	00070129	0.676	0.75	17.2	19.1
4450205	00070130	0.751	0.825	19.2	21
4450206	00070131	0.826	0.9	21.1	22.9
4450207	00070132	0.901	0.975	23	24.8
4450208	00070133	0.976	1.05	24.9	26.7
4450209	00070134	1.051	1.25	26.8	28.6
4450210	00070135	1.126	1.2	28.7	30.5
4450211	00070136	1.201	1.275	30.6	32.4
4450212	00070137	1.276	1.35	32.5	34.3
4450213	00070138	1.351	1.425	34.4	36.2

Quantity 2 Inserts Required per Suspension

For Housing Only - Order #4450001

*Add Suffix "S" to Catalog No. to include one #AS-5L Anchor Shackle and 5/8" Eye-Nut

ORDERING INSTRUCTIONS

Refer to the catalog tables (with or without rods) and select the appropriate FASN for the ADSS cables outside diameter.

Add suffix code "S" to include anchor shackle with 5/8" eye-nut (Cat. No. 710010357) option.

Order Cat. No. 710010577 to receive the Limited Tension Banding Bracket – see "Mounting" paragraph earlier in this section for details.

Order Cat. No. 710010016 to receive a 4' (1.3 m) long #4 (7W) copper with terminal on one end. Order Catalog No. 710010294 to receive a 4' (1.2 m) long 4/0 (7W) aluminum conductor with terminal on one end.