



FIBERLIGN® DIELECTRIC DEAD-END

The **FIBERLIGN Dielectric Dead-End** product line has been designed to securely but gently terminate ADSS aerial fiber optic cable. A two-component design consisting of appropriate size and length of Structural Reinforcing Rods (SRR) and dead-end component transfers axial tensile loads and distributes radial compressive forces through the plastic jacket and onto the internal strength members without damaging the plastic jacket or internal optical fibers. To support various cable system load requirements, four types of dual-layer FIBERLIGN Dielectric Dead-Ends are offered: Limited, Medium, Semi-High, and High Tension.

FEATURES AND BENEFITS

Limited Tension Dead-Ends

- Includes short structural reinforcing rods
- Used on most brands of ADSS cable that have low strengths and "standard" jackets

Medium Tension Dead-Ends

- Includes moderate length structural reinforcing rods
- Used on "standard" and most "track-resistant" jacket types of ADSS cable*

Semi-High Tension Dead-Ends

- Includes extended length structural reinforcing rods to hold higher loads
- Used on most brands of ADSS cable that have "standard" jackets

High Tension Dead-Ends

- Includes custom length structural reinforcing rods
- Dead-end component matches specific tension application
- Used on all brands of high-strength circular ADSS cables that have "standard" and "track-resistant" jackets

*Contact PLP to verify acceptable "track-resistant" cables.

SPECIFICATIONS

Specific dead-end design and performance depends upon numerous factors, including cable brand and design, jacket type, load requirements, and environmental operating conditions, among others. Due to these factors, four types of **FIBERLIGN® Dielectric Dead-Ends** are offered: Limited, Medium, Semi-High, and High Tension. Respective cable system requirements are listed below to help select the appropriate dead-end type.

CAUTION: Contact the cable manufacturer for specific capabilities to determine the proper sag and tension levels for your system.

FIBERLIGN Dielectric Dead-End

Dead-End Type	Maximum Span Rating	Maximum Installation Tension ¹ (MIT)		Maximum Loaded Tension ² (MLT)		Compatible with "Track-Resistant" Cables
		lb	kN	lb	kN	
Limited	600 ft	1,000	4.4	2,500	11.1	No
Medium	N/A	2,000	8.9	4,000	17.8	Yes
Semi-High	N/A	4,000	17.8	7,500	33.4	No
High	N/A	2,000+	8.9+	4,000+	17.8+	Yes

¹Stringing/nominal axis /long-term

²Working/loaded axial /short-term

Cable Systems with Figure 8 Fiber Optic Cable

For all-dielectric messengers, the messenger with jacket intact is separated from the fiber bundle and a two-piece dielectric dead-end is applied over the jacketed messenger. For metallic messengers, a conventional strand dead-end is applied directly to the bare messenger. Consult PLP for specifics for either style messenger.

NOTE: General load ratings are established to help selection; however, maximum holding performance will vary by cable brand and operating conditions. Therefore, no specific holding strength rating is possible.

ATTACHMENT FITTINGS

All **FIBERLIGN® Dielectric Dead-Ends** require a proper size and strength Thimble Clevis with Extension Link and connecting fitting. The optional Banding Bracket can be used to attach the dead-ends to concrete or steel poles.

Thimble Clevises

Catalog Number	Suffix Code	Rated Strength		Minimum Seat Diameter in	Minimum Groove Diameter in	Material	Recommended FIBERLIGN Dielectric Dead-End Type
		lb	kN				
TC-FO ¹	C1	13,000	58	2-1/4	7/8	Galvanized Ductile Iron	Limited or Medium Tension
ATC-20M	C2	20,000	89	3	1-1/2	Aluminum	High Tension
TC-6F	C4	42,400	188	2-1/2	1-1/16	Galvanized Ductile Iron	High Tension

¹ **Catalog Number: TC-5A** (Rated Strength: 12,000 lb/53 kN) Aluminum Thimble Clevis can be substituted for the **Catalog Number: TC-FO**. Contact PLP for more details.



Catalog Number: TC-FO
13,000 lb Thimble Clevis (Suffix Code C1)



Catalog Number: ATC-20M
20,000 lb Thimble Clevis (Suffix Code C2)

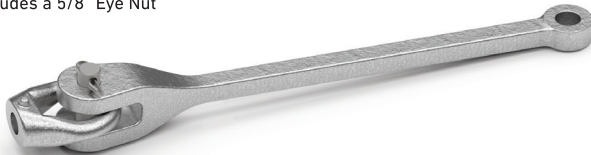


Catalog Number: TC-6F
42,400 lb Thimble Clevis (Suffix Code C4)

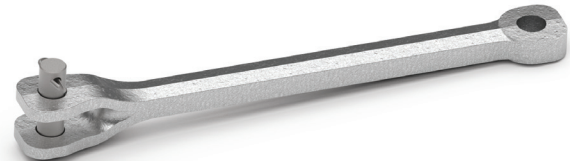
Extension Links

Catalog Number	Suffix Code	Rated Strength		Length in	Material	Recommended FIBERLIGN Dielectric Dead-End Type
		lb	kN			
71002366 ¹	E1	12,500	67	14	Galvanized Ductile Iron	Limited, Medium, or High Tension
LCE-66-14	E2	25,000	111	14	Galvanized Ductile Iron	High Tension

¹ Includes a 5/8" Eye Nut



Catalog Number: 71002366
12,500 lb 14" Extension Link with 5/8" Eye Nut (Suffix Code E1)



Catalog Number: LCE-66-14
25,000 lb 14" Extension Link (Suffix Code E2)

Banding Bracket Kits

Catalog Number	Suffix Code	Rated Strength		Recommended FIBERLIGN Dielectric Dead-End Type	Kit Contents
		lb	kN		
710010578 ¹	B1	5,000	22	Limited Tension	5/8"-11 x 2" Bolt, 5/8" Lock-Washer, 5/8" Hex Nut, and Banding Bracket
710010745 ²		12,000	53	Medium, Semi-High, or High Tension	5/8"-11 x 2" Bolt, 5/8" Lock-Washer, 5/8" Hex Nut, and Banding Bracket

¹ One high-strength 1-1/4" wide steel band is required to secure the banding bracket to a concrete or steel pole. (Banding material not included).

² Two high-strength 1-1/4" wide steel bands are required to secure the banding bracket to a concrete or steel pole. (Banding material not included).

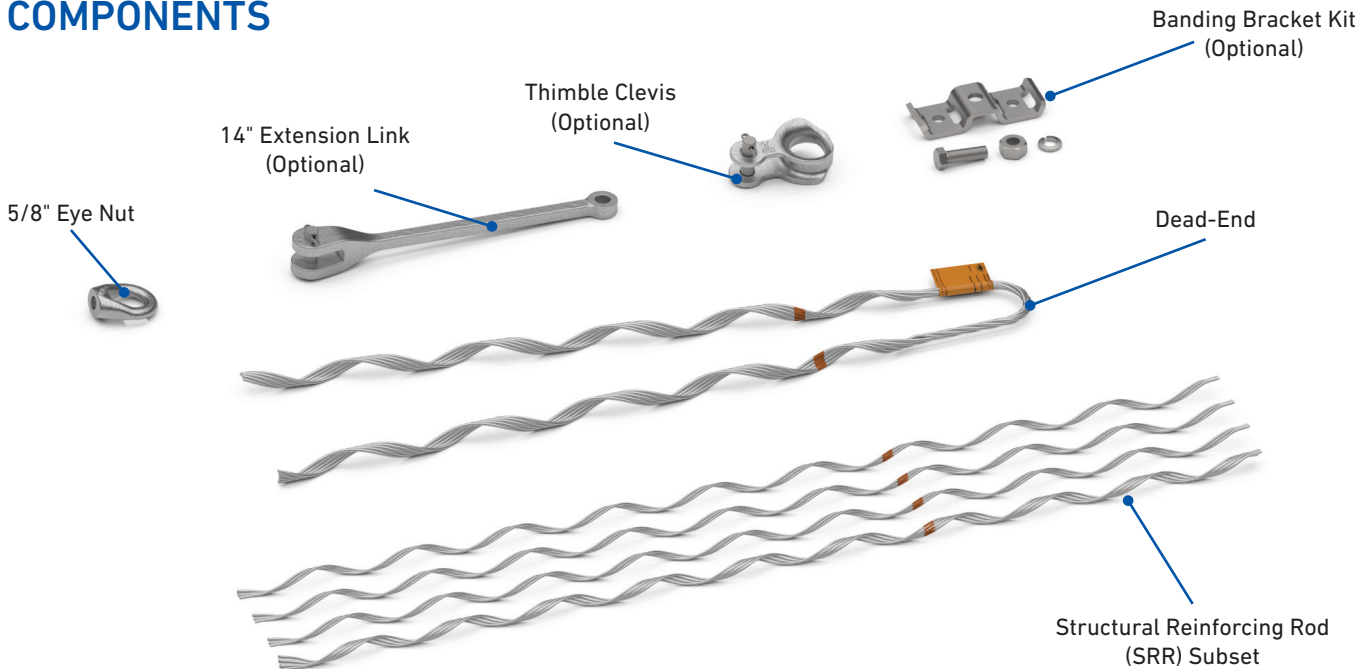


Catalog Number: 710010578
Banding Bracket Kit (Suffix Code B1)

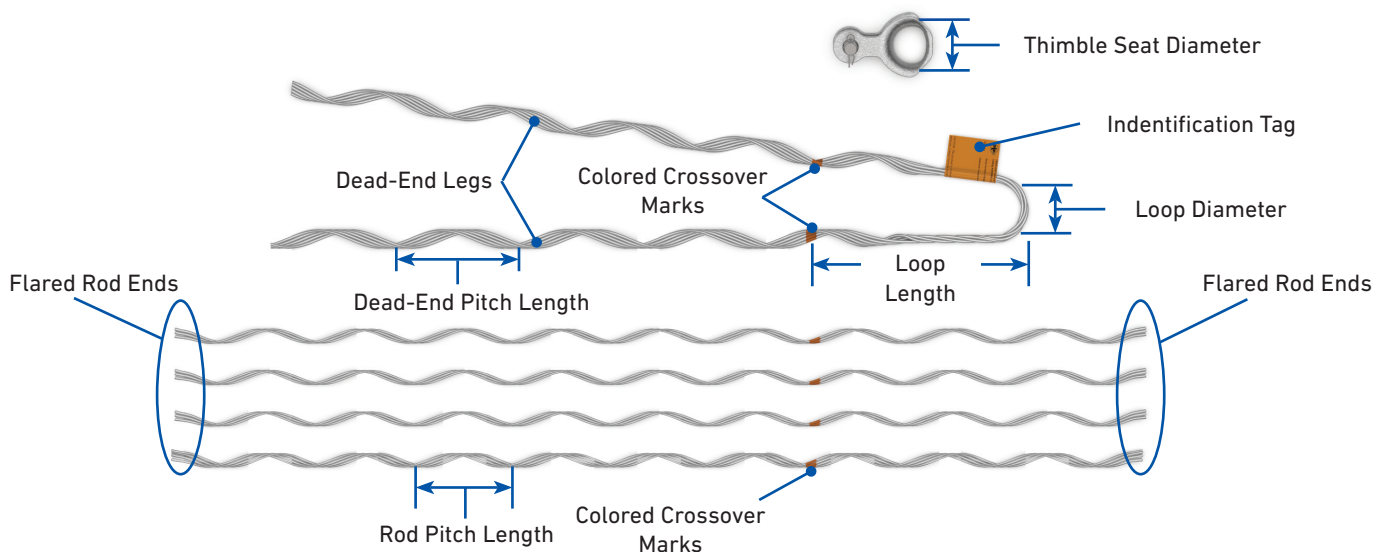


Catalog Number: 710010745
Banding Bracket Kit (Suffix Code B1)

COMPONENTS



Component	Description
Identification Tag	Tag includes product description and application information
Colored Crossover Mark	Indicates where dead-end contact should begin and identifies the cable diameter range
Dead-End Legs	Wrap onto the structural reinforcing rods beginning at the crossover mark
Flared Rod Ends	Special rod end treatment to prevent cable sheath damage
Loop Diameter	Formed diameter designed to interface with standard fittings
Loop Length	Length from the color mark to the end of the loop
Rod Pitch Length	Represents one complete wrap of the formed helix around the circumference of the cable (360 degrees)
Dead-End Pitch Length	Represents one complete wrap of the formed helix around the circumference of the structural reinforcing rods (360 degrees)
Thimble Seat Diameter	Formed diameter designed to fit the dead-end loop





ORDERING INFORMATION – LIMITED TENSION

Select the appropriate FIBERLIGN® Limited Tension Dead-End based on the diameter of the cable on which the dead-end will be installed. If the cable you are using does not fall within any of the published ranges, please contact PLP for further assistance.

NOTE: A thimble clevis and an extension link is required for two-layer dead-ends to provide proper cable bend radius near the pole.

CAUTION: Some ADSS cables are not suitable for use with Limited Tension Dead-Ends. Limited Tension Dead-Ends are not recommended for "track-resistant" jacket applications.

FIBERLIGN Limited Tension Dead-End

Catalog Number ¹			Cable Diameter Range ²		Color Code	Length
Dead-End Only	Dead-End with Thimble Clevis ³	Dead-End with Thimble Clevis & Extension Link ⁴	in	mm		in (m)
2872000	2872000C1	2872000C1E1	0.370 – 0.399	9.4 – 10.1	Purple	48 (1.2)
2872001	2872001C1	2872001C1E1	0.400 – 0.424	10.1 – 10.7	Black	48 (1.2)
2872002	2872002C1	2872002C1E1	0.425 – 0.451	10.8 – 11.4	Yellow	48 (1.2)
2872003	2872003C1	2872003C1E1	0.452 – 0.481	11.5 – 12.2	Green	48 (1.2)
2872004	2872004C1	2872004C1E1	0.482 – 0.510	12.3 – 12.9	Orange	48 (1.2)
2872005	2872005C1	2872005C1E1	0.511 – 0.542	13.0 – 13.7	Blue	48 (1.2)
2872006	2872006C1	2872006C1E1	0.543 – 0.577	13.8 – 14.6	White	48 (1.2)
2872007	2872007C1	2872007C1E1	0.578 – 0.613	14.7 – 15.5	Red	48 (1.2)
2872008	2872008C1	2872008C1E1	0.614 – 0.651	15.6 – 16.5	Black	48 (1.2)
2872009	2872009C1	2872009C1E1	0.652 – 0.692	16.6 – 17.5	Yellow	48 (1.2)
2872010	2872010C1	2872010C1E1	0.693 – 0.737	17.6 – 18.7	Green	48 (1.2)
2872011	2872011C1	2872011C1E1	0.738 – 0.784	18.8 – 19.9	Orange	48 (1.2)
2872012	2872012C1	2872012C1E1	0.785 – 0.834	20.0 – 21.1	Blue	48 (1.2)
2872013	2872013C1	2872013C1E1	0.835 – 0.889	21.2 – 22.5	White	48 (1.2)
2872014	2872014C1	2872014C1E1	0.890 – 0.945	22.6 – 24.0	Red	48 (1.2)
2872015	2872015C1	2872015C1E1	0.946 – 1.007	24.1 – 25.5	Black	48" (1.2)
2872016	2872016C1	2872016C1E1	1.008 – 1.073	25.6 – 27.2	Yellow	60 (1.5)
2872017	2872017C1	2872017C1E1	1.074 – 1.140	27.3 – 28.9	Green	60 (1.5)
2872018	2872018C1	2872018C1E1	1.141 – 1.212	29.0 – 30.7	Orange	60" (1.5)
2872019	2872019C1	2872019C1E1	1.213 – 1.288	30.8 – 32.5	Blue	60 (1.5)

¹ To include a Banding Bracket Kit with any of the Limited Tension Dead-Ends listed, add the suffix code "B1". For example, **Catalog Number: 2872001C1E1B1** includes the Limited Tension Dead-End, a Thimble Clevis (**Catalog Number: TC-FO**), a 14" Extension Link with 5/8" Eye Nut (**Catalog Number: 71002366**), and a Banding Bracket Kit (**Catalog Number: 710010578**)

² Contact PLP for cable applications not shown

³ Includes a Thimble Clevis (**Catalog Number: TC-FO**)

⁴ Includes a Thimble Clevis (**Catalog Number: TC-FO**) and a 12,500 lb Extension Link with a 5/8" Eye Nut (**Catalog Number: 71002366**)



FIBERLIGN Limited Tension Dielectric Dead-End
Installed on Wood Pole with Thimble Clevis and Extension Link

ORDERING INFORMATION – MEDIUM TENSION

Select the appropriate **FIBERLIGN® Medium Tension Dead-End** based on the diameter of the cable on which the dead-end will be installed. If the cable you are using does not fall within any of the published ranges, please contact PLP for further assistance.

NOTE: A thimble clevis and an extension link is required for two-layer dead-ends to provide proper cable bend radius.

FIBERLIGN Medium Tension Dead-End

Catalog Number ¹			Cable Diameter Range ²		Color Code	Length
Dead-End Only	Dead-End with Thimble Clevis ³	Dead-End with Thimble Clevis & Extension Link ⁴	in	mm		in (m)
2872099	2872099C1	2872099C1E1	0.452 – 0.481	11.5 – 12.2	Green	85 (2.2)
2872100	2872100C1	2872100C1E1	0.482 – 0.510	12.3 – 12.9	Orange	85 (2.2)
2872101	2872101C1	2872101C1E1	0.511 – 0.542	13.0 – 13.7	Blue	85 (2.2)
2872102	2872102C1	2872102C1E1	0.543 – 0.577	13.8 – 14.6	White	85 (2.2)
2872103	2872103C1	2872103C1E1	0.578 – 0.613	14.7 – 15.5	Red	85 (2.2)
2872104	2872104C1	2872104C1E1	0.614 – 0.651	15.6 – 16.5	Black	85 (2.2)
2872105	2872105C1	2872105C1E1	0.652 – 0.692	16.6 – 17.5	Yellow	85 (2.2)
2872106	2872106C1	2872106C1E1	0.693 – 0.737	17.6 – 18.7	Green	85 (2.2)
2872107	2872107C1	2872107C1E1	0.738 – 0.784	18.8 – 19.9	Orange	85 (2.2)
2872108	2872108C1	2872108C1E1	0.785 – 0.834	20.0 – 21.1	Blue	90 (2.3)
2872109	2872109C1	2872109C1E1	0.835 – 0.889	21.2 – 22.5	White	90 (2.3)
2872110	2872110C1	2872110C1E1	0.890 – 0.945	22.6 – 24.0	Red	95 (2.4)
2872111	2872111C1	2872111C1E1	0.946 – 1.007	24.1 – 25.5	Black	95 (2.4)
2872112	2872112C1	2872112C1E1	1.008 – 1.073	25.6 – 27.2	Purple	97 (2.5)
2872113	2872113C1	2872113C1E1	1.074 – 1.140	27.3 – 28.9	Pink	100 (2.5)
2872114	2872114C1	2872114C1E1	1.141 – 1.212	29.0 – 30.7	Brown	103 (2.6)
2872115	2872115C1	2872115C1E1	1.213 – 1.288	30.8 – 32.5	Orange	105 (2.7)

¹ To include a Banding Bracket Kit with any of the Medium Tension Dead-Ends listed, add the suffix code "B1". For example, **Catalog Number: 2872100C1E1B1** includes the Limited Tension Dead-End, a Thimble Clevis (**Catalog Number: TC-FO**), a 12,500 lb Extension Link with 5/8" Eye Nut (**Catalog Number: 71002366**), and a Banding Bracket Kit (**Catalog Number: 710010745**)

² Contact PLP for cable applications not shown

³ Includes a Thimble Clevis (**Catalog Number: TC-FO**)

⁴ Includes a Thimble Clevis (**Catalog Number: TC-FO**) and a 12,500 lb strength Extension Link with a 5/8" Eye Nut (**Catalog Number: 71002366**)



FIBERLIGN Medium Tension Dielectric Dead-End
Installed on Steel Pole with Thimble Clevis, Extension Link, and Banding Bracket



ORDERING INFORMATION – SEMI-HIGH TENSION

Select the appropriate FIBERLIGN® Semi-High Tension Dead-End based on the diameter of the cable on which the dead-end will be installed. If the cable you are using does not fall within any of the published ranges, please contact PLP for further assistance.

NOTE: A thimble clevis and an extension link is required for two-layer dead-ends to provide proper cable bend radius.

FIBERLIGN Semi-High Tension Dead-End

Catalog Number ¹ Dead-End with Thimble Clevis & Extension Link ³	Cable Diameter Range ²		Color Code	Length
	in	mm		in (m)
2872200C1E1	0.482 – 0.510	12.3 – 12.9	Orange	87 (2.2)
2872201C1E1	0.511 – 0.542	13.0 – 13.7	Blue	89 (2.3)
2872202C1E1	0.543 – 0.577	13.8 – 14.6	White	91 (2.3)
2872203C1E1	0.578 – 0.613	14.7 – 15.5	Red	93 (2.4)
2872204C1E1	0.614 – 0.651	15.6 – 16.5	Black	95 (2.4)
2872205C1E1	0.652 – 0.692	16.6 – 17.5	Yellow	97 (2.5)
2872206C1E1	0.693 – 0.737	17.6 – 18.7	Green	100 (2.5)
2872207C1E1	0.738 – 0.784	18.8 – 19.9	Orange	102 (2.6)
2872208C1E1	0.785 – 0.834	20.0 – 21.1	Blue	105 (2.7)
2872209C1E1	0.835 – 0.889	21.2 – 22.5	White	108 (2.7)
2872210C1E1	0.890 – 0.945	22.6 – 24.0	Red	112 (2.8)
2872211C1E1	0.946 – 1.007	24.1 – 25.5	Black	115 (2.9)
2872212C1E1	1.008 – 1.073	25.6 – 27.2	Purple	119 (3.0)
2872213C1E1	1.074 – 1.140	27.3 – 28.9	Pink	121 (3.1)
2872214C1E1	1.141 – 1.212	29.0 – 30.7	Brown	124 (3.1)
2872215C1E1	1.213 – 1.288	30.8 – 32.5	Orange	129 (3.3)

¹ To include a Banding Bracket Kit with any of the Semi-High Tension Dead-Ends listed, add the suffix code "B1". For example, **Catalog Number: 2872200C1E1B1** includes the Limited Tension Dead-End, a Thimble Clevis (**Catalog Number: TC-FO**), a 12,500 lb Extension Link with 5/8" Eye Nut (**Catalog Number: 71002366**), and a Banding Bracket Kit (**Catalog Number: 710010745**)

² Contact PLP for cable applications not shown

³ Includes a Thimble Clevis (**Catalog Number: TC-FO**) and a 12,500 lb Extension Link with a 5/8" Eye Nut (**Catalog Number: 71002366**)



FIBERLIGN Semi-High Tension Dielectric Dead-End
Installed on Wood Pole with Thimble Clevis and Extension Link

ORDERING INFORMATION – HIGH TENSION

FIBERLIGN® High Tension Dead-Ends are custom designed for more stringent holding requirements that have extreme operating conditions, typically in combination with high loads and longer spans. Cables exposed to high-temperature climates require special attention as they are more difficult to hold.

Catalog numbers for High Tension Dead-Ends are not published, rather they are provided upon review by PLP’s Technical Support Team. Cable specifications including sag/tension and cable system information are required in order to provide the custom design. Submit the required information listed in the chart to PLP’s Technical Support Team (email: inquiries@plp.com, Phone: 440-461-5200).

FIBERLIGN High Tension Dead-End Technical Specifications for Submittal

Technical Specification	Requirement	Description	Required for Submittal
Cable	OD	Nominal outer diameter of cable	Yes
	Standard or Track-Resistant Jacket	"Standard" jacketed cable is used in communication applications and most power distribution applications. "Track-resistant" jackets are provided for high-voltage applications.	Yes
	MIT	Maximum Installation Tension	Yes
	MLT	Maximum Loaded Tension (per local ice and wind conditions). This may be referred to as maximum operating load.	Yes
	MRCL	Maximum Rated Cable Load. Exceeding this load may cause permanent strain to the fiber.	Yes
	RBS	Rated Breaking Strength of the cable is estimated by the cable manufacturer.	Yes
	Percent Installation Sag	Installation sag that is used to establish sag and tension data	Optional
	Sag/Tension Tables	Calculated tension levels for MIT and MLT with respect to system span length and installation sag percentage	Yes
Cable System	Geographic Location	The geographic location helps identify the loading condition as established by the National Electric Safety Code (NESC).	Yes
	Pole Space Location	Vertical location on the pole – Communication Space or Utility "Supply" Space	Optional
	Power Line Voltage	Line voltage above 69 kV may require corona protection.	Yes
	Average Span Length	Span length that represents the majority of the system installation. Ruling span can be a good reference.	Yes
	Maximum Span Length	Maximum span length is typically associated with critical crossings such as highways or rivers. Usually this can be isolated to a few spans.	Yes
	Structure Type	Wood, concrete, or metal pole and lattice towers	Optional
	Structure Interface	Vang, 5/8" bolt, banding, etc. This helps determine fittings needed to connect the dead-end to the structure.	Yes

DIELECTRIC DEAD-END ACCESSORIES



Catalog Number: 70007571
Formed Wire Installation
Device