



## 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 the 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 <sup>1</sup> (MIT) |      | Maximum Loaded Tension <sup>2</sup> (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                                      |

<sup>1</sup> Stringing/nominal axis /long-term

<sup>2</sup> Working/loaded axial /short-term

## 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 | Minimum Groove Diameter | Material                | Recommended FIBERLIGN Dielectric Dead-End Type |
|--------------------|-------------|----------------|-----|-----------------------|-------------------------|-------------------------|------------------------------------------------|
|                    |             | lb             | kN  |                       |                         |                         |                                                |
| TC-FO <sup>1</sup> | 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                                   |

<sup>1</sup> **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)

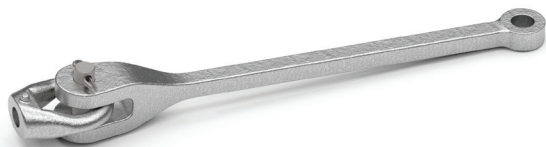


**Catalog Number: TC-6F**  
42,400 lb Thimble Clevis (Suffix Code C4)

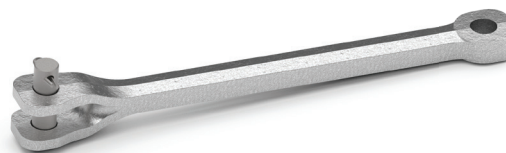
### Extension Links

| Catalog Number        | Suffix Code | Rated Strength |     | Length | Material                | Recommended FIBERLIGN Dielectric Dead-End Type |
|-----------------------|-------------|----------------|-----|--------|-------------------------|------------------------------------------------|
|                       |             | lb             | kN  |        |                         |                                                |
| 71002366 <sup>1</sup> | 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                                   |

<sup>1</sup> Includes a 5/8" Eye Nut



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



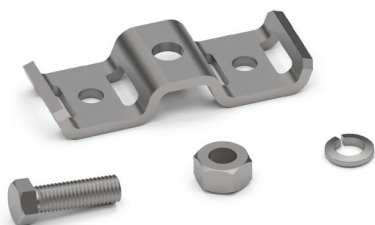
**Catalog Number: LCE-66-14**  
25,000 lb 14" Extension Link (Suffix Code E2)

### Banding Bracket Kits

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

<sup>1</sup> 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).

<sup>2</sup> 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).

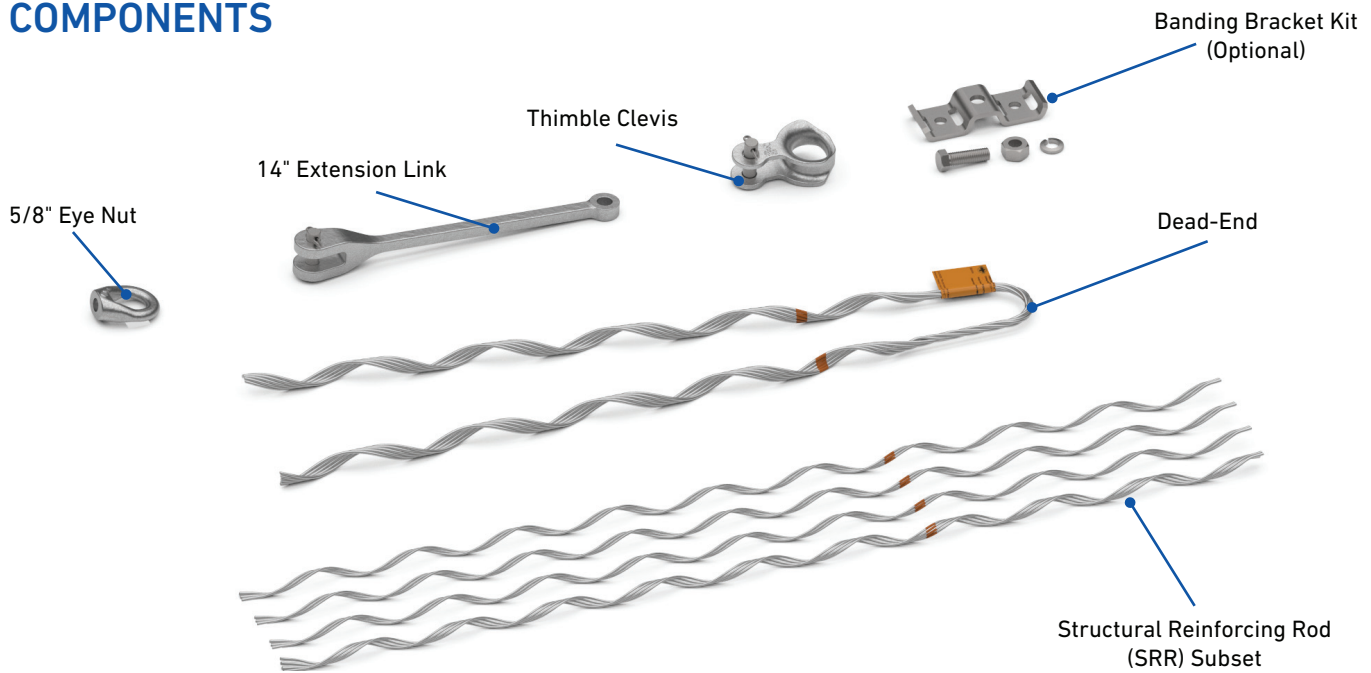


**Catalog Number: 710010578**  
Banding Bracket Kit (Suffix Code B1)

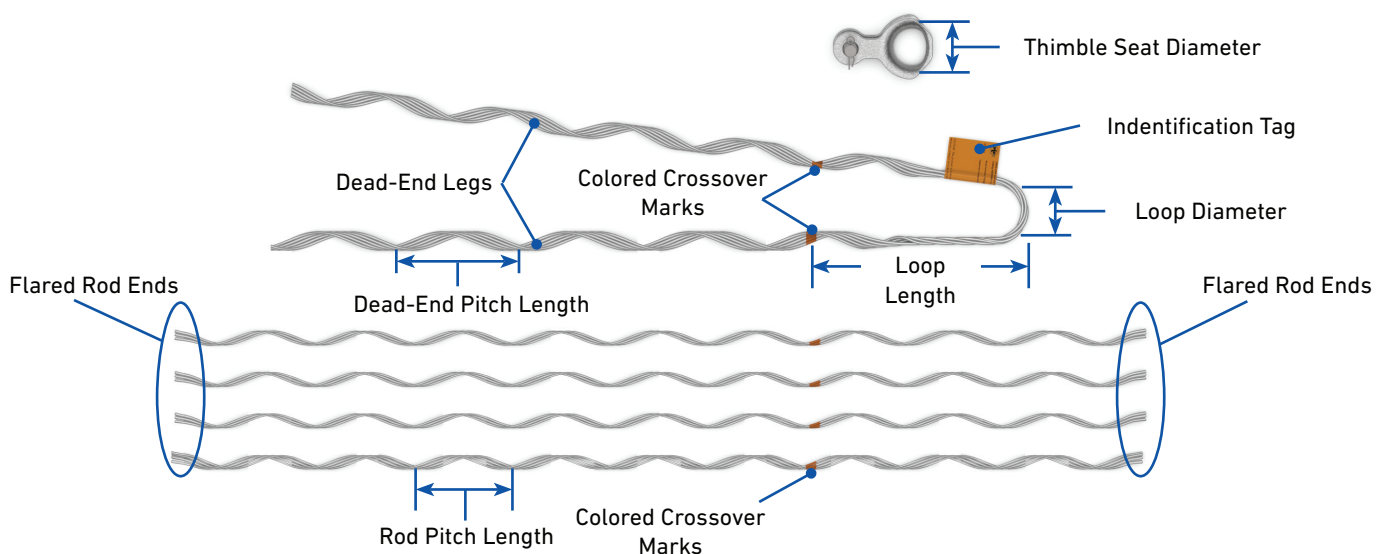


**Catalog Number: 710010745**  
Banding Bracket Kit (Suffix Code B1)

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

<sup>1</sup> 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**)

<sup>2</sup> Contact PLP for cable applications not shown

<sup>3</sup> Includes a Thimble Clevis (**Catalog Number: TC-FO**)

<sup>4</sup> 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.

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DEAD-ENDS

### FIBERLIGN Medium Tension Dead-End

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

<sup>1</sup> 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-F0**), a 12,500 lb Extension Link with 5/8" Eye Nut (**Catalog Number: 71002366**), and a Banding Bracket Kit (**Catalog Number: 710010745**)

<sup>2</sup> Contact PLP for cable applications not shown

<sup>3</sup> Includes a Thimble Clevis (**Catalog Number: TC-F0**)

<sup>4</sup> Includes a Thimble Clevis (**Catalog Number: TC-F0**) 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 <sup>1</sup><br>Dead-End with Thimble<br>Clevis & Extension Link <sup>3</sup> | Cable Diameter Range <sup>2</sup> |             | 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) |

<sup>1</sup>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**)

<sup>2</sup>Contact PLP for cable applications not shown

<sup>3</sup>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](mailto: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