FIBERLIGN® Dead-end for OPGW

Retaining Rods: Aluminum Covered Steel, with Conductive Grit Applied.

Nuts: Galvanized Steel

U-bolt, Spacer Bar: Galvanized Steel

Housing: Galvanized Iron

Wedges: Aluminum Alloy

Grounding Bolt And Lock Washer: (included but not shown): Galvanized Steel

APPLICATION

The FIBERLIGN Dead-end is designed to terminate Optical Ground Wire (OPGW) while minimizing any compression stresses that may be transferred to the core or optical elements within. The Retaining Rods act with the Wedge and Housing to distribute the axial and compressive loading over a large area of the OPGW. Standard units have left-hand lay rods.

The FIBERLIGN® Dead-end sketch at the bottom of this page includes reference to the exposed rod length "L_E" or the rod length beyond the housing. This dimension is listed in the catalog table to help with VORTX™ Damper placement.

The slotted Housing design allows for the application of the FIBERLIGN Dead-end at any location on the OPGW.

Bonding: Provisions for electrically bonding the OPGW to the supporting structure or ground lead are an integral part of the Housing. A 1" x 1/2"-13 UNC, 2A galvanized Grounding Bolt and Lock Washer are provided.

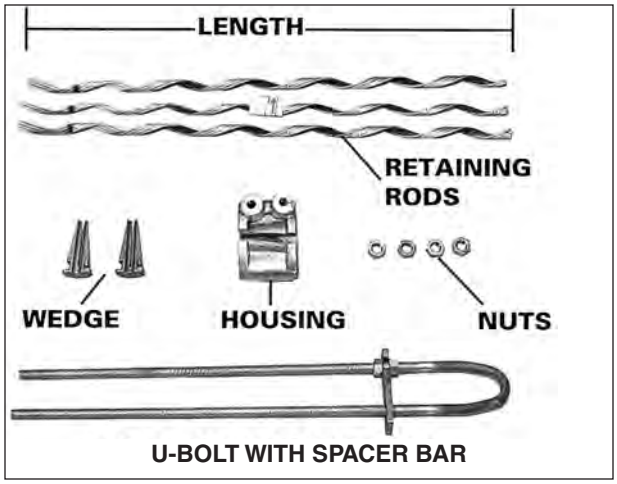
Grounding Wire Assembly Options: A 4' ground wire assembly can be connected from the FIBERLIGN Dead-end to the ground lead in your system. Two types of ground materials are offered (copper or aluminum). To included the preferred ground wire assembly in the same carton with the Dead-end, add the appropriate suffix code to the Dead-end catalog number.

Adjustment: The U-Bolt provides up to 18 inches of take-up to allow for tension adjustment and extra clearance distance without the need for external hardware such as a turnbuckle or extension links.

Component Strength: The value shown in the table on the following page reflects the strength of the standard housing and U-bolt. Higher strength requirements can be accommodated. Contact PLP® for more information.

Holding Strength: Specific holding strengths on an OPGW cable will depend upon that cable's internal construction design and composition of the materials used for the individual strands. The highest holding capabilities exist with cables that use all aluminum clad steel strands in a single layer. Use of multiple layers and/or aluminum alloy strands may reduce holding capabilities. Consult PLP for information regarding holding abilities of the FIBERLIGN OPGW Dead-end for a specific OPGW design.

NOMENCLATURE



U-BOLT WITH SPACER BAR

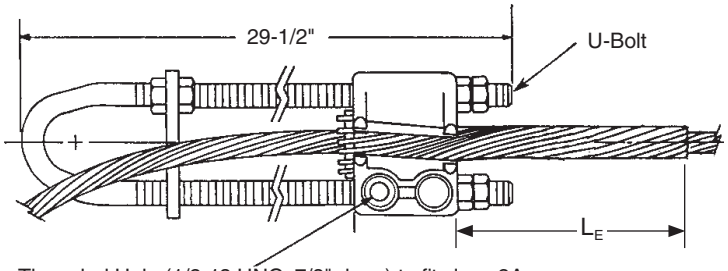
Lay Direction: Left-hand lay is standard. Custom right-hand lay units are available. Contact PLP with cable specifications for further information.

Attachment Fittings: The dead-end U-bolt component should be applied over pins, sheave wheels, or other fittings that have smooth contours, appropriate diameters and adequate strength for proper fit and support under loading conditions.

- For 5/8" U-bolts used in standard dead-ends designed for cable diameters less than or equal to .749" diameter – Adequate fitting or pin diameters range from 5/8" to 1-7/8".
- For 3/4" U-bolts used in standard dead-ends designed for cable diameters greater than .749" diameter cable - Adequate fitting or pin diameters range from 5/8" to 13/16".
- For either U-bolt size connected to a vang or structure plate, the holes in the plate should be chamfered - an example of an acceptable plate is maximum thickness of 1-1/16" (27 mm), Hole diameter 1" (25 mm), Chamfer 1/8" x 45° (3.2 mm x 45°), and Installation clearance 1-15/16" (24 mm).

Consult PLP® for installation to other plates or fittings.

Component Reuse: The retaining rods and wedges may be reused once for retensioning after initial installation. The hardware components may be reused as desired if in good condition. Do not modify any component.



Threaded Hole (1/2-13 UNC, 7/8" deep) to fit class 2A Galvanized Bolt for Grounding Connection.

FIBERLIGN® Dead-end for OPGW

FIBERLIGN Dead-end for OPTICAL GROUND WIRE (OPGW)

Patented

Ordering Instructions:

Select the appropriate FIBERLIGN Dead-end from the catalog table in this section.Consult PLP® for designs for OPGW diameters, strengths, or lay directions not shown. Also call PLP for availability of all sizes and designs.

Accessories:

Accessories may be included in the same container with the Dead-end by adding the appropriate suffix code. Ex. 2801312G, includes Dead-end with ground wire assembly, #710010016.

CAUTION: Determine the appropriate material and size wire necessary to provide adequate grounding for your system before ordering the ground wire assemblies. For proper performance and personal safety be sure to select the proper ground wire before application.

Catalog Number	Suffix Code	Description
710010016	**G**	4' long (1.2 m) #4 (7W) copper ground wire with terminal on one end.
710010294	**GA**	4' (1.2 m) long 4/0 (7W) aluminum ground wire with terminal on one end.
710011205	**GA2**	5' (1.5 m) long 95 mm^2 (19W) aluminum ground wire with terminals at both ends.

FIBERLIGN® Dead-end for OPGW

Catalog Number	Diameter Range				Overall Rod Length (in)	Rods per set	Subset	Color Code	Components Rated Strength (lbs)	Exposed Rod Length for (L_E) VORTX™ Placement	
	Min. (in)	Max. (in)	Min. (mm)	Max. (mm)						Damper (in)	Placement (mm)
280110266	.358	.374	9.1	9.5	24	9	3-3-3	Blue	25,000	21	533
2801300	.375	.391	9.5	9.9	24	9	3-3-3	Pink	25,000	21	533
2801301	.392	.410	10.0	10.3	24	9	3-3-3	Pink	25,000	21	533
2801302	.411	.425	10.4	10.7	26	10	3-3-4	White	25,000	23	584
2801303	.426	.443	10.8	11.2	26	10	3-3-4	White	25,000	23	584
2801304	.444	.460	11.3	11.6	27	10	3-3-4	Brown	25,000	24	609
2801305	.461	.477	11.7	12.0	27	10	3-3-4	Brown	25,000	24	609
2801306	.478	.494	12.1	12.5	29	11	3-4-4	Purple	25,000	26	660
2801307	.495	.511	12.6	12.9	29	11	3-4-4	Purple	25,000	26	660
2801308	.512	.528	13.0	13.3	31	12	3-3-3-3	Yellow	25,000	28	711
2801309	.529	.545	13.4	13.8	31	12	3-3-3-3	Yellow	25,000	28	711
2801310	.546	.562	13.9	14.2	32	12	3-3-3-3	Blue	25,000	29	737
2801311	.563	.579	14.3	14.6	32	12	3-3-3-3	Blue	25,000	29	737
2801312	.580	.596	14.7	15.1	34	12	3-3-3-3	Orange	25,000	31	787
2801313	.597	.613	15.2	15.5	34	12	3-3-3-3	Orange	25,000	31	787
2801314	.614	.630	15.6	15.9	36	11	3-4-4	Red	25,000	33	838
2801315	.631	.647	16.0	16.4	36	11	3-4-4	Red	25,000	33	838
2801316	.648	.664	16.5	16.9	38	12	3-3-3-3	Black	25,000	35	889
2801317	.665	.681	17.0	17.2	38	12	3-3-3-3	Black	25,000	35	889
2801318	.682	.698	17.3	17.7	40	12	3-3-3-3	Green	25,000	37	938
2801319	.699	.715	17.8	18.0	40	12	3-3-3-3	Green	25,000	37	938
2801320	.716	.732	18.1	18.5	41	12	3-3-3-3	Brown	25,000	38	965
2801321	.733	.749	18.6	18.9	41	12	3-3-3-3	Brown	25,000	38	965
2801322	.750	.766	19.0	19.4	59	12	3-3-3-3	Purple	45,000	56	1422
2801323	.767	.783	19.5	19.8	59	12	3-3-3-3	Purple	45,000	56	1422
2801324	.784	.800	19.9	20.2	64	12	3-3-3-3	Yellow	45,000	61	1549
2801325	.801	.817	20.3	20.7	64	12	3-3-3-3	Yellow	45,000	61	1549
2801326	.818	.834	20.8	21.1	66	13	3-3-3-4	Blue	45,000	63	1600
2801327	.835	.851	21.2	21.5	66	13	3-3-3-4	Blue	45,000	63	1600
2801328	.852	.868	21.6	22.0	70	12	3-3-3-3	Orange	45,000	67	1701
2801329	.869	.885	22.1	22.4	70	12	3-3-3-3	Orange	45,000	67	1701
2801330	.886	.902	22.5	22.8	72	12	3-3-3-3	Red	45,000	69	1753
2801331	.903	.919	22.9	23.2	72	12	3-3-3-3	Red	45,000	69	1753
2801332	.920	.936	23.3	23.8	74	13	3-3-3-4	Black	45,000	71	1803

See figure on page 5-3.