



Document Title:

Zero-Degree, Single-Phase, Double Position, Standoff Equipment Bracket

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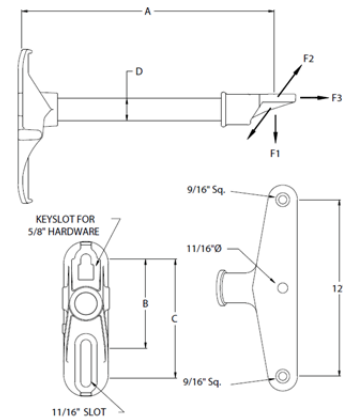
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Nov. 09, 2021	General format correction to Section 3, 4, and 7.
Abr. 13, 2022	TOC added
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Equipment Specification
Document No.: 4350.019
Item No.: 008-82332
Asset Suite: 82332
Originating Department: Distribution Engineering



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1. Introduction

This is a general specification that covers the minimum requirements for a single-phase, double position, standoff equipment bracket to be used in the distribution system in Puerto Rico. Further information will be provided by LUMA Energy at the time of order placement and will provide information on site specific conditions, quantity, and other requirements. This document includes the general electrical and mechanical characteristics of the material.

2. Special Requirements

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this material to LUMA on previous orders, will not have to furnish samples at bid opening. The material will be received at the LUMA's general warehouse (011) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse. Any bidder that complies with the provisions of subsection 9.3 will have preference over any other supplier at the time of awarding the purchase, conditioned to meet all the requirements in this document.

3. Quantity/Literature

Descriptive and technical literature must be supplied by vendor at time of bidding. This literature may include, but is not limited to details of material, drawings, documented testing, and instructions for use and installation. Failure to submit documents on time will cause bidder disqualification. For products described in this specification as requiring qualification, awards will be made only for such products that, prior to the time for opening of bids, had been tested and/or approved by LUMA. Evidence of LUMA Energy's approval of the equipment or material shall be supplied by vendor if requested by LUMA Energy.

4. Markings

- 4.1. Containers shall be marked outside with LUMA Energy's purchase order and item number.
- 4.2. Packaging labels and tags shall be waterproof.

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5. Equal or Approved Equal to

- 5.1. MacLean (G1MA0112ADBC).
- 5.2. Hubbell (1SBM12CTBSC).

6. Packaging

All material and equipment shall be packaged and marked in such a way as to facilitate handling and protection from damage and that the receiving warehouse can readily identify it and send it, in one complete unit, to a field location without opening crates or boxes to sort items and/or parts.

7. Number Per Package (Logistics)

Standard package: Eight (8) units per box or as requested by LUMA.

8. Acceptance Criteria

- 8.1. Test required: certified by external qualified laboratories.
- 8.2. Latest applicable codes, standards, and other regulations:
 - a. ASTM (A153): for hot dip galvanizing.
 - b. ASTM (D149, D150, D256, D495, D570, D638, D695, D792, D2583): for rod tests.
 - c. ANSI (C29.11, C29.12): for protective coating tests.
 - d. IEC (61109, 62217, TR-62039): for protective coating tests.

9. Description

- 9.1. Zero-degree, single-phase, double position, standoff equipment bracket used for configuration and mounting of arresters and fuse cutouts.
 - a. Features: Accepts 5/8" (1.6 cm) pole mounting hardware on 11/16" (1.8 cm) holes.
 - b. Hardware shall be steel, grade A36 with hot dip galvanized as per ASTM (A153). The following hardware should be included as minimum:
 - 1. Two carriage type bolts: 1/2" X 2" (1.3 X 5.1 cm). Each bolt with one 1/2" hex nut, one 1/2" lock washer, and one 1/2" flat washer (1/2" = 1.3 cm).
 - 2. One 5/8" X 2" (1.6 X 5.1 cm) bolt with one 5/8" hex nut, one 5/8" lock washer, and two 5/8" flat washer (5/8" = 1.6 cm).

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- c. Rod material: 1.5" (3.8 cm) diameter (D), fiberglass, gray, and ultraviolet (UV) silicone protective coating.
- d. Tab retainers for banding provisions.
- e. Weight: 6 pounds (2.7 kg) or less.
- f. Total length (A): 12" (30.5 cm).

9.2. Base:

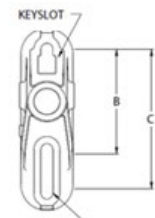


Figure 1

- a. Aluminum (A356-T6), 12" (30.5 cm) minimum long with bandable feature.
- b. Keyhole of installation: 11/16" (1.8 cm) on top.
- c. Slot at the bottom: 11/16" X 3-3/16" (1.8 X 8.1 cm).
- d. Distance from top hole to B and C points in the slot: 6" (15.2 cm) and 8" (20.3 cm) respectively. See figure 1.

9.3. Optional Base:

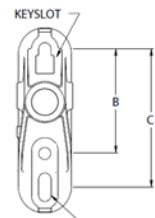


Figure 2

- Same as the one offering on each compatible model above but the spacing between the top hole and the other two points in the slot must be 8" and 12" (20.3 and 30.5 cm) respectively, center to center. The slot shall be replaced by a 11/16" hole at point B and a 11/16" X 1-1/2" slot at point C. See figure 2.

9.4. End Fitting:

- a. Aluminum (A356-T6).
- b. Shall have two square holes of 9/16" (1.4 cm), one at the top and one at the bottom, separated by 12" (30.5 cm) center to center.
- c. Shall have one hole of 11/16" (1.8 cm) at the center.

9.5. Minimum Ultimate Loads:

- a. Vertical 1,800 pounds (816.5 kg).
- b. Longitudinal 1,400 pounds (635.0 kg).
- c. Transverse 10,000 pounds (4,535.9 kg).

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10. Inspection

The acceptance of any material or equipment shall in no way relieve the vendor from his responsibility to meet all the requirements of this specification, and it would not prevent subsequent rejection if such materials were found later to be defective.

11. Proposal Information

11.1. Submitted proposals must include:

- a. Technical information
- b. Table of Compliance completed by the bidder with reference. (See Appendix 1)

— End of Specification —

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Appendix

Equipment Specification
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Appendix 1: Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4350.019).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document. (ANSI, ASTM, IEC)		
3	Minimum Ultimate Loads	<ul style="list-style-type: none"> • Vertical: 1,800 lbs. • Longitudinal: 1,400 lbs. • Transverse: 10,000 lbs. 		
4	Material	<ul style="list-style-type: none"> • Rod: Fiber glass rod (1.5" diameter) with UV silicone protective coating. • Base and End Fittings: Aluminum (A356-T6) • Hardware: Hot dip galvanized steel (grade A36) as per ASTM A153. 		
5	Dimensions	<ul style="list-style-type: none"> • Overall length: 12" • End fitting length: 12" with one 9/16" square hole on each corner and one 11/16" hole in the middle. 		
6	Hardware	<ul style="list-style-type: none"> • Two carriage type bolts (1/2" x 2") • Two hex nuts (1/2") • Two flat washers (1/2") • Two lock washers (1/2") • One bolt (5/8 x 2") • One hex nut (5/8") • Two flat washers (5/8") • One lock washer (5/8") 		
7	Base Holes	Keyhole on top (11/16 in.) and a slot at the bottom (11/16 or 13/16 in.) to provide 6" or 8" from top hole to slot top and 8" or 10" from top hole to slot bottom. All measurements from center to center.		
8	Optional Base Holes	Same arrangement as above but the measures between holes are to be 8" and 12", respectively.		











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Final Audit Report

2022-11-23

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