



Document Title:

Bushing Extension, Dead Break, 600 A

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Material Specifications

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Date	Revision Comments
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Item No.: 038-00661
Asset Suite: 5497
Originating Department: Distribution Engineering



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1. Introduction

This is a general specification that covers the minimum requirements for a 15/25 kV bushing extension to be used in the electrical 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 PREPA/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.

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 PREPA's and/or 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.

5. Equal or Approved Equal to

- 5.1. Elastimold (K655BE).
- 5.2. EATON - Cooper (DBE625SA).



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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: One (1) unit per box or as requested by LUMA.

8. Acceptance Criteria

- 8.1. Test required: certified by external laboratories.
- 8.2. Latest applicable codes, standards, and other regulations:
 - a. IEEE 386-2016 for separable insulated connector systems for power distribution systems rated 2.5 kV through 35 kV.

9. Description

- 9.1. The bushing extension is used to increase distance between the elbow connector and the connection plug.
- 9.2. Shall be suitable for 15/25 kV class connectors that conform to ANSI/IEEE 386. Dead Break type for deenergized circuits.
- 9.3. Housing shall be made of rubber or ethylene propylene diene terpolymer (EPDM), watertight, fully submersible, and resistant to chemicals.
- 9.4. Current carrying parts shall be made of aluminum suitable for copper and aluminum conductors.
- 9.5. Shall include a factory assembled threaded stud suitable for 600 A.
- 9.6. The following minimum information shall be permanently attached to or made an integral stamped part of the insulated connecting plug:
 - a. Device name
 - b. Manufacturer's name, trademark, type, and identification number
 - c. Current rating
 - d. Manufacture date and/or serial number



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9.7. Electrical Characteristics: Table 1

Current Rating	Voltage Class	Minimum AC Withstand Voltage (1 min)	Minimum AIC RMS Symmetrical @ 10 Cycles	Minimum Basic Insulated Level	Minimum Corona Extinction
600 A	15/25 kV	40 kV	25 kA	125 kVBIL	19 kV

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



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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 4350.162.		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document. (IEEE)		
3	Type	Dead Break		
4	Material	<ul style="list-style-type: none">• Rubber or EPDM• Fully Shielded & Watertight		
5	Product Requirement	<ul style="list-style-type: none">• Suitable for 15/25 kV class connectors that conform to ANSI/IEEE 386.• Factory Assembled Threaded Stud• Information described on section 9.6 permanently attached to or made an integral stamped part of the bushing.		
6	Electrical Characteristics	<ul style="list-style-type: none">• Voltage Class: 15/25 kV• Current Rating: 600 A• Basic Ins. Level: 125 kVBIL minimum• 60 Hz 1 min. withstand: 40 kV minimum• Symmetrical Current: 25 kA @ 10 cycles• Corona Extinction: 19 kV minimum		











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Final Audit Report

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