



Document Title:

Fuse Link, Buttonhead, 15 kV, Type K, 3 A and 5 A

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Document History

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Warehouse Catalog	Item Version	Date
010-03169	5	02/06/2023
010-03185	6	02/06/2023



Equipment Specification

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Originating Department: Distribution Engineering



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1. Introduction

This is a general specification that covers the minimum requirements for 15 kV, Type K fuse links with buttonhead 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 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. Each fuse shall be marked with voltage & ampere ratings, and type as minimum.
- 4.3. Packaging labels and tags shall be waterproof.

5. Equal or Approved Equal to

EATON, Kearney (see section 12 table 1 for models).



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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)

See table 1 for package 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. IEC 60282-2: for expulsion fuses designed for outdoors or indoors use on alternating current systems of 50 Hz and 60 Hz, and of rated voltages exceeding 1 kV.
- b. IEEE C37.41-2016: for performing design tests for high-voltage (> 1kV) fuses, as well as for fuse disconnecting switches, are specified.
- c. IEEE C37.42-2016: for high-voltage (> 1kV) Class A and Class B expulsion and current-limiting fuses.

9. Description

9.1. These fuse links are used to fit any standard make of open fuse cutout and for special loading situations, such as short-time overloads and cold load pick-ups.

9.2. Shall be made of silver-alloy or any other non-damageable material or metallic alloy with high resistance to corrosion and having a low electrical resistance (manufacturer shall state material used).

9.3. Shall be universal removable buttonhead fast type.

9.4. Link shall have a fiber sheath to ensure compliance with fault interrupting tests in accordance with ANSI standards-series 4 and 5.

9.5. Sheath shall be adequately affixed to buttonhead to prevent its removal during installation and to assist in low fault current interruptions.

9.6. Manufacturer shall guarantee the maximum tolerance for current in minimum melting curve shall not exceed 10 %.



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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)

12. Table 1: Warehouse and Asset Suite Identification Number

Item (Amp Rating)	Warehouse Catalog #	Asset Suite #	Pig Tail Length	Required Cutout Fuse- holder	Standard Package (Pallet)	EATON (Model)
3A	010-03169	55313	23" (58.4) cm	100A	10 (4,800)	31003CPS
5A	010-03185	55314	23" (58.4) cm	100A	10 (4,800)	31005

— 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 (4350.139).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document.		
3	Fuse Type	K		
4	Material	<ul style="list-style-type: none">• Silver-Alloy or Non-damageable material or metallic alloy with high resistance to corrosion and having a low electrical resistance.		
5	Product Requirement	<ul style="list-style-type: none">• Operating Voltage: 15 kV• Fiber sheath to ensure compliance with fault interrupting tests.• Universal Removable Buttonhead Fast Type• Sheath shall be adequately affixed to Buttonhead.		
6	Amp Rating	See table 1 on section 12		











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Final Audit Report

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