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Fuse Link, Universal Buttonhead, 15 kV, Type D

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Version History

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01	Mar. 09, 2022	Initial release
02	Jul. 07, 2022	Signature format modified
03	Dec. 16, 2025	General format revision. Item 010-08208 added. Section 9 revised. Changed Document Number (Legacy Number: 4350.149) to new Engineering Records nomenclature number 4300.50.149.

Item Version History

Warehouse Catalog #	Asset Suite #	Version	Date
010-08208	75984	1	12/16/2025
010-08101	54485	4	12/16/2025
010-08119	54486	4	12/16/2025
010-08127	54487	4	12/16/2025
010-08135	54488	4	12/16/2025
010-08143	54489	4	12/16/2025

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1. Introduction

This is a general specification that covers the minimum requirements for 15 kV, Type D fuse links with universal buttonhead to be used in the distribution and transmission 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 characteristics of the product.

2. Special Requirements

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this product to LUMA on previous orders, will not have to furnish samples at bid opening. The product will be received at LUMA's general warehouse (011) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse.

3. Literature

- 3.1. Descriptive and technical literature must be supplied by the vendor at time of bidding. This literature must include, but is not limited to, details of material, drawings, documented testing, and instructions for use and installation. **The literature must be an official document from and certified by the manufacturer.** Failure to submit documents on time and duly certified by the manufacturer will cause bidder disqualification.
- 3.2. If required by LUMA, final drawings and documentation shall be submitted by the vendor before the manufacturing and shipping process for approval.

4. Compatible with

For compatible manufacturer and model see Table 1. These models are examples of the product described in this document and do not represent a preference. LUMA will evaluate equally any model not listed here during any acquisition event

5. Markings

- 5.1. Containers shall be marked outside with LUMA Energy's purchase order and item number.
- 5.2. Individual package(s) shall be clearly marked with manufacturer name and item information (part number, serial number, quantity, etc.).
- 5.3. Packaging labels and tags shall be waterproof.

6. Packaging

- 6.1. All products 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.
- 6.2. A list of all parts included in the container and/or package must be provided at delivery time so the receiving personnel can verify that everything requested is present, avoiding any delay in the receiving process.

7. Number Per Package (Logistics)

Bidder shall indicate usual units per container at bid opening or as requested by LUMA.

8. Acceptance Criteria

- 8.1. Test required: certified by external qualified laboratories.
- 8.2. Product shall be manufactured in accordance with the latest issue below (section 8.3). When conflicts occur between purchaser's specifications and the latest issue below, the purchaser's specification shall prevail.
- 8.3. 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: for performing design tests for high-voltage (> 1kV) fuses, as well as for fuse disconnecting switches, are specified.
 - c. IEEE C37.42: for high-voltage (> 1kV) Class A and Class B expulsion and current-limiting fuses.

- 8.4. If any other standard different from the ones indicated in this document is used, the supplier must provide information showing compatibility with the required ones.

9. Description

- 9.1. These 15 kV universal buttonhead D-type fuse links are used to provide protection of overhead distribution transformers.
- 9.2. Fuse link shall be type D with time delay characteristics as per IEEE C37.42. Shall be of multiple elements to provide overload protection and high surge capability.
- 9.3. 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).
- 9.4. Shall be removable buttonhead.
- 9.5. Shall fit any standard make of open fuse cutout.
- 9.6. Link shall have a fiber sheath to ensure compliance with fault interrupting tests in accordance with latest ANSI standards.
- 9.7. Sheath shall be adequately affixed to buttonhead to prevent its removal during installation and to assist in low fault current interruptions.
- 9.8. Dimensions shall be 23" x 0.75".
- 9.9. Manufacturers shall guarantee the maximum tolerance for current in minimum melting curve shall not exceed 10 %.

10. Inspection

- 10.1. Upon inspection of incoming product, the purchaser reserves the right to refuse product shipments and to determine the acceptability or rejection of the product received. The supplier shall be liable for all costs incurred for a product that is rejected.
- 10.2. The acceptance of any product 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 products were found later to be defective.

11. Proposal Information

- 11.1. Submitted proposals must include:

- a. Technical information, drawings, and tests.
- b. Table of Compliance completed by the bidder with reference (see Appendix 1).

12. Table 1: Warehouse and Asset Suite Identification Number

Amp Rating	Warehouse Catalog #	Asset Suite #	Compatible Manufacturer & Model
3A	010-08208	75984	Eaton FL3D3
5A	010-08101	54485	Eaton FL3D5
7A	010-08119	54486	Eaton FL3D7
10A	010-08127	54487	Eaton FL3D10
15A	010-08135	54488	Eaton FL3D15
20A	010-08143	54489	Eaton FL3D20

Appendix

Appendix 1: Table of Compliance

Line	Description	Pass/Fail (P/F)	Comments
1	Complies with the specification document 4300.50.149.		
2	Fuse type D		
3	Silver-alloy or any other non-damageable material or metallic alloy with high resistance to corrosion and having a low electrical resistance		
4	Removable buttonhead		
5	Shall fit any standard make of open fuse cutout.		
6	Link shall have a fiber sheath to ensure compliance with fault interrupting tests		
7	Sheath shall be adequately affixed to buttonhead		
8	Dimensions shall be 23" x 0.75".		

NOTE: This table is only a checklist for reference. The compliance must be with the complete document. Filling out the table with "PASS" won't be accepted as a compliance without the technical information required to certify it.











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