



Document Title:
5/8" Oval-Eye Bolt, Hot-Dip Galvanized

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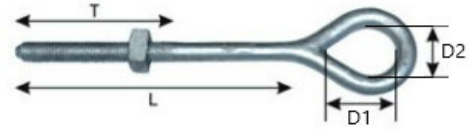
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Author Miguel J. Rios López, PE General Engineer, Distribution Stand & Materials	Signature 	Date Aug 15, 2023
Reviewer Rene Maldonado, PE Supervisor, Line Engineering Standards	Signature Rene Maldonado (Aug 16, 2023 08:24 EDT)	Date Aug 16, 2023
Reviewer Rafael Torres Martinez, PE Supervisor, Distribution Standards & Materials	Signature 	Date Aug 16, 2023
Approver Ricardo Castro Gómez, PE Manager, Distribution Standards & Materials	Signature 	Date Aug 17, 2023

Version History

Date	Revision Comments
Sep. 28, 2021	PREPA to LUMA Format (Rev. 7, 6, 6, 10)
Feb. 23, 2022	Sections 3, 4, and 7 modified (Rev. 8, 7, 7, 11)
Nov. 28, 2022	Cover Page and TOC added (Rev. 9, 8, 8, 12)
Aug. 14, 2023	General format modifications. Document changed as shared between T&D for items 002-00428, 002-00444, 002-00469 and 002-00501

Items	Warehouse Catalog	Version	Date
1	* 002-00428	10	08/14/2023
2	* 002-00444	9	08/14/2023
3	* 002-00469	9	08/14/2023
4	* 002-00501	13	08/14/2023



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1. Introduction

This is a general specification that covers the minimum requirements for a hot dip galvanized oval-eye bolt 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 electrical and mechanical characteristics of the equipment/material.

2. Special Requirements

Samples shall be furnished as requested by LUMA Energy. Vendors that have supplied this equipment/material to LUMA on previous orders will not have to furnish samples at bid opening. The equipment/material will be received at the LUMA's general warehouse (O11) at Palo Seco, Puerto Rico. Shipping will include transportation and unloading at the indicated warehouse.

3. Literature

Descriptive and technical literature must be supplied by the 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 Energy. Evidence of PREPA's and/or LUMA Energy's approval of the equipment/material shall be supplied by the 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. Compatible with

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

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6. Packaging

All equipment/material 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)

- 7.1. Twenty-five (25) units per box or as requested by LUMA.
- 7.2. Shall be shipped in carton boxes not to exceed 50 pounds (22.68 kg) gross weight.

8. Acceptance Criteria

- 8.1. Test required: certified by external laboratories.
- 8.2. Latest applicable codes, standards, and other regulations: ANSI/ASTM (A153, A307), ANSI/ASME (B18.2.1), IEEE (C135.1).

9. Description

- 9.1. These 5/8" (15.875 mm) oval-eye bolts are used in construction and maintenance of transmission and distribution lines.
- 9.2. Shall have the following characteristics:
 - a. Material: drop-forged structural hot dip galvanized steel according with ASTM A153, grade A, according to its tensile strength as per requirements of Class C ANSI/ASTM A307.
 - b. Shall be hex bolts with dimensions as per ANSI/ASME B18.2.1.
 - c. Shall have eleven (11) threads per inch.
 - d. Tensile strength: 12,400 lbf (55.2 kN) minimum as per ANSI/IEEE 135.1.
 - a. Stress area: 0.226 in^2 (1.5 cm^2).
 - e. Tolerance: The gaging limit for bolts and studs shall be verified during manufacture of use by assembly of a nut tapped to the oversize limit of 0.020" (0.51 mm) as per ANSI/ASTM A307.
- 9.3. Shall be furnished with one (1) 5/8" (1.59 cm) square nut.
- 9.4. Bolt and nut shall conform with IEEE C135.1 - 1999.
- 9.5. The nut top shall be flat and chamfered.
- 9.6. The diameter of the chamfered circle shall be equal to the maximum width across flats within a tolerance of -15 %.

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9.7. The bolt and nut shall be made so that the nut can run the entire bolt threaded length without the use of tools in accordance with IEEE C135.1 – 1999.

10. Inspection

The acceptance of any equipment/material 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 equipment/material 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	Warehouse Catalog #	Asset Suite #	Bolt Length (L)	Threaded Shank Length (T)	Oval-Eye Dimensions (D1 x D2)	Compatible Manufacturer & Model	
1	* 002-00428	8371	8" (20.3 cm)	4" (10.2 cm)	2" x 1-1/2" (5.1 x 3.8 cm)	Hubbell	29958
						MacGraw Edison	DF2E8
2	* 002-00444	8372	10" (25.4 cm)	4" (10.2 cm)	2" x 1-1/2" (5.1 x 3.8 cm)	Hubbell	29960
						MacGraw Edison	DF2E10
3	* 002-00469	8373	12" (30.5 cm)	6" (15.2 cm)	2" x 1-1/2" (5.1 x 3.8 cm)	Hubbell	29962
						MacGraw Edison	DF2E12
4	* 002-00501	8375	14" (35.6 cm)	6" (15.2 cm)	2" x 1-1/2" (5.1 x 3.8 cm)	Hubbell	29964
						MacGraw Edison	DF2E14

* Items 002-00428, 002-00444, 002-00469, and 002-00501 are also used in the 38kV transmission system.

— 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 (4350.074).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document. (ANSI/ASTM, ASME, and IEEE)		
3	Material	Hot Dip Galvanized Steel		
4	Product Requirements	Eleven (11) threads per inch.		
		Furnished with one (1) 5/8" square nut.		
		Flat and chamfered nut top.		
5	Minimum Tensile Strength	12,400 lbf		
6	Stress Area	0.226 in ²		
7	Dimensions	As per ANSI/ASME B18.2.1 (see Table 1).		












4350.074 Eyebolt 5-8 HDG (8-14-22)


Final Audit Report

2023-08-17

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