



Document Title:  
**Split Lock Washers, Stainless Steel 316**

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**Distribution**

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**Related/Referenced Documents**

N/A

**Version History**

Version	Date	Revision Comments
1	Mar. 18, 2022	Initial release with item 002-82930.
2	Mar. 30, 2023	Item 002-84576 created. Cover Page added. TOC and Table 1 models modified. Sections 8 and 9 modified. Document name modified.
3	Jun. 02, 2023	New Item added (002-84869). Table 1 and TOC modified.
4	Jun. 06, 2023	Updating catalog # for item 002-84869 on Table 1 and TOC.
5	Nov. 27, 2023	General format modifications. Document changed as shared with Transmission for Item 002-82930.



## Item Version History

Warehouse Catalog #	Asset Suite #	Version	Date
002-82930	82930	3	11/27/2023
002-84576	84576	2	11/27/2023
002-84869	84869	3	11/27/2023



## 1. Introduction

This is a general specification that covers the minimum requirements for stainless steel split lock washers 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 (011) 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. Evidence of LUMA Energy's approval of the equipment/material shall be supplied by the vendor if requested by LUMA Energy.

## 4. Markings

- 4.1. Packages 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.
- 5.2 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.

## 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. Standard package: as per Table 1 or as requested by LUMA Energy.

## 8. Acceptance Criteria

8.1. Test required: certified by external laboratories.

8.2. Latest applicable codes, standards, and other regulations:

a. ASME B18.21.1: Standard for dimensional requirements, physical properties, and related test methods for helical spring-lock washers (#0 through 3 inches), tooth-lock washers (#2 through 1 ¼ inches), and plain washers (#0 through 3 inches).

## 9. Description

9.1. Stainless steel split lock washers are used in mechanical connections with stainless-steel bolts.

9.2. Material: Stainless Steel 316

9.3. For dimensions, see Table 1.

## 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/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	Warehouse Catalog #	Asset Suite #	Bolt Diameter	Approx. Inner Diameter	Outer Diameter	Thickness	Package	Compatible Supplier & Model
1	* 002-82930	82930	1/2" (12.7 mm)	0.502" (12.8 mm)	0.869" (22.1 mm)	0.125" 3.2 mm)	25 units	Grainger (item 23NJ85) Fastenal (78071)
2	002-84576	84576	3/4" (19.0 mm)	0.753" 19.1 mm)	1.265" (32.1 mm)	0.188" (4.8 mm)	20 units	Grainger (item 23NJ87) Fastenal (78077)
3	002-84869	84869	3/8" (9.5 mm)	0.377" (9.6 mm)	0.68" (17.3 mm)	0.094" (2.4 mm)	50 units	Grainger (item 23NJ83) Fastenal (78067)

\* Item 002-82930 is also used in the 38kV transmission system.

— End of Specification —



## Appendix



## Appendix 1: Table of Compliance

Line	Criteria	Description	Pass/Fail (P/F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4350.110).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document (ASTM, ASME).		
3	Material	Stainless Steel 316		
4	Dimensions (1/2": 002-82930)	<ul style="list-style-type: none"><li>• 0.502" inside diameter</li><li>• 0.869" outside diameter</li><li>• 0.125" thickness</li></ul>		
5	Dimensions (3/4": 002-84576)	<ul style="list-style-type: none"><li>• 0.753" inside diameter</li><li>• 1.265" outside diameter</li><li>• 0.188" thickness</li></ul>		
6	Dimensions (3/8": 002-84869)	<ul style="list-style-type: none"><li>• 0.377" inside diameter</li><li>• 0.680" outside diameter</li><li>• 0.094" thickness</li></ul>		












# 4350.110 Split Lock Washers, SS (11-27-2023)


Final Audit Report


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