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Copper Compression Connectors 2 Holes, Long Barrel

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Document History

Date	Revision Comments
Dec. 21, 2021	PREPA to LUMA format.
Jul. 26, 2023	Cover page added, document changed as shared between T&D for Items 002-09833 and 038-00786, and general format and TOC modifications.

Items	Warehouse Catalog #	Version	Date
1	002-09833	4	7/26/2023
2	038-81460	3	7/26/2023
3	038-00786	5	7/26/2023
4	038-01487	4	7/26/2023
5	038-00778	6	7/26/2023



Copper Compression Connectors

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1. Introduction

This is a general specification that covers the minimum requirements for copper, 2 holes, and long barrel compression connectors 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 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. 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 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 manufacturers and models 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.

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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)

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. UL Listed
 - b. UL 486A-486B: For single-polarity connectors for use with all alloys of copper or aluminum, or copper-clad aluminum conductors.
 - c. RoHS compliance

9. Description

- 9.1. Used for terminating insulated copper conductors when mechanical connection is needed.
- 9.2. Electro tin plated copper compression connector with two (2) hole tongue, long barrel, and no inspection window.
- 9.3. Must be long barrel to allow for an increased number of crimps which will increase the mechanical strength of the connection.
- 9.4. Shall be designed with an internal chamfer at the wire entry to ensure smooth insertion of the wire, preventing possible damaging of the strands.
- 9.5. Must have two (2) hole tongue/tang to minimize the terminations from loosening or rotating under vibration, movement, or heat cycling.
- 9.6. Tongue holes must be 1/2" (12.7 mm) in diameter with 1-3/4" (44.45 mm) stud hole spacing.
- 9.7. Shall be electro-tin plated to reduce galvanic corrosion and resist corrosive elements.
- 9.8. Must be clearly marked with stamping and barrel color coding to show conductor range and tooling information.
- 9.9. The use of oxide inhibiting compound is mandatory during installation.

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9.10. See Table #2 for connector characteristics and tooling information.

10. Inspection

The acceptance of any material or 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

Warehouse Catalog #	Asset Suite #	Suggested Manufacturer	Model	Conductor Size	Color Code	Standard Package
* 002-09833	56696	Burndy	YA2C2N	#2	Brown	25
038-81460	81460	Burndy	YA252N	1/0	Pink	10
* 038-00786	54678	Burndy	YA282N	4/0	Purple	10
038-01487	56912	Burndy	YA342N	500 MCM	Brown	1
038-00778	54677	Burndy	YA392N	750 MCM	Black	6

* Items 002-09833 and 038-00786 are also used in the 38kV transmission system.

13. Table 2: Connector Characteristics and Tooling Information

Model	Tongue Width	Total Length	Barrel Length	Tongue Thickness	Die Index
YA2C2N	0.83 in (21.08 mm)	4.64 in (11.79 cm)	1.25 in (3.17 cm)	0.12 in (3.05 mm)	10
YA252N	0.83 in (21.08 mm)	4.81 in (12.22 cm)	1.38 in (3.50 cm)	0.11 in (2.79 mm)	12
YA282N	1.02 in (25.91 mm)	5.17 in (13.13 cm)	1.62 in (4.11 cm)	0.14 in (3.56 mm)	15
YA342N	1.55 in (39.37 mm)	6.06 in (15.39 cm)	2.25 in (5.71 cm)	0.23 in (5.84 mm)	20 or 299
YA392N	1.91 in (48.51 mm)	6.87 in (17.45 cm)	2.88 in (7.31 cm)	0.27 in (6.86 mm)	24

— 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 (4350.132).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document (UL)		
3	Type	Compression connector with two (2) hole tongue, long barrel, and no inspection window.		
4	Material	Electro tin plated copper		
5	Product Requirement	Long barrel with an internal chamfer at the wire entry.		
		Tongue: 2 holes, 1/2" diameter with 1-3/4" spacing between holes.		
6	Cable Size	As per Table 1.		
7	Color Code	As per Table 1.		
8	Dimensions	As per Table 2.		











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Final Audit Report

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