



Document Title:

Accessories for URD Mole Connector, Type ZM & ZMT, Size B

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Author

Miguel J. Rios López, PE
Standards Engineer, Distribution Stand & Materials

Signature and Date

Oct 4, 2022

Reviewer

Rafael Torres Martinez, PE
Supervisor, Distribution Standards & Materials

Signature and Date

Oct 4, 2022

Approver

Ricardo Castro Gómez, PE
Manager, Distribution Standards & Materials

Signature and Date

Oct 5, 2022

Version History

Date	Revision Comments
May. 13, 2022	Document 4350.174 created for item 038-83169. Document 4350.215 created for item 038-83168. Document 4350.217 created for item 038-83159. Document 4350.216 created for items 038-83161 to 038-83167.
Oct. 4, 2022	All documents merged into one (4350.174), so title was changed. Cover page added. Sections 1, 5, 7, 9, and Appendix were edited.

Warehouse Catalog	Item Version	Date
038-83169	2	10/04/2022
038-83168	2	10/04/2022
038-83159	2	10/04/2022
038-83161	2	10/04/2022
038-83162	2	10/04/2022
038-83163	2	10/04/2022
038-83164	2	10/04/2022
038-83165	2	10/04/2022
038-83166	2	10/04/2022
038-83167	2	10/04/2022



Equipment Specification
Document No.: 4350.174
Originating Department: Distribution Engineering

Accessories for URD Mole Connector, Type ZM & ZMT, Size B



1. Introduction

This is a general specification that covers the minimum requirements for connector URD mole accessories 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 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. Packaging labels and tags shall be waterproof.

5. Equal or Approved Equal to

Burndy (see Tables 1, 2, 3, and 4 for models).

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.

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7. Number Per Package (Logistics)

Seller shall indicate the units per package of each model or as requested by LUMA.

8. Acceptance Criteria

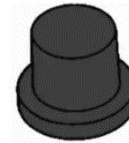
- 8.1. Test required: certified by external qualified laboratories.
- 8.2. Latest applicable codes, standards, and other regulations.

9. Description

9.1. These URD mole connector accessories are used in underground residential distribution systems for Burndy mole connectors with outlet size arrangement “B”.

9.2. Mole Outlet Plug, Type Z-P

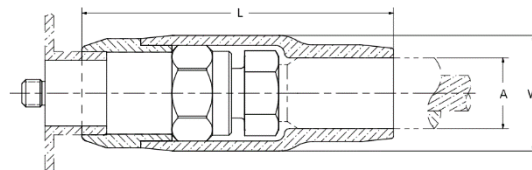
- 1. These plugs are used in underground residential distribution systems to facilitate sealing mole outlets not currently in use.
- 2. Shall be suitable for URD mole type ZM & ZMT with outlet size “B”. The mole models used are Burndy ZM825B (038-83158) & ZMT925B (038-83225).
- 3. Material: Rubber
- 4. Approx. Height: 1-1/8” (2.86 cm)
- 5. Table 1: Warehouse and Asset Suite Identification Number



Item	Warehouse Catalog #	Asset Suite #	Burndy Mole Compatibility	Approximate Height	Suggested Model
1	038-83169	83169	ZM825B & ZMT925B	1-1/8” (2.86 cm)	Z34P

9.3. Mole Outlet Insulating Sleeve, Type Z-C

- 1. These plugs are used in underground residential distribution systems to produce a secure watertight joint with a minimum of taping.
- 2. Shall be used on mole outlets with socket and nut assemblies: Z34NRB
- 3. Material: Diatex
- 4. Approximate Dimensions:
 - a. Length (L): 5-3/16” (13.18 cm)
 - b. Width (A): 1-3/8” (3.49 cm)
 - c. Width (W): 2-1/8” (5.40 cm)



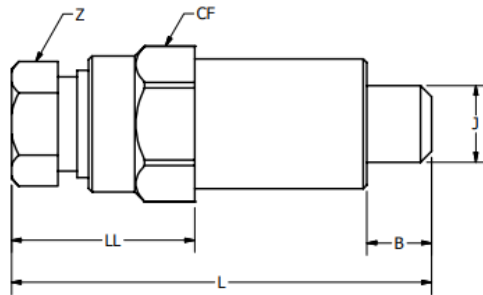
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5. Table 2: Warehouse and Asset Suite Identification Number

Item	Warehouse Catalog #	Asset Suite #	Burndy Socket & Nut Assembly Compatibility	Suggested Model
1	038-83168	83168	Z34NRB	Z88C3429

9.4. Mole Socket & Nut Assembly, Type Z-NRB

1. These socket & nuts assembly are used in underground residential distribution systems with Burndy mole outlet size B with the use of proper compression cones. For compression cones see section 9.5, Table 4.
2. Shall be suitable for conductor sizes from 2 AWG to 500 MCM.
3. Material: Tin Plated Copper
4. Approximate Weight: 1.5 lbs. (0.58 kg)
5. Approximate Dimensions:
 - d. Overall length (L): 3.69" (9.37 cm)
 - e. Length (LL): 1.75" (4.44 cm)
 - f. Stud length (B): 0.69" (1.75 cm)
 - g. Stud diameter (J): 7/8" (2.22 cm) - 14
 - h. Nut (Z) cross flats: 1.25" (3.18 cm)
 - i. Nut (CF) cross flats: 1.50" (3.81 cm)



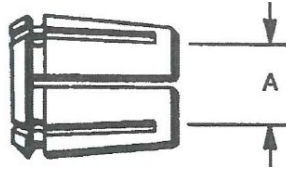
6. Table 3: Warehouse and Asset Suite Identification Number

Item	Warehouse Catalog #	Asset Suite #	Conductor Size Range Compatibility	Suggested Model
1	038-83159	83159	2 AWG to 500 MCM	Z34NRB

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9.5. Mole Compression Cone, Type Z

1. These compression cones are used in underground residential distribution systems with Burndy mole Z34NRB socket and nut assembly.
2. Shall provide maximum secureness in gripping conductor sizes from 2 AWG to 500 MCM.
3. Material: Tin Plated Brass
4. Approximate Diameter (A): see section 9.5.5, Table 4.



5. Table 4: Warehouse and Asset Suite Identification Number

Item	Warehouse Catalog #	Asset Suite #	Cable Size	Socket & Nut Assembly Required	Overall Diameter (A)	Suggested Model
1	038-83161	83161	2 AWG	Z34NRB	0.29" (7.37 mm)	Z2C34
2	038-83162	83162	1/0 AWG	Z34NRB	0.37" (9.40 mm)	Z2534
3	038-83163	83163	2/0 AWG	Z34NRB	0.42" (10.67 mm)	Z2634
4	038-83164	83164	4/0 AWG	Z34NRB	0.53" (13.46 mm)	Z2834
5	038-83165	83165	250 MCM	Z34NRB	0.58" (14.73 mm)	Z2934
6	038-83166	83166	350 MCM	Z34NRB	0.69" (17.53 mm)	Z3134
7	038-83167	83167	500 MCM	Z34NRB	0.81" (20.57 mm)	Z3434

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)

— End of Specification —



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Appendix



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Appendix 1: Mole Outlet Plug, Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4350.174).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document.		
3	Type	Z-P		
4	Material	Rubber		
5	Approximate Height	1-1/8"		
6	Product Requirement	Suitable for URD mole outlet types ZM & ZMT, size "B" (Burdy ZM825B & ZMT925B)		

Appendix 2: Mole Outlet Insulating Sleeve, Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4350.174).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document.		
3	Type	Z-C		
4	Material	Diatex		
5	Approximate Dimensions	See drawing on section 9.3.4: <ul style="list-style-type: none">• Length (L): 5-3/16"• Width (A): 1-3/8"• Width (W): 2-1/8"		
6	Product Requirement	<ul style="list-style-type: none">• Shall produce a watertight joint.• Suitable for mole outlets with socket and nut assembly Z34NRB.		



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Appendix 3: Mole Socket & Nut Assembly, Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4350.174).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document.		
3	Type	Z-NR		
4	Material	<ul style="list-style-type: none">• Copper• Tin Plated		
5	Approximate Dimensions	See drawing on section 9.4.5: <ul style="list-style-type: none">• Overall Length (L): 3.69"• Length (LL): 1.75"• Stud length (B): 0.69"• Stud diameter (J): 7/8" - 14• Nut (Z) cross flats: 1.25"• Nut (CF) cross flats: 1.50"		
6	Conductor Size Compatibility	2 AWG to 500 MCM		
7	Product Requirement	Suitable for mole outlet, size B with the use of proper compression cones (see Table 4 for compression cones).		



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Appendix 4: Mole Compression Cone, Table of Compliance

Line	Criteria	Description	Pass/Fail (P / F)	Comments
1	Specification	The Proponent complies with the corresponding specification document (4350.174).		
2	Industry Standards	The Proponent complies with the industry standards established in the specification document.		
3	Type	Z		
4	Material	<ul style="list-style-type: none">• Brass• Tin Plated		
5	Approximate Diameter (A)	As per Table 4		
6	Conductor Size Compatibility	2 AWG to 500 MCM (see Table 4)		
7	Product Requirement	<ul style="list-style-type: none">• Suitable for mole socket and nut assembly Z34NRB.• Provide maximum secureness in gripping conductors.		











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Final Audit Report

2022-10-05

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