

## 200 AMP, 35 kV Class 3Ø Rated Integrated Bushing

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The ERMCO Components, Inc. SURE MAKE separable connector 200 amp, 35 kV Class Three Ø Rated Loadbreak Integrated Bushing meets all requirements of ANSI/IEEE Std. 386 - Separable Insulated Connector Systems, and combines the advantages of reliable one-piece design with the operating features required for underground distribution switching. The bushing is designed for padmounted transformers, switchgear and other apparatus filled with transformer oil.

### Design Features:

- Insulating body is molded of an epoxy formulation designed for excellent electrical and mechanical properties.
- The ground shield coating is oil resistant. The coating covers from the elbow cuff mating surface and extends 0.50 inch beyond the sealing gasket through the tank wall.

### Ratings:

- Maximum Continuous Voltage 35 kV RMS
- Maximum Continuous Line to Ground Voltage 21.1 kV RMS
- Maximum Continuous Line to Line Voltage 36.6 kV RMS
- Continuous Current 200 AMP RMS
- Switching 10 Operations at 200 amp RMS at 36.6 kV
- Fault Closure 10,000 amp RMS Symmetrical at 36.6 kV after 10 switching operations for 0.17 seconds
- Basic Impulse Level 150 kV Crest



# Technical Description

ECI 94.11

*ERMCO Components, Inc.*

*Hickory, NC*

## ERMCO Components, Inc. SURE MAKE<sup>®</sup> 200 AMP, 35 kV CLASS 3 $\phi$ RATED INTEGRATED BUSHING

### Model Number 9U02DBC001

The ERMCO Components, Inc. SURE MAKE separable connector 200 amp, 35 kV Class Three  $\phi$  Rated Loadbreak Integrated Bushing meets all requirements of ANSI/IEEE Std. 386 - Separable Insulated Connector Systems, and combines the advantages of reliable one-piece design with the operating features required for underground distribution switching. The bushing is designed for padmounted transformers, switchgear and other apparatus filled with transformer oil.

The 9U02DBC001 integrated bushing when mated with an appropriate elbow meets the requirements of ANSI/IEEE Std. 386 pertaining to switching, fault closure, interchangeability, voltage and current withstand and corona extinction when installed in accordance with the published SURE MAKE instructions.

### DESIGN FEATURES:

- Insulating body is molded of an epoxy formulation designed for excellent electrical and mechanical properties.
- The ground shield coating is oil resistant. The coating covers the area, from the elbow cuff mating surface and extends 0.50 inch beyond the sealing gasket through the tank wall.
- All copper current path ensures the coolest operating temperature and highest reliability.
- Gasket location and compression are controlled by the molded in gasket retaining ring.
- Dimensions comply with ANSI/IEEE 386 Std. for Separable Insulated Connectors.
- Uses tank mounting hole of 2.75 inches diameter.
- Recommended torque values: External clamp is 80 inch lbs, Internal connection is 80 inch lbs.

### RATINGS:

- Maximum Continuous Voltage 35 kV RMS
- Maximum Continuous Line to Ground Voltage 21.1kV RMS
- Maximum Continuous Line to Line Voltage 36.6kV RMS
- Continuous Current 200 AMP RMS
- Switching 10 Operations at 200 amp RMS at 36.6kV
- Fault Closure 10,000 amp RMS Symmetrical at 36.6kV  
After 10 Switching Operations for 0.17 seconds.
- Short-Time Current Rating:
  - 0.17 second duration 10,000 AMP RMS SYM
  - 3.0 second duration 3,500 AMP RMS SYM
- Basic Impulse Level 150kV Crest  
(1.2 x 50 micro-second wave)
- 60 HERTZ Hipot (one minute) 50kV RMS
- DC hipot (15 minutes) 103kV
- Corona Extinction Voltage 26kV RMS  
(3 pico-coulombs)
- Outline Drawing: 32B028015

UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE

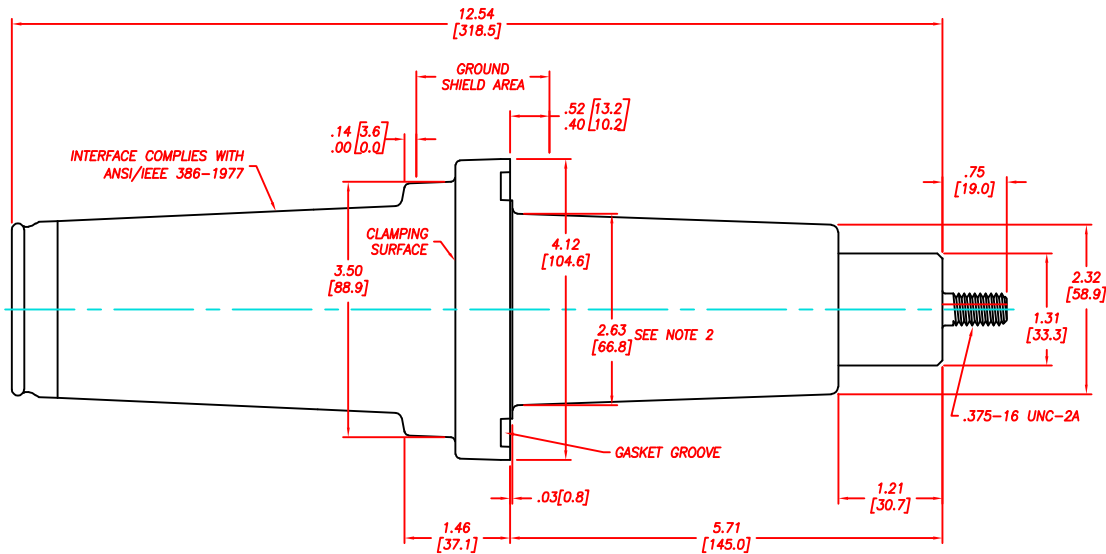
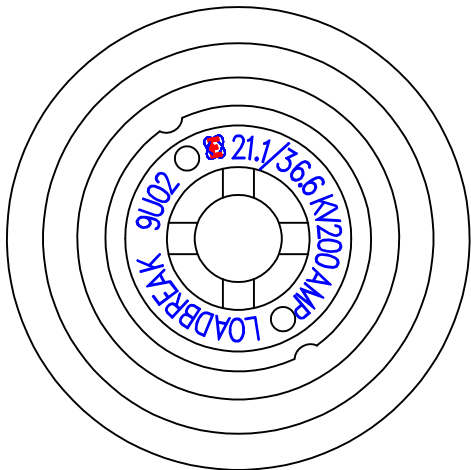
SURFACES	2 PL DEC	3 PL DEC	ANGLES
✓	±	±	± DEG

OUTLINE (INTEGRATED BUSHING)

FIRST MADE FOR

21.1/36.6 KV 1/BSH (RL)

ENLARGED FRONTAL VIEW



NOTES:

1. [ ] = DIM IN MILLIMETERS.
2. FOR 2.750 ±.015 [69.850 ±.381] TANK HOLE. BUSHING SECTION WITHIN TANK MUST BE IMMERSUED UNDER A SUITABLE HEAD OF OIL.
3. ORDER 9U09AAW216 FOR CLAMP AND GASKET.

MODEL NO: 9U02DBC001  
21.1/36.6KV - 200AMP

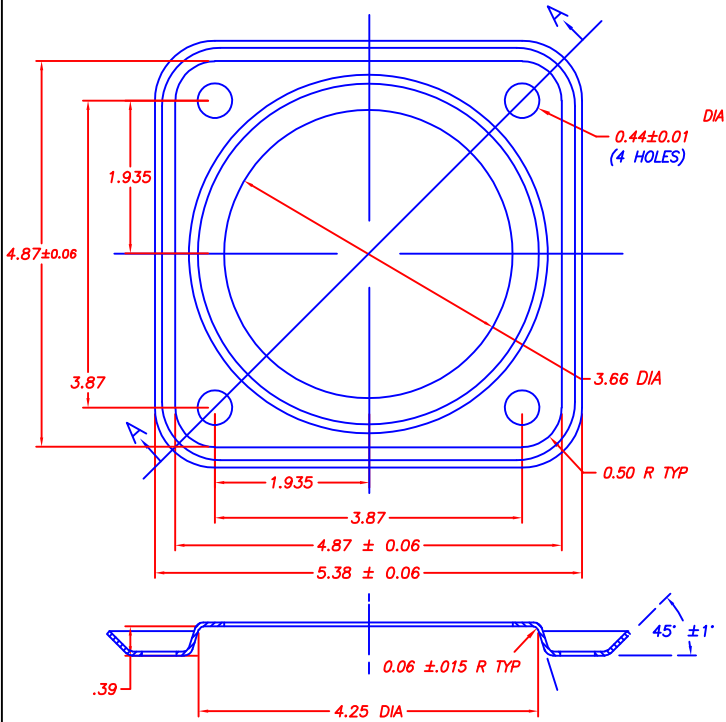
REVISIONS		APPROVALS		HICKORY ERMCO		32B028015		ERMCO-BTL	
7	MAR. 30,1984								
2	G. DAVIS OCT. 21,1981 RETRACTED, CUST'D 2.32 DIM WAS 2.12								
3	B. BRITIAN 7/21/85								
	REMOVED .13 WASHER ADDED FRONT VIEW								
4	G. BRYANT per R. Reckord DECEMBER 4, 1986 Corrected rev.3 representation of change. Outline format.								
5	S. STULPIN 20-JAN-89 CHG GE LOGO TO ERMCO UPDATED TEMPLATE								
MADE BY: A. MILLIKAN NOV. 06, 1980		ISSUED BY: S. STULPIN 04-FEB-99		HICKORY ERMCO		32B028015		PRINTS TO	
						CONT ON SH		SH	

UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE

SURFACES ✓	2 PL DEC ± 0.03	3 PL DEC ± 0.015	ANGLES ± 0.5 DEG
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FIRST MADE FOR 21.1 / 36.6 KV I/BSH (RL) 03989801

REVISIONS



**SECTION A-A**  
GASKET-DWG 32A026027

PT	THK	MODEL NO. CLAMP & GASKET	MATERIAL
01	.110	9U09AAW216	HR-LC STL STRIP- DRAW QUALITY BBA582 EXCEPT ROCKWELL "B" 60 MAX (AISI 1008) (ZINC CHROMATE)
03	.100	9U09AAW262	CR-CHROM NICKEL STL STRIP-ANNEALED-B7A65C3 (AISI TYPE 304)

6	STULPIN 14-NOV-97	ON POI-CHG PLING-WIS TIN PER ECN # R131	UPDATED TEMPLATE
7	S. STULPIN 04-FEB-99		
4	B. Britton 14-July-95	Retraced into Acid Rev's 1-3 Missing.	
5	K. Corroll 15-April-97	Updated Tolerances ECN #R87	

**ERMCO-BTL**

MADE BY: A. Millikan 8-Sept-80  
ISSUED BY: S. STULPIN 04-FEB-99

APPROVALS

HICKORY  
ERMCO