

# 200 A 35 kV class three-phase integral loadbreak bushing



## General

Eaton meets all the requirements of IEEE Std 386™ standard, Separable Insulated Connector Systems, and combines the advantages of a reliable one-piece design with the operating features required for underground distribution switching with its Cooper Power™ series 200 A, 35 kV three-phase rated integral loadbreak bushing. The bushing is designed for pad-mounted transformers, switchgear and other apparatus filled with transformer oil, Envirotemp™ FR3™ fluid or an approved equivalent. It eliminates the insert-to-well interface present in bushing well and insert primary terminations.

The three-phase rated 21.1/36.6 kV design has an ablative arc interrupter for superior arc quenching characteristics, and a fault activated piston contact assembly for a full 10 cycle, 36.6 kV fault close rating. The bushing has a continuous copper/copper alloy current path.

The 21.1/36.6 kV three-phase rating bushing should not be used with 21.1 kV single-phase rated loadbreak elbow connectors or grounding elbows. For quick identification, 21.1/36.6 kV three-phase rated bushing are color coded with purple nose pieces. Mating 21.1/36.6 kV three-phase rated loadbreak elbow connections (Catalog Section CA650068EN) have a molded purple cuff. Single-phase rated products are color coded with tan nose pieces and molded cuffs. When mated with comparably rated products, the bushing provides a fully shielded, submersible, separable connection for loadbreak operation.

## Installation

One-piece bushings are installed through the apparatus front plate and externally clamped. No special tools are required. Internal primary loads are threaded or bolted to the copper stud. Refer to *Service Information MN800008EN High-Voltage Primary Bushings Installation Instructions* for details.

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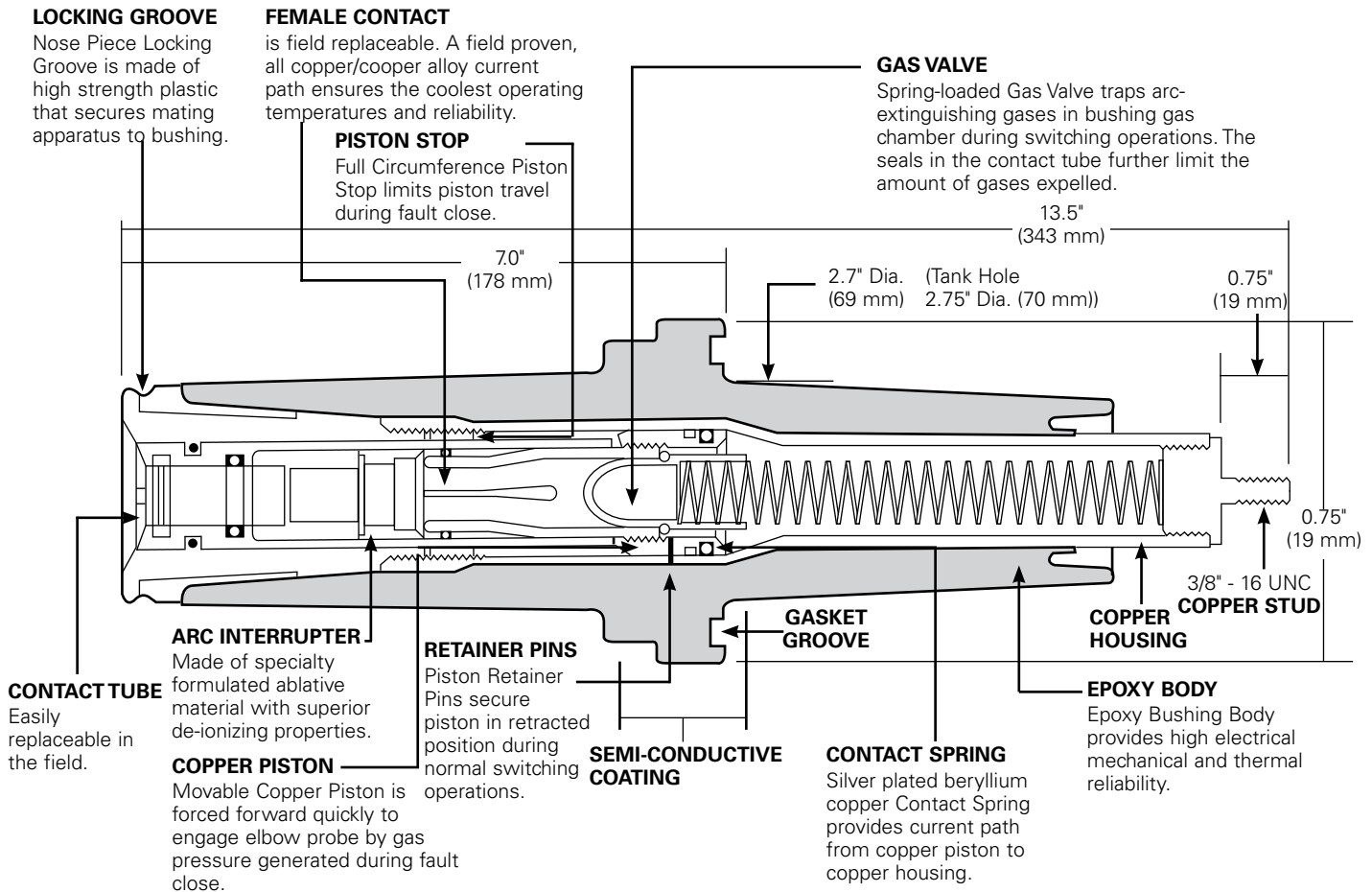


Figure 1. Cutaway illustration shows design detail and dimensions.

Note: Dimensions given are for reference only.

**Production tests**

Tests are conducted in accordance with IEEE Std 386™ standard.

- ac 60 Hz 1 Minute Withstand
  - 50 kV
- Minimum Corona Voltage Level
  - 26 kV

Tests are conducted in accordance with Eaton's requirements.

- Physical Inspection
- Periodic Dissection
- Periodic Fluoroscopic Analysis (X-ray)

Table 2. Current ratings and characteristics

Description	Amperes
Continuous Switching	200 A rms 10 operations at 200 A rms at 36.6 kV
Fault Closure	10,000 A rms symmetrical at 36.6 kV after 10 switching operations for 0.17 s
Short Time	10,000 A rms symmetrical for 0.17 s 3,500 A rms symmetrical for 3.0 s

Current ratings and characteristics are in accordance with IEEE Std 386™ standard.

Table 1. Voltage ratings and characteristics

Description	kV
Standard Voltage Class	35
Maximum Rating Phase-to-Phase	36.6
Maximum Rating Phase-to-Ground	21.1
AC 60 Hz 1 Minute Withstand	50
DC 15 Minute Withstand	103
BIL and Full Wave Crest	150
Minimum Corona Voltage Level	26

Voltage ratings and characteristics are in accordance with IEEE Std 386™ standard.

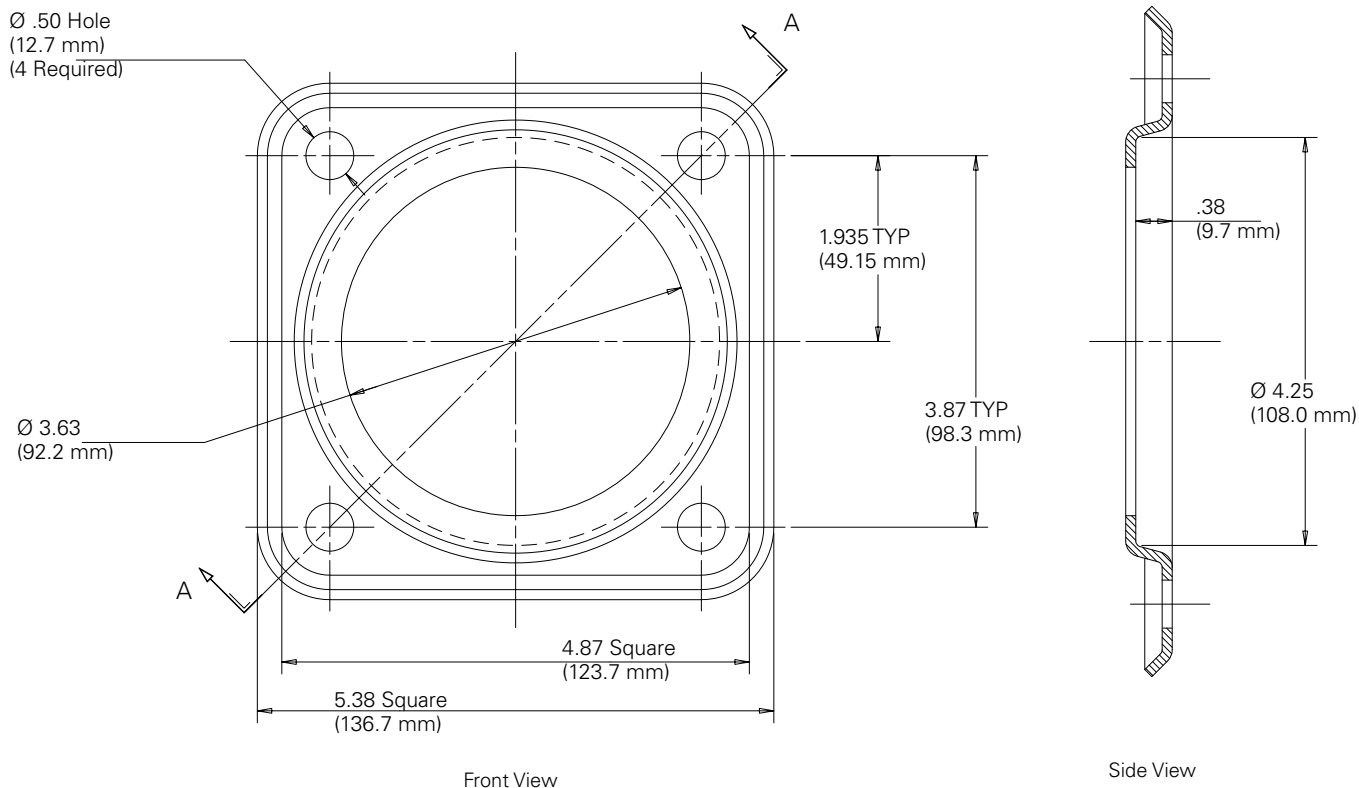


Figure 2. Bushing clamp.

Note: Dimensions given are for reference only.

### Ordering information

To order a 35 kV Class three-phase integral loadbreak bushing, specify the bushing, gasket and mounting clamp from Table 3.

Table 3. Bushing, gasket and clamp

Description	Catalog Number
Integral Bushing (good for oil and FR3)	LB235B150
Gasket	0537980C12
4-Stud Clamp	2603989B01
SF6 Bushing	LB235B150S
Integral Bushing with Gasket and Clamp	LB235B150GC

Note: Shipped in standard pack of 6.  
 Bushing alternative suffixes:  
 Add "X" for single pack bushing part number (e.g., LB235B150X)  
 Add "S" for SF<sub>6</sub>  
 Add "GC" for Gasket and Clamp

Table 4. Replacement parts

Description	Catalog Number
Contact Tube Assembly	2637407B05B
Contact Tube Replacement Tool	2637585B01
Shipping Cap	2606754A03

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[www.eaton.com/cooperpowerseries](http://www.eaton.com/cooperpowerseries).