

## 200 A 15, 25, and 35 KV class insulated standoff bushing installation instructions



## **DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY**

The information, recommendations, descriptions and safety notations in this document are based on Eaton Corporation's ("Eaton") experience and judgment and may not cover all contingencies. If further information is required, an Eaton sales office should be consulted. Sale of the product shown in this literature is subject to the terms and conditions outlined in appropriate Eaton selling policies or other contractual agreement between Eaton and the purchaser.

THERE ARE NO UNDERSTANDINGS, AGREEMENTS, WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, OTHER THAN THOSE SPECIFICALLY SET OUT IN ANY EXISTING CONTRACT BETWEEN THE PARTIES. ANY SUCH CONTRACT STATES THE ENTIRE OBLIGATION OF EATON. THE CONTENTS OF THIS DOCUMENT SHALL NOT BECOME PART OF OR MODIFY ANY CONTRACT BETWEEN THE PARTIES.

In no event will Eaton be responsible to the purchaser or user in contract, in tort (including negligence), strict liability or otherwise for any special, indirect, incidental or consequential damage or loss whatsoever, including but not limited to damage or loss of use of equipment, plant or power system, cost of capital, loss of power, additional expenses in the use of existing power facilities, or claims against the purchaser or user by its customers resulting from the use of the information, recommendations and descriptions contained herein. The information contained in this manual is subject to change without notice.

**Contents**

**DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY . . . . . I**

**SAFETY FOR LIFE . . . . . III**

**SAFETY INFORMATION . . . . . III**  
    Safety instructions . . . . . iii

**PRODUCT INFORMATION . . . . . 1**  
    Introduction . . . . . 1  
    Acceptance and initial inspection . . . . . 1  
    Handling and storage . . . . . 1  
    Quality standards . . . . . 1  
    Equipment required . . . . . 2  
    Tools required . . . . . 2

**INSTALLATION PROCEDURE . . . . . 2**



## Safety for life



Eaton's Cooper Power series products meet or exceed all applicable industry standards relating to product safety. We actively promote safe practices in the use and maintenance of our products through our service literature, instructional training programs, and the continuous efforts of all Eaton employees involved in product design, manufacture, marketing, and service.

We strongly urge that you always follow all locally approved safety procedures and safety instructions when working around high-voltage lines and equipment, and support our "Safety For Life" mission.

## Safety information

The instructions in this manual are not intended as a substitute for proper training or adequate experience in the safe operation of the equipment described. Only competent technicians who are familiar with this equipment should install, operate, and service it.

A competent technician has these qualifications:

- Is thoroughly familiar with these instructions.
- Is trained in industry-accepted high and low-voltage safe operating practices and procedures.
- Is trained and authorized to energize, de-energize, clear, and ground power distribution equipment.
- Is trained in the care and use of protective equipment such as flash clothing, safety glasses, face shield, hard hat, rubber gloves, clampstick, hotstick, etc.

Following is important safety information. For safe installation and operation of this equipment, be sure to read and understand all cautions and warnings.

### Hazard Statement Definitions

This manual may contain four types of hazard statements:

#### DANGER

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

#### WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

#### CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

#### CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in equipment damage only.

### Safety instructions

Following are general caution and warning statements that apply to this equipment. Additional statements, related to specific tasks and procedures, are located throughout the manual.

#### DANGER

**Hazardous voltage. Contact with hazardous voltage will cause death or severe personal injury. Follow all locally approved safety procedures when working around high- and low-voltage lines and equipment.**

G103.3

#### WARNING

**Before installing, operating, maintaining, or testing this equipment, carefully read and understand the contents of this manual. Improper operation, handling or maintenance can result in death, severe personal injury, and equipment damage.**

G101.0

#### WARNING

**This equipment is not intended to protect human life. Follow all locally approved procedures and safety practices when installing or operating this equipment. Failure to comply can result in death, severe personal injury and equipment damage.**

G102.1

#### WARNING

**Power distribution and transmission equipment must be properly selected for the intended application. It must be installed and serviced by competent personnel who have been trained and understand proper safety procedures. These instructions are written for such personnel and are not a substitute for adequate training and experience in safety procedures. Failure to properly select, install or maintain power distribution and transmission equipment can result in death, severe personal injury, and equipment damage.**

G122.3

## Product information

### Introduction

Eaton's Cooper Power series 200 A Insulated Standoff Bushing A meets the full requirements of IEEE Std 386™ standard - Separable Insulated Connector Systems and provides a single loadbreak interface made of high quality peroxide-cured EPDM rubber. It is used to isolate and sectionalize energized cable in pad-mounted cabinets, underground vaults, and other apparatus. Temporary or permanent parking of energized 200 A loadbreak elbow connectors that conform to IEEE Std 386™ standard is simplified with use of the insulated standoff bushing.

The insulated standoff bushing is designed to be installed in the parking stand mounted on a transformer or other apparatus. A grounding lug is provided on the standoff bushing bracket for attachment of a drain wire to ensure deadfront construction. When mated with a comparably rated product, the insulated standoff bushing provides a fully-shielded, submersible, separable connector for energized operation.

---

### WARNING

---

**Hazardous Voltage. All associated apparatus must be de-energized during any hands-on installation or maintenance. Failure to comply could result in death and severe personal injury.**

---

### CAUTION

---

**The 200 A insulated standoff bushing is designed to be operated in accordance with normal safe operating procedures. These instructions are not intended to supersede or replace existing safety and operating procedures.**

**The insulated standoff bushing should be installed and serviced only by personnel familiar with good safety practices and the handling of high-voltage electrical equipment.**

---

### Read this manual first

---

**Read and understand the contents of this manual and follow all locally approved procedures and safety practices before installing or operating this equipment.**

### Additional information

These instructions cannot cover all details or variations in the equipment, procedures, or process described nor provide directions for meeting every possible contingency during installation, operation, or maintenance. For additional information, contact your representative.

### Acceptance and initial inspection

Each insulated standoff bushing is in good condition when accepted by the carrier for shipment. Upon receipt, inspect the shipping container for signs of damage. Unpack the insulated standoff bushing and inspect it thoroughly for damage incurred during shipment. If damage is discovered, file a claim with the carrier immediately.

### Handling and storage

Be careful during handling and storage of the insulated standoff bushing to minimize the possibility of damage. If the insulated protective bushing is to be stored for any length of time prior to installation, provide a clean, dry storage area.

### Quality standards

ISO 9001 Certified Quality Management System

# 200 A 15, 25, and 35 kV class insulated standoff bushing installation instructions

## Equipment required

- Insulated Standoff Bushing Assembly Kit including:
  - Insulated Standoff Bushing
  - Instruction Sheet

## Tools required

- Hotstick

## Installation procedure

### Step 1.

#### Clean and lubricate

- Remove protective shipping cap.
- Clean interface surface of standoff bushing and lubricate with lubricant (purchased separately).

### Step 2.

#### Attach drain wire

- Attach copper drain wire (Minimum #14 AWG) from standoff bushing grounding lug to ground bus on apparatus.

### Step 3.

#### Install standoff bushing

- Grasp the eyebolt on the standoff bushing with a hotstick.  
Using a hotstick, install the standoff bushing on the parking stand.
- Using a hotstick, turn the eyebolt clockwise to ensure rigid mounting.

**Note:** Insulated standoff bushings are designed to fit standard standoff brackets furnished with most apparatus.

### Step 4.

#### Operating procedures

- Attach a hotstick into the pulling eye of the loadbreak elbow. Disconnect the elbow from the bushing, position the elbow probe into the standoff tap and push tightly onto the standoff bushing.
- Cover the energized bushing with a grounded insulated protective cap.

**Note:** Standoff bushings must be covered with an insulated protective cap when not in use to keep the interface clean.

This page intentionally left blank.



**Eaton**  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
Eaton.com

**Eaton's Power Systems Division**  
2300 Badger Drive  
Waukesha, WI 53188  
United States  
Eaton.com/cooperpowerseries

© 2016 Eaton  
All Rights Reserved  
Printed in USA  
Publication No. MN650039EN Rev 0  
(Supersedes S500221 Rev 0)  
November 2016

Eaton is a registered trademark.

All trademarks are property  
of their respective owners.

For Eaton's Cooper Power series product  
information  
call 1-877-277-4636 or visit:  
[www.eaton.com/cooperpowerseries](http://www.eaton.com/cooperpowerseries).