

600 A 15 kV, 25 kV and 35 kV class bushing  
extender installation instructions



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## 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, 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 a hazardous situation which, if not avoided, will result in death or serious injury.

#### WARNING

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

#### CAUTION

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

#### CAUTION

Indicates a hazardous situation which, if not avoided, could 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 high voltage will cause death or severe personal injury. Follow all locally approved safety procedures when working around high- and low-voltage lines and equipment.**

#### 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.**

#### 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 may result in death, severe personal injury and equipment damage.**

#### 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.**

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**⚠ WARNING**

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**Visible break and adequate grounding must be provided before cable work proceeds. All associated apparatus must be de-energized during installation and maintenance. Failure to comply may result in death, severe personal injury and equipment damage.**

## Product information

The twin 600 A interfaces of the bushing extender allow installation on standard de-energized 600 A deadbreak interfaces for coupling reducing tap plugs, connecting plugs and apparatus bushings. When assembled to mating apparatus, it provides a completely submersible, fully shielded unit that meets the requirements of IEEE Std 386™ standard.

### 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.



Figure 1. 600 A bushing extender unit (35 kV shown)

### Acceptance and initial inspection

Each bushing extender is in good condition when accepted by the carrier for shipment. Upon receipt, inspect the shipping container for signs of damage. Unpack the bushing extender 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 bushing extender to minimize the possibility of damage. If the bushing extender is to be stored for any length of time prior to installation, provide a clean, dry storage area.

### Standards

ISO 9001 Certified Quality Management System

## Installation procedure

### Bushing extender kit

- Bushing Extender
- Silicone Lubricant
- Installation Instruction Sheet

### Installation instructions

#### Step 1

##### *Clean and lubricate*

- Remove protective cap from apparatus bushing and both ends of bushing extender.
- Clean and lubricate bushing extender interfaces with the lubricant supplied.
- Clean and lubricate apparatus bushing interface with lubricant supplied.
- Ensure that all mating surfaces are kept clean during installation.

#### Step 2

##### *Assemble*

- Push bushing extender onto apparatus bushing.
- Install mating component per the instructions provided with that component.

#### Step 3

##### *Install drain wire*

- Connect uninsulated copper drain wire from drain wire tabs on bushing extender to system ground and to mating component.

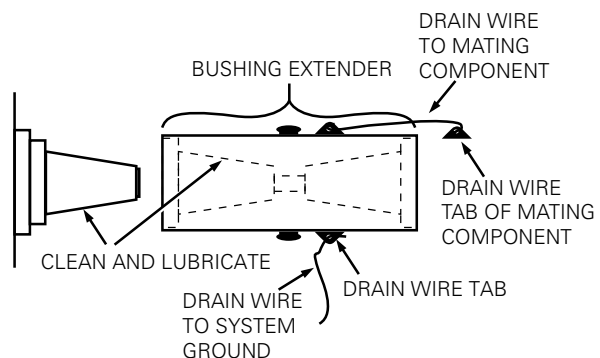


Figure 1. Line illustration of bushing extender installation

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