

# X-Limiter™ Hinge-Mount for S & C SML-4Z Fuse Mounting Assembly and Installation Instructions



*Powering Business Worldwide*

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## Safety for life



Eaton meets or exceeds all applicable industry standards relating to product safety in its Cooper Power™ series products. 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 arc 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:

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#### DANGER

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

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#### WARNING

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

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#### CAUTION

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

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#### CAUTION

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

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### 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.

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#### DANGER

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**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

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#### WARNING

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**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

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#### WARNING

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**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

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#### WARNING

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**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.**

G122.2

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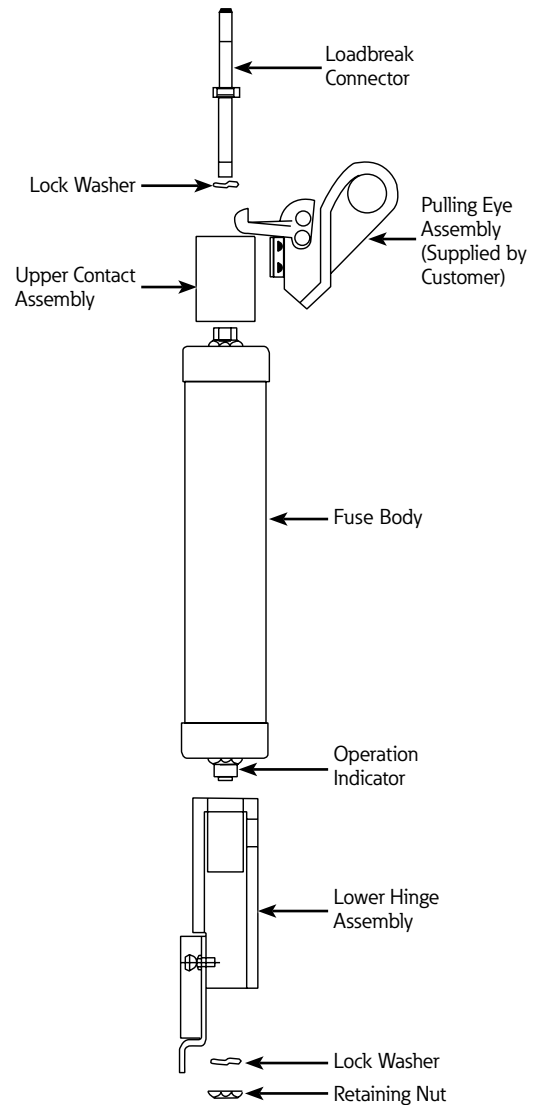
## Product information

### CAUTION

Eaton's Cooper Power series X-Limiter Hinge-mount fuse is designed to be installed in accordance with normal safe operating procedures. These instructions are not intended to supersede or replace existing safety and operating procedures. **READ ALL THE INSTRUCTIONS BEFORE INSTALLING THE X-LIMITER HINGEMOUNT FUSE.** The Hinge-mount fuse should be installed and serviced only by personnel familiar with good safety practice and the handling of high-voltage electrical equipment.

### Introduction

The X-Limiter hinge-mount, full range current-limiting fuse has been adapted to fit the S & C SML®-4Z indoor mount. The use of the existing S & C upper pulling eye assembly, along with the supplied lower hinge assembly, allow for complete interchangeability with the S & C SML-4Z expulsion fuse. A viewing window is provided in the lower hinge assembly to view the indicator pin after fuse operation. The assembled fuse is installed and removed using the S & C Universal Pole and Grapppler® device.



**Figure 1. Exploded view of X-Limiter hinge-mount fuse for S&C SML-4Z mounting.**

### Retrofit installation of X-Limiter hinge-mount fuse

Retrofit installation includes removing the existing S & C SML-4Z expulsion fuse and replacing it with the X-Limiter hinge-mount current-limiting fuse in accordance with the following steps:

#### 1. Removal of S & C SML-4Z expulsion fuse:

- A. Open the fuse compartment door(s) and secure with the door holder. If front barriers are provided, remove them at this time.
- B. Using the S & C Grapppler device on the end of the S & C Universal Pole, in accordance with the S & C operating procedures, position the Grapppler prong inside the pulling eye on the top of the fuse.

## X-Limiter™ Hinge-Mount for S & C SML-4Z Fuse

- C. Pull the fuse through its full travel without hesitating at any point. Downward pressure should be applied on the Universal Pole during this operation to prevent any bounce back towards the closed direction.
- D. Position the cone of the Grappler device in the pulling eye and cradle the fuse in the Grappler prongs. Move the pole forward until resistance is felt between the Grappler device and the fuse. Then remove by lifting forward and upward.
- E. Remove the pulling eye assembly from the upper contact assembly of the S & C SML-4Z expulsion fuse. The pulling eye assembly is needed with the X-limiter Hinge-mount fuse.

### 2. Assembly of X-Limiter hinge-mount current-limiting fuse:

- A. When shipped from the factory, the X-Limiter Hinge-mount fuse will have the upper and lower contact assemblies already connected. It is only necessary to install the S & C pulling eye assembly (removed from the S & C SML-4Z expulsion fuse) to the upper contact assembly. Alignment will be adjusted at the factory.
- B. Install the pulling eye on the upper contact assembly making sure that the hooking device faces away from the fuse body as shown in Figure 1.

### 3. Installation

- A. Using the S & C Grappler device in accordance with S & C's operating procedures, position the cone in the fuse pulling ring and cradle the fuse on the Grappler prongs. Lift the fuse and lower it into its hinge. Make sure that the fuse is seated correctly in the hinge.
- B. Insert the longest prong of the Grappler device into the pulling eye. With a firm push, close the fuse in one complete motion.
- C. When fuse installation is complete, install barrier boards, close and lock the switchgear door(s).

### Fuse replacement

Fuse replacement instructions include the steps to be taken after an X-limiter Hinge-mount current-limiting fuse operates and needs replacement.

#### 1. For removal of X-limiter Hinge-mount current-limiting fuse, follow the same steps outlined above in "Removal of S & C SML-4Z expulsion fuse:"

#### 2. Assembly of X-limiter Hinge-mount current-limiting fuse

- A. On the lower hinge assembly, remove the retaining nut and lock washer holding the hinge assembly to the fuse body. Retain this hardware for reassembly.
- B. Loosen and remove the loadbreak connector and lock washer holding the upper contact assembly to the fuse body. Retain this hardware for reassemble.
- C. Locate the indicator end of the replacement fuse. Mount the lower hinge assembly and install the lock washer and retaining nut from A above. Tighten to 25 ft-lbs.
- D. Place the fuse on a flat surface with the flat part of the lower hinge assembly facing the surface. Install the upper contact assembly, lock washer and loadbreak connector making sure that the pulling eye remains perpendicular to the flat surface. Tighten the loadbreak connector to 10 ft-lbs. Check alignment. Adjustments can be made on the pulling eye assembly to ensure proper latching. When proper latching is obtained, tighten the four screws holding the pulling eye assembly to the contact assembly.

#### 3. For installation follow the same steps outlined above in "Retrofit installation of X-Limiter hinge-mount fuse" section.

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