

# X-Limiter™ Hinge-Mount for S&C SMD® -20 Fuse Mounting Assembly and Installation Instructions



*Powering Business Worldwide*

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# Contents

<b>DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY</b> .....	<b>ii</b>
<b>SAFETY FOR LIFE</b> .....	<b>iv</b>
<b>SAFETY INFORMATION</b> .....	<b>iv</b>
Safety instructions .....	iv
<b>PRODUCT INFORMATION</b> .....	<b>1</b>
Introduction .....	1
Retrofit installation of X-Limiter hinge-mount fuse .....	1
Fuse Replacement .....	2



## 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 Hinge-Mount 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 SMD®-20 cutout mounting. The use of the S&C standard end fittings allow for complete interchangeability with fuses mounted in S&C SMD-20 cutouts.

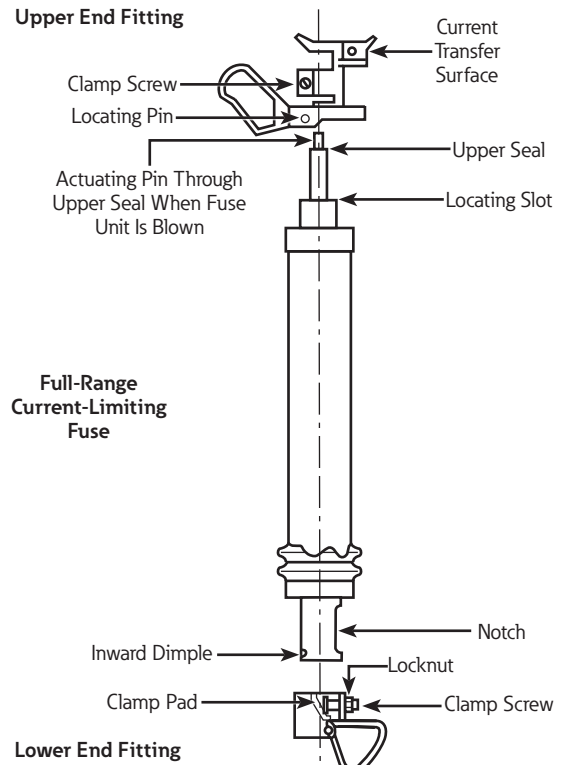
### CAUTION

**Do not install fuse units if the blown fuse indicator has been damaged or destroyed, as the fuse's moisture seal will be damaged, which may cause fuse failure.**

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

Initial retrofit installation includes removing the existing fuse from the S&C SMD-20 cutout and replacing it with the X-Limiter fuse in accordance with the following steps.

1. Removal of fuse in the S&C SMD-20 cutout:
  - A. The fuse will be in an open position after it has operated. **Remove it from the mounting using a standard insulated hotstick.**
  - B. **Loosen the upper- and lower-end fitting-clamp screws.** With a screwdriver, force the upper-end fitting clamp apart slightly, and slide both end fittings off the upper end of the fuse unit.
  - C. **Save the end fittings for use with the X-Limiter fuse.**



**Figure 1. Line illustration of X-Limiter hinge mount for S&C SMD-20 fuse mounting.**

2. Assembly of X-Limiter hinge-mount current-limiting fuse: When shipped from the factory, the X-Limiter fuse will be readily equipped for installation.
3. Attachment of end fittings on the X-Limiter fuse:
  - A. **The lower end fitting must be attached first.** The X-Limiter fuse has a notch in the bottom which receives the S&C end fitting wedge. Care must be taken to hand tighten the bolt such that the end fitting wedge is in the fuse notch. When properly installed, the bottom of the fitting is even with the bottom of the fuse, to about 1/8" above the bottom of the fuse, and the inward dimple is centered and visible on the opposite side of the fittings. (Location of notch and inward dimple are shown in Figure 1.) When the end fitting is properly located tighten the clamp screw and locking nut securely.

### CAUTION

**If upper and lower contacts are not properly aligned DO NOT FORCE. Loosen clamp screws and realign.**

- B. Slide the upper end fitting over the X-Limiter fuse. Align the locating pin inside the end fitting with the locating slot of the fuse and slide it down. When the locating pin is placed in the slot, tighten the clamp screw securely. (Refer to Figure 1.)

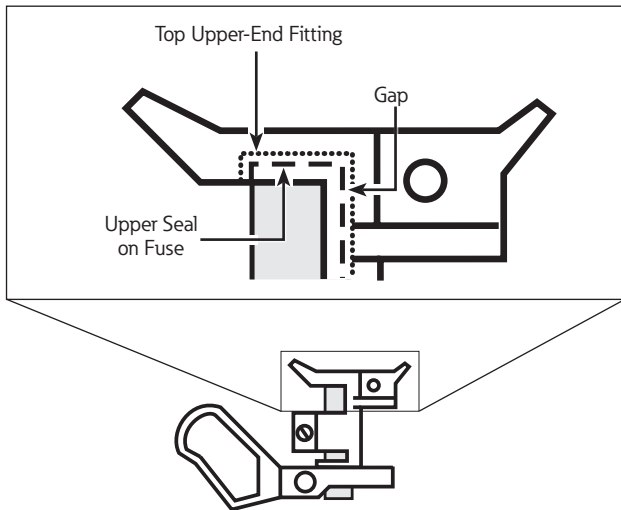
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**CAUTION**

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**In accordance with Figure 2, verify that gaps are eliminated between the top of the upper-end fitting and the upper seal on the fuse. Gaps may cause latch failure.**

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**Figure 2. Illustration of gap at top upper-end fitting.**

4. Installation of X-Limiter hinge-mount fuse with end fittings into SMD-20 cutout: Refer to manufacturer's operating procedure for installation of fuse into cutout.

### **Fuse Replacement**

When the X-Limiter hinge-mount fuse clears a fault, the actuating pin causes the fuse to drop open. For removal and installation of a new X-Limiter hinge-mount current-limiting fuse, follow the steps outlined on page 1, "Retrofit installation of X-Limiter hinge-mount fuse".

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