

# Hinge-Type NX<sup>®</sup> Fuse Contact Assemblies Mounting 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

### Introduction

These instructions cover the mounting procedures recommended by Eaton for installing hinge-type NX fuse contact assemblies.

### 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

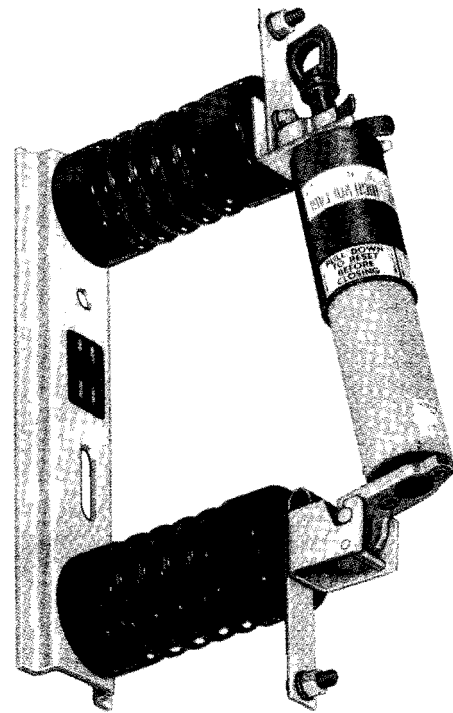
Each fuse is inspected, tested at the factory. It is in good condition when accepted by the carrier for shipment. Upon receipt of a fuse, inspect the fuse thoroughly for damage and loss of parts incurred during shipment. If damage or loss is discovered, file a claim with the carrier immediately.

### Handling and storage

If the fuse is to be stored for an appreciable time before installation, provide a clean, dry storage area. Locate the fuse so as to minimize the possibility of mechanical damage.

### Standards

ISO 9001 Certified Quality Management System.



**Figure 1. Hinge-type NX fuse with Arc Strangler loadbreak device.**

## Mounting instructions

The upper contact assembly consists of silverplated copper contacts, a stainless steel contact reinforcement, and a corrosion-resistant-steel contact guide. The contact guide contains a rubber bumper, the element that releases the latch spring on the Arc Strangler loadbreak device during operation.

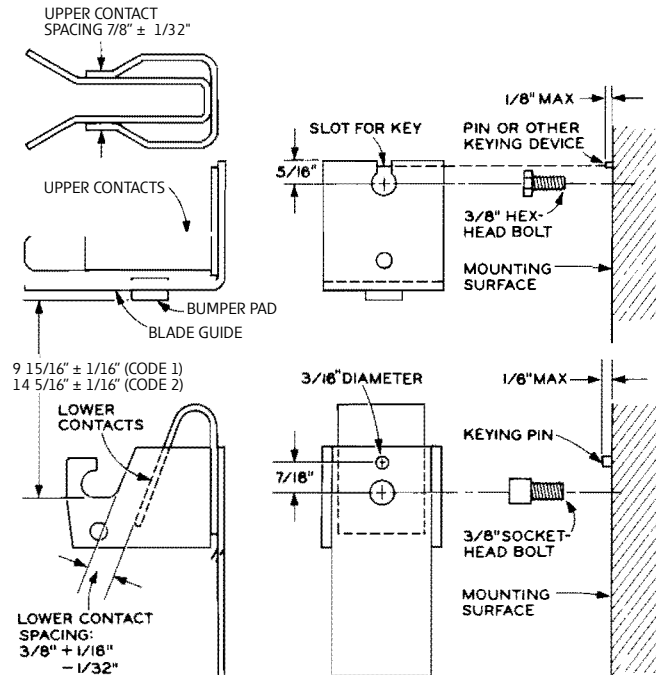
The lower contact and hinge assembly consists of silver plated copper contacts, a steel support-and-hinge assembly, and a tinplated copper connect shunt.

### Upper contact assembly

1. Make sure the spacing and tolerances are the same as those shown in Figure 2 for the upper contact assembly. Install mounting plate (leaving benelex barriers off) and tighten mounting bolts securely.
2. Use a pin or other keying device in the slotted mounting to prevent rotation around the mounting.

**Note:** It is essential to the proper operation of the Arc Strangler loadbreak device that rotation around the mounting be prevented.

## Hinge-Type NX® Fuse Contact Assemblies



**Figure 2. Dimensions and tolerances for mounting hinge-type NX fuse contact assemblies.**

### Lower contact assembly

**Note:** The lower contact assembly must be mounted with a socket-head bolt (allen-head type). Do not use a standard hex-head bolt. (A standard hex-head bolt will cause deformation of the spring contacts resulting in improper contact action.)

1. Make sure the spacing and tolerances are the same for the lower contact assembly as those shown in Figure 2.
2. Use a pin in the keyhole beside the mounting hole to prevent rotation of the bottom hinge contact.

### CAUTION

When additional hardware (such as an L bracket) is required, exercise care in its selection to assure the rigidity of the mountings. Supporting pieces must be at least as strong as the steel support members of the basic assemblies. When the additional support hardware is required to carry current, a shunting strap may be added if steel is used to provide a rigid mounting.

### Adjustments

1. Make adjustments in the position of one contact assembly relative to the position of the other contact assembly by moving the entire assembly, rather than by bending the component parts.
2. Tighten mounting bolts to a minimum torque of 250 pound-inches.

### Inspection and testing

#### Mounting arrangement - design verification test

Test the design of the mounting arrangement for strength and rigidity by allowing a fuse of the rating to be used to swing down in the hinge by gravity 25 times without loss of adjustment.

### Fuse units

After installation, test each fuse unit:

1. Close, open, and reclose each fuse, making sure the two contact assemblies are properly aligned and that the Arc Strangler loadbreak device operates properly.
2. Check the distance between contact assemblies, making sure the distance is within the tolerance specified in Figure 2.
3. Make sure the lower contact spacing is within the tolerance shown in Figure 2 so that the hinge end of the NX fuse-Arc Strangler assembly drops into position without interference from the spring.

**Note:** The lower contact spacing is set at the factory and does not normally require adjustment. However, it should be checked to make sure the spacing is not out of tolerance due to handling.

4. Make sure the upper contact spacing is within the tolerance specified in Figure 2.

**Note:** Upper contact spacing is set at the factory and does not normally require adjustment. However, it should be checked to make sure the spacing is not out of tolerance due to handling.

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Printed in USA  
Publication No. MN132022EN  
November 2016

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