Current-Limiting – Type NXC® (C-Rated) Fuse Installation Instructions

Powering Business Worldwide

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

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:

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. G122.2

General

Standard safety procedures should be followed when removing and installing NXC® fuses on capacitor blocks.

Removal

1. Remove all power from capacitor block.
2. Allow capacitors to discharge internally for five minutes; then manually discharge all capacitors, including the suspected failed capacitor unit.
3. Remove fuse leader from capacitor bushing.
4. Remove fuse from bus bar and retain mounting hardware for installation of replacement fuse.

Installation

NXC fuses may be mounted by various means on capacitor blocks. This instruction bulletin provides information for the four standard configurations as shown in Figure 1 through Figure 4.

⚠ WARNING

NXC fuses should be installed with the leader pointing down (see Figure 1 through Figure 4).

1. Verify that the proper rated fuse is being installed by checking information provided on fuse identification label.
2. Remove leader wire from the hex-head bolt supplied with the fuse. If a hose clamp is supplied with the replacement fuse, remove the clamp from the fuse before fuse installation (see Figure 5).
3. Secure the fuse to the bus bar with the .50-13 UNC-2A x .75 stainless steel hex reg bolt supplied with the fuse or use the mounting hardware retained from the fuse that was removed.

⚠ CAUTION

Do not apply any type wrenching tool directly on the fuse when installing it. Sufficient torque can be applied with the hand for a proper fit.

4. Check that the recommended spacing exists between end of main fuse housing and closest conductive part on capacitor. Refer to Figure 1 through Figure 4 as applicable.

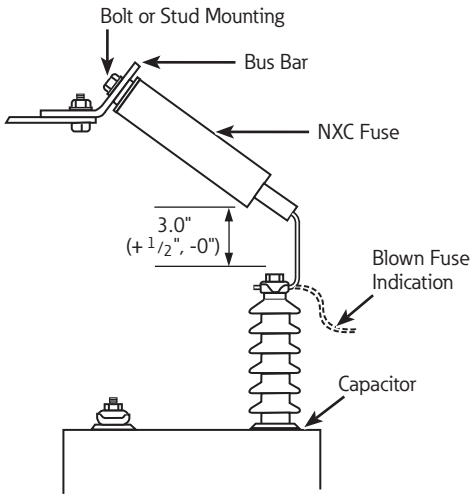

Figure 1. NXC fuse angle-mounted on vertical capacitor bank.

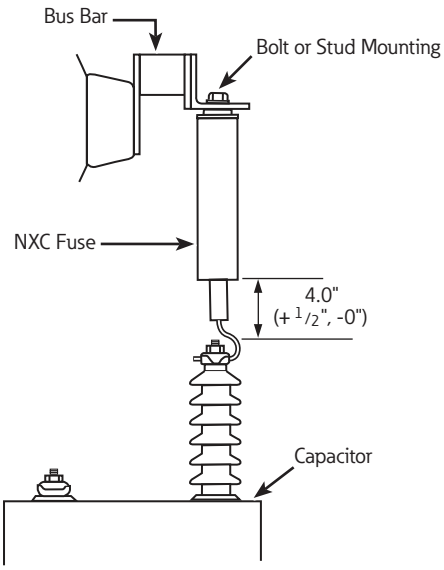

Figure 2. NXC fuse vertically mounted on vertical capacitor bank.

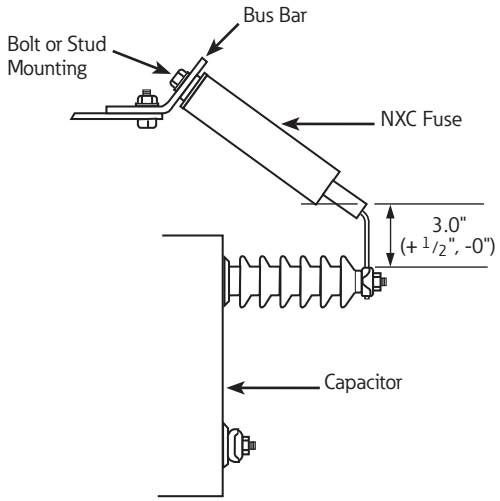

Figure 3. NXC fuse mounted on horizontal capacitor bank.

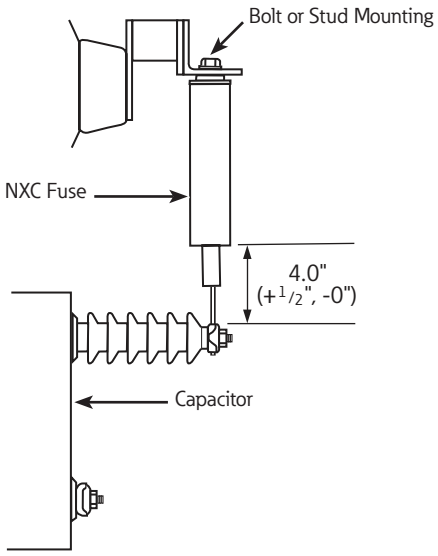

Figure 4. NXC fuse vertically mounted on horizontal capacitor bank.

Note: The following recommended spacing between potentially live elements of a blown fuse and conductive parts of a capacitor is the same for all recommended applications of the NXC fuse. Smaller spacing will result in reduced system BIL after the fuse has blown. Larger spacing will create an excessively long fuse leader which could bounce over and short out adjacent capacitors when it is ejected from a blown fuse.

5. Secure fuse leader to capacitor bushing connector and recheck spacing. Leader should be snug and not contain any slack.
6. Cut off excessive leader wire which extends beyond capacitor bushing.

Note: A blown fuse is indicated by the fuse leader hanging from the capacitor bushing and not connected to the fuse.

⚠ CAUTION

This product as designed and packaged by Eaton is classified by the USDOT as Not Regulated as an Explosive. The leader wire must be held in place by attaching the wire under the hex-head bolt or clamped to the fuse body to maintain this classification when an un-operated fuse is transported.

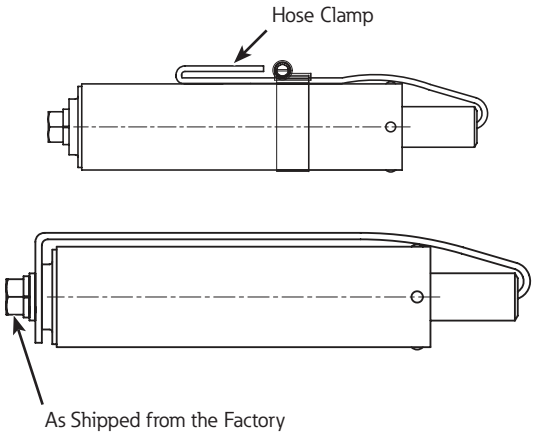

Figure 5. NXC fuse shown with leader retained for transportation.

This page is 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

Powering Business Worldwide

Printed in USA
Publication No. MN132014EN
November 2016

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