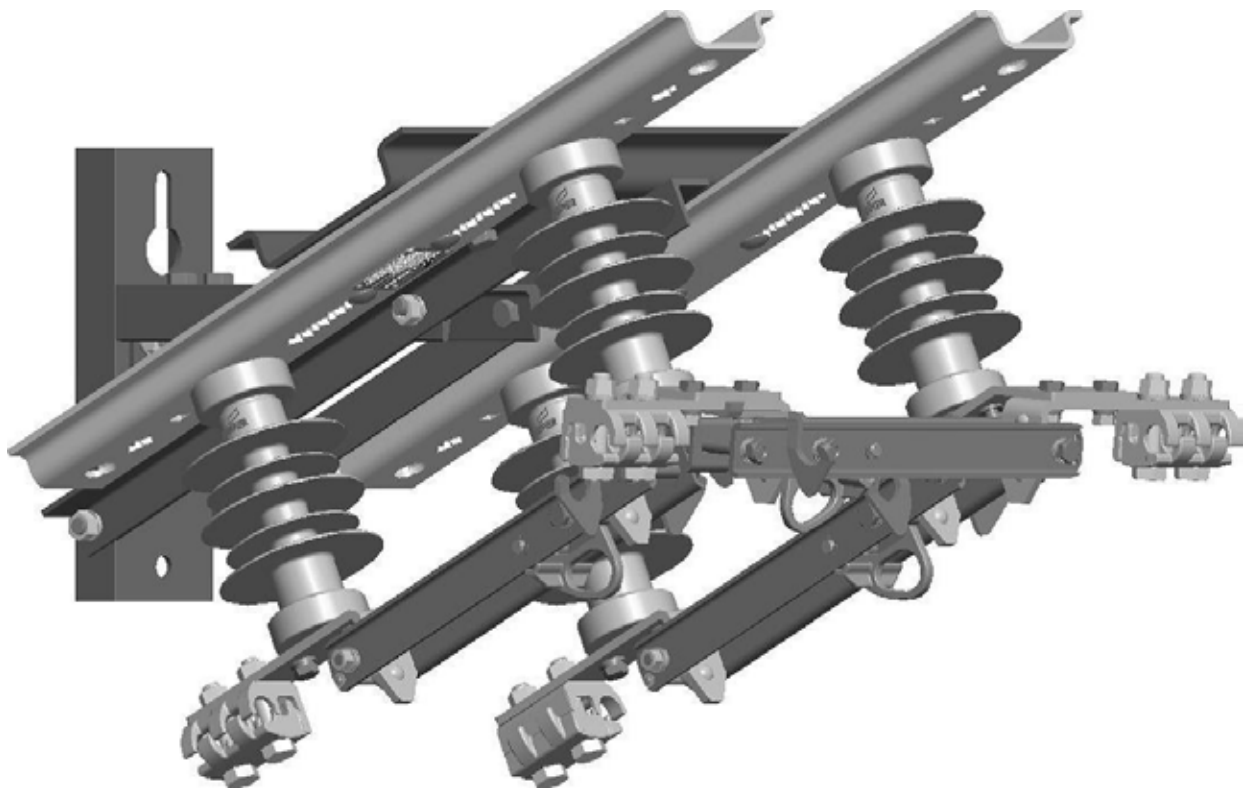


D-73P3 bypass switches installation instructions



EATON

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:

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.

G122.3

Product information

Introduction

Eaton's Cooper Power™ series D-73P3 bypass switch is a single-phase 3-pull, 3-blade hookstick-operated switch. It is used for manually disconnecting a recloser or regulator without disturbing normal electrical service. The D-73P3 switch does not have current making or breaking capability without use of portable loadbreak tools.

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. When additional information is desired to satisfy a problem not covered sufficiently for the user's purpose, please contact your Eaton representative.

Acceptance and initial inspection

Each switch is in good condition when accepted by the carrier for shipment. Upon receipt, inspect the shipping container for signs of damage. Unpack the switch 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 switch to minimize the possibility of damage. If the switch 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

The switch must be properly selected for each installation with consideration to continuous current, BIL, and rated voltage.

Switch configurations

D-73P3 style bypass switches are available for both right (standard) and left bypass opening configuration. Left opening configuration is indicated by a "L" catalog number listed on nameplate. When opening switch with standard right configuration, the bypass blades opens to the right of the operator when standing in front of the switch. A left opening by-pass opens to the left. Operation procedures do not change based on right or left opening of the bypass blade.

Mounting the switch

1. Eaton's D-73P3 line of bypass switches come equipped with blade stop pin to provide 90° blade opening stop. If 90° blade stop is not required, remove retaining clip from one side of pin closest to hinge contact, and slide stop pin out of blade assembly.
2. Optional 150° latch (option A) available to provide positive blade stop at 150° opening. To utilize 150° latch, ensure stop pin is positioned to alternate pin hole located closest to latch side contact.



Figure 1. Optional 150D positive latch.

3. D-73P3 bypass switch is made for mounting to either a single or double cross arm in an inverted or vertical position, as well as using optional pole mounting bracket (option M or X) to secure directly to pole with equipment positioned beneath.

When mounting using back strap, position the switch on the cross arms using the supplied standard back strap and bolt assembly. Secure back strap to switch with cross arm between base using the supplied carriage bolts, lock washers, flat washers and nuts.

Cross-arm mount:

The standard D-73P3 back strap is 15" galvanized steel with two 1/2"-13 thread x 8"L carriage bolts each with nut, flat and lock washer. Adjust the bolt heads in the switch base slots as needed to closely fit the cross arms. Tighten mounting hardware to about 12-15 ft-lbs.

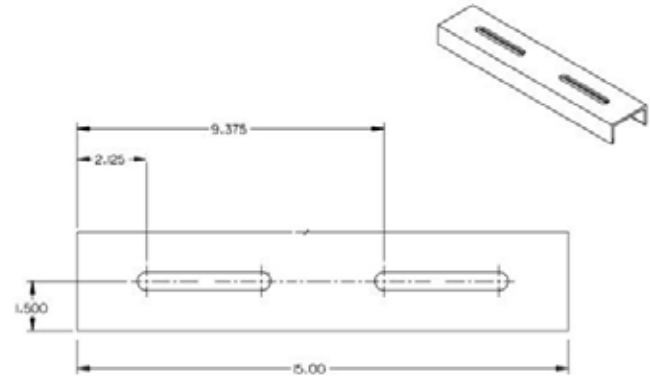


Figure 2. Standard backstrap mount for cross-arm installation

Pole mounting

Optional pole mounting bracket provides a steel bracket for wood pole mounting. 1/2" galvanized hardware including bolts, flat-washer, lock-washer and nuts are supplied to attach the switch to bracket. The user supplies the hardware for mounting bracket to pole.

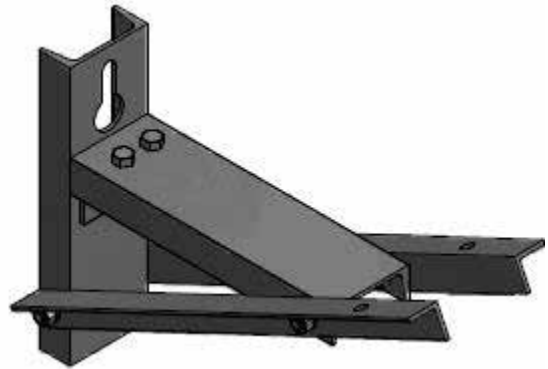


Figure 3. Optional pole mounting bracket, available in standard (19.5") and extended length (25.5")

Terminal connectors

Before installing desired connectors on terminal pads. Consider using wire brush on terminal pads and electrical conductors and using oxidation inhibitor before inserting conductor into connector. Tighten connector hardware to about 12-15 ft-lbs.

Operation

In normal operation, the bypass blade is open and the two disconnect blades are closed (Figure 4), allowing the equipment to be in the circuit. When isolation of regulator or recloser is required, close the by-pass blade to provide a parallel current path. Open the disconnect blades to isolate the recloser/regulator from the circuit. To open the disconnect blades, position yourself with stable footing below switch, place the hookstick in pull ring on blade and pull down toward the hinge end of switch at a 45° angle. Once disconnect blade is open, complete blade travel to its stop position.

To close the D-73P3 switch, place the hookstick in the pull ring on the blade and rotate the blade to an intermediate position. Look away from switch. Quickly and firmly drive the switch blade to the closed position.

To open the D-73P3 by-pass switch, place the hookstick in the pull ring on the blade. Look away from switch. Quickly and firmly pull down towards the hinge end of the switch at a 45° angle. Once the switch blade is open complete the blade travel to its stop position. Carefully remove hookstick from the pull ring.

All Eaton's D-73P3 switches include loadbreak hooks as standard offering to be used with loadbreak tool. To open the switch under load, use only an approved loadbreak tool or device designed for use with switches. Follow the instructions provided with such tools.

Maintenance

The D-73P3 bypass switch should require little maintenance. Following a program of periodic inspection and maintenance will prolong the life of the D-73P3 switch.

1. Operate the switch periodically to clean contact surfaces and to free moving parts
2. Check for burned or pitted contacts and replace if necessary
3. Inspect all blade spacers for looseness and if loose, tighten for even pressure across contacts.
4. Inspect mounting hardware and tighten as needed (12-15 ft-lbs.)

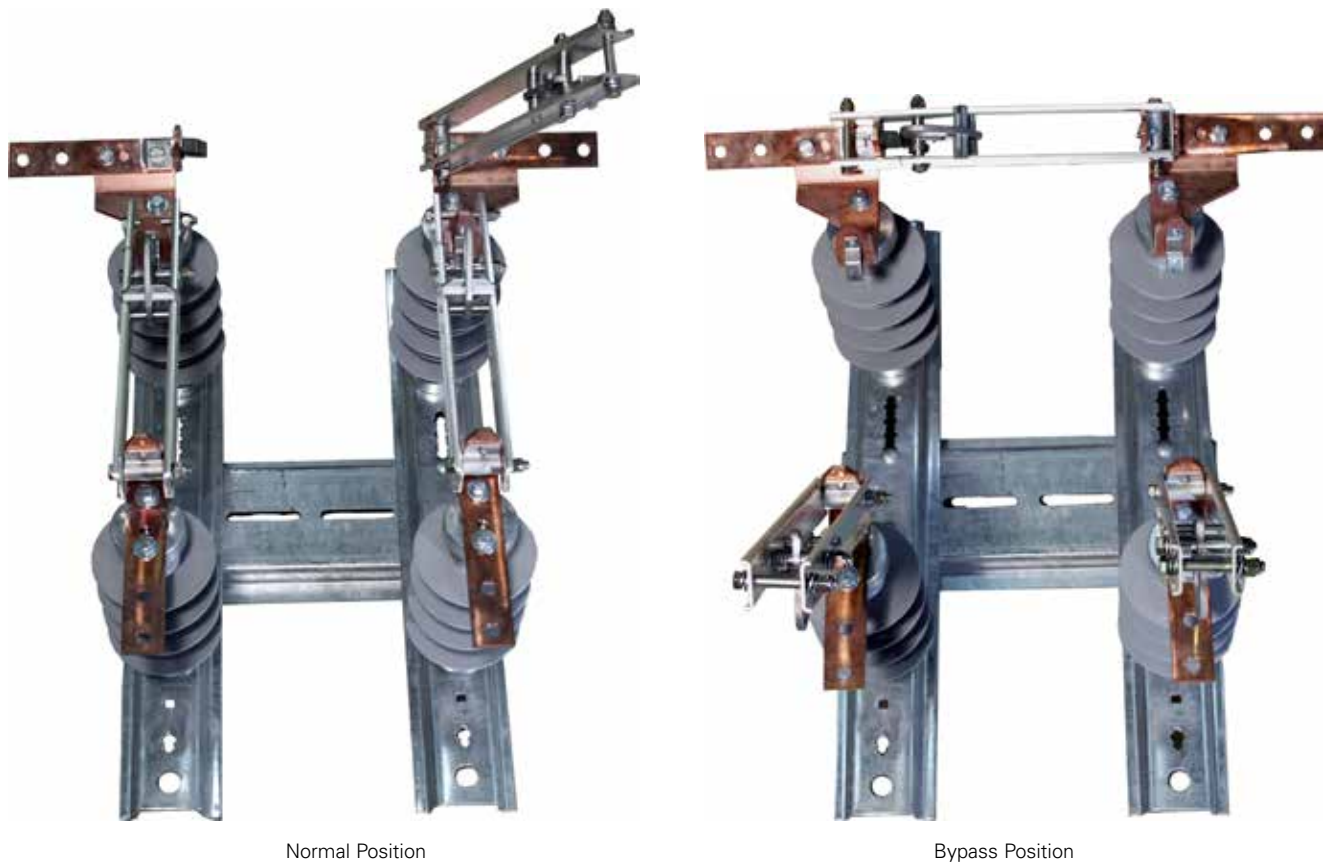


Figure 4. D-73P3 3-pull regulator/recloser bypass switch.



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