Fusing Equipment
Technical Data
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COOPER POWER
SERIES

NX® Fuses with ARC-Strangler switch equipment specifications

Powering Business Worldwide

For convenience in specifying desired equipment on various jobs, a set of suggested specifications for the line of NX® fuses and switches is presented below.

This equipment can be used in any indoor installation where:

1. Silent operation is desirable
2. Load break is required
3. Smaller space requirements will save on installation costs
4. Hook stick operation is allowed
5. High interrupting rating is needed
6. Complete absence of expulsion gases is advantageous

Indoor installations are defined as any enclosure which protects the equipment from direct weather. This includes:

1. Pad-mounted transformers
   a. Oil-filled
   b. Dry type
2. Free standing enclosures
3. Building vaults
4. High rise building primary feed compartments
5. Underground vaults, nonsubmersible with overhead covering

To specify any particular size or variation, select and combine:

I. Fuse Specification

Note: Current and voltage rating of fuses must be called out on individual inquiries or jobs.

and/or

II. Switch Specifications

and one of the following

111. General and Mounting Specifications for Size and Variation of Mounting Desired

A. Single-Phase Unit
B. Three-Phase Unit
C. Single-Phase, 3-Pole, Feed-Through Frame Mounting Unit
D. Single-Phase, 3-Pole, Feed-Through Box Mounting Unit

Note: Choices of ratings or types are shown in parenthesis.

NX Fuses with arc-strangler load break

I. Fuses

The fuses used shall be the current-limiting, non-expulsion type from which no gases are released from the unit to the surrounding atmosphere during or after fault interruption. In addition, the fuse shall interrupt fault currents without noise or mechanical force. The fuse shall have an interrupting rating of 50,000 amperes rms symmetrical or greater and shall have a current and voltage rating applicable to the individual installation.

They must be capable of clearing the full range of fault currents from minimum melting through the maximum interrupting rating of the fuse without the aid of auxiliary devices.

Fuses are to be of the disconnecting type and must be completely switch-stick operable, including installation, operation and removal with distribution class switch sticks made in accordance with NEMA Standard SG2 and USA Standard C37.42.

Each fuse shall be equipped with integral loadbreak device to provide full load interruption when used with the stationary contact structure for which it is designed. Operation shall be automatic whenever the fuse is opened with a switch stick. No auxiliary interrupters, replaceable interrupting devices or other attachments shall be required for proper operation.

The construction shall include a safety feature which prevents the fuse or switch from closingin unless the load break is reset and ready for another operation.

Arc-strangler swltch

II. Load-break disconnect switch

The disconnect switches used shall be rated 200-ampere full load and 18,000 amperes momentary and have a voltage rating of (8.3 kv or below) (15 kv).

The disconnect switch must be completely switch-stick operable, including installation, operation and removal, with distribution-class switch sticks made in accordance with NEMA Standard SG2 and USA Standard C37.42.

Each switch shall be equipped with an integral load-break device to provide full load interruption when used with the stationary contact structure for which it is designed. Operation shall be automatic whenever this switch is opened with a switch-stick. No auxiliary interrupters, replaceable interrupting devices or other attachments shall be required for proper operation.

The construction shall include a safety feature which prevents the fuse or switch from closingin unless the load break is reset and ready for another operation.

Mounting and mounting arrangements

III-A. General and mounting specifications for single-phase units

The fuse (switch) mounting shall be single-phase, single pole, for use in any nonsubmersible location, sheltered from direct weather and directly accommodate, without modification, the fuse (switch) of the current and voltage specified.

Mountings shall consist of a base, two insulators and stationary contact assemblies with appropriate terminals.

The base shall be a formed channel, adaptable for wall or structure mounting.

Insulators shall be 95-kv BIL indoor post type, bolted directly to the base.

Contact assemblies shall accommodate either fuses or switches interchangeably and without modification. The lower contacts shall be of the hinge design to allow the fuse or switch to be retained in a 90° (150° to 180°)* open position, yet easily removed with a standard switch stick as described above.

Upper contacts shall be of the clip type with a reinforcing backup spring member, and shall be suitable for use with the load-break device on the fuse or switch. Terminals shall be provided to accommodate adequate cable connectors.

III-B. General and mounting specifications for three-phase units

The fuse (switch) mounting shall be three phase, 3-pole, for use in any non-submersible location, sheltered from direct weather and shall directly accommodate the fuses (switches) of the current and voltage specified.

The mounting shall consist of a base, six insulators and stationary contact assemblies with appropriate terminals.

The base shall consist of a single formed plate, approximately 15 inches wide and adaptable for wall or structure mounting.

Insulators shall be 95-kv BIL indoor post type, bolted directly to the base plate.

Contact assemblies shall accommodate either fuses or switches interchangeably, without modification. The lower contacts shall be of the hinge design to allow the fuse or switch to be retained in a 90°(150° to 180°)* open position and removed with a standard switch stick as described above. Upper contacts shall be of the clip type with a reinforcing

backup spring member and shall be suitable for use with the loadbreak device on the fuses or switches. Terminals shall be provided on each pole to accommodate adequate cable connectors.

Insulating barriers shall be provided between phases. These barriers shall extend beyond the upper and lower edges of the base plate and outward from the live parts to prevent accidental contact between adjacent phases by service personnel.

III-C. General and mounting specifications for single- phase, 3-pole units

The fuse and switch mounting shall be singlephase, 3 pole, with the upper contacts commonly bused. It shall be suitable for use in any nonsubmersible location sheltered from direct weather and shall directly accommodate the the fuses and switches of the current and voltage specified.

The mounting shall consist of a base, five insulators and stationary contact assemblies with appropriate terminals.

The base shall consist of a single formed plate approximately 15 inches wide, adaptable for wall or structure mounting.

Insulators shall be 95-kv BIL indoor post type bolted directly to the base.

Contact assemblies shall accommodate either fuses or switches interchangeably and without modification. The lower contacts shall be of a hinge design to allow the fuse or switch to be retained in a 90° (150° to 180°)* open position, yet easily removed with a standard switch-stick as described above. Upper contacts shall be of the clip type with a reinforcing backup spring member and shall be suitable for use with the load-break device on the fuse and switches. The upper contact poles shall be commonly bused and supported on two insulators. Terminals shall be provided on the lower contacts to accommodate adequate cable connectors.

Insulating barriers shall be provided between poles. These barriers shall extend upward sufficiently to properly insulate the lower contacts one from the other, downward beyond the lower edges of the base plate, and outward from the live parts to prevent accidental contact between adjacent phases by service personnel.

III-D. General and mounting specifications for single- phase, 3-pole, molded box mounted unit

The fuse and switch mounting shall be single phase, 3-pole, with the upper contacts commonly bused. It shall be suitable for use in any nonsubmersible location sheltered from direct weather and shall directly accommodate, without modification, fuses and switches up through 8.3 kv of the current specified.

The mountings shall consist of a single, molded box of fiber-glass reinforced polyester with non-tracking additives, stationary contact assemblies, and appropriate terminals. The onepiece box shall perform the functions of base, insulators, and barriers. The mounting box shall be approximately 9 inches wide, 20 inches high, and 10 inches deep at the deepest point. A portion of the box shall form a thru-bushing for connecting the lower middle contact directly through the wall of an oil-filled compartment. Impulse insulation strength shall be not less than 75-kv BIL when mounted directly to the oil-filled compartment wall with ground plane sidewalls a minimum of 1-1/8 inches from the sides of the box. Minimum creepage distances over the surface of the box from any live part to any ground part shall be not less than 19 inches.

Contact assemblies shall mount directly to metal inserts molded in the box and shall accommodate either fuses or switches interchangeably and without modification. The lower contacts shall be of the hinge design to allow the fuse or the switch to be retained in a 90° open position, yet easily removed with a standard switch stick as described above. Each contact of the upper contact assembly shall be of the clip type with a reinforcing backup spring member and shall be suitable for use with the load-break device on the fuse or switch. The three upper contact clips shall be bused in a common assembly. Terminals shall be provided on the two outside, lower contact assemblies to accommodate adequate cable connectors.

***Note: 150° to 180° opening recommended if lower contact is higher than 4-1/2 feet off the ground.**

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