

# INSTRUCTIONS

## For Installation and Adjustment

### GENERAL

**CAUTION:** The equipment covered by this publication must be selected for a specific application and it must be installed and adjusted by qualified persons who are thoroughly trained and who understand any hazards that may be involved. This publication is written only for such qualified persons and is not intended to be a substitute for adequate training and experience in safety procedures for this type of equipment.

The following instructions are for installation and adjustment of S&C Type SM-4 and SM-5 Mountings.

**WARRANTY QUALIFICATIONS:** For the standard warranty contained in seller's standard conditions of sale (as set forth in Price Sheet 150) to apply to S&C Power Fuses — Types SM-4 and SM-5, these mountings must be installed in accordance with instructions found in this publication.

The standard warranty contained in seller's standard conditions of sale (as set forth in Price Sheet 150) does not apply when fuses of other than S&C manufacture are used in S&C SM Mountings or when S&C refill units or holders are used in mountings of other than S&C manufacture.

### INSTALLATION

#### Step 1

Remove the mounting from its shipping crate, taking care not to lift it by the insulators or live parts.

#### Step 2

Attach the mounting to a supporting frame or structure, using appropriate hardware (not included with mounting).

### ADJUSTMENTS

S&C Type SM-4 and SM-5 Mountings are factory assembled and adjusted, and further adjustment should not be required. However, to verify that no misalignment of parts

has occurred during shipping or installation, the following precautionary checks are recommended.

**S&C Power Fuses**  
**Types SM-4 and SM-5**

Outdoor Distribution (7.2 kv through 34.5 kv)

Mountings — Disconnect and  
 Non-Disconnect Styles

**ADJUSTMENTS — DISCONNECT STYLE**

**Step 1**

Accurately measure the distance between the contact fingers of the latch-and-upper-contact assembly and the corresponding contact fingers of the hinge-and-lower-contact assembly (Dimension P, Figure 1). Check to be sure that this dimension is within the tolerance established for Dimension P. If adjustment is necessary, loosen the latch-and-upper-contact assembly mounting bolts and move the assembly toward or away from the hinge-and-lower-contact assembly as required to bring Dimension P within the specified limits. Make certain that Dimension P is maintained between upper and lower contact fingers on *both* sides of the fuse mounting. Fully tighten the latch-and-upper-contact assembly mounting bolts.

**Step 2**

Install a holder — fused as directed in S&C Instruction Sheet 252-525 — in the hinge-and-lower-contact assembly

and slowly close the holder into the latch-and-upper-contact assembly. Check to be sure that the holder makes an “on-center” approach to the contacts on the latch-and-upper-contact assembly. If adjustment is necessary, slightly loosen the hinge-and-lower-contact assembly mounting bolts and, using the holder as a lever, bring the hinge-and-lower-contact assembly into proper alignment with the latch-and-upper-contact assembly. Recheck to be sure that Dimension P is still within the specified tolerance. Retighten the hinge-and-lower-contact assembly mounting bolts.

**Step 3**

Move the holder to the closed position and check to be sure that the latch of the latch-and-upper-contact assembly securely engages the holder cap. Then, using a conventional hookstick, move the holder from the closed position to the open position to be sure that the latch properly disengages from the holder cap when the pull ring is operated.

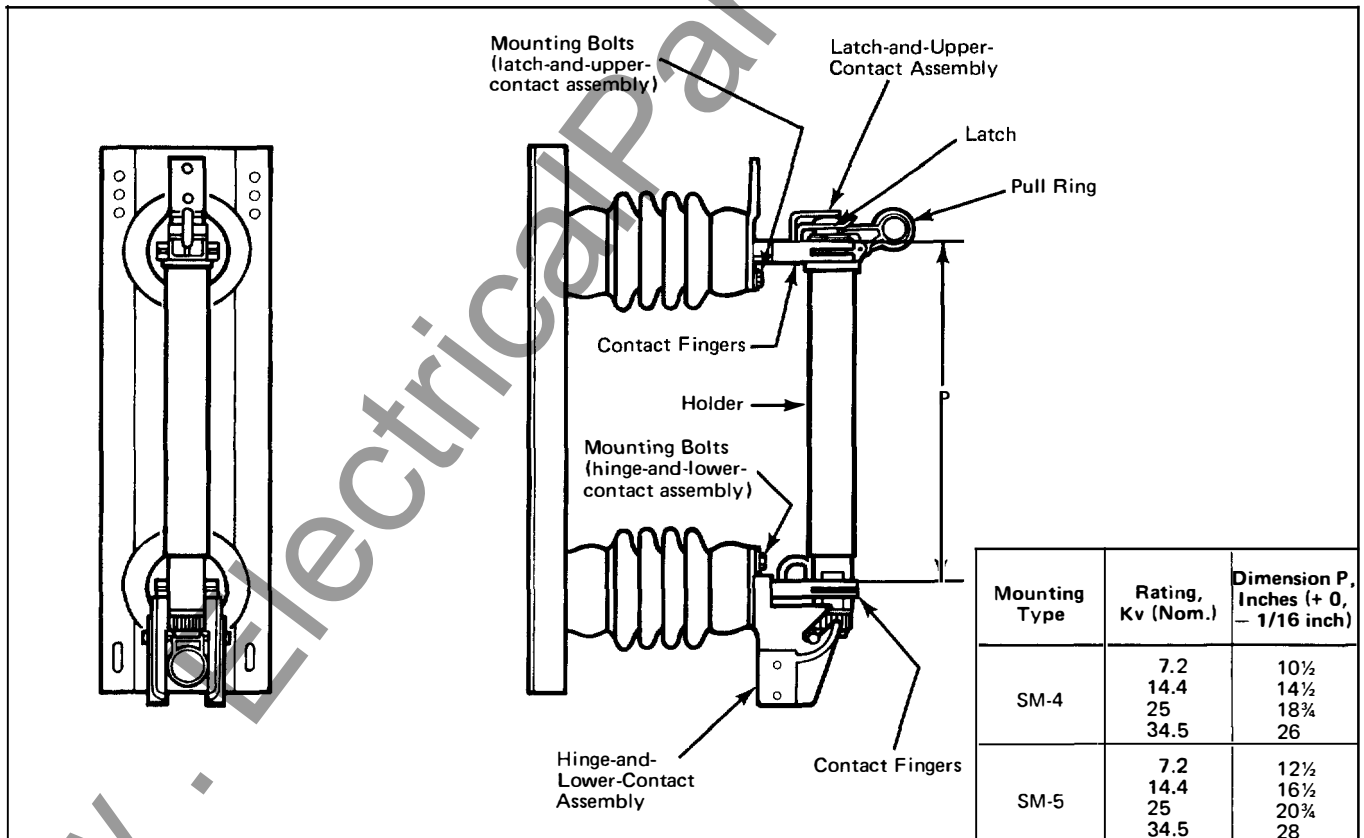


Figure 1. Live-part spacing for S&C Power Fuses — Types SM-4 and SM-5, Disconnect, 180° Opening, Vertical, and Disconnect, 90° Opening, Inverted Styles.



## ADJUSTMENTS – DISCONNECT STYLE

### Step 4

Verify the presence of the No-Ox-Id “A Special” oxidation-inhibiting grease applied to the contact fingers of the latch-and-upper-contact assembly, and to the contact fingers of the hinge-and-lower-contact assembly – and that this grease is still free of contaminants. If necessary, clean the contact fingers with a nontoxic, nonflammable solvent and apply a coating of No-Ox-Id “A Special” grease (available from Sanchem Incorporated†), or similar nonmetallic-filler oxidation-inhibiting grease.

### Step 5

If aluminum-alloy body connectors\* are to be used to connect the conductors, the following procedures should be employed:

A. Thoroughly wire-brush the current-transfer surfaces of

each connector and immediately apply a liberal coating of Penetrox A (available from Burndy Corporation) to the brushed surfaces.

- B. Wire-brush each fuse-mounting terminal pad and apply a coating of Penetrox A. Then bolt the connectors to the terminal pads.
- C. Prepare the conductors using established procedures and clamp them in their respective connectors.

† Subsidiary of Santell Chemical Company.

\* “Mass anode” type connectors, such as the Catalog Number 5300 series offered by S&C, which has been designated by the connector manufacturer as being suitable for direct attachment to copper-bearing alloy terminal pads.

## ADJUSTMENTS – NON-DISCONNECT STYLE

### Step 1

Accurately measure the distance between the contact fingers of the hanger-bracket-and-upper-contact assembly and the corresponding contact fingers of the lower contact assembly (Dimension P, Figure 2). Check to be sure that this dimension is within the tolerance established for Dimension P. If adjustment is necessary, loosen the hanger-bracket-and-upper-contact assembly mounting bolts and move the assembly toward or away from the lower contact assembly as required to bring Dimension P within the specified limits. Make certain that Dimension P is maintained between upper and lower contact fingers on *both* sides of the fuse mounting. Fully tighten the hanger-bracket-and-upper-contact assembly mounting bolts.

### Step 2

Move the clamps on the upper and lower contact assemblies

to the open (up) position. Then, position the holder – fused as directed in S&C Instruction Sheet 252-525 – such that the hanger, located on the upper end fitting of the holder, rests on the hanger bracket of the hanger-bracket-and-upper-contact assembly. Check to be sure that the holder is centered naturally with respect to the lower contact assembly. If necessary, loosen the hanger-bracket-and-upper-contact assembly mounting bolts and rotate the assembly as needed to obtain “on-center” entry of the holder into the lower contact assembly. Recheck Dimension P and adjust if necessary. Retighten all mounting bolts. Next, push the holder into both contact assemblies and move the clamps on the upper and lower contact assemblies to the “locked” (down) position. The holder, inserted and clamped as described above, should be fully engaged by all contact fingers, and the ferrules on the holder should be seated between the raised projections on the contact fingers.

**INSTRUCTION SHEET 242-500**

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S&C ELECTRIC COMPANY · Chicago  
S&C ELECTRIC CANADA LTD · Rexdale

**S&C Power Fuses  
Types SM-4 and SM-5**

Outdoor Distribution (7.2 kv through 34.5 kv)

Mountings — Disconnect and  
Non-Disconnect Styles

**ADJUSTMENTS — NON-DISCONNECT STYLE**

**Step 3**

Verify the presence of the No-Ox-Id "A Special" oxidation-inhibiting grease applied to the contact fingers of the hanger-bracket-and-upper-contact assembly, and to the contact fingers of the lower contact assembly — and that this grease is still free of contaminants. If necessary, clean the contact fingers with a nontoxic, nonflammable solvent and apply a coating of No-Ox-Id "A Special" grease (available from Sanchem Incorporated†), or similar nonmetallic-filler oxidation-inhibiting grease.

**Step 4**

If aluminum-alloy body connectors\* are to be used to connect the conductors, the following procedures should be employed:

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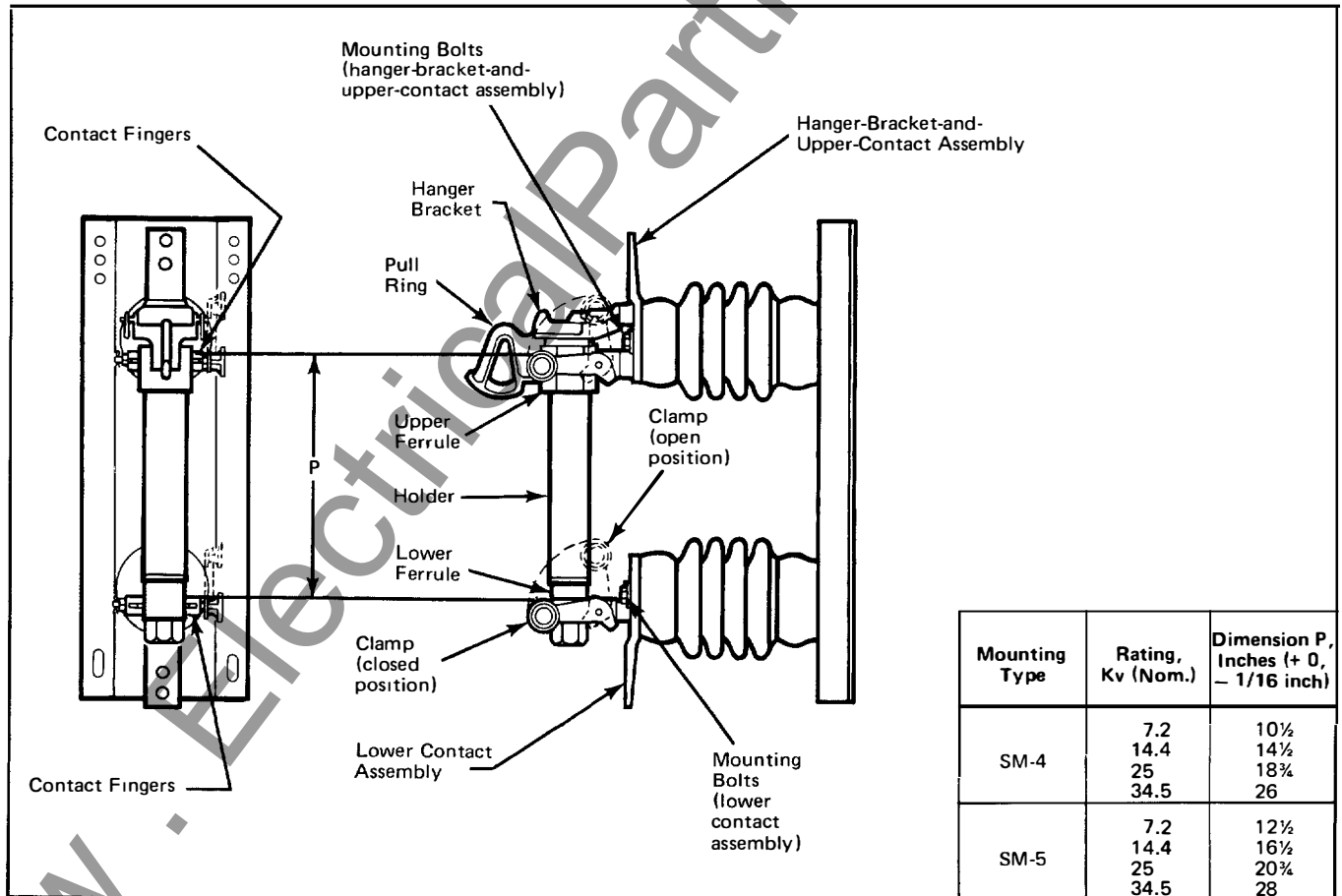


Figure 2. Live-part spacing for S&C Power Fuses — Types SM-4 and SM-5, Non-Disconnect Vertical and Non-Disconnect Upright Styles.

**242-500 INSTRUCTION SHEET**

