

Lockout Bracket Retrofit

Table of Contents

Introduction	2	Safety Precautions	4
Qualified Persons	2	Component Overview	5
Read this Instruction Sheet	2	Installation Requirements	6
Retain this Instruction Sheet	2	Retrofit Kit SDA-27256	6
Proper Application	2	Required Tools	6
Safety Information	3	Lockout Bracket Installation	7
Understanding Safety-Alert Messages	3		
Following Safety Instructions	3		
Replacement Instructions and Labels	3		



Introduction

Qualified Persons

WARNING

Only qualified persons knowledgeable in the installation, operation, and maintenance of overhead and underground electric distribution equipment, along with all associated hazards, may install, operate, and maintain the equipment covered by this publication. A qualified person is someone trained and competent in:

- The skills and techniques necessary to distinguish exposed live parts from nonlive parts of electrical equipment
- The skills and techniques necessary to determine the proper approach distances corresponding to the voltages to which the qualified person will be exposed
- The proper use of special precautionary techniques, personal protective equipment, insulated and shielding materials, and insulated tools for working on or near exposed energized parts of electrical equipment

These instructions are intended only for such qualified persons. They are not intended to be a substitute for adequate training and experience in safety procedures for this type of equipment.

Read this Instruction Sheet

NOTICE

Thoroughly and carefully read this instruction sheet before installing the Scada-Mate SD Switching System lockout bracket. Become familiar with the Safety Information on page 3 and Safety Precautions on page 4. The latest version of this publication is available online in PDF format at **sandc.com/en/contact-us/product-literature/**.

Retain this Instruction Sheet

This instruction sheet is a permanent part of the Scada-Mate SD Switching System. Designate a location where users can easily retrieve and refer to this publication.

Proper Application

WARNING

The information in this instruction sheet is only intended for use when installing the retrofit lockout bracket when directed by S&C Electric Company.

Understanding Safety-Alert Messages

Several types of safety-alert messages may appear throughout this instruction sheet and on labels and tags attached to the product. Become familiar with these types of messages and the importance of these various signal words:

DANGER

“DANGER” identifies the most serious and immediate hazards that will likely result in serious personal injury or death if instructions, including recommended precautions, are not followed.

WARNING

“WARNING” identifies hazards or unsafe practices that can result in serious personal injury or death if instructions, including recommended precautions, are not followed.

CAUTION

“CAUTION” identifies hazards or unsafe practices that can result in minor personal injury if instructions, including recommended precautions, are not followed.

NOTICE

“NOTICE” identifies important procedures or requirements that can result in product or property damage if instructions are not followed.

Following Safety Instructions

If any portion of this instruction sheet is unclear and assistance is needed, contact the nearest S&C Sales Office or S&C Authorized Distributor. Their telephone numbers are listed on S&C’s website sandc.com, or call the S&C Global Support and Monitoring Center at 1-888-762-1100.

NOTICE

Read this instruction sheet thoroughly and carefully before installing the lockout bracket in the Scada-Mate SD switch.



Replacement Instructions and Labels

If additional copies of this instruction sheet are required, contact the nearest S&C Sales Office, S&C Authorized Distributor, S&C Headquarters, or S&C Electric Canada Ltd.

It is important that any missing, damaged, or faded labels on the equipment be replaced immediately. Replacement labels are available by contacting the nearest S&C Sales Office, S&C Authorized Distributor, S&C Headquarters, or S&C Electric Canada Ltd.



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⚠ DANGER

Scada-Mate SD Switching Systems carry high voltage. Failure to observe the precautions below will result in serious personal injury or death.

Some of these precautions may differ from your company's operating procedures and rules. Where a discrepancy exists, follow your company's operating procedures and rules.

1. **QUALIFIED PERSONS.** Access to the Scada-Mate SD Switching System must be restricted only to qualified persons. See the "Qualified Persons" section on page 2.

2. **SAFETY PROCEDURES.** Always follow safe operating procedures and rules.

3. **PERSONAL PROTECTIVE EQUIPMENT.** Always use suitable protective equipment, such as rubber gloves, rubber mats, hard hats, safety glasses, and flash clothing, in accordance with safe operating procedures and rules.

4. **SAFETY LABELS.** Do not remove or obscure any of the "DANGER," "WARNING," "CAUTION," or "NOTICE" labels.

5. **OPERATING MECHANISM AND BASE.** Scada-Mate SD Switching Systems contain fast-moving parts that can severely injure fingers. Do not remove or disassemble operating mechanisms or remove access panels on the Scada-Mate SD switch base unless directed by S&C Electric Company.

6. **ENERGIZED COMPONENTS.** Always consider all parts live until de-energized, tested, and grounded.

7. **GROUNDING.** Before energization and at all times when energized, the switch base and control unit enclosure must be connected to suitable earth ground at the base of the pole in accordance with the S&C instruction sheet furnished with this device.

The switch base ground must also be connected to the system neutral. If the system neutral is not present, proper precautions must be taken to ensure the local earth ground cannot be severed or removed.

8. **LOAD INTERRUPTER SWITCH POSITION.** Always confirm the **Open/Close** position of load-interrupter switches by visually observing the indicator.

Interrupters, terminal pads, and disconnect blades on disconnect-style models may be energized from either side of the Scada-Mate SD switch.

9. **MAINTAINING PROPER CLEARANCE.** Always maintain proper clearance from energized components.

4 S&C Instruction Sheet 775-511

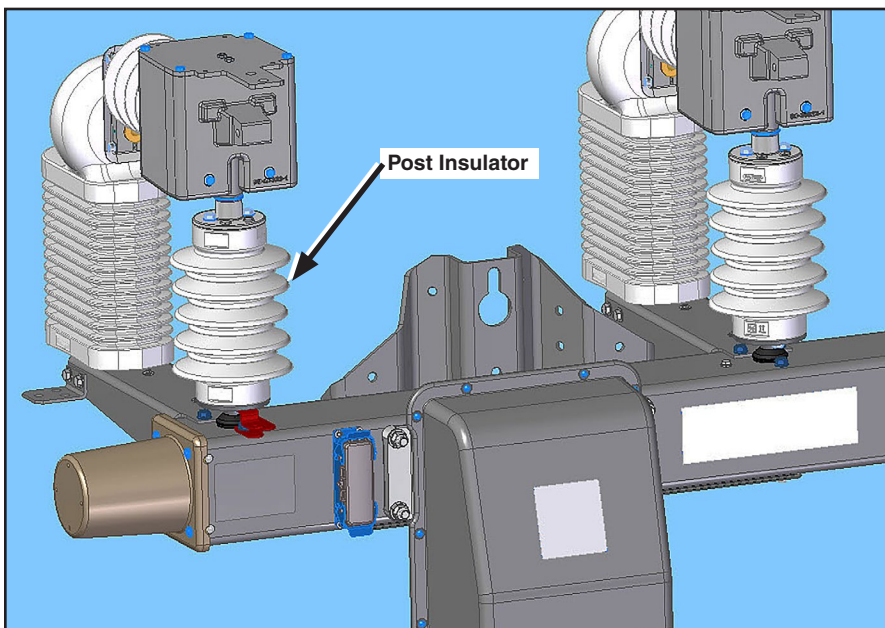


Figure 1. Left post insulator location.

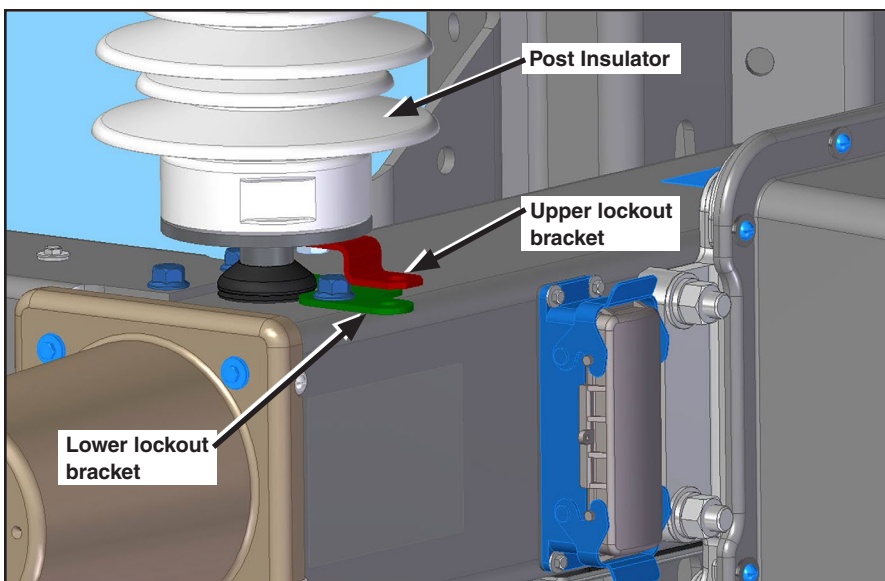


Figure 2. Left post insulator with lockout brackets.

Installation Requirements

DANGER

De-energize and ground the switch according to utility practice at all six terminals.

Failure to de-energize the switch before performing the retrofit installation will lead to serious injury or death.

To retrofit the Scada-Mate SD switch with the lockout bracket, the switch must be in the **Closed** position while de-energized. This is required to obtain clearance to remove and install mounting hardware for the lockout bracket.

Install the lockout bracket for upright switches on pole 1 (furthest left when looking at the operator): catalog numbers 35811XR1 and 35821XR1. For tiered-outboard mounting configuration switches, the lockout bracket is installed on pole 3 (lowest pole on the switch): catalog number 35841XR1.

Retrofit Kit SDA-27256

The kit includes one each:

- A $\frac{3}{8}$ -16 $\times$ 1-inch serrated flange stainless steel hex-bolt (part number TR-10508)
- A lockout bracket – lower (part number SD-6435)
- A lockout bracket – upper (part number SD-5797)
- A $\frac{3}{8}$ -inch Belleville washer, K-0750-C-062 $\frac{3}{4}$ OD (part number 1340-294).
- A $\frac{3}{8}$ -16 $\times$ 1 $\frac{1}{4}$ -inch hex head, stainless steel cap screw (part number 1323-316)

Required Tools

These tools are required to install the retrofit kit:

- A $\frac{1}{16}$ -inch wrench
- A $\frac{1}{16}$ -inch offset box end socket (McMaster part number 55015A24 or equivalent); see Figure 3
- A 35-ft-lb torque wrench



Figure 3. An offset box end $\frac{1}{16}$ -inch socket (McMaster part number 55015A24 or equivalent).

DANGER

The Scada-Mate SD switch must be de-energized, grounded at all six terminals and operated to the **Closed** position.

Working on an energized switch will result in serious personal injury or death.

Follow these steps to install the lockout bracket:

- STEP 1.** After de-energizing the switch, close the Scada-Mate SD switch. See Figure 4.
- STEP 2.** Remove the serrated flange head bolt from the base of the switch using a $\frac{9}{16}$ -inch wrench. See Figure 5.



Figure 4. Bottom of the post insulator in the Closed position.

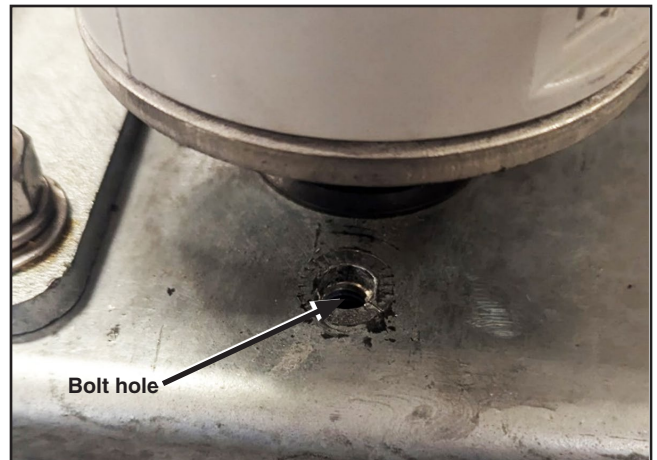


Figure 5. Location where the bolt was removed.

Lockout Bracket Installation

- STEP 3.** Match the new $\frac{3}{8}$ -16 $\times$ 1-inch serrated flange hex bolt to the removed bolt and install the new bolt in the slotted hole of the supplied lower bracket. See Figure 6.
- STEP 4.** Install the lower bracket and new bolt in the hole from Step 2 on page 7. Do not tighten so the bracket position can be adjusted. See Figure 7.



Figure 6. Orientation of the lower bracket with the new bolt inserted in the slotted hole.



Figure 7. Lower bracket and bolt installed, not tightened.

- STEP 5.** Remove the bottom post insulator bolt at the right of the lockout bracket using a $\frac{9}{16}$ -inch wrench. The bolt must be twisted out to be removed. See Figure 8.
- STEP 6.** Match the new $\frac{3}{8}$ -16 $\times$ 1-inch hex bolt to the removed bolt. Insert the upper bracket, new bolt, and Belleville washer into the hole from Step 5. See Figure 9.

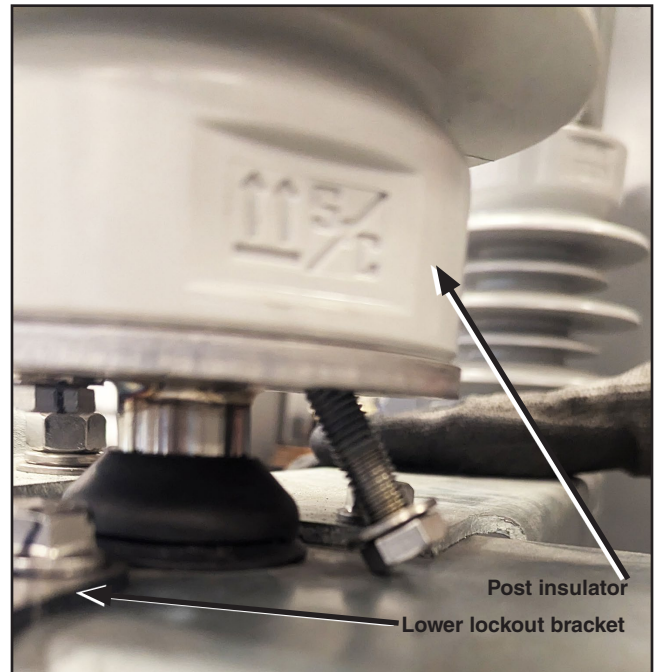


Figure 8. Removing the bottom post insulator bolt.

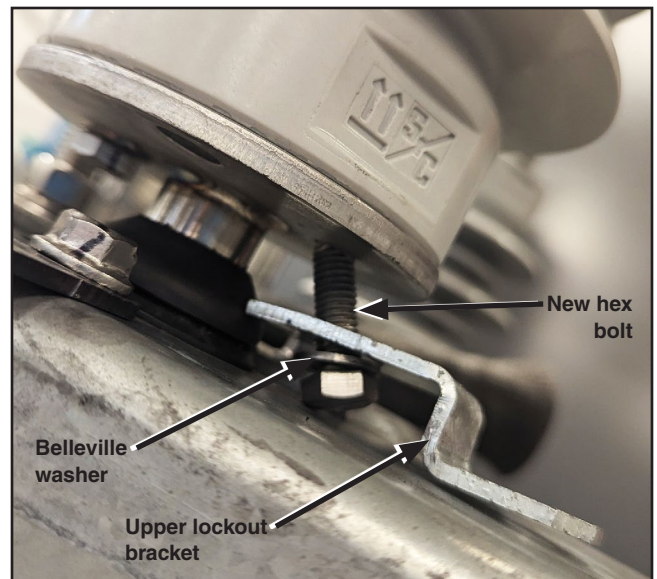


Figure 9. Inserting the upper bracket and bolt.

Lockout Bracket Installation

STEP 7. Push the bracket into the spindle while tightening the bolt to 35-ft-lbs with the $\frac{9}{16}$ -inch offset box end socket and torque wrench. See Figure 10.

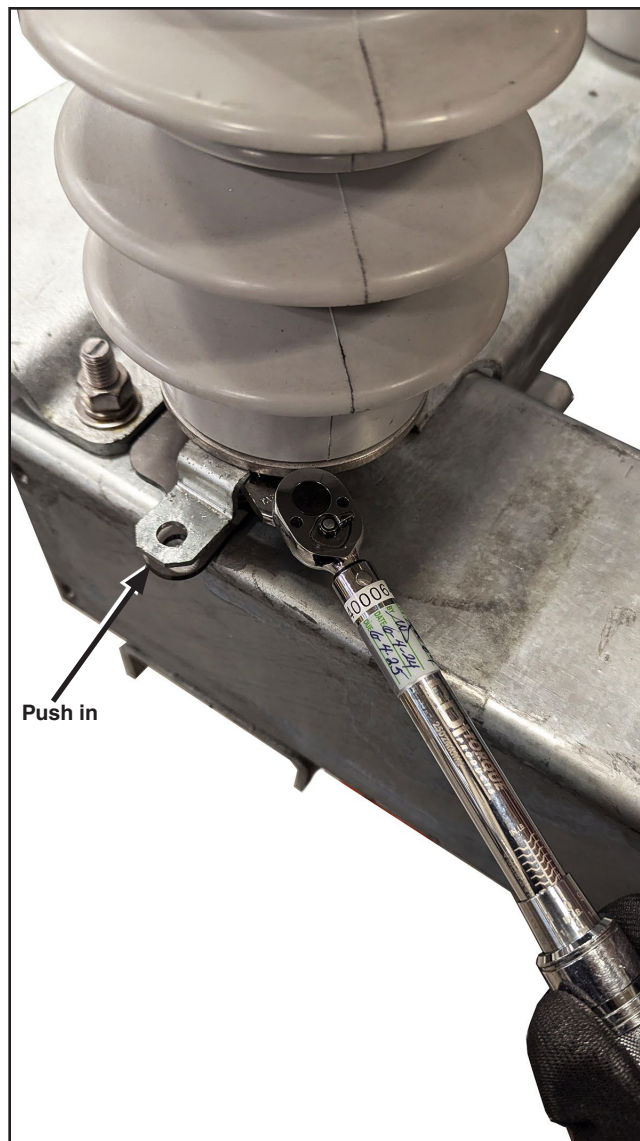


Figure 10. Positioning the upper bracket and tightening the bolt.

- STEP 8.** Open the Scada-Mate SD switch.
- STEP 9.** Move the lower bracket to align the holes in the upper and lower lockout brackets. See Figure 11. Then, torque the lower bracket bolt to 35-ft-lbs using the $\frac{9}{16}$ -inch offset box end socket and torque wrench.
- STEP 10.** The switch can be returned to service.



Figure 11. Aligning the lower bracket hole with the upper bracket.