

Inspection Recommendations

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Introduction

Qualified Persons

WARNING

Only qualified persons who are 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 who is 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 and all materials included in the product's instruction handbook before installing or operating the Scada-Mate SD Switching System. Become familiar with the Safety Information and Safety Precautions on pages 3 and 4. The latest version of this publication is available online in PDF format at <https://www.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 equipment in this publication is only intended for a specific application. The application must be within the ratings furnished for the equipment. Ratings for the Scada-Mate SD Switching System are listed in the ratings table in Specification Bulletin 775-31. The ratings are also on the nameplate affixed to the product.

Special Warranty Provisions

The standard warranty contained in the seller's standard conditions of sale, as set forth in Price Sheets 150 and 181, applies to Scada-Mate SD Switching Systems.

For equipment/services packages, the seller warrants, for a period of one year after commissioning, that the Scada-Mate SD Switching Systems will provide automatic fault isolation and system reconfiguration per agreed-upon service levels. The remedy shall be additional system analysis and reconfiguration of IntelliTeam SG system software until the desired result is achieved.

Understanding Safety-Alert Messages

Several types of safety-alert messages may appear throughout this instruction sheet and on labels and tags attached to the Scada-Mate SD Switching System. 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 Scada-Mate SD Switching System.	

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.

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.

Recommended Inspection Procedures

S&C recommends utilities inspect their Scada-Mate Switching Systems to ensure they are in good working order when performing periodic inspection and maintenance of their overhead lines and switches.

The schedule for inspecting Scada-Mate SD switches is greatly dependent on environmental conditions and the location of the switch. S&C recommends the inspection schedule be based on standard utility practice for pole-mounted distribution equipment.

Table 1 indicates S&C’s recommended inspection procedures, both visual and operational. Table 2 on page 7 lists S&C’s recommended cleaning and lubrication procedures for the switch. Users may reference the applicable S&C instruction sheets for the Scada-Mate SD Switching System for further details.

Table 1. Recommended Inspection Procedures

Component	Procedures
General	<ul style="list-style-type: none"> • Check with your local S&C Sales Office to verify whether there are any outstanding field notifications for inspection, maintenance, or retrofit of your switch model. • Check the switch for overall cleanliness of the insulators, live parts, and control cabinet. The switch should be free from wildlife nests, tree limbs, or other debris that could affect dielectric clearances. • Check the through-bolts, pole-band and J-bolts, and cross-arms (if furnished) securing the switch to the pole or mounting structure. Tighten the mounting hardware, if necessary.
Insulation and sensors	<ul style="list-style-type: none"> • Check for evidence of arc damage, tracking, or soot. • Make sure the insulation is free from contamination or debris from wildlife or the environment. Clean the insulators, if necessary. See Table 2 on page 7.
Disconnect live parts	<ul style="list-style-type: none"> • Check that the disconnect current-carrying contact enters the jaw contact on-center. • Check that the disconnect operates smoothly and freely through its full travel, without binding. Clean and lubricate the contacts, if necessary. See Table 2 on page 7.
Control cabinet and control cable	<ul style="list-style-type: none"> • Check for evidence of water ingress, damage, excessive corrosion, or wear. • Check electrical operation using the local control TRIP and CLOSE buttons. • Check for loose wiring inside the enclosure and for proper functioning of all LED indicators, the operation counter, the 6801 Automatic Switch Control, the remote terminal unit (RTU), etc. • Check the key interlock operation, if furnished, mechanically and electrically. • Inspect the control cable and connectors for evidence of damage or moisture ingress. • Inspect the ground wires to ensure the switch and communication and control unit (CCU) are properly grounded. • Perform the Battery Charger Recalibration Procedure detailed in RD-3808.
Options	<ul style="list-style-type: none"> • Make sure the lightning arresters are in good condition and are properly grounded. • Check the condition of the wildlife covers, if furnished, to make sure they are in place and secure.
Operation	<ul style="list-style-type: none"> • Manually operate the switch.● • Operate the 6801 Automatic Switch Control or the CCU open and closed three times to ensure the controls, control cable, and switch are working properly.

● Scada-Mate SD switches with the “-R2” option can be manually operated by pulling the yellow ring located on the bottom of the operator. Scada-Mate SD switches with the hookstick operating mechanism can be opened by pulling the operating lever to the **Open** position.

Recommended Cleaning and Lubrication Procedures

As with all outdoor live parts, the grease used to lubricate the disconnect contacts is susceptible to drying out, becoming imbedded with airborne dirt or particles, or being washed off by precipitation. If the disconnect becomes difficult to operate, the existing grease should be removed and re-applied. See Table 2.

Table 2. Recommended Cleaning and Lubrication Procedures

Component	Procedures
General	<ul style="list-style-type: none"> Remove any wildlife nests or debris if present. Trim trees around the switch to the distance specified by standard utility practices. When connector/jumper connections are adjusted, wire-brush the surface of the Scada-Mate switch terminal pads and re-apply a suitable aluminum connector compound before replacing the connectors/jumpers.
Insulators	<ul style="list-style-type: none"> Clean dirt or contamination off of insulators using a mild soap and water solution and a clean cloth. Follow by rinsing with clean water. See the “Power Washing” section below. <div style="background-color: #FFA500; text-align: center; padding: 5px;">⚠ WARNING</div> <p>Manual cleaning of the insulation must be performed with the switch de-energized. Failure to do so could result in serious injury or death.</p>
Current carrying contacts	<ul style="list-style-type: none"> Wipe dirt and grease from both hinge and jaw contact with a clean cloth. Dirt or contamination can be cleaned off of the blade and hinge with a mild soap and water solution and a clean cloth. Follow by rinsing with clean water. <div style="background-color: #FFA500; text-align: center; padding: 5px;">⚠ WARNING</div> <p>Manual cleaning of the insulation must be performed with the switch de-energized. Failure to do so could result in serious injury or death.</p> <ul style="list-style-type: none"> Apply a light coating of Shell Aeroshell #7 or an equivalent non-sulfur containing contact lubricant. (Shell Aeroshell #7 is available from S&C Electric Company.)
Power washing	<div style="background-color: #0070C0; color: white; text-align: center; padding: 5px;">NOTICE</div> <p>Do not power wash with water or other liquid solvent. A ventilator hole is located at the base of the switch operating mechanism. Power washing with water or another liquid solution can force liquid inside the operating mechanism, causing damage.</p> <ul style="list-style-type: none"> S&C recommends hand-washing the de-energized switch with a mild soap and water solution and a clean, lint-free cloth.