

Installation and Operation

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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 your TripSaver II Cutout-Mounted Recloser cordless power module. Familiarize yourself with the Safety Information and Safety Precautions on pages 5 and 6. The latest version of this publication is available online in PDF format at sandc.com/en/support/product-literature/.

Retain this Instruction Sheet

This instruction sheet is a permanent part of your TripSaver II Cutout-Mounted Recloser cordless power module. Designate a location where you can easily retrieve and refer to this publication.

Proper Application

NOTICE

The cordless power module is only intended for use with the TripSaver II Cutout-Mounted Recloser and with the S&C Talon™ Handling Tool. Store the cordless power module in its carrying case when not in use. Refer to S&C Instruction Sheet 461-502, “TripSaver® II Cutout-Mounted Recloser: *Installation and Operation*,” for more information on installing and applying the TripSaver II recloser.

The cordless power module attaches to the base of the TripSaver II Cutout-Mounted Recloser and provides enough power to the recloser to allow the user to:

- Read the updated LCD screens when the load current is too low to provide enough power to the recloser
- Execute the user-configurable **Local Manual Open (LMO)** load-breaking feature when load current is too low to provide enough power to the recloser
- Use the cordless power module instead of the TripSaver II recloser magnet tool when temporarily enabling near-range wireless communication (This allows the viewing of recloser status and downloading of snapshot files after connecting to the TripSaver II recloser with the TripSaver® II Service Center Configuration Software v1.6. For more information on the magnet tool, see S&C Instruction Sheet 461-507, “TripSaver® II Cutout-Mounted Recloser: *Enabling Pole-Top Communication Via the TripSaver II Magnet Tool*.” For more information on service center configuration software, see S&C Instruction Sheet 461-504, “S&C TripSaver® II Cutout-Mounted Recloser: *Protection Setup Using Service Center Configuration Kit*.”)

NOTICE

Do not perform a firmware or settings update in the field using the cordless power module. Loss of 9-Volt battery power or loss of packets caused by weak signal strength or outdoor interference in the update process may render the recloser nonfunctional. Reclosers must be removed from the pole to perform firmware or settings updates using the Service Center Configuration Kit.

The cordless power module is also an easier alternative to using a 9-Volt battery when manually resetting a TripSaver II recloser when it does not drop open because of icing exceeding 3/4-inch (19 mm).

⚠ DANGER

The TripSaver II recloser **MUST** be removed from the pole before a manual reset is attempted. While using the cordless power module is an easier way to attach a 9-V battery to a TripSaver II recloser as compared to using a plain 9-V battery, the module must **NOT** be used to manually reset the TripSaver II recloser while it is still in the vertical position and mounted to the pole. Attempting to reset a TripSaver II recloser that has not dropped open because of icing or other reasons will reset the recloser’s vacuum interrupter but **NOT** the drop-open mechanism. (This state can be confirmed if the recloser’s LCD screen reads “VI Open” but the recloser appears closed.) When the vacuum interrupter is reset and closed by the cordless power module, the trunnion of the TripSaver II recloser in this state is still loose and can cause the TripSaver II recloser to swing out of the mounting when the blockage is removed or when it is manually operated, potentially causing arcing. Therefore, the TripSaver II recloser **MUST** be removed from the pole and be placed in the horizontal position to reset both the drop-open mechanism **AND** the vacuum interrupter. Failure to do so can lead to arcing, injury, or death.

For more information on manually resetting the TripSaver II recloser, see the “Troubleshooting” section of S&C Instruction Sheet, 461-502, “S&C TripSaver II Cutout-Mounted Recloser: *Installation and Operation*.”

Warranty

The warranty and/or obligations described in S&C's Price Sheet 150, "Standard Conditions of Sale–Immediate Purchasers in the United States," (or Price Sheet 153, "Standard Conditions of Sale–Immediate Purchasers Outside the United States"), plus any special warranty provisions, as set forth in the applicable product-line specification bulletin, are exclusive. The remedies provided in the former for breach of these warranties shall constitute the immediate purchaser's or end user's exclusive remedy and a fulfillment of the seller's entire liability. In no event shall the seller's liability to the immediate purchaser or end user exceed the price of the specific product that gives rise to the immediate purchaser's or end user's claim. All other warranties, whether express or implied or arising by operation of law, course of dealing, usage of trade or otherwise, are excluded. The only warranties are those stated in Price Sheet 150 (or Price Sheet 153), and THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY EXPRESS WARRANTY OR OTHER OBLIGATION PROVIDED IN PRICE SHEET 150 (OR PRICE SHEET 153) IS GRANTED ONLY TO THE IMMEDIATE PURCHASER AND END USER, AS DEFINED THEREIN. OTHER THAN AN END USER, NO REMOTE PURCHASER MAY RELY ON ANY AFFIRMATION OF FACT OR PROMISE THAT RELATES TO THE GOODS DESCRIBED HEREIN, ANY DESCRIPTION THAT RELATES TO THE GOODS, OR ANY REMEDIAL PROMISE INCLUDED IN PRICE SHEET 150 (or PRICE SHEET 153).

Understanding Safety-Alert Messages

Several types of safety-alert messages may appear throughout this instruction sheet and on labels and tags attached to your TripSaver II Cutout-Mounted Recloser. Familiarize yourself with these types of messages and the importance of these various signal words:

⚠ DANGER
<p>“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.</p>


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

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

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

Following Safety Instructions

If you do not understand any portion of this instruction sheet and need assistance, contact your 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	
<p>Read this instruction sheet and Instruction Sheet 461-502 thoroughly and carefully before operating your cordless power module and TripSaver II Cutout-Mounted Recloser.</p>	

Replacement Instructions and Labels

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

⚠ DANGER



The TripSaver II Cutout-Mounted Recloser operates at 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 TripSaver II Cutout-Mounted Recloser and the cordless power module 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. Remove tags ONLY if instructed to do so.
5. **ENERGIZED COMPONENTS.** Always consider all parts live until de-energized, tested, and grounded.
6. **OPERATING TOOLS.** To close a TripSaver II Cutout-Mounted Recloser, use a conventional insulated hookstick or S&C Universal Pole and Pole Extension fitted with a distribution prong. An extendo-stick can also be used after proper training and practice. To open a TripSaver II Cutout-Mounted Recloser, use Loadbuster®—The S&C Loadbreak Tool attached to a conventional insulated hookstick or S&C Universal Pole, or execute the **Local Manual Open** loadbreak function. To connect the cordless power module to the base of the TripSaver II recloser, ONLY use the Talon Handling Tool.
7. **MAINTAINING PROPER CLEARANCE.** Always maintain proper clearance from energized components.

Inspection

Examine the shipment for external evidence of damage as soon after receipt as possible, preferably before removal from the carrier's conveyance. Check the bill of lading to make sure the shipping skids, crates, and containers listed are present.

If there is loss or visible damage:

1. Notify the delivering carrier immediately.
2. Ask for a carrier inspection.
3. Note the condition of shipment on all copies of the delivery receipt.
4. File a claim with the carrier.

If concealed damage is discovered:

1. Notify the delivering carrier within 15 days of receipt of shipment.
2. Ask for a carrier inspection.
3. File a claim with the carrier.

Also, notify S&C Electric Company in all instances of loss or damage.

Packing and Storage

The TripSaver II Cutout-Mounted Recloser Cordless Power Module comes in a foam-padded carrying case. See Figure 1. A 9-V battery is included. When not in use, the cordless power module should be stored in its carrying case. The carrying case should be stored in a protected area, such as inside of a truck or indoors in a service center. Use care not to drop the cordless power module during installation and removal.



Figure 1. Cordless power module in carrying case.

NOTICE

The cordless power module is not designed for extended use on a TripSaver II Cutout-Mounted Recloser.

Installing the Cordless Power Module

Follow these steps to attach a cordless power module to a TripSaver II Cutout-Mounted Recloser:

- STEP 1.** Attach the Talon Handling Tool to a hookstick. S&C recommends the S&C Universal Pole and Pole Extension (if required) or equivalent. S&C recommends that the Talon tool be at a 30° angle from the hookstick for operational comfort. See Figure 2.
- STEP 2.** Remove the cordless power module from its case. Place the power module on the Talon tool with the short side of the collar resting on the U-shaped part of the tool, and the long side against the Talon tool holding it in place. See Figures 3 and 4.



Figure 3. Place the power module on the Talon tool.



Figure 2. Attach the Talon tool to the hookstick.



Figure 4. Make sure the cordless power module is secure on the talon tool.

Using the Cordless Power Module with the TripSaver II Recloser

STEP 3. Lift the cordless power module and keep it level.
See Figure 5.

STEP 4. Attach it to the base of the TripSaver II recloser.
See Figure 6.

Keeping the hookstick level, raise the cordless power module to the height of the TripSaver II recloser and position it against the base of the unit. The module will be held in place magnetically.



Figure 5. Keep the cordless power module level while lifting.



Figure 6. Lift the cordless power module and attach it to the base of the TripSaver II recloser.

Using the Cordless Power Module with the TripSaver II Recloser

Removing the Cordless Power Module

When finished using the cordless power module to power the TripSaver II recloser, the power module should be removed. Follow these steps to remove the cordless power module from the base of the TripSaver II recloser.

STEP 1. Hook the U-shaped part of the Talon Handling Tool through the pull-ring of the cordless power module. See Figures 7 and 8.



Figure 7. Hook the Talon tool through the pull-ring on the module.



Figure 8 Make sure the hook is fully engaged with the Talon tool.

STEP 2. Pull the module away from the TripSaver II recloser. See Figures 9 and 10.

STEP 3. Store the cordless power module in its case. See Figure 1 on page 7.



Figure 9. Pull the module away from the TripSaver II recloser.



Figure 10. Lower the module and remove from the Talon tool.

The cordless power module must use a 9-Volt lithium (L522) battery to provide power to the module. To replace the battery:

STEP 1. Unscrew the pull-ring from the base of the module. See Figure 11.



Figure 11. Unscrew the pull-ring from the base of the module.

STEP 2. Carefully separate the battery from the battery contacts. See Figure 12.

STEP 3. Attach the new battery to the battery contacts, and train the wires back into the body of the module. Insert the battery into the body of the module. See Figure 13.

STEP 4. Screw the pull-ring onto the base of the module.



Figure 12. The battery compartment inside the cordless power module.



Figure 13. Train the wires inside the body of the module and replace the pull-ring.

When Connecting to the TripSaver II Recloser with the Service Center Configuration Software

NOTICE

Do not perform a firmware or settings update in the field using the cordless power module. Loss of 9-Volt battery power or loss of packets caused by weak signal strength or outdoor interference in the update process may render the recloser nonfunctional. Reclosers must be removed from the pole to perform firmware or settings updates using the Service Center Configuration Kit.

Pay attention to the following limitations when using the TripSaver II cordless power module:

- If the signal strength is weak because of distance and/or outdoor interference when communicating with units on the pole using the TripSaver II Service Center Configuration Software, if safe work practices allow, move the laptop computer closer to the recloser.
- When a connection is established, the signal strength can be seen at the lower left corner of the TripSaver II Service Center Configuration Software screen. To download a snapshot file successfully, an -87-dBm signal strength or better is required. (The lower the magnitude of the number, the better. For example, -83 dBm is better than -87 dBm; -90 dBm is worse than -87 dBm.) If the signal strength is less than -87 dBm, downloading a snapshot file may take an excessive amount of time, increasing the possibility of signal interruption or signal cancellation. To improve the signal strength, move the laptop computer closer to the unit if it is safe to do so.
- The cordless power module must not be left attached unattended.

When Resetting a TripSaver II Recloser That Has Not Dropped Open

DANGER

The TripSaver II recloser **MUST** be removed from the pole before a manual reset is attempted. While using the cordless power module is an easier way to attach a 9-V battery to a TripSaver II recloser as compared to using a plain 9-V battery, the module must **NOT** be used to manually reset the TripSaver II recloser while it is still in the vertical position and mounted to the pole. Attempting to reset a TripSaver II recloser that has not dropped open because of icing or other reasons will reset the recloser's vacuum interrupter but **NOT** the drop-open mechanism. (This state can be confirmed if the recloser's LCD screen reads "VI Open" but the recloser appears closed.) When the vacuum interrupter is reset and closed by the cordless power module, the trunnion of the TripSaver II recloser in this state is still loose and can cause the TripSaver II recloser to swing out of the mounting when the blockage is removed or when it is manually operated, potentially causing arcing. Therefore, the TripSaver II recloser **MUST** be removed from the pole and be placed in the horizontal position to reset both the drop-open mechanism **AND** the vacuum interrupter. Failure to do so can lead to arcing, injury, or death.

If the TripSaver II Cutout-Mounted Recloser does not drop open at the end of its operating sequence, usually because icing exceeds 3/4-inch (19 mm), the recloser can be reset as described in the "Troubleshooting" section of S&C Instruction Sheet 461-502, "TripSaver II Cutout-Mounted Recloser: *Installation and Operation*," using the cordless power module in place of the 9-Volt battery. The cordless power module **MUST NOT** be used to reset the TripSaver II recloser while it is still mounted on the pole. The TripSaver II recloser **MUST** be removed from the pole and placed in the horizontal position to properly reset the internal latching mechanism.

Battery Life

Battery life depends on the brand of 9-Volt battery used in the cordless power module. S&C recommends using a 9-Volt lithium (L522) battery. Do not use rechargeable or zinc-carbon batteries.