

Inspection Recommendations

Table of Contents

Introduction	2	Safety Information	4
Qualified Persons	2	Understanding Safety-Alert Messages	4
Read this Instruction Sheet	2	Following Safety Instructions	4
Retain this Instruction Sheet	2	Replacement Instructions and Labels	4
Proper Application	2	Safety Precautions	5
Operating Considerations	2	Inspection and Maintenance	
Warranty	3	Recommendations	6
Warranty Qualifications	3		



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 inspecting or performing maintenance on an Omni-Rupter Switch. Become familiar with the Safety Information and Safety Precautions on pages 4 and 5. 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 the Omni-Rupter Switch. Designate a location where the operator 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 Omni-Rupter Switch are listed in the ratings table in Specification Bulletin 765-31. The ratings are also on the nameplate affixed to the product.

Operating Considerations

Circuit-making and circuit-breaking are involved in the normal operation of this interrupter switch and, as a result, precautionary “partway” opening or closing is undesirable. To operate manually, swing the operating handle through its full stroke without hesitation. Do not assume the operating-handle position necessarily indicates the **Open** or **Closed** position of the interrupter-switch blades. Upon completion of an opening or closing operation, visually check the position of the interrupter switch blades to determine the intended position has been attained, and then tag or padlock the operating handle in accordance with standard system operating procedures. In all cases make sure the operating handle is locked before “walking away.”

Note: These interrupter switches are not intended for breaking fault currents.

If the switch is covered in ice or snow, do not “chop” the switch between the **Open** and **Closed** position to dislodge ice and snow. The Omni-Rupter Switches' ice-breaking capabilities and ratings vary based on the mounting configuration and operating style. Refer to Specification Bulletin 765-31 for more information.

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).

Warranty Qualifications

The standard warranty is applicable to the Omni-Rupter Switch detailed in this instruction sheet except when it is power-operated using a switch operator not manufactured by S&C.

Safety Information

Understanding Safety-Alert Messages

Several types of safety-alert messages may appear throughout this instruction sheet and on labels and tags attached to the Omni-Rupter Switch. 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 not understood 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 an Omni-Rupter Switch.



Replacement Instructions and Labels

If additional copies of this instruction sheet are needed, 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



Omni-Rupter Switches operate 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.

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. QUALIFIED PERSONS. Access to switches and controls 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 AND TAGS. Do not remove or obscure any of the "DANGER," "WARNING," "CAUTION," or "NOTICE" labels and tags. Remove tags ONLY if instructed to do so. 5. ENERGIZED COMPONENTS. Always consider all parts live until de-energized, tested, and grounded. | <ol style="list-style-type: none"> 6. INTERRUPTER SWITCH POSITION. Always confirm the Open/Close position of interrupter switches by visually observing the position of the blades. Switches may be energized from either side and with the blades in any position. 7. MAINTAINING PROPER CLEARANCE. Always maintain proper clearance from energized components. 8. OPERATION. Circuit-making and circuit-breaking are involved in the normal operation of this interrupter switch and, as a result, "partway" opening or closing is undesirable. To operate, swing the operating handle through its full travel vigorously and without hesitation. |
|---|--|

Inspection and Maintenance Recommendations

S&C recommends when utilities perform periodic inspection and maintenance of their overhead lines and switches, that Omni-Rupter Switches be inspected to ensure they are in good working order. The schedule for inspecting Omni-Rupter 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 the recommended inspection procedures, both visual and operational. Table 2 on page 7 lists the recommended alignment recommendations for the switch live parts. The applicable S&C instruction sheets for Omni-Rupter Switches can be referenced for further details.

⚠ WARNING
Any procedures beyond visual inspection should only be performed when the Omni-Rupter Switch is completely de-energized and grounded at all six terminals. Follow all applicable safety procedures. Failure to do so could lead to injury or death.

Table 1. Recommended Inspection Procedures

Component	Procedures
General	<ul style="list-style-type: none"> • Make sure the switch and operating mechanism have been installed per the appropriate installation and operation instruction sheets provided with each switch. • Make sure all clamping bolts are tight and the piercing set screws are installed properly. Check the through-bolts, pole-band (if furnished), and J-bolts (if furnished) securing the switch to the pole or mounting structure. Tighten the hardware, if necessary. • Examine insulators, live parts, and the switch base for signs of tracking, contamination, arc damage, and soot. Clean the insulators, if necessary, with a clean cloth and a mild soap and water solution. Follow by rinsing with clean water. • Check that the switch is free from wildlife nests, tree limbs, and debris. Remove any impediments if present.
Interrupter	<ul style="list-style-type: none"> • Do not rework the interrupters. Replace the entire interrupter if any of the conditions below are not met. • Check that all interrupter end caps are in place and secure. • Make sure all interrupters operate smoothly and the shunt arm automatically resets to its Closed position after opening. • Check all interrupters for damage or soot.
Live Parts	<ul style="list-style-type: none"> • Check the condition of the shunt contact. If any shunt contacts exhibit signs of damage or excessive wear, replace the associated blade and operating cam assembly. • Clean and grease the contacts (for switches without catalog number suffix “-C”), if required. Wipe dirt and grease from both the blade and jaw contacts with a clean dry cloth. Remove any oxidation by lightly polishing the contacts with steel wool or fine-grit sandpaper and wiping excess grit off with a dry cloth. Apply a light coating of Shell Gadus S2 U1000 (available from S&C) to the contact surface. • The graphite-impregnated contacts (catalog number suffix “-C”) do not require grease. Grease may be applied, but once used on graphite-impregnated contacts, the contacts must be maintained in the same manner as non-graphite-impregnated contacts.
Operating Mechanism	<ul style="list-style-type: none"> • For rotating-type operating mechanisms, make sure the operating handle is adjusted to create an “overtoggle” in the operating-mechanism linkage when the switch is in the Closed position. To adjust the overtoggle, move the handle stops as necessary. (When power-operated, the overtoggle should not be present.) • For reciprocating-type operating mechanisms, make sure the operating handle is adjusted so all slack in the operating linkage is taken up when the handle is fully closed (and over center). When operated to the fully Closed position, a definite resistance should be felt at the end of the stroke. • For hookstick-type operating mechanisms, make sure that the stop pin on the operating mechanism engages with the detent spring when the switch is in the Open position and an “overtoggle” is present in the operating-mechanism linkage when the switch is in the Closed position.
Options	<ul style="list-style-type: none"> • If furnished, examine ice shields (catalog number suffix “-B”) for signs of tracking, contamination, arc damage, and soot. • If furnished, examine wildlife protection (catalog number suffix “-U” or “-W”) for signs of tracking, contamination, arc damage, and soot.

Table 2. Alignment Recommendations

Procedures	Checks
Move the operating handle <i>slowly</i> to the fully Open position:	<ul style="list-style-type: none"> • The interrupter and interrupter shunt arm must be parallel to the sweep of the blade. See Figure 1. • The operating cam shunt contact should engage the interrupter shunt arm on the copper-bronze surface of the shunt contact. See Figure 2. • When the blade reaches its full travel, the interrupter shunt arm will be released and will quickly snap back to its Closed position, reset for the next operation. • With the operating handle as far as it will go in the opening direction, the switch blades should be 90 degrees from the Closed position.
Move the operating handle <i>slowly</i> to the fully- Closed position:	<ul style="list-style-type: none"> • The interrupter shunt arm should be guided into position by the curved back of the shunt contact. • With the operating handle as far as it will go in the closing direction: <ul style="list-style-type: none"> - All switch blades move into the jaw contact guide fingers on center and are fully seated in the jaw contacts. See Figure 3. - The interrupter shunt arms are no more than 1/8-inch (3 mm) from the auxiliary return arm of the multipurpose operating cam, and the shunt arm and return arm do not touch each other. See Figure 4.

⚠ WARNING

Any procedures beyond visual inspection should only be performed when the Omni-Rupter Switch is completely de-energized and grounded at all six terminals. Follow all applicable safety procedures. **Failure to do so could lead to injury or death.**

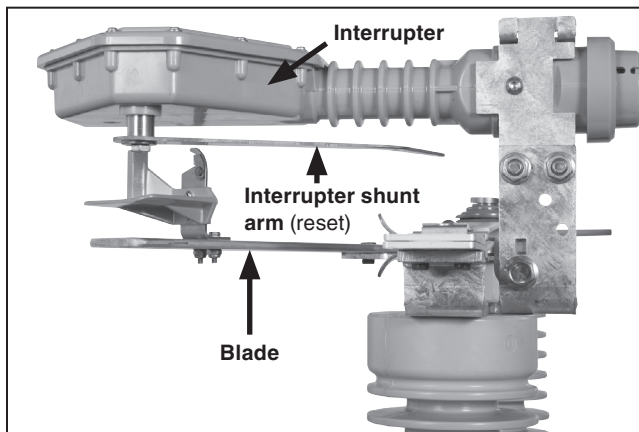


Figure 1. Make sure the interrupter and interrupter shunt arm are parallel to the sweep of the blade.

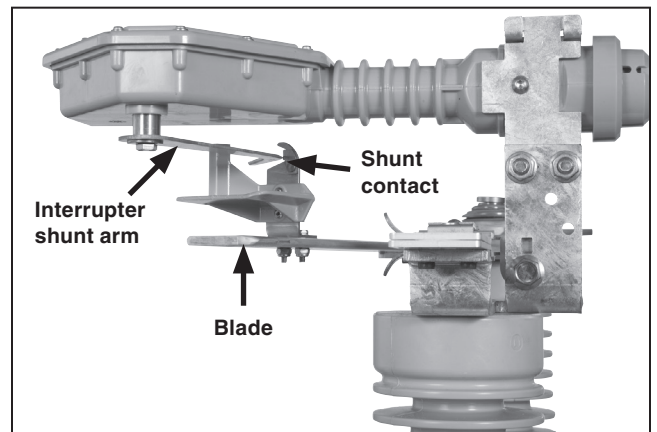


Figure 2. The shunt contact should engage the interrupter shunt arm on the copper-bronze contact surface of the shunt contact.

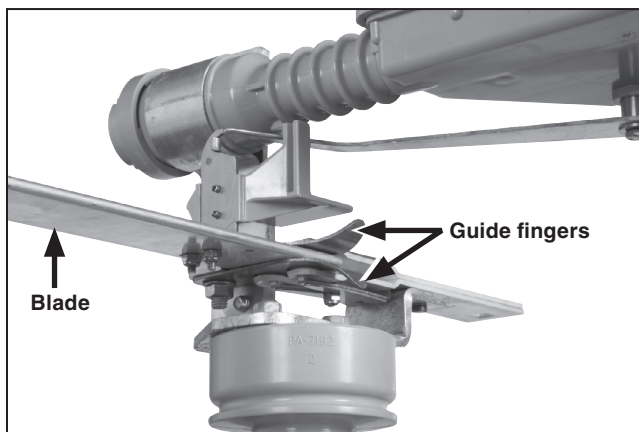


Figure 3. During closing, make sure the blade enters the guide fingers on center.

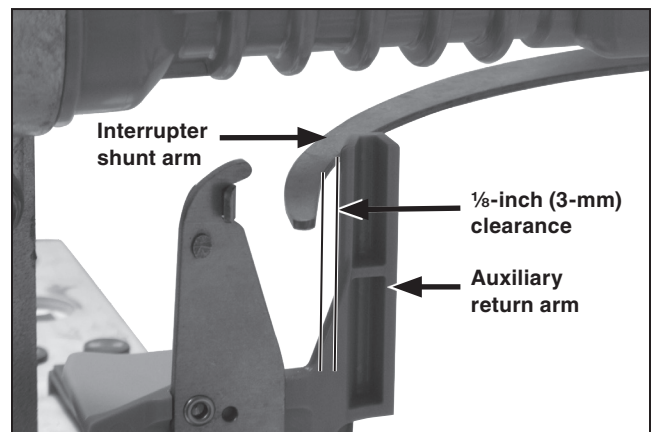


Figure 4. The interrupter shunt arm should be resting against or no more than 1/8-inch (3 mm) away from the auxiliary return arm.