

Installation

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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 and all materials included in the product's instruction handbook before installing or operating the Manual PMH Pad-Mounted Gear. Become familiar with the Safety Information and Safety Precautions on page 4 through page 7. 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 Manual PMH Pad-Mounted Gear. Designate a location where users can easily retrieve and refer to this publication.

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 manual PMH Pad-Mounted Gear are listed in the ratings table in Specification Bulletin 662A-31. The ratings are also on the nameplate affixed to the product. Ratings for this gear are listed on the ratings label on the interior of the doors (right-hand door only for double door models.)

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 contained in the seller's standard conditions of sale (as set forth in Price Sheet 150) does not apply to manual PMH Pad-Mounted Gear where fuse units, fuse unit end-fittings, holders, refill units, or switch blades of other than S&C manufacture are used in conjunction with S&C SML Mountings. Nor does it apply to manual PMH Pad-Mounted Gear where other than Fault Fiter® Electronic Power Fuses, S&C Switch Blades, or the current-limiting fuses listed in Table 1 of S&C Information Bulletin 660-50 are used in conjunction with Fault Fiter Electronic Power Fuse mountings and S&C Holders designed therefor, or when current-limiting fuses are applied other than as set forth in the "Recommended Voltage Ratings" section of S&C Information Bulletin 660-50.

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 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 manual PMH Pad-Mounted Gear.

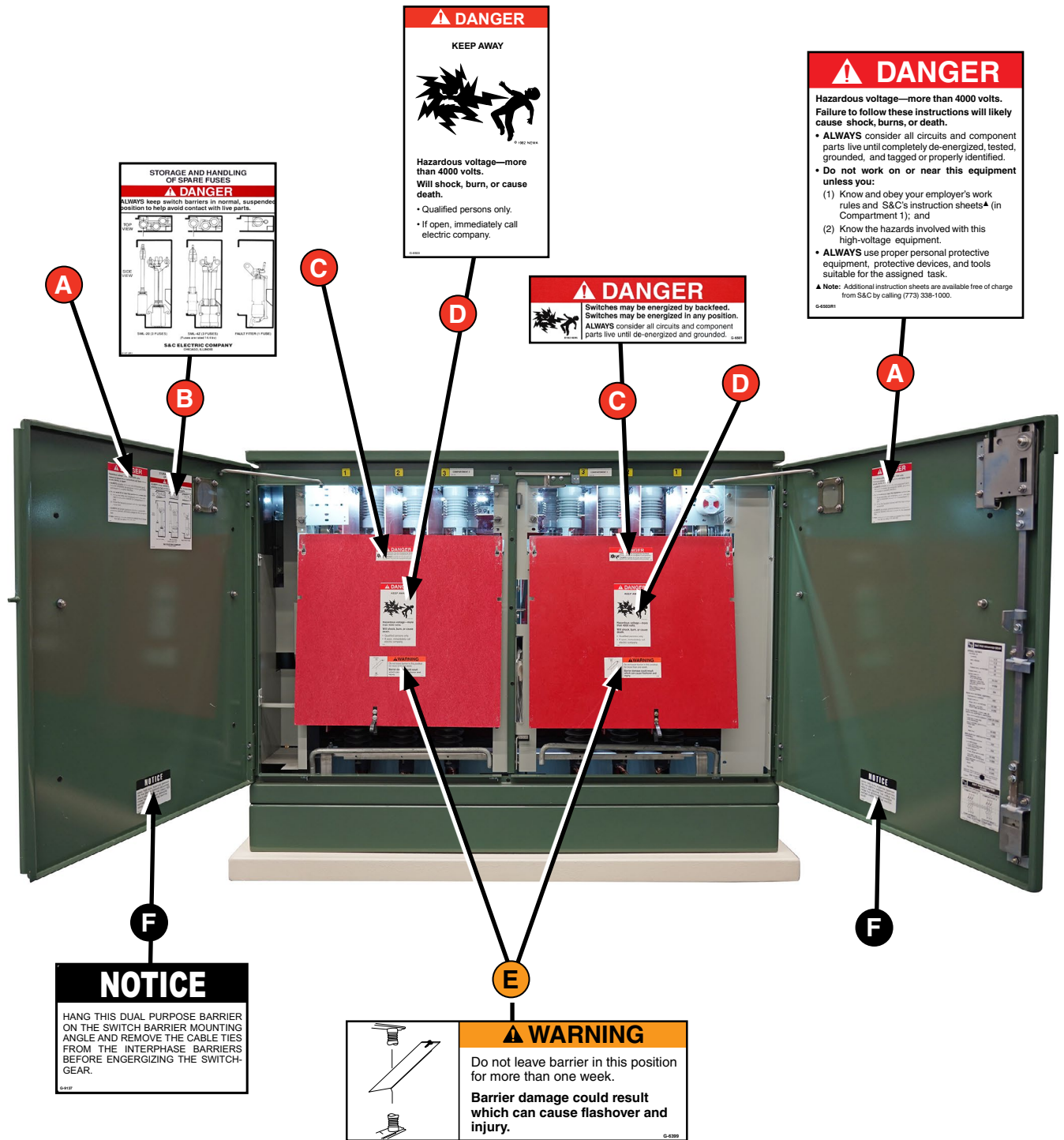


Replacement Instructions and Labels

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.

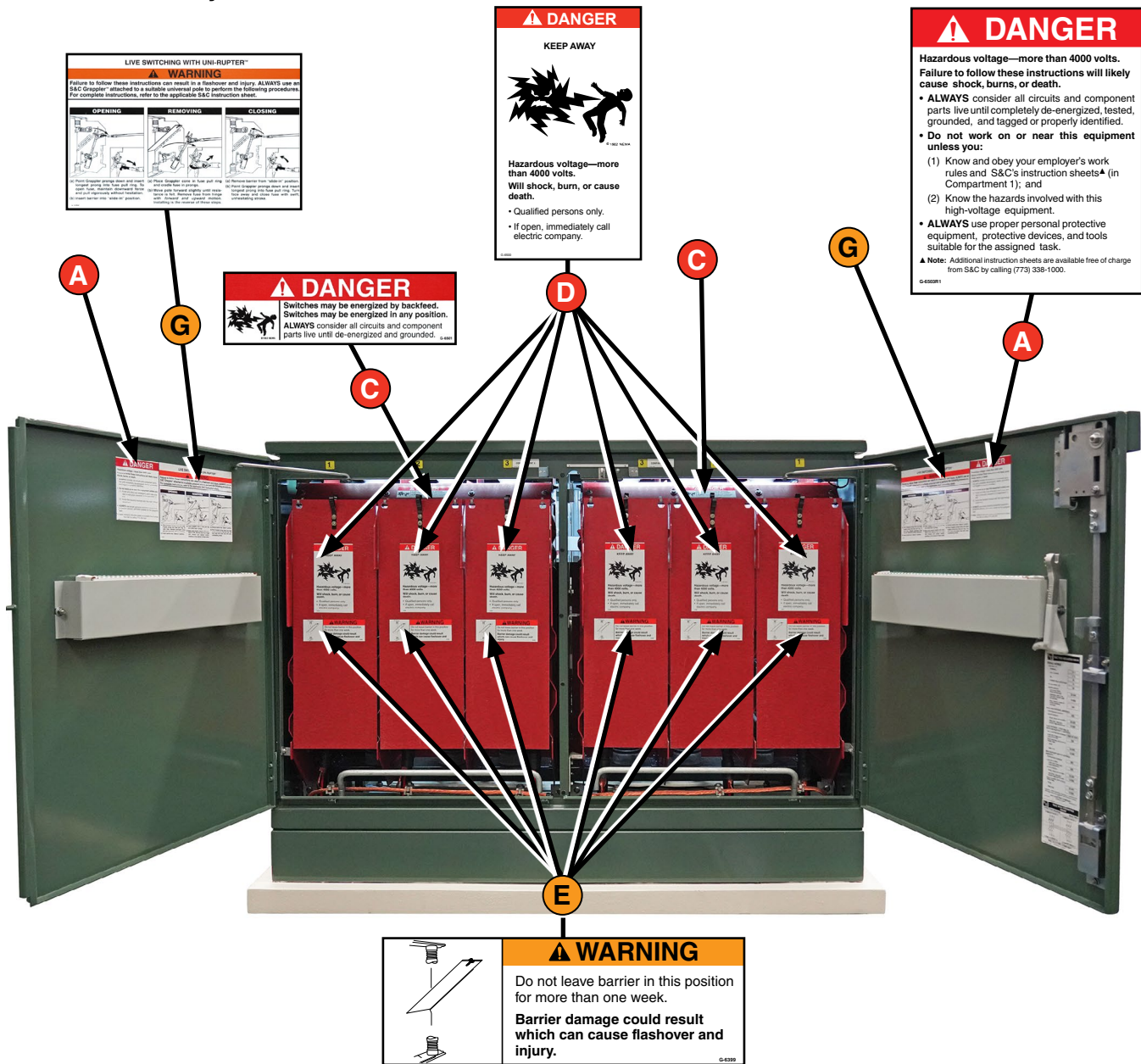
It is important that any missing, damaged, or faded labels on the equipment be replaced immediately. Replacement labels are available by contacting the nearest S&C Sales Office, S&C Authorized Distributor, S&C Headquarters, or S&C Electric Canada Ltd.

Location of Safety Labels



Safety Information

Location of Safety Labels



Reorder Information for Safety Labels

Location	Safety Alert Message	Description	Part Number
A	⚠ DANGER	Hazardous voltage —more than 400 volts . . .	G-6503
B	⚠ DANGER	Storage and handling of spare fuses	G-5147-2R1
C	⚠ DANGER	Switches may be energized . . .	G-6501
D	⚠ DANGER	Keep away . . .	G-6500
E	⚠ WARNING	Do not leave barrier in this position . . .	G-6399
F	NOTICE	Hang this dual purpose barrier . . .	G-9137
G	⚠ WARNING	Live switching with Uni-Rupter . . .	G-6369

⚠ DANGER



Manual PMH Pad-Mounted Gear 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.

1. **QUALIFIED PERSONS.** Access to manual PMH Pad-Mounted Gear must be restricted only to maintain proper clearance from energized qualified persons . See the "Qualified Persons" components section on page 2.
2. **SAFETY PROCEDURES.** Always follow safe grounding equipment before touching any device 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. **HIGH-VOLTAGE ISOLATION.** Switch operators and controls are isolated from high voltage in grounded, metal-enclosed compartments. Access to these components is controlled by padlockable covers, which incorporate a nonremovable manual handle. Other low-voltage components, such as meters, selector switches, toggle switches, etc., are similarly isolated.
6. **TEST FOR VOLTAGE.** Test for voltage using proper high-voltage test equipment before touching any device to be inspected, serviced, or repaired in the high-voltage compartments.
7. **ENERGIZED COMPONENTS.** Always consider all parts live until de-energized, tested, and grounded. Voltage levels can be as high as the peak line-to-ground voltage last applied to the unit. Units energized or installed near energized lines should be considered live until tested and grounded.
8. **GROUNDING.** Manual PMH Pad-Mounted Gear must be connected to a suitable earth ground at the base of the utility pole, or to a suitable building ground for testing, before energizing the switchgear, and at all times when energized.
The ground wire(s) must be bonded to the system neutral, if present. If the system neutral is not present, proper precautions must be taken to ensure the local earth ground, or building ground, cannot be severed or removed.
9. **MAINTAINING PROPER CLEARANCE.** Always maintain proper clearance from energized components.
10. **GROUNDING EQUIPMENT.** Install suitable grounding equipment before touching any device to be inspected, serviced, or repaired in the high-voltage compartments.
11. **PADLOCKS.** Non-removable, manual handles in high-voltage compartment doors and hinged-padlockable covers, as well as hinged-bolted panels, have provisions for padlocks which must be in place and secured at all times unless work is being performed inside the enclosure. Padlocks must be installed and secured on manual switch operating handles at all times unless the switch is being operated.
12. **KEY INTERLOCKS.** Key interlocks (if applicable) must be in place. Check the operating sequence of key interlocks to verify proper sequencing. After the switchgear is installed, destroy all duplicate keys or make them accessible only to authorized persons so the key interlock scheme will not be compromised. Key interlocks are not security locks.
13. **MECHANICAL CABLE INTERLOCKS.** Mechanical cable interlocks are provided to prevent access to fuses unless the switch is open and to prevent operation of stored-energy switch operators when the enclosure door is open. Do not attempt to operate any switch when the enclosure door is open. Periodically, verify these interlocks are functional.
14. **DO NOT APPLY UNDUE FORCE.** Do not apply any undue force when attempting to open a door. The use of undue force may damage the door-latching mechanism. If optional key interlocks are provided, make certain the interlocks are in their correct positions to allow door opening.
15. **FUSES MUST BE DISCONNECTED.** Make certain fuses are disconnected from all power sources (including backfeed) before being inspected or replaced.

Shipping and Handling

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 all listed shipping skids, crates, and containers are present.

If there is visible loss and/or damage:

1. Notify the delivering carrier immediately.
2. Ask for a carrier inspection.
3. Note condition of shipment on all copies of the delivery receipt.
4. File a claim with the carrier.
5. If concealed damage is discovered:
6. Notify the delivering carrier within 15 days of receipt of shipment.
7. Ask for a carrier inspection.
8. File a claim with the carrier.

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

Packing

Manual PMH Pad-Mounted Gear is fastened to a wood skid for shipment. Any components specified, such as fuses, refill units, fuse holders, end fittings, etc., are packed separately and, insofar as practicable, are shipped within the enclosure.

At the first opportunity, remove all packing materials (cardboard, paper, foam padding, etc.) from the outside of the gear. This will prevent the finish from being damaged by rainwater absorbed by the packing materials and will also prevent wind-induced abrasion from loose cardboard.

Handling**⚠ WARNING**

When handling the gear with an overhead hoist, observe standard lifting practices as well as the following general instructions.

Failure to follow these precautions can result in injury and equipment damage.

Follow these steps to lift and move the pad-mounted gear:

- STEP 1.** Make sure the lifting tabs are securely bolted to the enclosure before lifting the gear.
- STEP 2.** Use 6-foot (183-cm) or longer hoist slings of equal length to prevent overstressing the enclosure during lifting. (Four-foot (122-cm) hoist slings are acceptable for two-compartment pad-mounted gear models: PMH-3, -4, and -5.)
- STEP 3.** Arrange the hoist slings to distribute the lifting forces equally between the lifting tabs. See Figure 1.
- STEP 4.** Avoid sudden starts and stops.

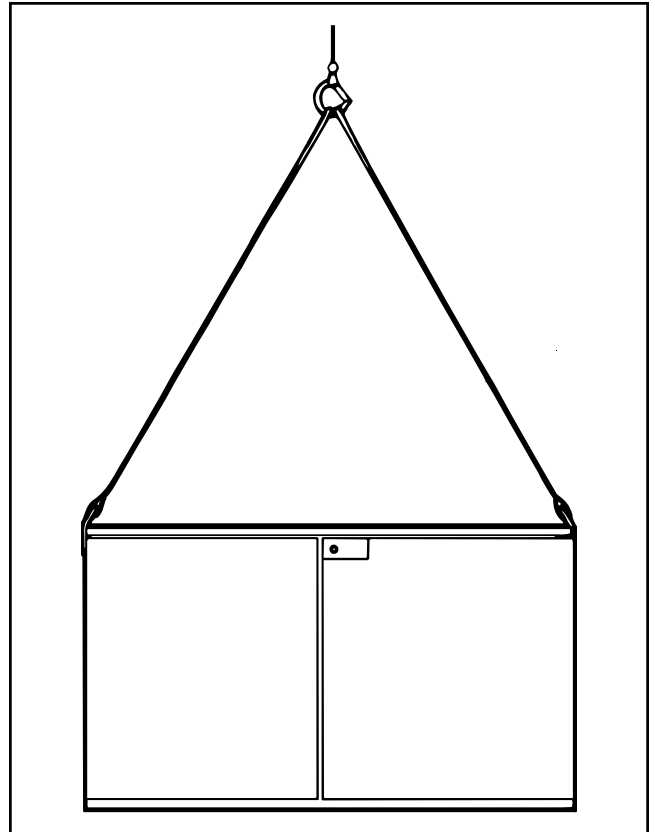


Figure 1. Hoisting arrangements.

Overview

The following instructions cover installation of Manual PMH Pad-Mounted Gear, which features directly operable accessible components and is available in ratings of 14.4 kV and 25 kV. These units are equipped with external handle-operated 600-ampere Mini-Rupter® Switches for three-pole live switching of three-phase source circuits, and 200- or 400-ampere hookstick-operated S&C Power Fuses with a Uni-Rupter® Interrupter for single-pole live switching of single-phase or three-phase load circuits. Models available offer a choice of Type SML-20 and SML-4Z Power Fuses, Fault Fiter® Electronic Power Fuses, or a variety of single-barrel current-limiting fuses.

For operating instructions regarding Manual PMH Mounted Gear, refer to S&C Instruction Sheet 662-510. All personnel involved with the installation and operation of the equipment should be thoroughly familiar with the contents of the installation and operation instruction sheets.

The catalog number stamped on the nameplates affixed to the outside of the doors of the pad-mounted gear is suffixed with letter-number combinations. These suffixes indicate the inclusion of optional features, such as key interlocks (catalog number suffix “-C1,” “-C3,” or “-C4”). Refer to Specification Bulletin 662A-31 for a complete listing of the available options for the gear.

Access to the Interior

NOTICE

Do not apply any undue force when attempting to open a door. The use of undue force may damage the latching mechanism.

Access to the interior of Manual PMH Pad-Mounted Gear is controlled by the Penta-Latch® Mechanism, which must be opened with a pentahead socket wrench or tool except when hexhead actuators are specified.

The latching mechanism is coordinated with the provisions for padlocking so the mechanism can be unlatched only after the padlock has been removed. The padlock can be installed only after the door has been securely closed and completely latched.

Opening the Front Doors

Complete the following steps to open the doors:

STEP 1. Use a pentahead socket wrench or tool (a hexhead socket wrench or tool when catalog number suffix “-B1” or “-B2” is specified) to unlatch the Penta-Latch Mechanism by rotating the actuator counterclockwise approximately 60° against spring resistance until a distinct “click” is heard and the actuator reaches its stop. See Figure 2. This single motion unlatches the mechanism and recharges the latching spring for the subsequent closing operation.

STEP 2. Pull the door open and secure it with the door holder. See Figure 3.

NOTICE

If optional key interlocks are provided, be sure the interlocks are in their correct positions to allow door opening.

STEP 3. *For double-door models of pad-mounted gear:* The left-hand door is secured by a latch and is overlapped by the right-hand door, which is equipped with the Penta-Latch Mechanism. The left-hand door can be opened after opening the right-hand door, removing the tie wrap that secures it for shipment, and disengaging the rotating latch. To disengage the latch, rotate it upward. See Figure 4 on page 12.



Figure 2. To unlock the doors, turn the pentahead socket wrench 60° counterclockwise against spring resistance until a “click” is heard and the wrench reaches its stop.

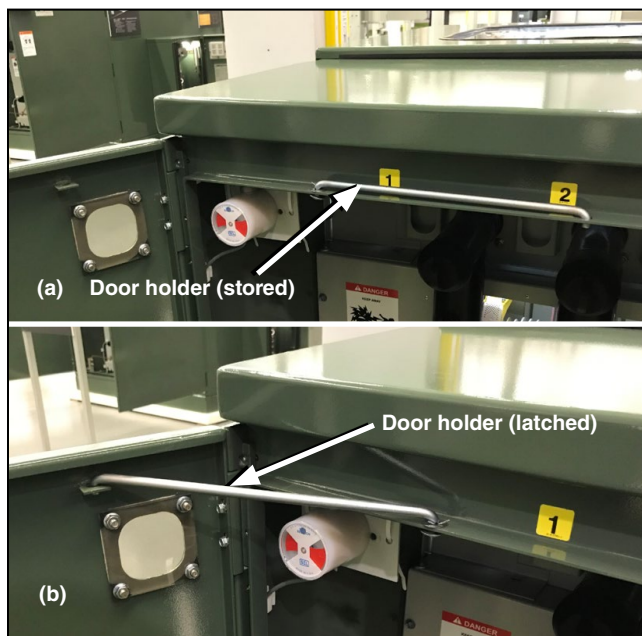


Figure 3. Using the door holder to hold the door open.

Installation

Closing the Front Doors

Complete the following steps to close the doors:

- STEP 1.** Close the left-hand door, where applicable, and secure it with the latch by rotating the latch downward over the stop on the outer edge of the door. See Figure 4. The right-hand door of double-door models of pad-mounted gear is equipped with the Penta-Latch Mechanism, which latches automatically when the door is closed.

To close a door equipped with the Penta-Latch Mechanism: Place one hand at the midpoint of the door-front near the edge and firmly push the door closed. When the latch points are positively engaged, the spring mechanism will trip to latch the door.

- STEP 2.** Pull outward on the cover of the Penta-Latch Mechanism to verify the door has latched securely. If it has not, use a pentahead (or hexhead, when applicable) socket wrench or tool to rotate the actuator counterclockwise until a distinct “click” is heard and the actuator reaches its stop.

If the actuator will not rotate counterclockwise, the mechanism was already charged for closing and was not closed properly. Close the door again, making sure that all latch points engage completely and simultaneously.

- STEP 3.** Insert a padlock into the hasp when the door is securely latched.

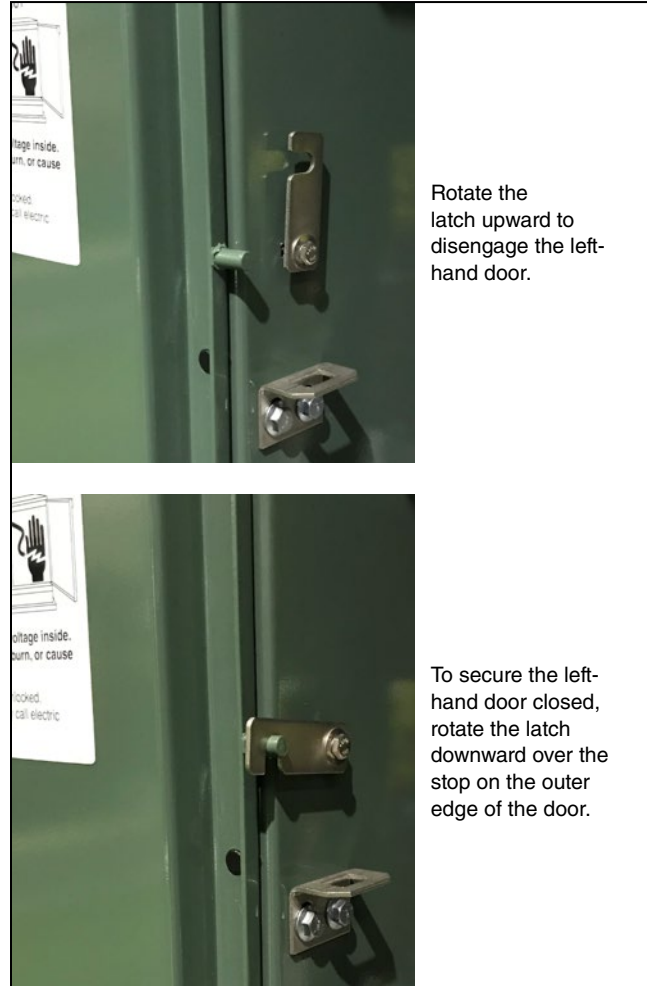


Figure 4. The left-hand door retainer.

Placing the Gear

Complete the following steps to place the gear:

- STEP 1.** At the installation site, remove all separately packaged components shipped in the pad-mounted gear enclosure and set them aside in a protected area.
- STEP 2.** Unbolt the enclosure from its skid and lift the unit onto the mounting pad, observing the precautions given in the “Shipping and Handling” section on page 8.
- STEP 3.** Open the doors to the interior of the gear and secure them with the door holders.
- STEP 4.** Refer to the catalog dimensional drawing furnished and verify the enclosure compartments are positioned correctly and the unit is properly aligned with respect to the anchor bolts (or flush anchors).

Note: If excess lengths of direct-buried cable are in place and it is desired to feed them into the enclosure compartments as the unit is being lowered, the doors must be opened (with door holders in place) to allow any excess cable to be fed over the door stiles.

If switch interphase and end barriers (where applicable) are removed to facilitate this procedure, note their positioning to ensure correct reinstallation later.

It should not be necessary to remove any upper barriers. Refer to STEP 1 on page 14 in the “Cable Terminations” section for instructions for removal of switch barriers.

- STEP 5.** Level the pad-mounted gear enclosure using metal shims as required between the mounting pad and the enclosure. Shim the enclosure of four-compartment units until the tops of the compartment doors are even.

For two-compartment units, shim the enclosure until the top of each door is parallel with the top of the gear.

- STEP 6.** Secure the enclosure to the pad using the anchor brackets provided (see anchor-bolt detail on the catalog dimensional drawing). Make sure all compartment doors open and latch closed without binding. Binding indicates enclosure distortion which must be corrected by additional shimming.

Installation

Cable Terminations

Complete the following steps to terminate the cables:

- STEP 1.** To facilitate makeup and connection of cable terminations to the switch terminals, switch interphase and end barriers (where applicable) can be removed by loosening the wing-head screw that secures each barrier to the barrier-support angle.
- (a) Remove the tie wraps that secure the wing-head screws for shipment. The screw will remain attached to the barrier, which is supported at the switch frame by the barrier guide. See Figure 5.
 - (b) Lift the barrier from the guide and place it in a location where the barrier will not be damaged.

- STEP 2.** Optional cable guides, if specified, include cable-support brackets (packed separately) and mounting angles (factory-installed when an optional base spacer, 12-inch (30-cm) minimum, is specified; packed separately otherwise).

Using the hardware furnished, attach the mounting angles (if packed separately) to the tabs provided on the sidewalls of the compartments and attach the cable-support brackets to the angles. See Figure 5.

Note: Do not remove the protective sheet from the saddle of the bracket or install the cable wrap until instructed to do so in STEP 3.

- STEP 3.** Make up cable terminations following the cable-terminator manufacturer's instructions.

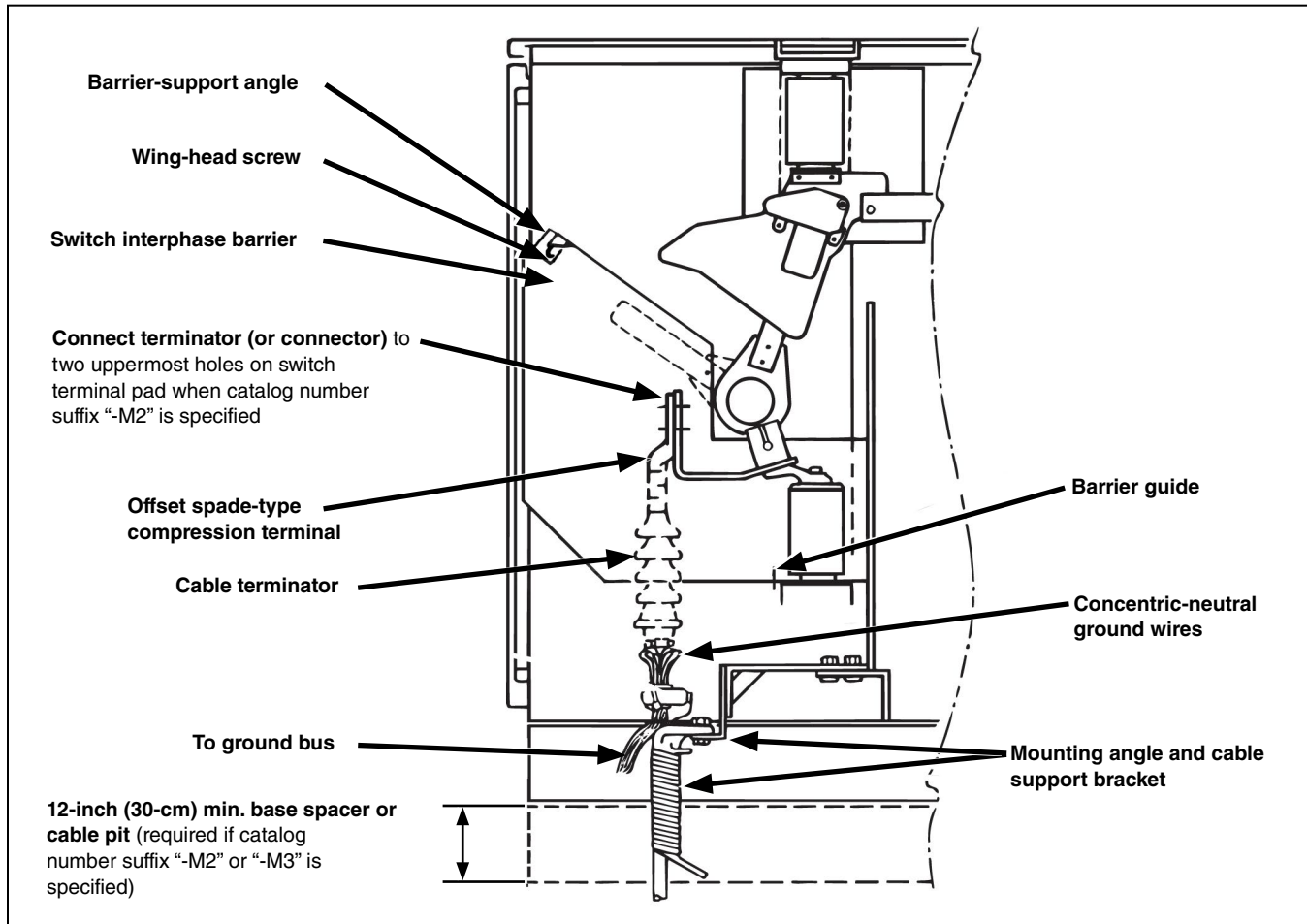


Figure 5. Side view of the switch showing the interphase barrier attachment points, terminal-pad connections, and optional cable guides.

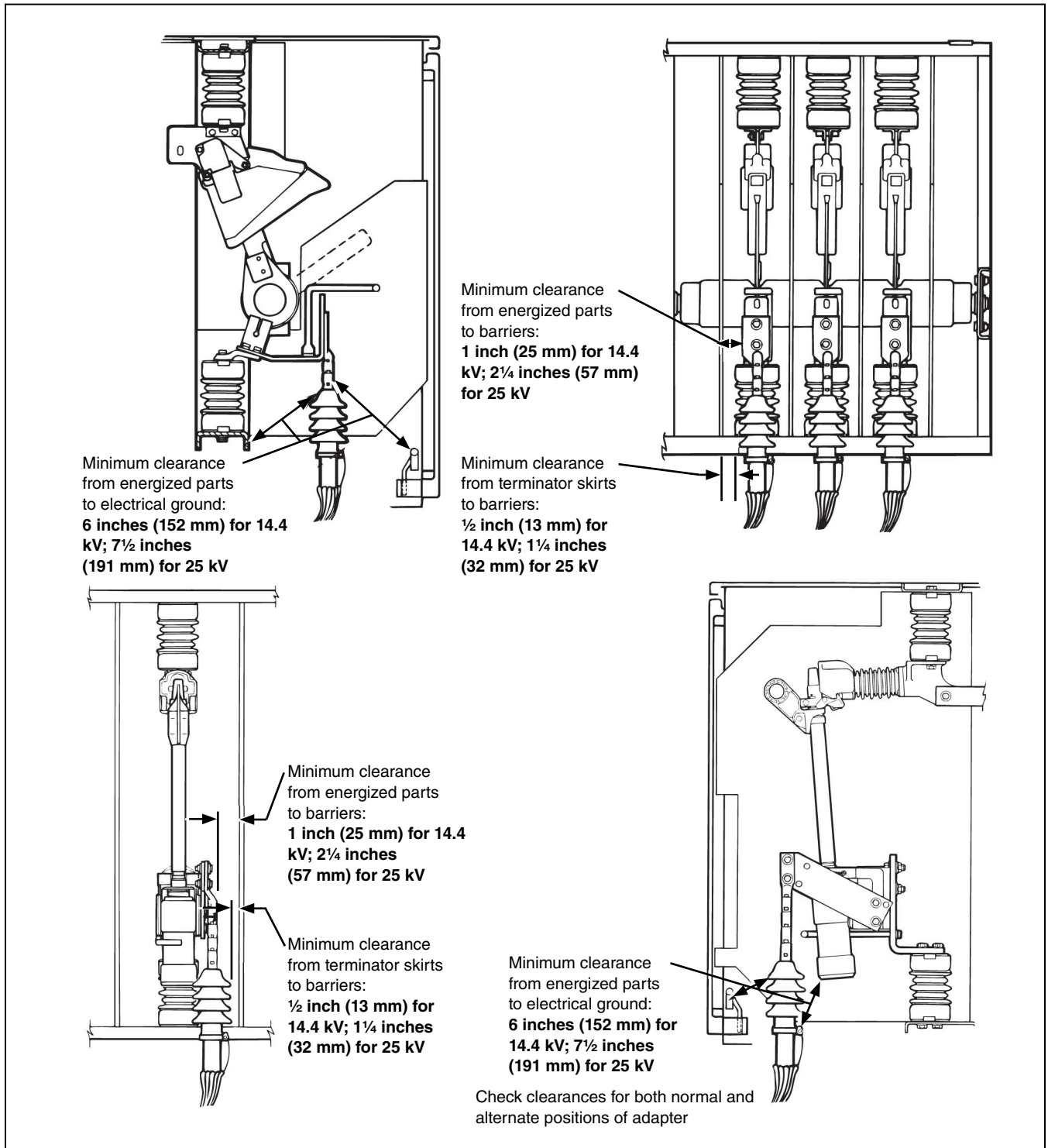


Figure 6. Minimum clearances that must be maintained when installing cable terminators.

WARNING

While the interior of Manual PMH Pad-Mounted Gear is protected from direct exposure to the elements, it is inherently an outdoor environment—and requires selection and application of cable-terminating devices accordingly. Terminations must incorporate adequate leakage distance between the exposed conductor and the stress-relief cone, across a surface of non-tracking material (or surface rendered non-tracking by properly taping with a suitable material). Furthermore, to maintain the rated BIL, the following minimum clearances are required. See Figure 6 on page 15:

- From energized parts to electrical ground: 6 inches (152 mm) at 14.4 kV; 7½ inches (191 mm) at 25 kV
- From energized parts to fiberglass-reinforced polyester barriers: 1 inch (25 mm) at 14.4 kV; 2¼ inches (57 mm) at 25 kV
- From terminator skirts to fiberglass-reinforced polyester barriers: ½-inch (13 mm) at 14.4 kV; 1¼-inch (32 mm) at 25 kV

Two-position cable-terminator adapters are provided at the fuse hinge assemblies. See Figure 7. These adapters can be placed in their alternate positions when required for increased clearance from energized parts to grounded parts of the cable terminators.

Switch terminal pads are furnished with three mounting holes. In general, cable terminators may be connected to the two lower holes in the switch terminal pads. However, if the pad-mounted gear includes optional cable guides for switch terminals, cable terminators must be connected to the two uppermost holes in the switch terminal pads. See Figure 5 on page 14.

NOTICE

When connecting cable terminators, avoid placing any intentional strain on switch or fuse terminals. Do not use the connecting bolts to pull the cables into alignment. Place each connector flat against the corresponding switch or fuse terminal pad with the bolt holes aligned. **Failure to follow these precautions can cause misalignment of the switch or fuse.**

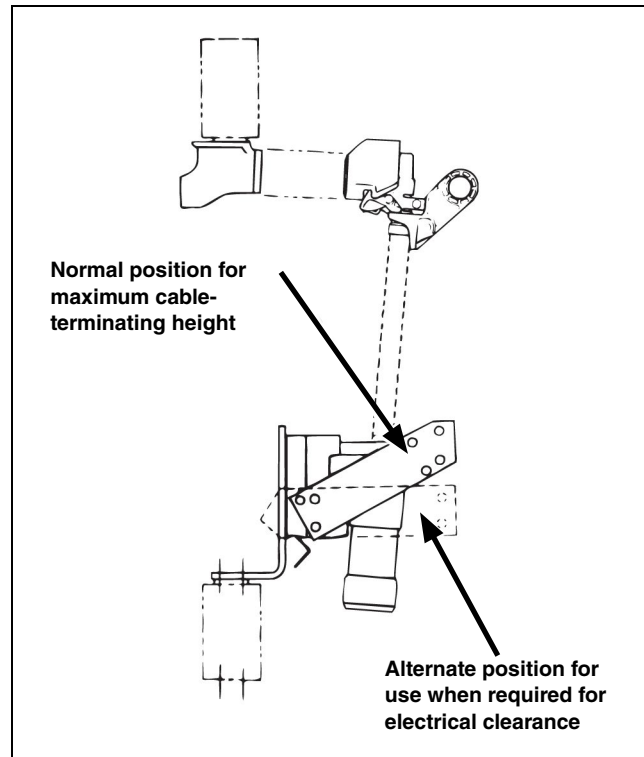


Figure 7. Fuse assembly showing alternate arrangement of two-position cable-terminator adapters.

STEP 4. Before connecting the cable terminators to the aluminum terminal pads, thoroughly wire-brush aluminum contact surfaces to remove any dirt or foreign materials as well as natural surface oxides. Immediately coat both contact surfaces to $\frac{1}{2}$ -inch (13 mm) beyond the joint with a uniform layer of Penetrox® A. Then, make the connections as follows. See Figure 8.

For aluminum connectors: Use $\frac{1}{2}$ -inch aluminum or galvanized steel hardware with two Belleville spring washers (not furnished) as shown in Detail A of Figure 8. Before tightening the connecting bolts, complete the installation of optional cable guides (where applicable) following the cable-guide manufacturer's instructions. Torque aluminum bolts to the manufacturer's specifications. Torque steel bolts to 50 foot-pounds (67.79 N-m) or, in the absence of a torque wrench, tighten each bolt until the Belleville washers are fiat. Then, back off one-half turn. Do not use lockwashers with Belleville washers.

For tinned copper or tinned bronze connectors: Use $\frac{1}{2}$ -inch galvanized steel hardware with one Belleville spring washer (not furnished) against the aluminum terminal pad and one galvanized steel fiat washer against the tinned connector as shown in Detail B of Figure 8. Before tightening the connecting bolts, complete the installation of optional cable guides (where applicable) following the cable-guide manufacturer's instructions. Torque the bolts to 50 foot-pounds (67.79 N-m) or, in the absence of a torque wrench, tighten each bolt until the Belleville washer is fiat. Then, back off one-half turn. Do not use lockwashers with Belleville washers.

STEP 5. Connect the cable concentric-neutral ground wires and the ground pads inside the pad-mounted gear enclosure to the system ground facility in accordance with the user's standard grounding practice. Use the equivalent of 4/0 copper cable (or cable sized in accordance with the user's standard practice) in either a single or multiple connection to realize the maximum momentary rating of the gear. For a multiple connection, cables smaller than 1/0 copper or equivalent should not be used.

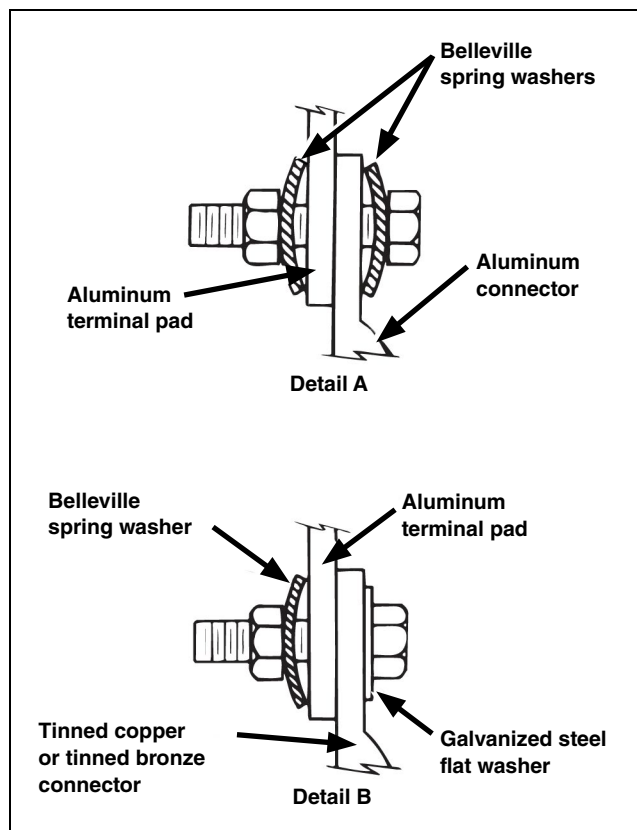


Figure 8. Terminal-pad connections. See STEP 4.

● The use of untinned copper or bronze connectors is not recommended.

Installation

Fault Indicators

Optional mounting provisions for fault indicators are available. Fault indicators are to be furnished by the user and installed in accordance with the manufacturer's instructions. If mounting provisions are specified, mount the fault indicators on the mounting brackets and attach the associated sensors to the cables below the cable terminators.

Completing the Installation

Complete the following steps to complete the installation:

STEP 1. Optional surge arresters and optional mounting provisions for base-mounted surge arresters are available. These options include mounting provisions, surge arresters (when specified), and hard-drawn copper connectors to connect the surge arresters to the terminal pads of the Mini-Rupter Switch.

STEP 2. If applicable, install and connect surge arresters in accordance with the manufacturer's instructions.

WARNING

Always use the hard-drawn copper connectors provided to connect the surge arresters to the Mini-Rupter Switch. Do not use flexible leads. Use of flexible leads can result in a flashover, injury, and equipment damage.

STEP 3. If any switch interphase or end-barriers (where applicable) were removed to facilitate cable termination, reinstall them now. Position the rear of each barrier in the appropriate support notch of the barrier guide mounted on the base of the Mini-Rupter Switch. Then, tighten the wing-head screw of the barrier securely to the barrier-support angle at the front of the switch compartment.

Make sure the clearances from the barriers to energized parts and from the barriers to terminator skirts conform to the minimum dimensions specified in STEP 3 on page 14.

WARNING

Verify the rear of each switch barrier is correctly positioned in its support notch on the switch frame and the front of the barrier is securely fastened to the barrier-support angle. Failure to properly reinstall the switch barriers will reduce the clearance between the barriers and energized parts or terminator skirts, and can result in a flashover, injury, and equipment damage.

STEP 4. Check functional operation of key interlocks, if furnished.

WARNING

When optional key interlocks are furnished, duplicate keys are provided for use during installation. To maintain the integrity of the key-interlock scheme, duplicate keys must be destroyed or made accessible only to authorized persons. **Failure to maintain the integrity of the key interlock scheme may lead to equipment damage, personal injury, or death.**

Note: Key interlocks are not security locks and are not a substitute for padlocks.

NOTICE

Do not force doors open. Forcing a door can damage the latching mechanism. If optional key interlocks are furnished, correctly position the interlocks so the doors can be opened.

STEP 5. Make sure the doors open and close without binding and the shimming of the pad-mounted gear enclosure is adequate.

STEP 6. Check for space between the enclosure gasket and the foundation. A resilient closed-cell gasket on the bottom flange of the enclosure

protects the finish from being scratched during installation and isolates it from the alkalinity of a concrete foundation. This gasket also helps to seal the enclosure to the foundation to guard against entry of rodents, insects, or weeds, and to discourage tampering.

If the gasket cannot compensate for an uneven foundation, grout the bottom of the enclosure as necessary. Any grout applied should be recessed enough to permit caulking. To complete the installation, caulk around the bottom of the enclosure with a weatherproof compound applied with a standard caulking gun. A room-temperature vulcanizing (RTV) silicon-rubber compound is recommended. Apply a suitable compound to fill the spaces between the cable and the conduit, and cap all empty conduits to prevent the entry of moisture and animals.


- STEP 7.** Remove the lifting tabs and replace the bolts to plug the blind-tapped holes.
- STEP 8.** Check the interior of the pad-mounted gear. Remove all foreign materials and tools that may have been mislaid, and sweep the interior clear of debris.
- STEP 9.** Remove the tie wraps that secure the dual-purpose barriers to the inside of the door.
- STEP 10.** Wipe barriers, insulators, switches, fuses, and terminators clean with a mineral-spirits solvent and dry with a clean cloth.
- STEP 11.** Hang dual-purpose front barriers in their normal, suspended positions. Also install optional inner barrier panels, if furnished.

STEP 12. Store spare SMU-20(R) Fuse Units or SM-4(R) Refill Units (as applicable) in the fuse-storage racks inside the fuse-compartment doors. Storage for Fault Fiter Electronic Power Fuses or current-limiting fuses cannot be provided in these racks.

STEP 13. Wipe down the exterior of the enclosure with a clean, damp cloth. To preserve the integrity of the surface, refinish any scratches or abrasions with S&C touch-up paint and red-oxide primer which are available in aerosol spray cans. See S&C Specification Bulletin 662A-31 for catalog number information used for ordering. No other finish or primer is approved. The area to be touched up should be cleaned to remove all oil and grease. Sand the area, removing any traces of rust that may be present, and make sure that all edges are feathered before applying primer.

Note: Labels indicating the area around the pad-mounted gear that must be kept clear so work on the gear can be done safely are provided in the Installation and Operation Information Kit. These labels (or equivalent labels) should be affixed to the exterior of the gear. Refer to the “Location of Safety Labels” section on page 5 and page 6.

When the installation is completed, refer to S&C Instruction Sheet 662-510 for the operating instructions.

 WARNING
<p>Dual-purpose front barriers must be wiped clean before placing them in the “slide-in” position. In addition, do not leave any dual-purpose front barriers in the “slide-in” position for more than one week. These barriers are intended for temporary use only. If the barriers are left in the “slide-in” position for extended periods of time, there is the possibility of corona discharge to the barriers.</p> <p>Prolonged exposure to corona discharge may damage the barriers and result in a flashover or injury.</p>

Dielectric Testing

For the convenience of users who normally perform electrical tests on system components such as pad-mounted gear, appropriate withstand test values are given in Table 1.

Table 1. Ratings and Insulation Test Values

Rating, kV		Withstand, kV		
Nom.	Max ^①	60-Hz, RMS ^②	Dc ^{③④}	Impulse (BIL)
14.4	17	36	50	95
25	27●	60	70	125
25	29■	60	70	125

① Maximum voltage ratings are lower than the values listed when current-limiting fuses are used. Consult the appropriate current-limiting fuse manufacturer for complete fuse ratings.

② Ac withstand tests made on this equipment after shipment by S&C should be conducted at no more than 0.75 times the values shown. When making ac tests, the time duration for application of the test voltage should be limited to less than 10 seconds.

③ The column headed "Dc" is given as a reference only for those making dc tests and represents values believed to be appropriate and approximately equivalent to the corresponding power-frequency

withstand test values specified for components of this voltage class. The presence of this column in no way implies any requirement for a dc-withstand test on these components.

④ Dc withstand tests made on this equipment after shipment by S&C should be conducted at no more than 0.75 times the values shown. When making dc tests, the test voltage should be raised in discrete steps-one minute per step.

- With fuses.
- Without fuses.