

External Power Supply Installation

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Introduction

Qualified Persons

WARNING

The equipment covered by this publication must be installed, operated, and maintained by qualified persons who are knowledgeable in the installation, operation, and maintenance of overhead electric power distribution equipment along with the associated hazards. A qualified person is one who is trained and competent in:

- The skills and techniques necessary to distinguish exposed live parts from non-live 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 the special precautionary techniques, personal protective equipment, insulating 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

Read this instruction sheet thoroughly and carefully before installing or operating your IntelliRupter® fault interrupter. Familiarize yourself with the Safety Information and Safety Precautions on pages 3 through 5. The latest version of this publication is available online in PDF format at sandc.com/en/support/product-literature/.

Retain this Instruction Sheet

The equipment in this publication must be selected for a specific application. The application must be within the ratings furnished for the selected equipment.

Proper Application

WARNING

The equipment in this publication must be selected for a specific application. The application must be within the ratings furnished for the selected equipment.

Special Warranty Provisions

The standard warranty contained in S&C's standard conditions of sale, as set forth in Price Sheet 150, applies to the IntelliRupter fault interrupter and its associated options, except for the control group (the protection and control module and communication module). For these devices, the first paragraph of said warranty is replaced by the following:

- (1) General:** The seller warrants to the immediate purchaser or end user for a period of 10 years from the date of shipment that the equipment delivered will be of the kind and quality specified in the contract description and will be free of defects of workmanship and material. Should any failure to conform to this warranty appear under proper and normal use within 10 years after the date of shipment, the seller agrees, upon prompt notification thereof and confirmation that the equipment has been stored, installed, operated, and maintained in accordance with recommendations of the seller and standard industry practice, to correct the nonconformity either by repairing any damaged or defective parts of the equipment or (at the seller's option) by shipment of necessary replacement parts. The seller's warranty does not apply to any equipment that has been disassembled, repaired, or altered by anyone other than the seller. This limited warranty is granted only to the immediate purchaser or, if the equipment is purchased by a third party for installation in third-party equipment, the end user of the equipment. The seller's duty to perform under any warranty may be delayed, at the seller's sole option, until the seller has been paid in full for all goods purchased by the immediate purchaser. No such delay shall extend the warranty period.

Understanding Safety-Alert Messages

Several types of safety-alert messages may appear throughout this instruction sheet as well as on labels attached to crate, packing, and equipment. Familiarize yourself with these types of messages and the importance of the various signal words, as explained below.

⚠ 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 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 Global Support and Monitoring Center at 1-888-762-1100.

NOTICE

Read this instruction sheet thoroughly and carefully before installing or operating an IntelliRupter PulseCloser Fault Interrupter.



Replacement Instructions and Labels

If you need additional copies of this instruction sheet, 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.

Safety Information

Location of Safety Labels

⚠ WARNING

IntelliRupter base contains electrical and mechanical parts that can cause injury. **DO NOT** disassemble or remove access panels unless directed by S&C Electric Company. **DO NOT** drill holes in the base. Damage to internal components can cause equipment failure.

G-9220

⚠ WARNING

ELECTROCUTION HAZARD

Failure to follow these instructions can cause serious injury or death.

- This IntelliRupter® PulseCloser® Fault Interrupter must be installed, grounded and operated **ONLY** by qualified personnel familiar with high-voltage electrical equipment, associated safety practices, and potential hazards.
- Before energization, and at all times when energized, the IntelliRupter fault interrupter base must be connected to a suitable earth ground at the base of the pole in accordance with the S&C instruction sheet furnished with this device.
- The IntelliRupter fault interrupter base ground must also be connected to the system neutral. If the system neutral is not present, proper precautions must be taken to ensure that the local earth ground cannot be severed or removed.
- To ensure safe and effective installation and operation, follow procedures in the S&C instruction sheet furnished with this device **EXACTLY**.
- For additional S&C instruction sheets, call 1-773-338-1000.

REMOVE THIS TAG AFTER INTELLIRUPTER® FAULT INTERRUPTER IS INSTALLED AND ADJUSTED.

G-9222

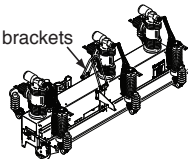
⚠ WARNING

LIFTING INSTRUCTIONS

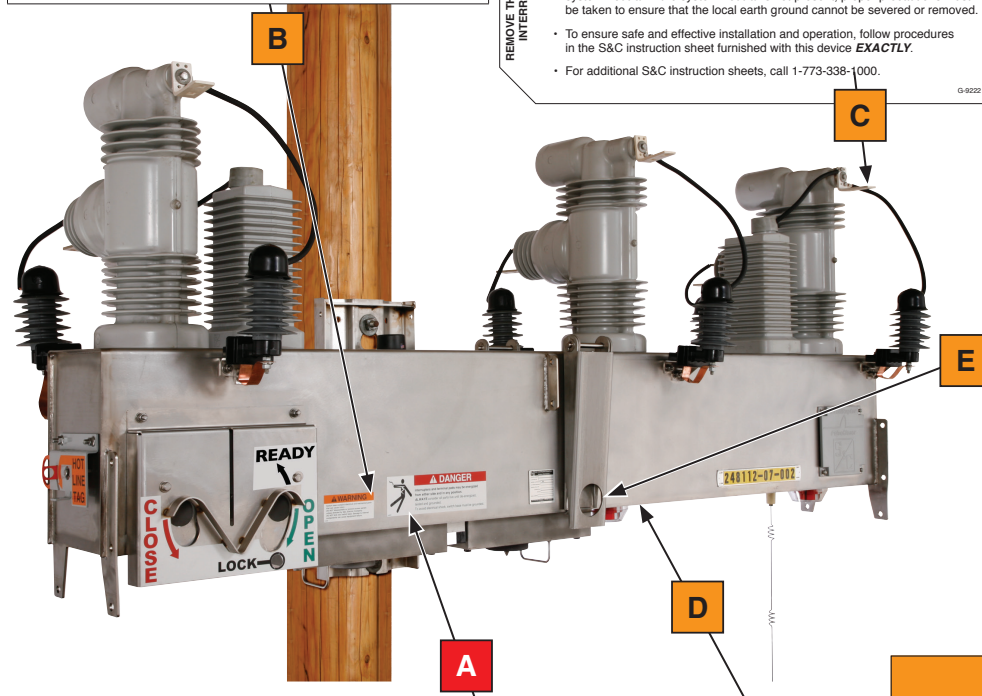
- Attach lifting slings **ONLY** to lifting brackets provided. (Lifting brackets are permanently attached to the IntelliRupter® PulseCloser® for future use.)
- Lift IntelliRupter fault interrupter as shown until slings are just taut.
- Unbolt IntelliRupter fault interrupter from steel brackets attached to the shipping skid.
- Slowly and carefully lift IntelliRupter fault interrupter onto pole or structure.
- Securely bolt IntelliRupter fault interrupter to pole or structure.

Failure to lift IntelliRupter fault interrupter properly can result in damage, causing improper operation, arcing, or electrical shock.

Lifting brackets




G-9223



⚠ DANGER

Interrupter and terminal pads may be energized from either side and in any position. **ALWAYS** consider all parts live until de-energized, tested and grounded. To avoid electrical shock, IntelliRupter base must be grounded.



G-9221

⚠ WARNING

DO NOT ATTACH ANY POWER SOURCE TO THIS CONNECTOR IF INTELLIRUPTER IS ENERGIZED AT HIGH VOLTAGE.

S&C Power Supply Catalog TA-3221 can be attached to configure IntelliRupter prior to energization, indoors, in a service center or lab.

G-9281

Reorder Information for Safety Information

Location	Safety Alert Message	Description	Part Number
A	⚠ DANGER	Interrupter and terminal pads may be energized from either side . . .	G-9221★
B	⚠ WARNING	IntelliRupter base contains electrical and mechanical parts that . . .	G-9220
C	⚠ WARNING	Electrocution Hazard—Failure to follow these instructions can . . .	G-9222▲
D	⚠ WARNING	Do not attach any power source to this connector if IntelliRupter . . .	G-9281
E	⚠ WARNING	Lifting Instructions—1. Attach lift slings only to lifting brackets . . .	G-9223▲

★ Label is placed on front and back of the IntelliRupter fault interrupter base.

▲ Tag is removed and discarded after the IntelliRupter fault interrupter is installed and adjusted.

⚠ DANGER



IntelliRupter PulseCloser Fault Interrupters 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 an IntelliRupter fault interrupter 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. IntelliRupter fault interrupters contain fast-moving parts that can severely injure fingers. Do not remove or disassemble operating mechanisms or remove access panels on the IntelliRupter fault interrupter base unless directed by S&C Electric Company. 6. ENERGIZED COMPONENTS. Always consider all parts live until de-energized, tested, and grounded. The integrated power module (IPM) contains components that can retain a voltage charge for many days after the IntelliRupter fault interrupter has been de-energized and can derive a static charge when in close proximity to a high-voltage source. Voltage levels can be as high as the peak | <p>line-to-ground voltage last applied to the unit. Units that have been energized or installed near energized lines should be considered live until tested and grounded.</p> <ol style="list-style-type: none"> 7. GROUNDING. The IntelliRupter fault interrupter base 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 an IntelliRupter fault interrupter, 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 that the local earth ground, or building ground, cannot be severed or removed. 8. VACUUM INTERRUPTER POSITION. Always confirm the Open/Close position of each interrupter by visually observing its indicator.

Interrupters, terminal pads, and disconnect blades on disconnect style models may be energized from either side of the IntelliRupter fault interrupter.

Interrupters, terminal pads, and disconnect blades on disconnect style models may be energized with the interrupters in any position. 9. MAINTAINING PROPER CLEARANCE. Always maintain proper clearance from energized components. |
|---|--|

Overview

An IntelliRupter PulseCloser Fault Interrupter with catalog number suffix -P300 or -P350 is shipped with the external power supply assembly packed in a separate box inside the crate.

The external power supply mounting bracket is bolted to the bottom of the IntelliRupter fault interrupter crossarm base, and the junction box is mounted on the IntelliRupter fault interrupter pedestal. The power supply slides into the mounting bracket, and must be grounded to the IntelliRupter fault interrupter base. See Figure 1 and Figure 3 on page 9.

Two control power sources can be wired to the junction box, and the secondary source only replaces the primary source if the primary source is not powered. The secondary source can be connected to either ac control power or dc substation battery power.

The external power supply can be installed on IntelliRupter fault interrupters that also have one or two integrated power modules. The external power supply is used when power is not supplied by the integrated power module(s).

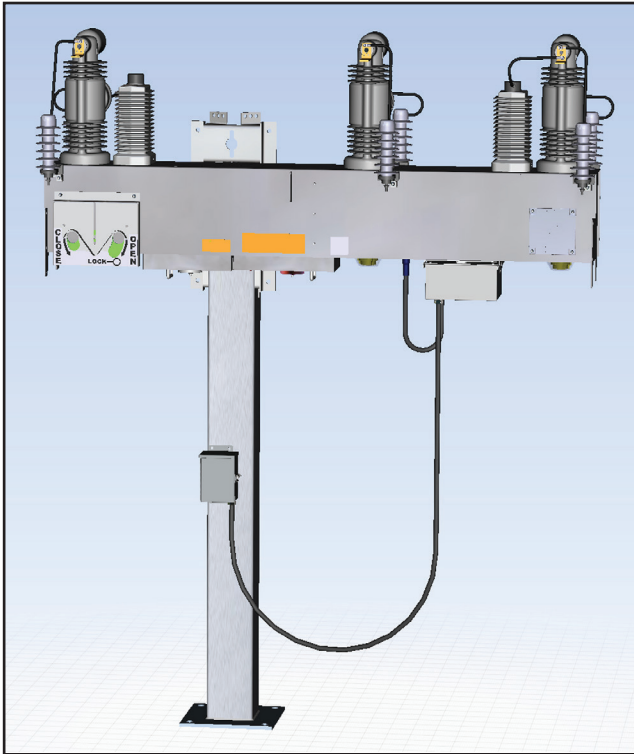


Figure 1. The external power supply installed on a pedestal-mounted IntelliRupter fault interrupter.

Inspection

Examine the shipment for external evidence of damage as soon after receipt as possible.

If there is visible loss and/or 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 damaged 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 and/or damage.

Parts List

The IntelliRupter external power supply kit includes the following items:

Reference Number	Quantity	Description	Catalog Number
1	1	External power supply assembly; includes junction box and attached cables	SDA-4892
2	1	Mounting bracket assembly	SDA-4901
3	2	Spacer	SD-6659
4	2	¼-20 x 1½-inch stainless steel hexhead capscrew	1323-308
5	2	¼-inch 18/8 stainless steel medium pattern lockwasher	1323-054
6	2	¼-inch stainless steel flat washer SAE .265 ID x .500 OD	340-022
7	1	Knob 5/16-18 stainless steel through hole, for ground strap	TR-10907
8	1	5/16 stainless steel medium pattern lockwasher	1323-056
9	2	5/16 flat 18/8 stainless steel washer	1340-016

Installation

Install External Power Supply

Complete the following steps to install the external power supply:

STEP 1. Install the mounting bracket (SDA-4901) to the bottom of the IntelliRupter fault interrupter base; hardware reference numbers are indicated. See Figure 2.

STEP 2. Slide the external power supply (SCA-4892) into the mounting bracket.

STEP 3. Attach the flexible ground strap with the ground nut hardware. See Figures 3 and 4 on page 9.

STEP 4. Connect the power connector to the IntelliRupter fault interrupter. See Figure 5 on page 9.

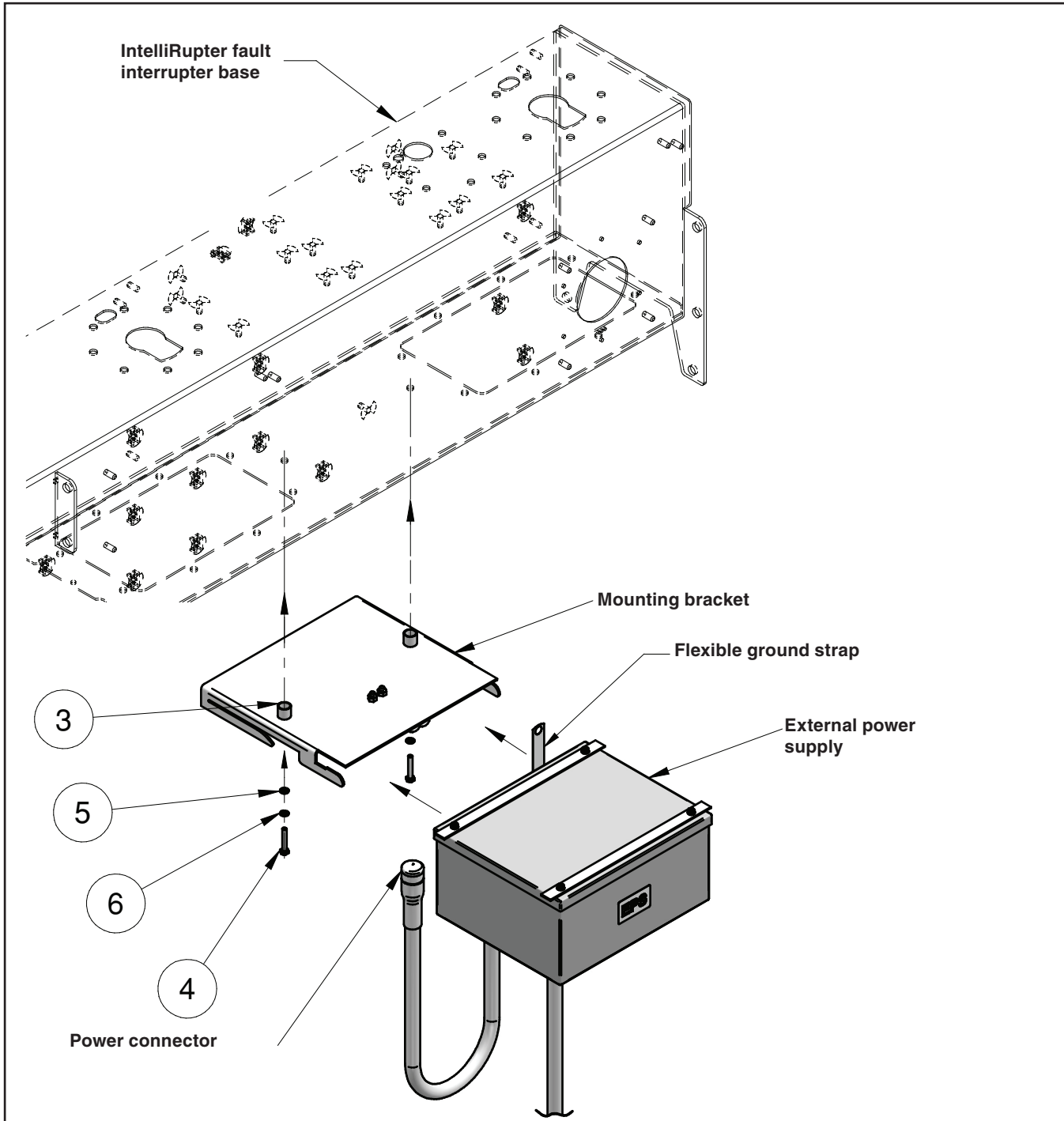


Figure 2. Mounting the external power supply to IntelliRupter fault interrupter base.

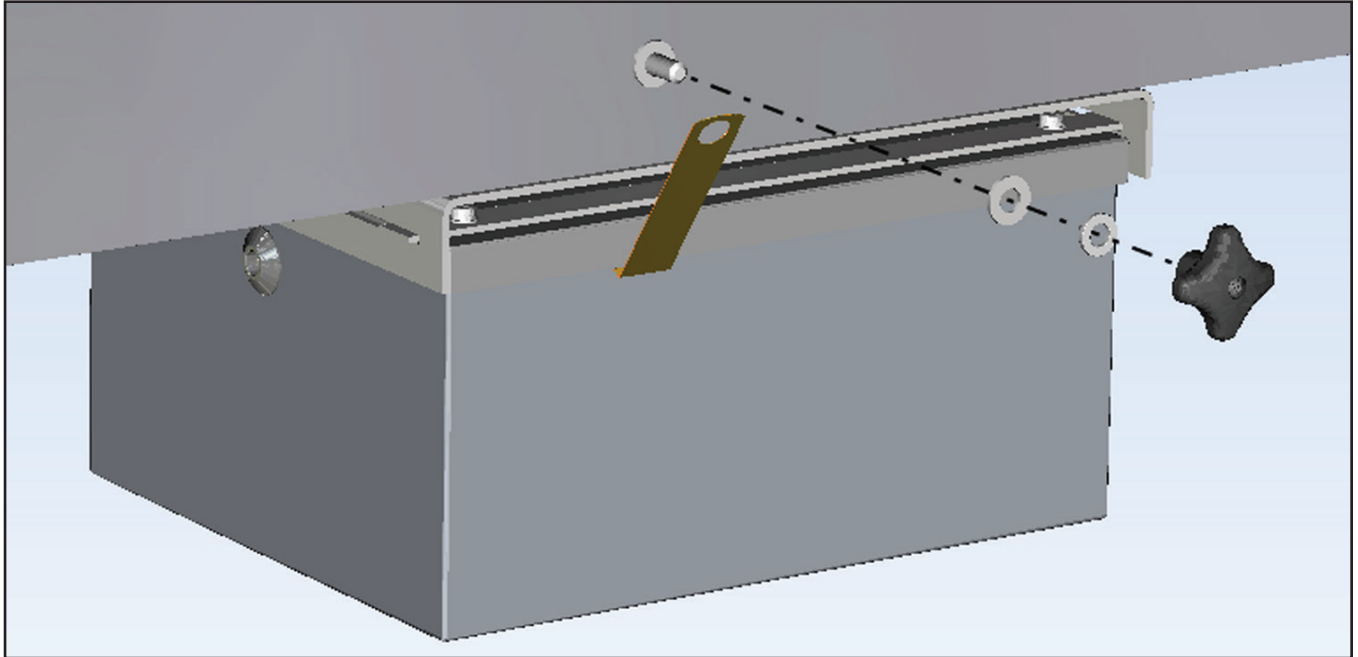


Figure 3. Grounding the external power supply to the IntelliRupter fault interrupter base.

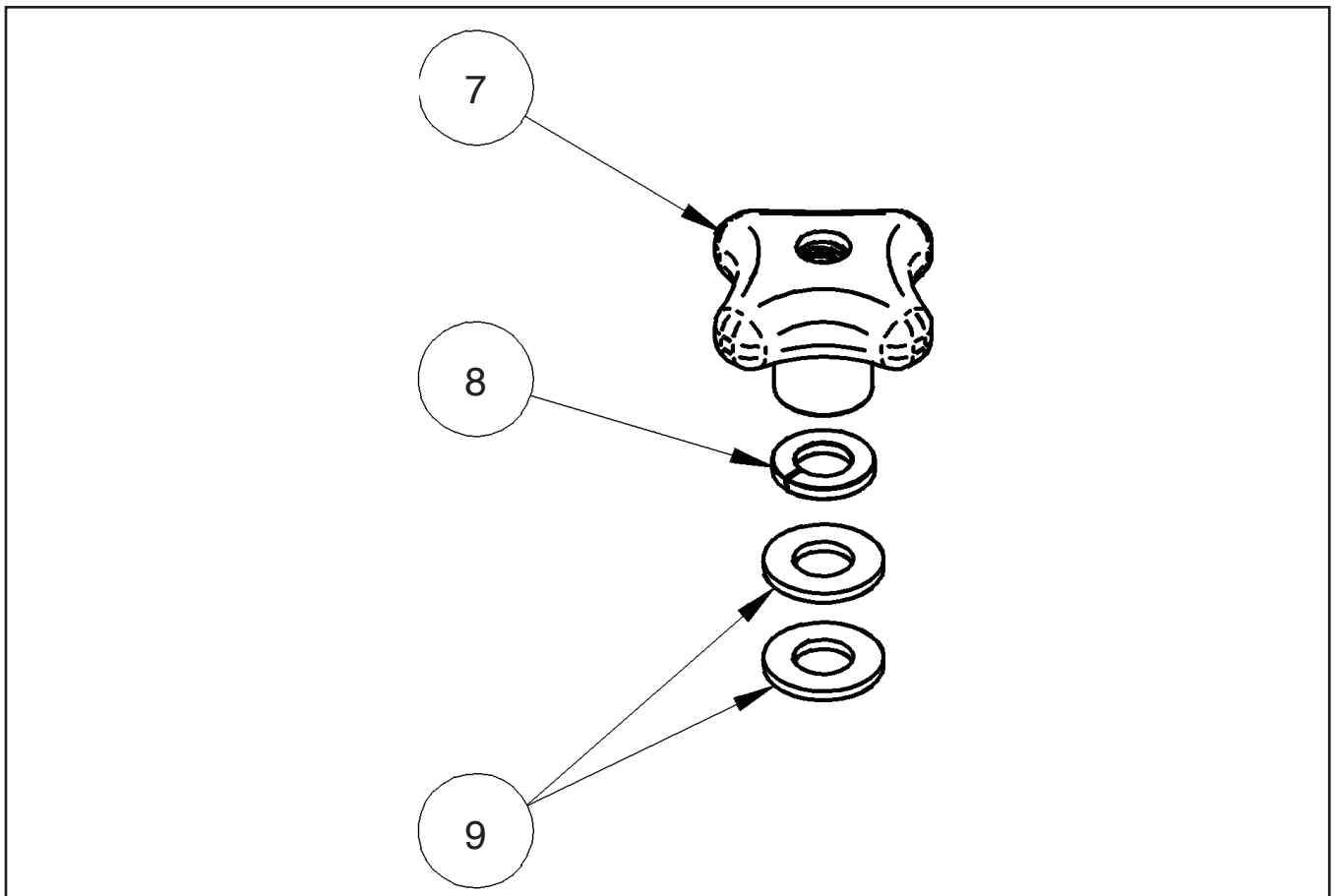


Figure 4. Ground nut and washers; reference numbers indicated.



Figure 5. An external power supply connected to the IntelliRupter fault interrupter.

Install Junction Box

Complete the following steps to install the junction box:

- STEP 1.** Install the junction box on the pedestal following standard utility practices. Hole spacing is shown in Figure 6.
- STEP 2.** Remove the knockout for the appropriate power supply conduit size. See Figure 7 on page 11.
- STEP 3.** Use ring terminals to connect control power to the top terminals. Wire must be sized sufficiently to provide 6 amperes for all input voltage ranges.

See Figure 8 on page 11.

The external power supply accommodates these voltage ranges:

- Preferred Input:** 90- to 259-Vac, 50/60 Hz
- Alternate Input:** 90- to 259-Vac 60/60 Hz
19- to 60-Vdc
100- to 360-Vdc

The source connected to the external power supply must provide a minimum of 300 VA.

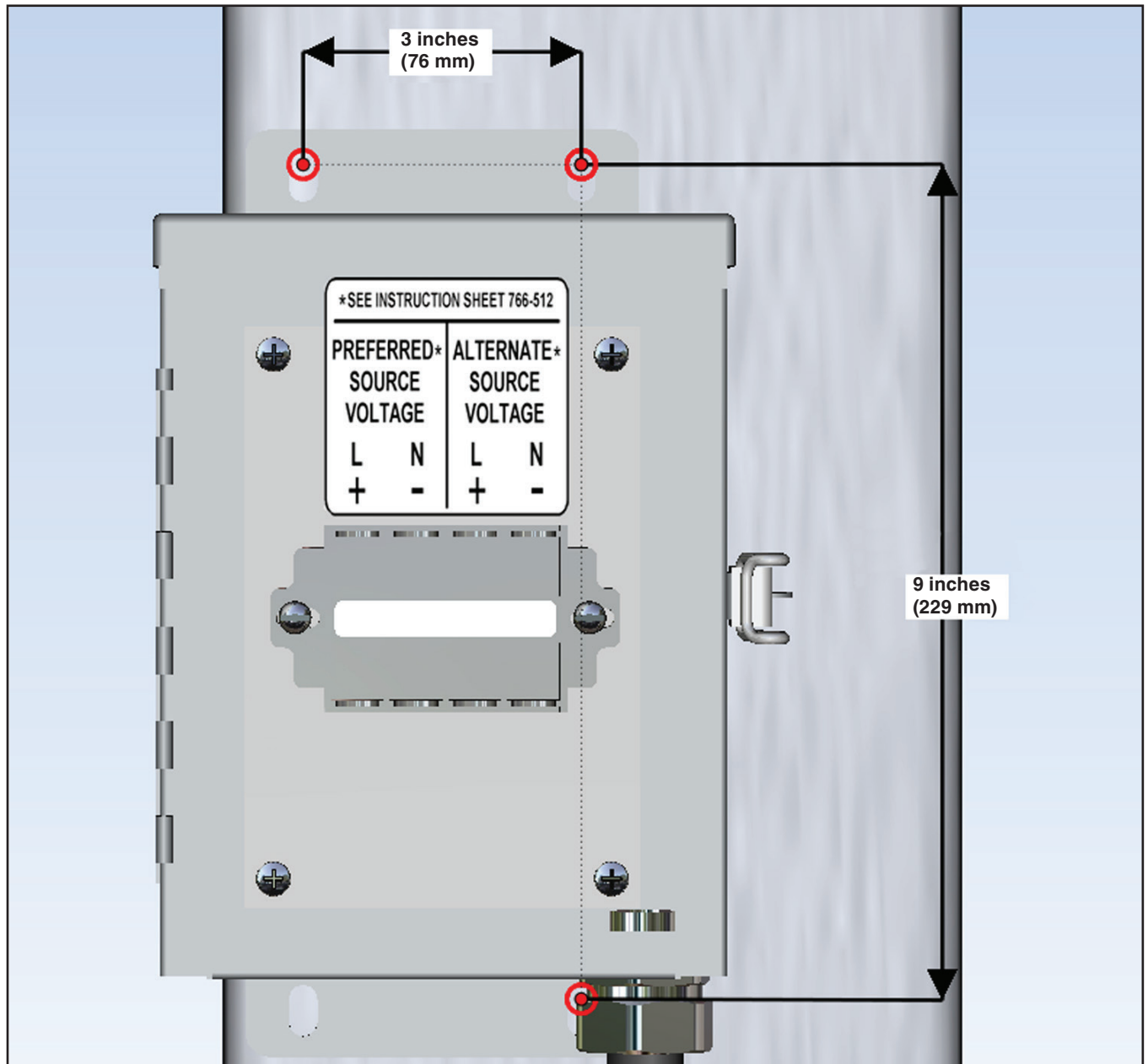


Figure 6. Junction box mounting hole spacing.

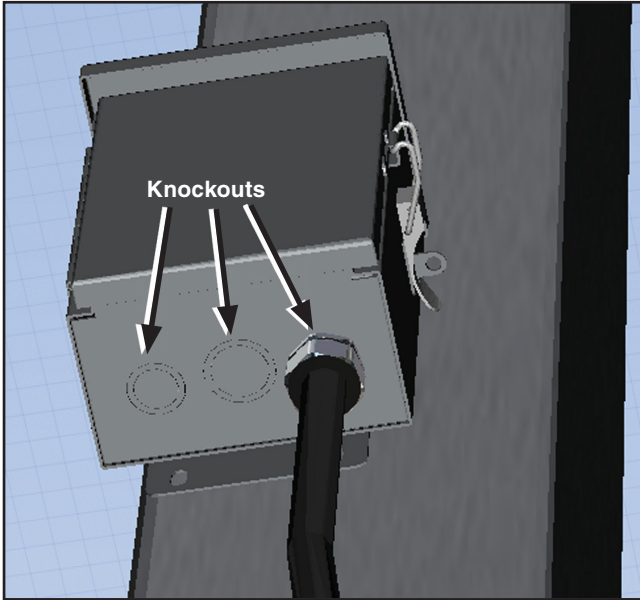


Figure 7. Junction box mounted on the IntelliRupter fault interrupter pedestal.



Figure 8. Junction box power input terminals.