FlashBox Installation Manual
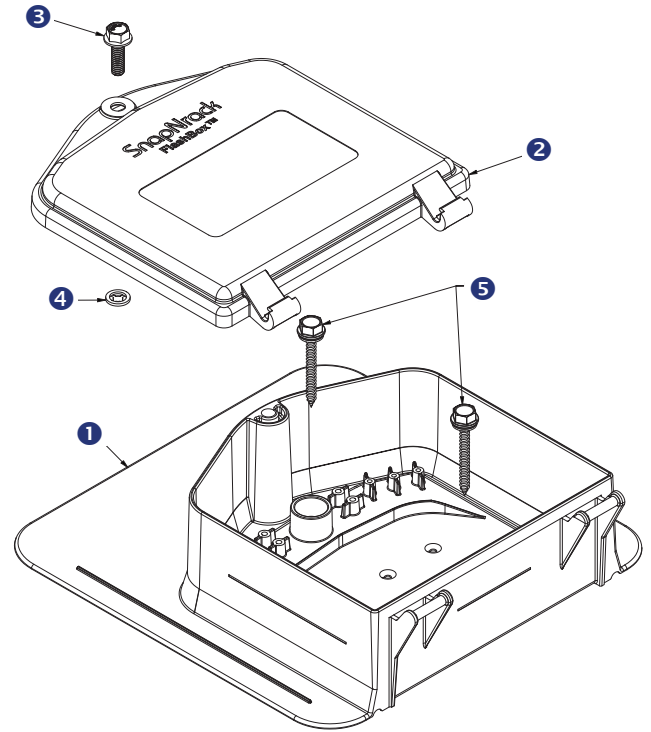
Materials Included:

❶ (1) SnapNrack FlashBox Body
❷ (1) SnapNrack FlashBox Lid
❸ (1) 5/16"-18 Smooth Flange Bolt
❹ (1) Self-Retaining Washer
❺ (2) #14 X 2-1/4" Sealing Wood Screws

⚠ NOTES - SAVE THESE INSTRUCTIONS

This manual contains important instructions for the FlashBox that shall be followed during installation and maintenance of the photovoltaic system transition box.

Clamps and fasteners for the attachment of conduit, electrical metallic tubing, armored cable, non metallic flexible tubing, nonmetallic-sheathed cable, service cable, or equivalent, that are supplied as a part of an enclosure shall comply with the Standard for Conduit, Tubing, and Cable Fittings, UL 514B.
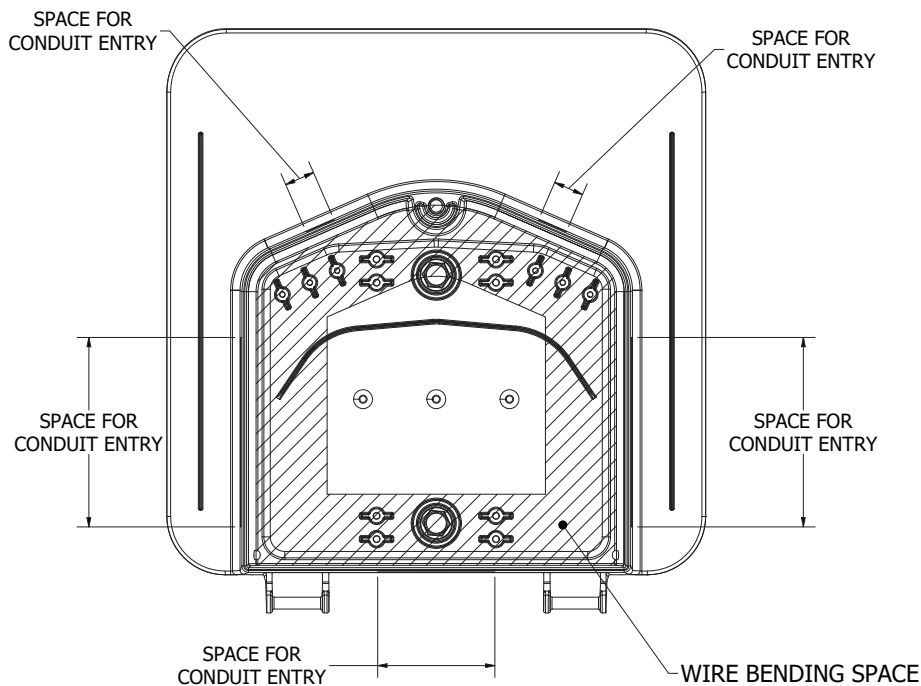
Conduit Fittings shall be rated 3, 3S, 4, 4X, 6, or 6P

Raintight or wet location hubs that comply with the requirements in the Standard for Conduit, Tubing, and Cable Fittings, UL 514B, are to be used
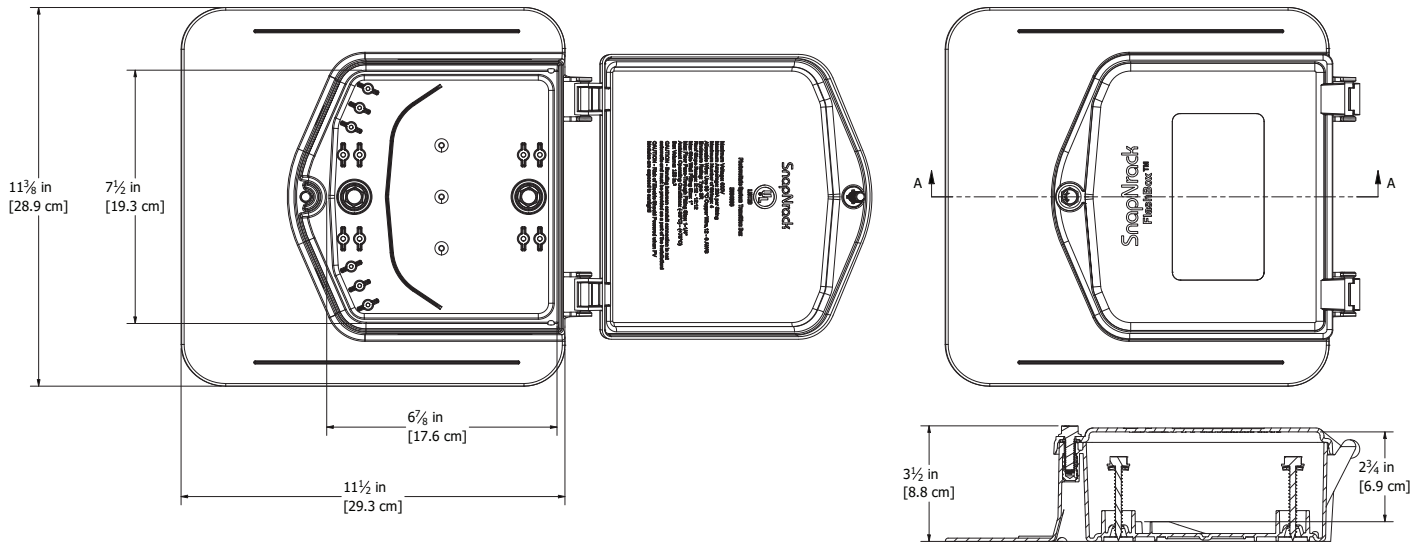
Temperature Range: -35°C to +75°C

Wiring methods in accordance with the National Electrical Code, ANSI/NFPA 70 are to be used

Disconnect and Overcurrent Protection Device provided by the installer

SPACE FOR CONDUIT ENTRY

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WIRE BENDING SPACE

Hardware Description	Torque Specification
FlashBox Lid	3 lb-ft (36 lb-in)

Technical Specifications	
Internal Dimensions	7.61" x 6.91" x 2.7" (inner box area)
Material	Deck Screw: Stainless Steel Box: Polycarbonate
UL Environmental Rating	Type 3R
Certifications	UL1741, Solar Transition Pass-through Box
Compatibility	Comp Shingle Roof, 2:12 to 12:12 roof pitch

Required Tools

- Socket Wrench
- Torque Wrench
- ½" socket
- Roof Crayon
- Prybar
- Utility Knife or Shears
- Drill with step-bit or hole-saw

Installation Instructions

1

Ensure that there is adequate attic access to the penetration. The attic space should be clear of obstacles and other equipment.

2

Locate the FlashBox nearest the edge of the array where the conduit will penetrate the roof. Avoid interference with any rails or module frames. Junction Box access after installation should not require the removal of more than one module.

3

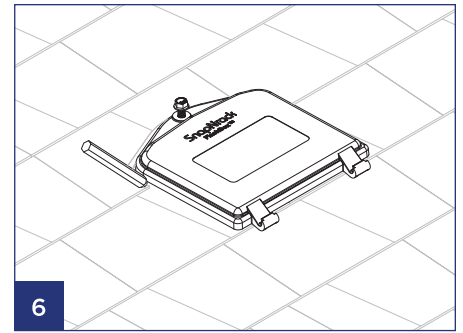Locate the penetration at least 3 inches from a shingle seam.
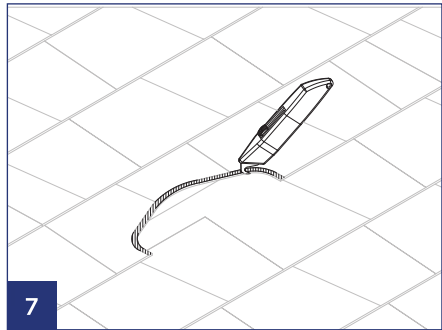
Installation Instructions Continued
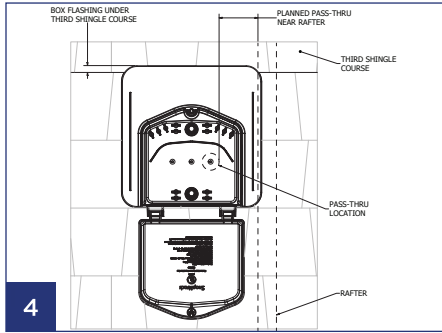
4

Align bottom of FlashBox with the row of shingles. Be sure the intended roof penetration area has at minimum 1" clearance from the rafter below.
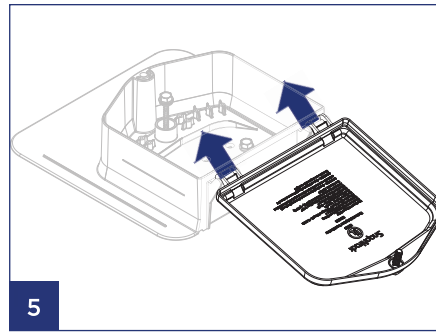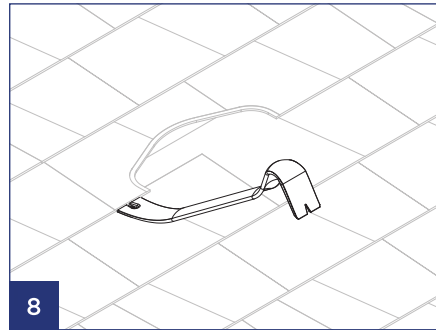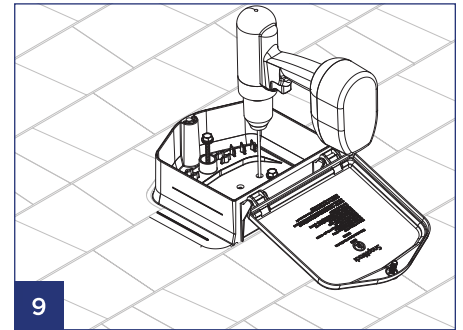

5

Remove lid from FlashBox.

6

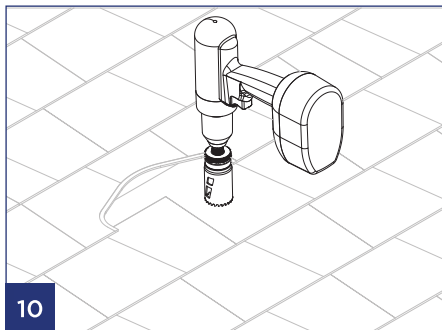Align the lid with the shingle row and use the lid as a template to draw the box outline.

7

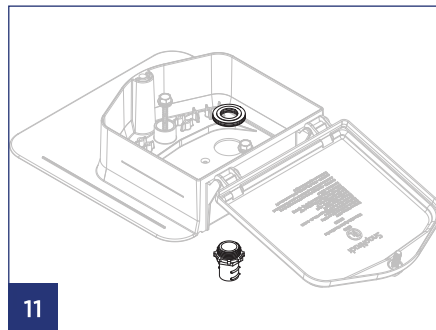Using the lid outline, use a utility knife to cut the shingle course.

8

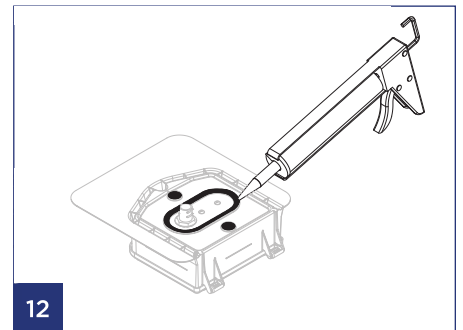Lift the shingles and slide the FlashBox into place and verify the roof penetration area is appropriate.

9

Use a ¼" drill bit make a reference hole in the FlashBox and roof.

10

Use a step bit or hole saw to penetrate the FlashBox and roof sheathing using the reference holes.

11

Use a water-tight conduit fitting to attach the box to the conduit coming from the roof.

12

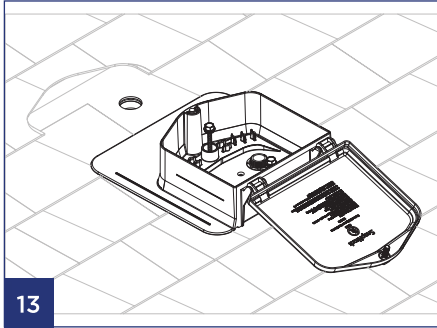Apply sealant to the "Racetrack" and the (2) screw sealant cavities.

> ⚠️ **Install Note**
>
> The hole in the roof surface will need to be larger than the hole in the box to accommodate the conduit fitting.
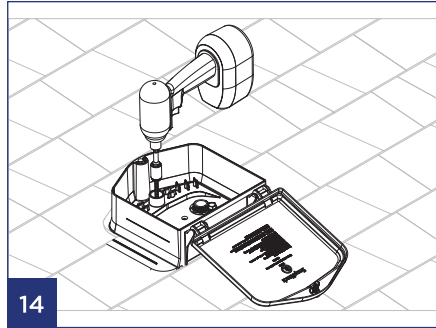
> ⚠️ **Install Note**
>
> This could also be done after the FlashBox is in place.

3

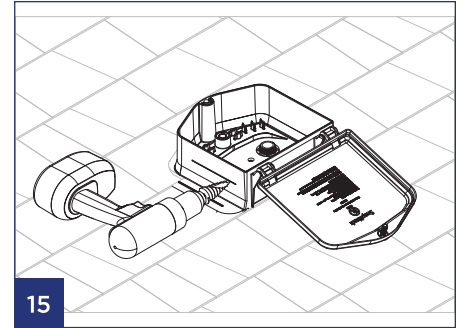## Installation Instructions Continued

13

Slide the FlashBox into place. Take care to avoid disturbing the sealant on the bottom of the box until the FlashBox is in the intended location.

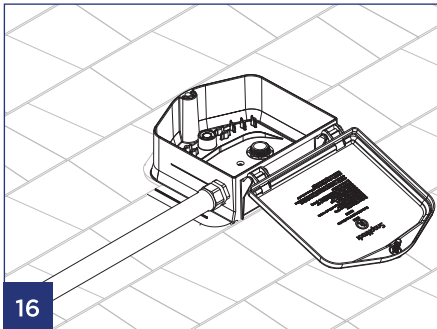14

Secure with (2) 2 ¼" deck screws

15

Use a step-bit or hole saw to penetrate the walls of the FlashBox.
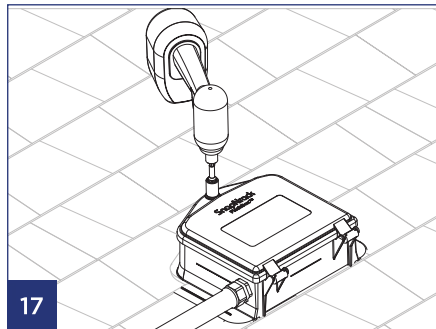
⚙ Best Practice

Use the reference line on the side of the box to ensure the penetration is in the center.
Do not drill outside the reference line.

16

Use outdoor-rated strain relief and sealed conduit fitting. Install outdoor-rated, sealed conduit fitting to the conduit. Then connect to the side wall of junction box and complete wiring installation.
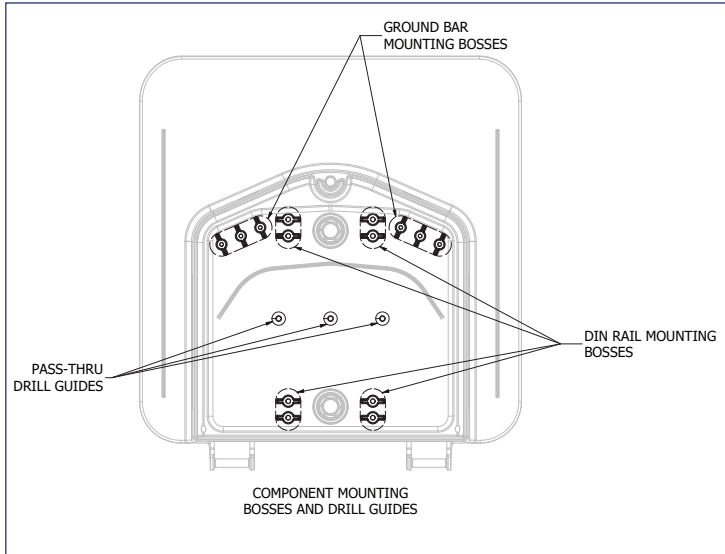
⚠ Caution

Bonding between conduit connections is not automatic and shall be provided as a part of the installation

17

Once wiring is complete, close lid and tighten bolt until the front lid makes contact with the box, then torque to 3 lb-ft (36 lb-in) minimum.
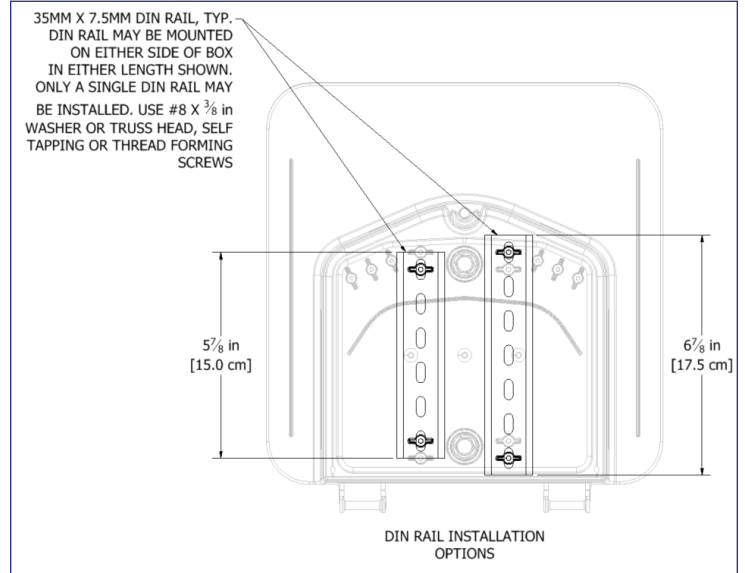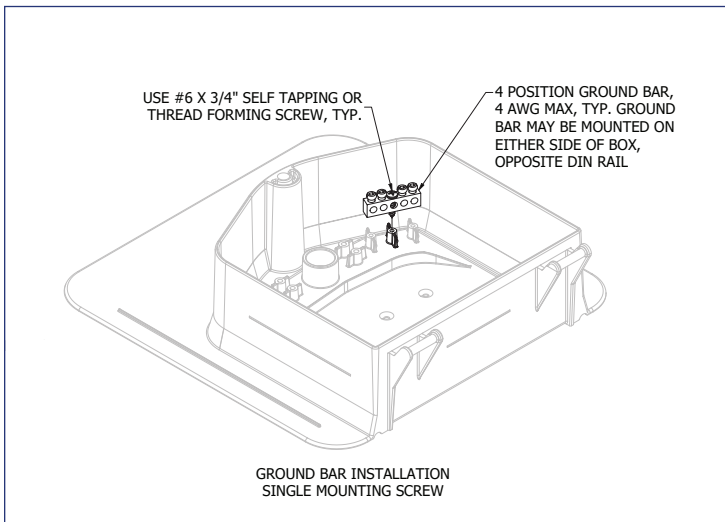
Optional Equipment Installation

Installing Internal Components

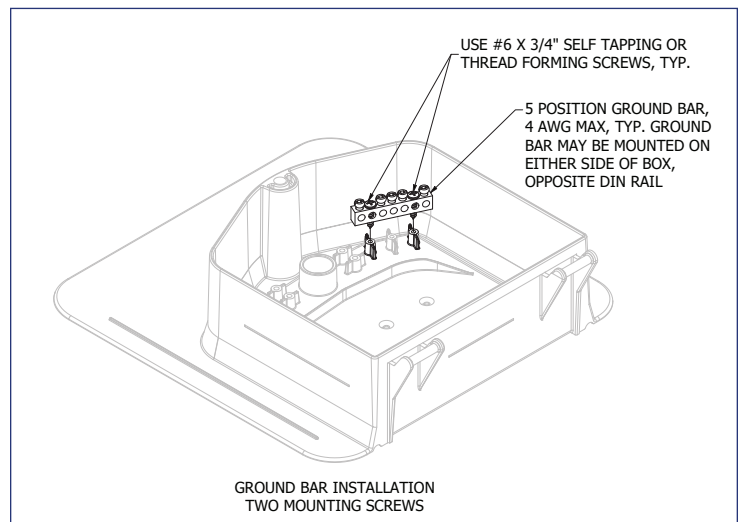For wire sizes greater than 10AWG SnapNrack offers Terminal block kit model 242-10048
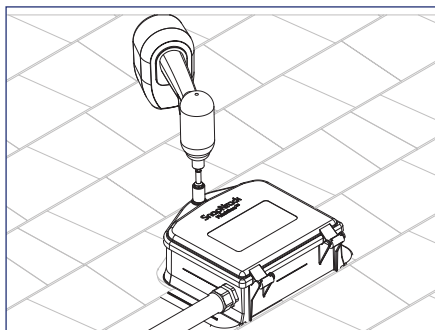

DIN Rail Installation Options:

DIN rail may be installed on either side of the FlashBox. Torque #8 x 3/8in thread cutting or thread forming screws to 10 to 20 in.lb.

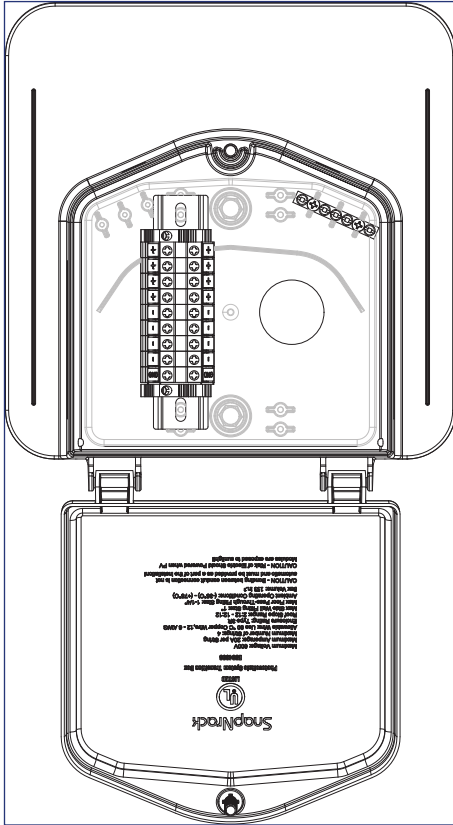Ground Bar Installation with single mounting screw

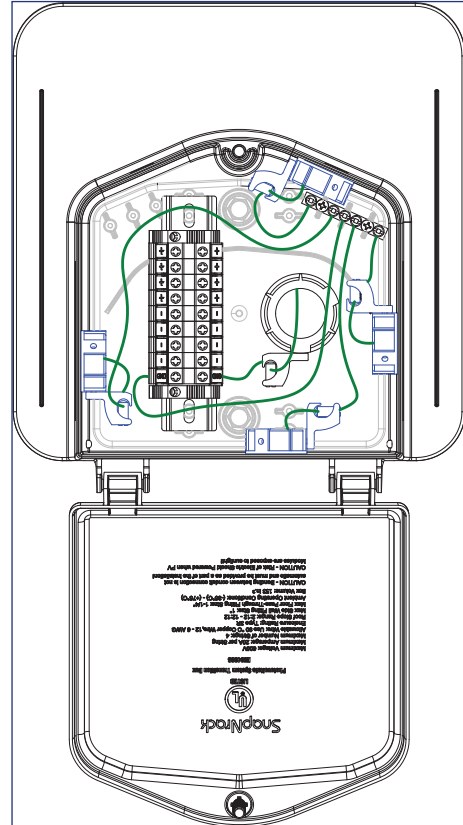

Ground Bar Installation with two mounting screws

Once wiring is complete, close lid and tighten bolt until the front lid makes contact with the box, then torque to 3 lb-ft (36 lb-in) minimum.
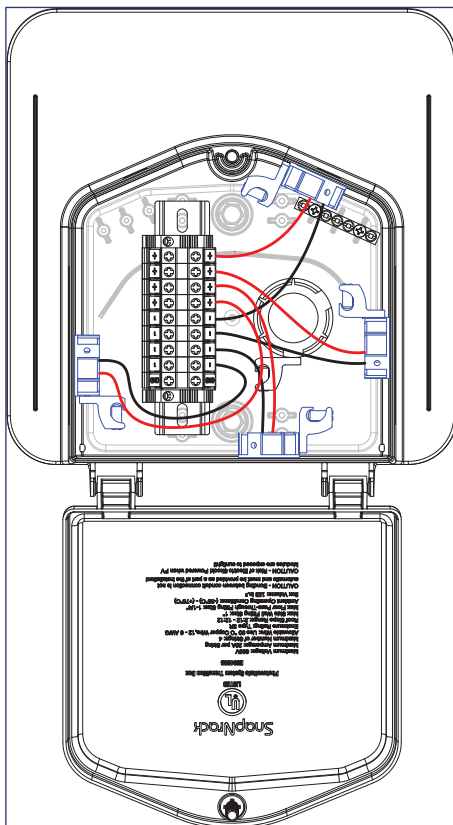
Internal Wiring

Terminal Block Installation



Routing Ground Conductors

Route PV array bonding conductor(s) through conduit grounding bushings (if required) before terminating at the ground bar.

If installing FlashBox with 4 incoming bonding conductors, route the home run bonding conductor to the grounding terminal block first, and then to the ground bar.
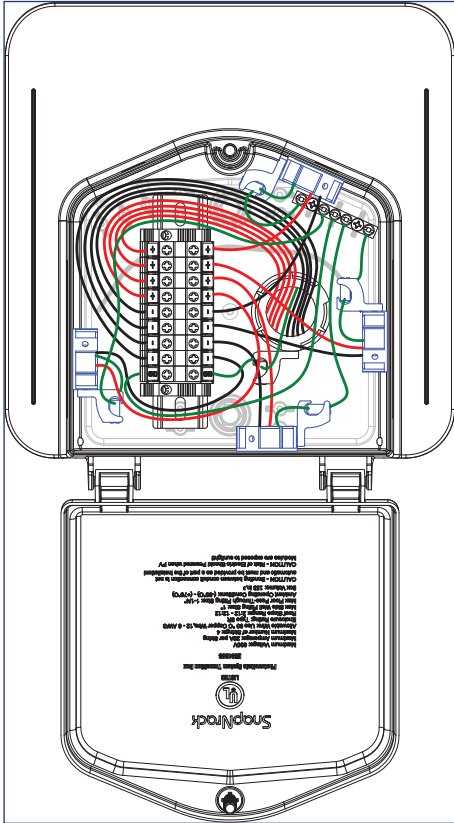

Routing Input Wiring

Route input wiring from PV array(s) to innermost side of terminal block

Internal Wiring Continued
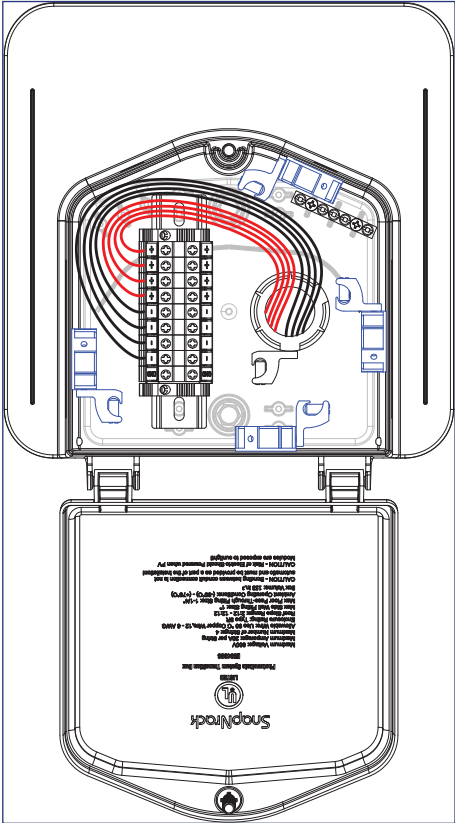
Routing Output Wiring

Finished Installation

Route output wiring from opposite side of terminal block to floor pass-through