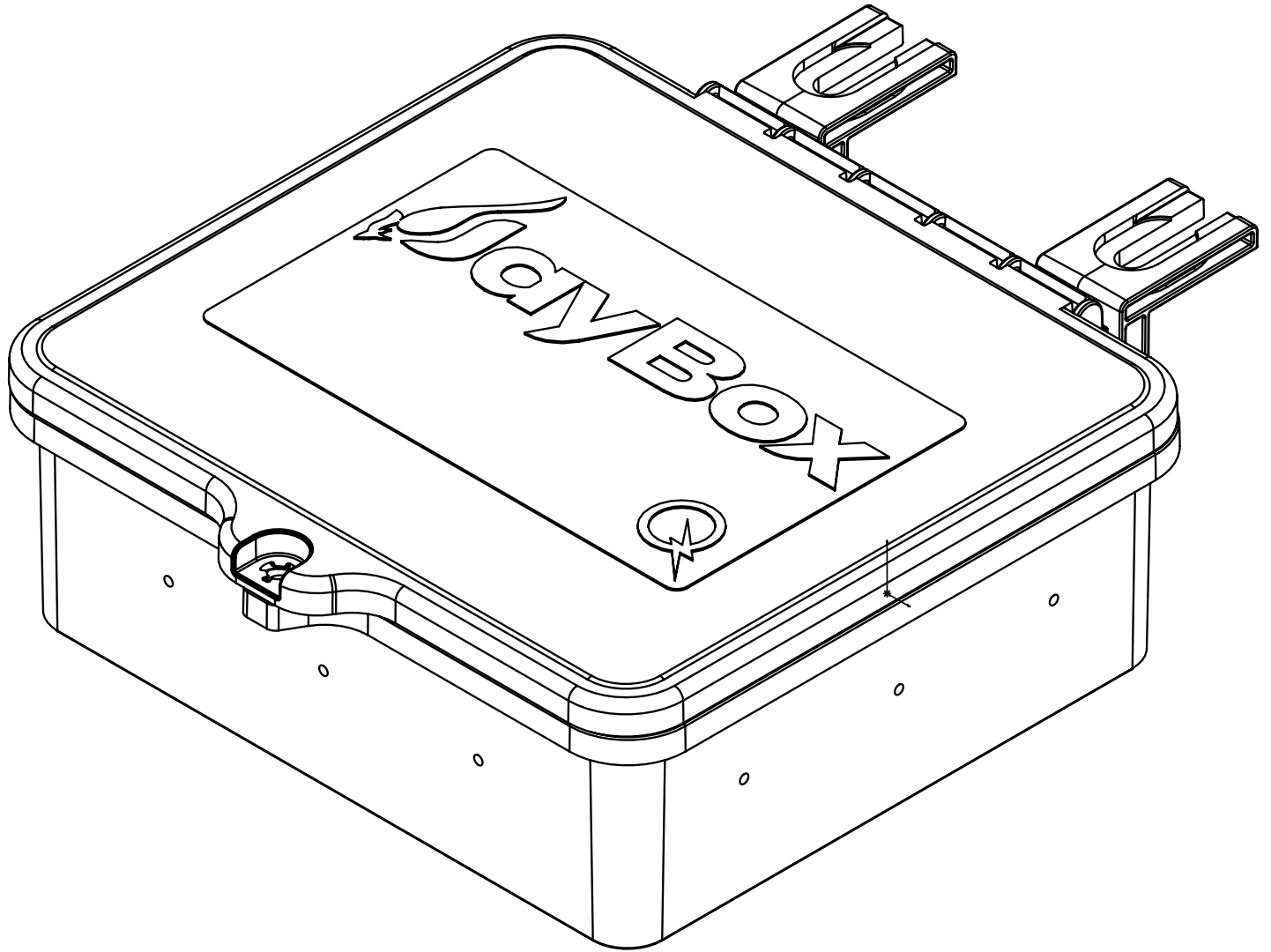


QuickMount®

JAYBOX



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DISCLAIMER

IMPORTANT SAFETY INSTRUCTIONS

This product has been designed and tested to national safety requirements to ensure your personal safety. Improper use may result in potential electric shock. To reduce the risk of personal injury, read and follow all instructions and warnings in this installation manual.

A) SAVE THESE INSTRUCTIONS

This manual contains important instructions that shall be followed during installation and maintenance of the system. This manual should be stored near the product's installation and must be available at all times.

B) SAFETY WARNINGS AND CAUTIONS

This product is only to be installed by qualified personnel. These installation and service instructions are for qualified personnel only. To reduce the risk of electric shock, injury or death, all wiring and connection must be performed by qualified personnel. Do not perform any installation or service other than that to which you are qualified to perform. Lethal voltages are present during the installation, operation and service of this equipment. Proper precautions must be taken at all times to ensure the safety of the service personnel.

At all times follow state and federal occupational safety and health administration (OSHA) guidelines and regulations.

Ensure the electrical installation is in accordance with the National Electrical Code (NEC), ANSI, NFPA 70, all local electrical codes, and with the authority having jurisdiction. If there are any contradictions between the NEC and this document, follow the NEC requirements.



WARNINGS

- Ensure all electrical conductors are at zero voltage potential before installing or servicing this unit.
- Never break contact on a circuit without using the appropriate disconnect device.
- Follow established lockout-tagout procedures for all electrical conductors prior to servicing.
- Photovoltaic systems produce potentially lethal electrical energy when exposed to light. Use all appropriate procedures to de-energize the photovoltaic system and the conductors leaving the system prior to service.
- Check all wiring and connections for integrity and proper installation prior to energizing the circuit. Nicked, pinched, or damaged wires can lead to electrocution or cause a fire.
- Use all appropriate electrical safety equipment as defined by OSHA or by the local or national governing safety body for servicing and installing high voltage products.
- Wear safety equipment rated for a minimum of 1500V or as required for the specific site conditions.
- Activating the AC and/or DC disconnect switch within a circuit does not shut off potential electrical energy or voltage from the photovoltaic panels.
- Do not use this equipment in a manner other than that outlined in these instructions. Doing so may cause personal injury or death.
- If any part of this product becomes damaged, remove and discard the entire unit, and replace with a new one. Failure to do so could result in fire, property damage, personal injury, electrocution, or death.
- When disconnecting the inverter, allow 15 minutes for all electrical storage components to discharge before servicing any conductors in that circuit.
- Be aware of and work away from power lines. Contact with power lines could result in electrocution, personal injury, or death.
- Whenever drilling into an attic space, ensure that no electrical wires, conduit or electrical components are on the other side. Failure to note electrical equipment locations could lead to damage which could result in electrocution, personal injury or death.

CAUTIONS

- Do not exceed the maximum wire sizes specified in this manual.
- Do not exceed maximum voltage ratings specified in this manual.
- Do not install attic pass-through holes without use of the flashing attachment flashing and self drilling roofing screws.
- Do not install the box in a rail-mounted configuration in a location where snow loads could cause contact of the box and/or MLPE mount with the back of the PV module.
- Use proper safety and personal protective equipment (PPE) such as goggles and safety glasses, gloves, ear protection, hard hats, safety harness and fall protection, etc. Ensure you have proper training on how to use and install this equipment. Follow all national and local regulations and best practices.
- The installation of this product involves working around high-voltage electrical equipment. Follow applicable safety regulation and best practices to avoid creating an electrocution hazard.
- The installation of this product requires working on roofs. Follow applicable safety regulations and best practices to avoid falling from the work area. Take steps to prevent objects from falling off the roof. Cordon off the area on the ground directly under where the roof work will take place or equipment/tools will be stored.
- Never work alone. Someone should always be in range of your voice or close enough to come to your aid in the event of an accident.
- Remove all rings, bracelets, necklaces, watches or other metal equipment that could become energized while working with electrical conductors and equipment.
- The maximum ambient operating condition of this equipment is 75°C. NOTE: this includes temperature rise over ambient due to irradiance from the sun. Qualified system designer and Engineer is responsible for identifying maximum temperature based upon site conditions. Exceeding the temperature rating could cause electrical failure or arcing that could result in property damage, fire, electrocution, personal injury or death.
- If loose components or loose fasteners are found during periodic inspection, re-tighten immediately. Any components showing signs of corrosion or damage that compromise safety shall be replaced immediately.

RATINGS

UL 1741 LISTED



Photovoltaic Junction Box Conforms to UL STD 1741 and Certified to CSA STD C22.2 No. 107.1

- Maximum System Voltage: 1500 Volts
- Maximum Total Current (Isc): 100 Amps
- Maximum Current Per String (Isc): 30 Amps
- Maximum Number of Input Circuits: 4 - Combined circuits not to exceed 100 Amps
- Ambient Operating Conditions: -35°C to 75°C (-31°F to 167°F)
- Enclosure Rating: Type 3R Rainproof

Allowable Wire Sizing:

- Inputs: 12 AWG - 10 AWG
- Outputs: 12 AWG - 8 AWG
- Ground: 10 AWG - 6 AWG

Roof Specifications:

- Roof Slope Range: 2:12 and above
- Attic Conduit Pass-Through Fitting Size Range: 1/2" - 1 1/4"
- Max Attic Pass-through Conduit Fittings: 2
- Max Side Wall Conduit Fitting Size: 1 1/4"

Interior Dimensions:

- Box: 8" W x 8"D x 3" H
- Box Volume: 150 in3
- Flashing: 12"W x 9"D

Water Seal Ratings:

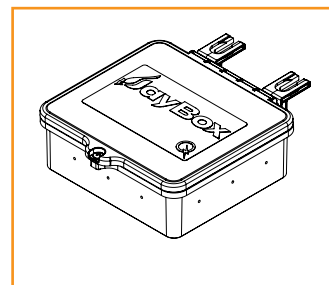
- UL 441
- TAS 100(A)-95

Approved wire connectors: UL486C or UL486D Listed Wire Connectors for Wire Gauge 12ga to 6ga.

Approved Conduit Fittings: UL514B Listed rain tight or wet location conduit connectors or fittings for entry into the enclosure.

MARKINGS

Product Markings are located on the inside of the Jaybox Lid.



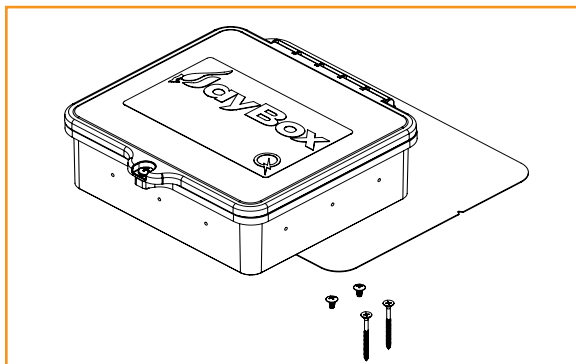
PRODUCT OVERVIEW

The QuickMount™ JayBox Photovoltaic Junction Box is designed to secure to either the rail or on asphalt shingle roofs for optimal roof placement. In addition, the Deck Mounted Junction Box allows for waterproof pass-through from the Junction Box to the attic.

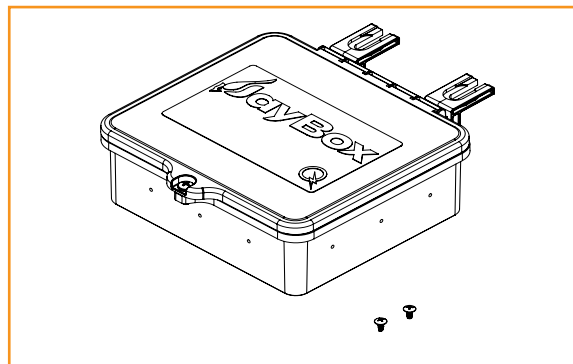
The enclosure is made from highly durable and weather resistant engineered polymer with excellent cold impact resistance, fire resistance and a wide operating temperature range. In addition, since it is made of nonconductive material there is no need to ground the box or its lid. Drill starter locations are provided around the outside of the enclosure to help guide the hole location for your watertight attachment.

The QuickMount™ JayBox - Deck Mount is designed to be deck attached, and comes equipped with a flashing, self-drilling wood screws to install into the roof deck, and fasteners to install user supplied Din 3 Rail and grounding devices.

The QuickMount™ JayBox - Rail Mount is designed to be rail-mounted, and comes equipped with rail hangers and fasteners to install user supplied Din 3 rail and grounding devices.



JayBox - Deck Mount



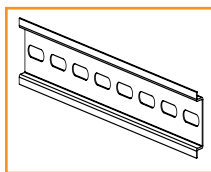
JayBox - Rail Mount

TOOLS REQUIRED

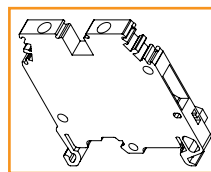
- Cordless Drill (non-impact)
- #3 Phillips bit
- Torque Wrench (0-250 in-lbs)
- 5/16" Socket
- 1/2" Socket
- 7/16" Socket
- Hole Saw(various)
- Step Bit
- Channel Lock Pliers
- #2 Phillips Bit

ADDITIONAL COMPONENTS

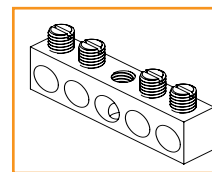
Please refer to each optional part's manufacturer installation manuals for instructions and torque specifications.



7" Din 3 Rails



Din 3 Rail Terminal Blocks (user supplied)



Grounding Bar

Rating Requirements for Additional User Supplied Parts

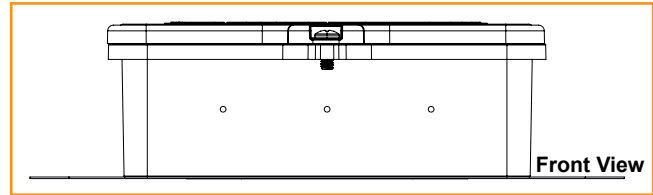
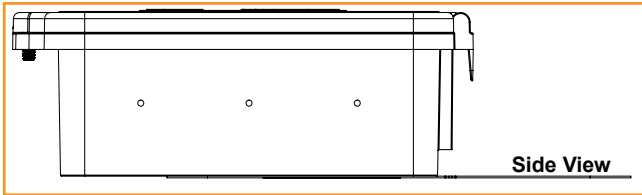
- IP65, IP66, IP67 or IP68 Rated Cable Glands, Strain Relief Fittings or Cord Grips for PV/DG wires for sidewall pass-through.
- UL514B Listed rain tight or wet location conduit connectors or fittings for transition wiring for sidewall pass-through.
- #12 - #8 AWG, min 90° C copper wire as required by NEC.
- #10 - #6 AWG equipment grounding conductor as required by NEC.
- UL486C or 486D Listed Wire Connectors for Wire Gauge #12 AWG to #6 AWG.

INSTALLATION PREPARATION

A. DRILL THE BOX

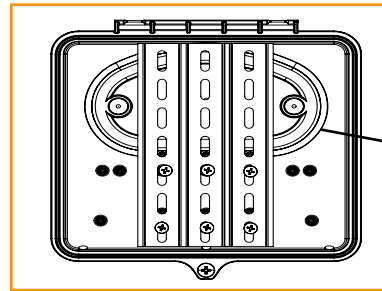
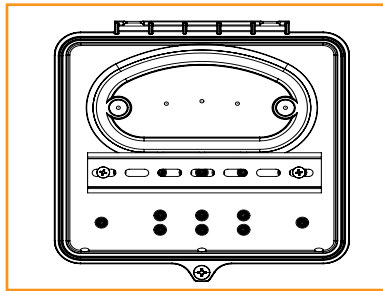
Prior to installation, use step drill bit to place pass through holes for conduits or water-tight connectors. Drill bit starter locations are provided on the sides and front of enclosure. Do not install conduit facing up roof.

Drill Starter Locations



B. DIN 3 RAIL INSTALLATION

If installing your own Din 3 Rail, using standard 35mm x 7mm Din 3 Rail is recommended. Install Din 3 Rail at preferred location using hardware provided. Up to 7" long Din 3 rail can be installed in one horizontal orientation and three vertical options within the box using the provided #8 x 3/8" Phillips head screws.



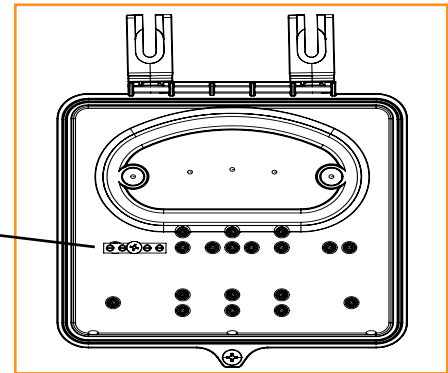
Din 3 Rails can be installed in any combination or orientation that mounting holes allow

C. GROUNDING DEVICES

Install grounding buss bar or lug at any screw boss location using hardware provided: #8 x 3/4" Phillips head screws.

- Torque Grounding Bar set screws to 25 in-lbs

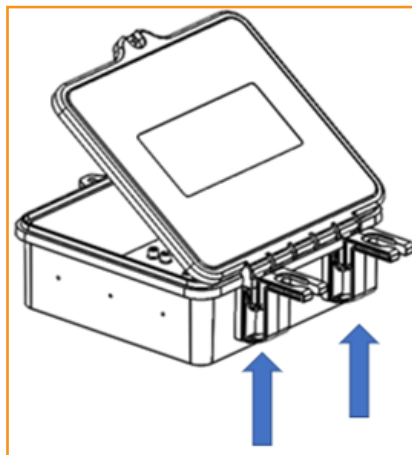
Grounding Bar can be installed in any orientation that the mounting holes allow



A. INSTALL RAIL HANGERS

Insert Rail Hangers onto rear of enclosure at locations provided.

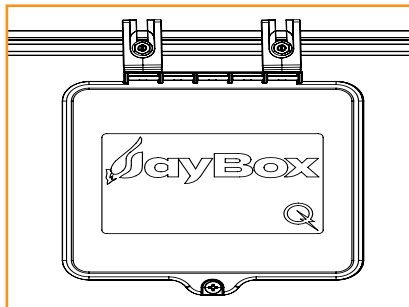
- Rail Hangers will click when fully seated.



B. MOUNT TO RAIL

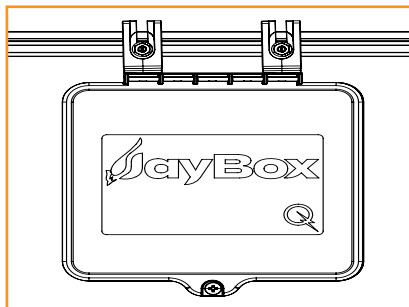
Use rail-specific MLPE mounting hardware to attach Rail Hangers to rail. Ensure junction box is pushed as close to the rail as possible. Torque to 80-in lbs(1/2" or 7/16" socket), do not overtighten.

- If installing in areas with ground snow loads greater than 40 psf, install JayBox directly next to module frame edge.



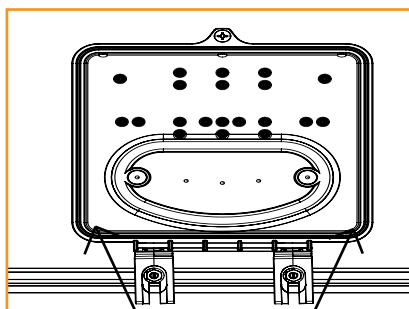
C. SECURE LID

Install wiring, conduit and fittings per NEC requirements and following local AHJ guidance. Using Philips Head Driver tighten the bolt.



D.(Optional) UP ROOF

When installing the JayBox on the uproof side of the rail, two 1/8" field drilled weep holes must be installed in the down slope corners of the box.



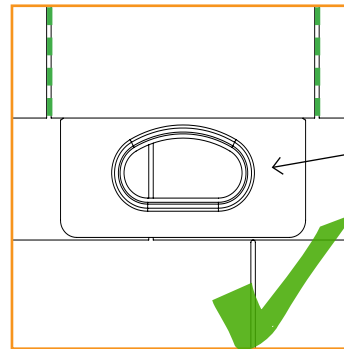
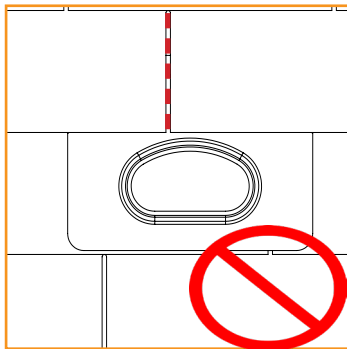
Two holes
1/8 inch in diameter

DECK MOUNTED INSTALLATION

A. LOCATION

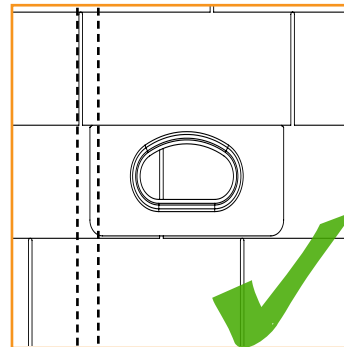
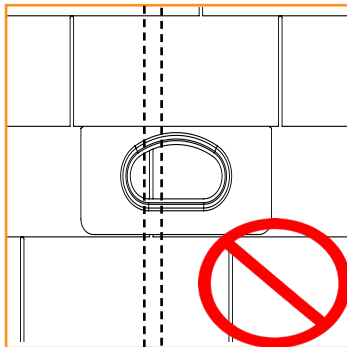
1. Locate the Junction Box during the system design process to ensure optimal placement and compliance to permit requirements. It is acceptable to install the Junction Box under a PV module. To service the PV system, it is important to have access to the Junction Box after the installation. When installing the Junction Box under a module, consider placing it under the last module in a string or under a module that is easy to lift out of position for access.
2. Place the junction box in a location that will limit contact of the module back sheet under high snow loads, such as near a module frame edge rather than the center of the module.
3. Place the Junction Box in a location that avoids keyways, shingle joints or tabs in the shingle course above the Junction Box. The flashing is designed for use with typical 5" - 5-7/8" asphalt shingle coursing.
4. If utilizing the attic pass-through, do not install the Box directly over a rafter such that the rafter interferes with the conduit coming down from the Box. If you run your wires through the attic, place the Junction Box in an optimal location for access when working inside the attic space.

Avoid Keyways



Drill starter locations

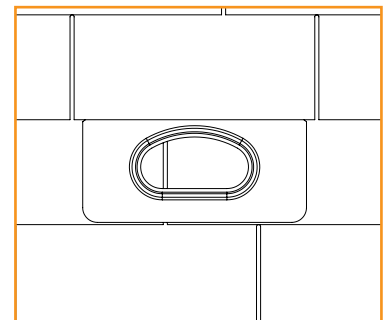
Avoid Rafters



Do not install over a rafter when using the pass-through.

INSTALL FLASHING

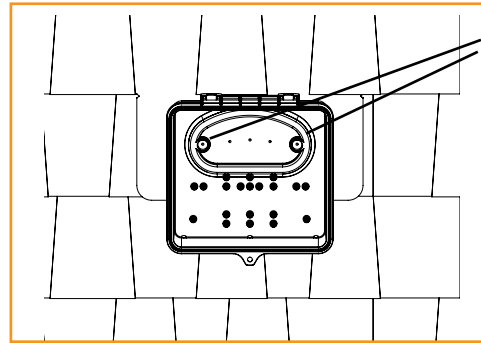
Carefully loosen the shingle glue line at the second shingle course and insert the flashing to the V alignment marks. The flashing should not overhang the shingle, and the marking for UPSLOPE on the flashing should be under the second shingle course



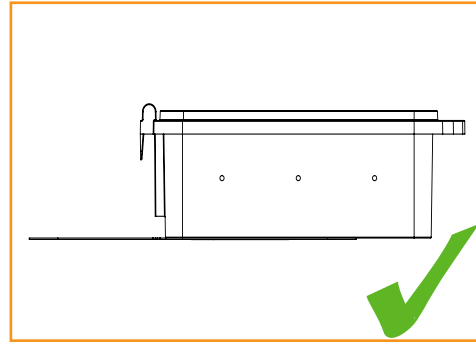
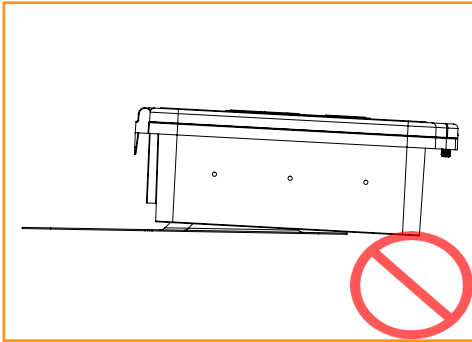
INSTALL JAYBOX ON FLASHING

Align sealing oval of box to align with mating feature on flashing. An EPDM foam gasket is pre-installed to the underside of the junction box to seal the flashing to the box without the need for additional sealant. Secure with supplied #12 x 1-3/4" deck screws (2x) until the junction box is pulled tight to the flashing. **Do not over-tighten screws to avoid stripping screws in OSB.**

- If installing pass through fittings, ensure that the JayBox and roof deck are both properly prepared. Complete installation process before attaching the Jaybox to the deck.



Attach with self drilling wood screws



INSTALL PASS THROUGH FITTINGS

Using a pilot drill, begin drilling out the box at the desired conduit pass through location. It is acceptable to use any location inside the watertight oval for a penetration. Drill through both the box and into the roofing, marking the location on the roof of the clearance hole, transferring the proper drill location to the roof surface.

Remove the box from the roof surface and finish creating conduit mating hole within the box with a step drill bit

Drill pass thru hole with clearance hole saw:

- 2 - 1/4" for 1 - 1/4" conduit fitting
- 1 - 7/8" for 1" conduit fitting
- 1 - 5/8" for 3/4" conduit fitting
- 1 - 3/8" for 1/2" conduit fitting

Install conduit fitting to bottom of box provided per conduit fittings manufacturer instructions. Place Jaybox back over flashing and secure to the roof using self drilling wood screws.

WIRING

Install wiring, conduit and fittings per NEC requirements and following local AHJ guidance.

Close lid and fasten with Philips Head Screw Driver, tighten screw 50 in-lbs. Do not overtighten lid screw.