

Installation Manual
For SolaDeck Models 0783-41 and 0786-41

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RSTC Enterprises Inc
2219 Heimstead Road
Eau Claire, Wi 54703
866-367-7782

Warranty Information:

Thank you for your purchase. As with all manufactured devices repairs may be needed due to damage, unauthorized use, or defect.

- Warranty repairs must conform to warranty terms.
- Equipment must be installed according to the instructions and manuals provided.
- Products returned, must be Packaged, properly addressed and shipped prepaid.
- There is no additional allowance or reimbursement for installer or user labor or travel time required to disconnect, service or reinstall the damaged component(s).
- RSTC will ship a replacement product prepaid to addresses in the continental United States.
- In the event of a product malfunction, RSTC will not bear any responsibility for resulting losses, expenses, or damage to other components.

DO NOT PROCEED WITH INSTALLATION UNTIL YOU HAVE READ ENTIRE INSTRUCTIONS INCLUDING WARNINGS

WARNING! STOP

**DO NOT WORK ON ROOF IF SURFACE IS WET, FROSTED, ICE OR SNOW COVERED.
USE LADDERS SAFELY
USE HAND & EYE PROTECTION WHEN WORKING WITH POWER TOOLS
USE EXTREME CAUTION TO AVOID CONTACT WITH POWER LINES. CONTACT WITH POWER LINES, ELECTRIC LIGHTS OR POWER CIRCUITS MAY BE FATAL**

Installation of this product should be attempted only by individuals skilled in the use of the tools and equipment necessary for installation. Protect you and all persons and property during installation. If you have any doubt concerning your competence or expertise, consult a qualified expert to perform the installation. R.S.T.C. Enterprises Incorporated assumes no responsibility for the failure of an architect, contractor, installer, or building owner to comply with all applicable laws, building codes and requirements, and adequate safety precautions.

One Year Limited Warranty

Important: Evidence of original purchase is required for warranty service.

WARRANTOR: RSTC Enterprises Incorporated

ELEMENTS OF WARRANTY: RSTC warrants for one year to the original retail owner, this SolaDeck is free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

WHAT IS NOT COVERED: This warranty covers only defects in materials and workmanship provided by RSTC Enterprises, and does not cover equipment damage or malfunction from misuse, abuse, accident, and act of God. Installation must be in accordance with our written instructions. RSTC Enterprises will not be liable for any installation charges associated with replacement, incidental or consequential damages resulting from your use of or inability to use the SolaDeck.

REMEDY: Your only remedy under this warranty is the exchange or replacement in the event that the product does not conform to this warranty. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

CLAIMS PROCESS: To make a claim under this warranty, the product should be shipped postage paid, with original purchase receipt to:

**RSTC ENTERPRISES
2219 HEIMSTEAD ROAD
EAU CLAIRE, WI 54703**

1-866-367-7782 or www.commdeck.com

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Tools and Hardware List

Utility Knife - #2 Phillips Head Driver Bit- Pry Bar – Roof sealant – Cordless Drill

A – (7) # 10 – 1” Phillips head wood screws

B – (4) 8-32 – ½” Phillips head threading machine screws

C – (4) #10 Bonded seal washers

D – (2) 10-32 – ½” Steel studs

E – (2) # 10 Star washers

F – (2) 10-32 – 3/8” steel nuts

SolaDeck Installation Instructions

1. Determine the location for the SolaDeck on the roof surface.
2. Use the template from the SolaDeck Carton and position it $\frac{3}{4}$ " below the shingle line. Trace the outline on the roof (Fig. 1).
3. Use a pry bar to loosen the shingles and remove any nails that will interfere with the flashing sliding beneath the shingles (Fig. 2).
4. Cut the roofing material to the template shape.
5. Inside of the base there are three knockout sizes. Remove the one (s) needed for the conduit fitting (s).
6. Slide the SolaDeck with flashing beneath the shingles into place and trace the knockout hole (s) (Fig. 3).
7. Drill out the traced knockout hole (s) $\frac{1}{3}$ larger than the knockout.
8. Slide the SolaDeck base back into place and fasten it to the roof deck with the 1" truss head screws provided. (Fig 4).
9. Use a quality roof sealant to seal the shingles to the SolaDeck flashing.
10. With the base installed, you have several options to wire the SolaDeck enclosure. Use either the sump built into the base or the predetermined centering dimples to knock out a hole for the fitting or conduit size you choose.
 - Dimples at the corners of the base allow for $\frac{1}{2}$ " or $\frac{3}{4}$ " fittings.
 - Dimples below the sump allow for $\frac{1}{2}$ " fittings.
 - These dimple positions accept conduit, liquid tight or strain relief fittings.
11. Peel off the tape on the foam Gasket and position it on the inside of the cover where it will contact the base sump.
12. When connections are complete, finish by fastening the cover to the base using the 8-32 screws with bonded seal washers provided.

*NOTE: Extra steel studs are provided for installing an isolated negative terminal or power distribution block



IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS- This manual contains important instructions for models 0783-41 and 0786-41 that shall be followed during installation of the combiner.

SolaDeck models are listed by ETL as PV Combiners under the standard:

UL 1741, First Edition

SolaDeck models meet UL 50 Type 3R rainproof requirements.

This enclosure is rated for up to 600 VDC fuses.

Grounding Instructions- Each system should be connected to a grounded, permanent wiring system. **All system wiring and system grounding must comply with NEC Code, ANSI/NFPA 70-1996, or other appropriate codes, is the responsibility of the installer.**



The equipment ground on SolaDeck is marked with the symbol:

Note: Solar panels produce electrical current when lighting is present, even during overcast weather. Do not wire from the array to the SolaDeck combiner. Complete all connections inside the SolaDeck combiner first and then connect the array.

General Wiring Installation Instructions

- Remove any necessary knockouts before securing the SolaDeck to the roof or other surface.
- Follow the mounting instructions page 3
- Slide the fuse holders onto the Din rail and lock in place.
- Secure the Bus Bar to the fuse holders.
- Install the negative power distribution block using the steel studs in the location designated for the Negative PV Model (0783).
- Install negative terminal blocks on DIN rail where designated PV Negative and lock in place. Model (0786).
- Connect all wires to fuse holders, bus bar lug and negative terminals, securing them according to the listed torque values **from table on page 5.**
- **Conduit and Strain relief fittings and hubs must comply with UL 514B**

Requirements

- Use minimum 75 C copper
- Use only code approved, appropriately listed fuse holders and Fuses

Maximum Fuse Rating	30 AMP , 600 Volt
Total Maximum Current Rating	0783-41 / 0786-41 120 AMPS DC
Maximum Fuse Short Circuit Current	10ka
Fuse Holder Torque	13.6 in lb Flat or Phillips Head Driver
Din Rail Mounted Terminal Block Torque	9 - 14 in lb Flat Head Driver

Torque Data* for Box Lug

Wire Size		Torque	
AWG	mm2	in lbs	Nm
14-10	2.1-5.3	35	4
8	8.4	40	4.5
6-4	13.3-21.2	45	5.1
2	13.3-21.2	50	5.7

Torque Data* for Negative Power Distribution Block

Wire Size		Torque		
AWG	mm2	Screw Driver	External Drive Wrench	Nm
		in lbs		
14-10	2.1-5.3	35	75	4
8	8.4	40	75	4.5
6-4	13.3-21.2	45	110	5.1
Main 2/0-14	13.3-21.2	0	120	5.7

Torque Data* for Ground Lug

Wire Size		Torque	
AWG	mm2	in lbs	Nm
14-10	2.1-5.3	35	4
8	8.4	40	4.5
6-4	13.3-21.2	45	5.1
2-2/0	13.3-21.2	50	5.7

SolaDeck Combiner Features

- Stamped Seamless Galvanized Steel
- Powder Coated Surfaces
- Mounting Hardware Included
- Flashes into the roof deck
- 6" DIN rail installed Model (0786)
- 3" DIN rail installed Model (0783)
- 2 Position Ground lug installed
- 3 Roof deck knockouts .5", .75", 1"
- 5 Centering dimples for enter/exit strain or conduit fittings
- Accommodates fuse holders with combiner bus

SolaDeck cover on base **Fig 1**

Four 8-32 3/8" phillips head self thread screws and boded seal washers secure the SolaDeck cover



Figure 1

SolaDeck Base showing dimples Fig 2
Corner dimples support .5" or .75" fittings or conduit
Center dimples support .5" fittings or conduit



Figure 2

Base plate configuration Fig 3
Three knockouts for roof deck penetration .5", .75", 1"

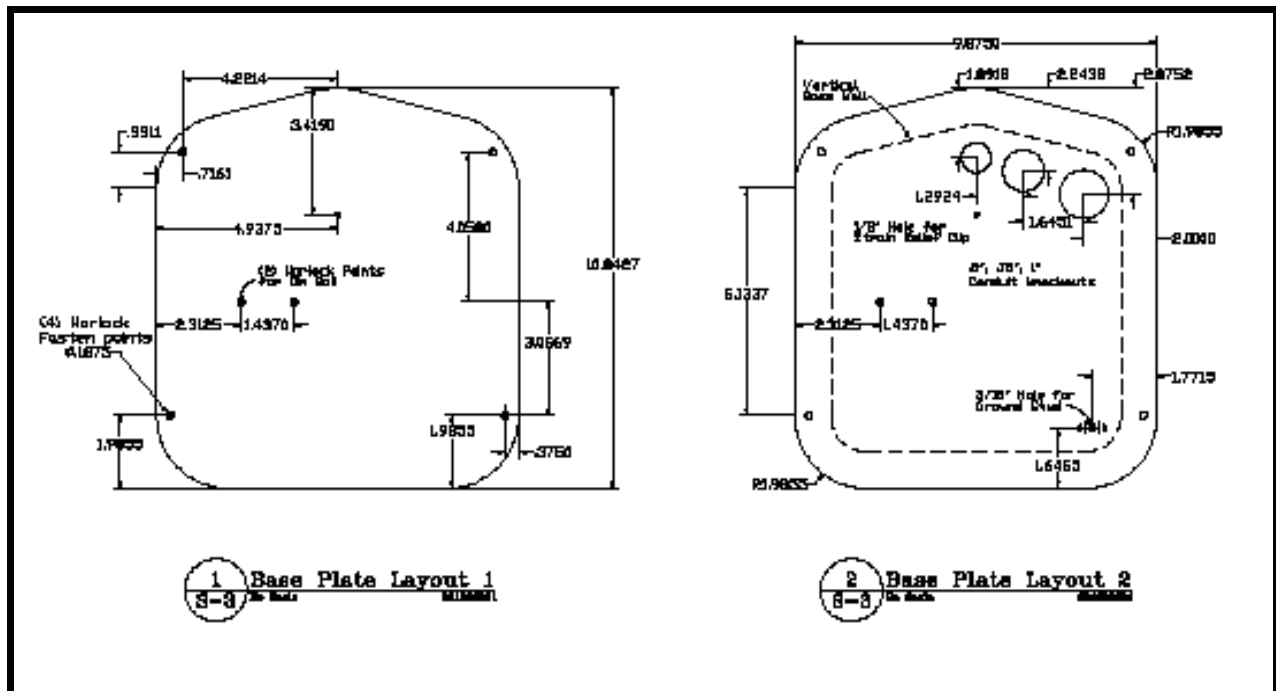


Figure 3

Fuse holders with bus Bar **Fig 4**

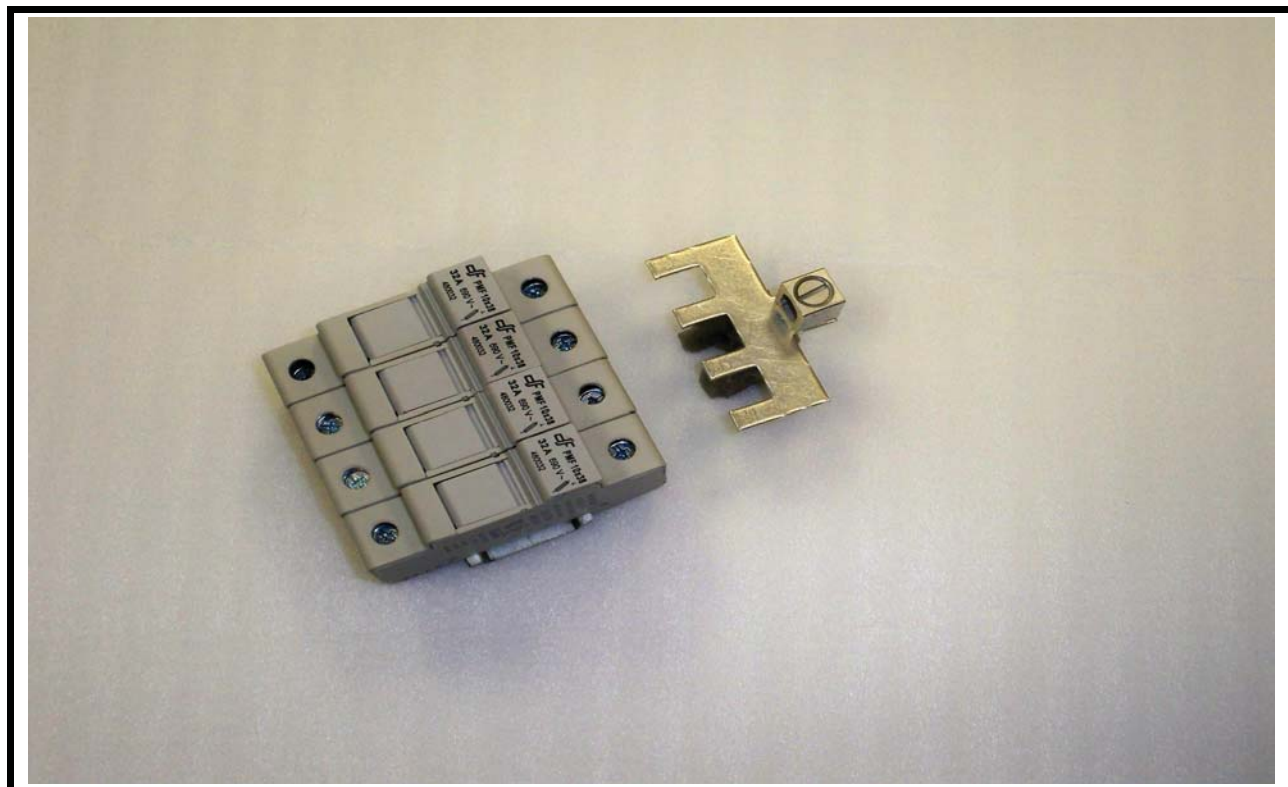


Figure 4

SolaDeck Models with cover off



Model 0786-41



Model 0783-41

PV Panel Example

