



**Installation Manual for Models
0799 Series, 0999 and 0766-41AD**

Table of Contents

Safety Instructions and Ratings2

Safety warnings.....3

General wiring4

Base plate and base dimple locations4

Requirements and torque data 5

Installation instructions6

Typical SolaDeck features7

PV example8

Warranty8

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www.soladeck.com

Read the Entire Installation Manual

Before Installing a SolaDeck

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.

ATTENTION! STOP

NE FONCTIONNE PAS SUR LE TOIT Si la surface est mouillée, dépolie, la glace ou couvert de neige.

Utiliser les échelles TOUTE SÉCURITÉ

UTILISATION DES MAINS ET DES LUNETTES DE PROTECTION LORS DE TRAVAILLER AVEC LES OUTILS DE PUISSANCE. UTILISATION EXTRÊME PRUDENCE POUR ÉVITER LE CONTACT AVEC DES LIGNES DE PUISSANCE. CONTACT AVEC DES LIGNES DE PUISSANCE, lumières électriques circuits électriques ou PEUT ÊTRE MORTEL

L'installation de ce produit devrait être tentée que par des personnes formées à l'utilisation des outils et équipements nécessaires pour l'installation. Protégez vous et les personnes et les biens pendant l'installation. Si vous avez un doute concernant votre compétence ou l'expertise, consulter un expert qualifié pour effectuer l'installation.

RSTC Enterprises Incorporated décline toute responsabilité de l'échec d'un architecte, entrepreneur, installateur ou propriétaire d'immeuble pour se conformer à toutes les lois, les codes du bâtiment et des exigences, et les précautions de sécurité adéquates.



Requirements: 75 C° copper wire

Use only code approved, appropriately UL listed or recognized components

SolaDeck models are ETL listed to UL 1741; and CSA C22.2 No. 290

Models 0799 and 0766-41AD are rated 0 to 600VDC/115 amps 10Ka short circuit; 0 to 240 VAC/60 amps 10Ka Short circuit, ambient temperature rating 75C°.

Model 0999 is rated 0 to 1000VDC/115 amps 10Ka short circuit; 0 to 240 VAC/60 amps 10Ka Short circuit, ambient temperature rating 75C°.

External pollution degree **PD4**, overvoltage category (**OVC**) II.

Exigences: Fil de cuivre 75 C°

N'utilisez que du code approuvé, des composants correctement répertoriés UL ou reconnus

Les produits SolaDeck sont répertoriés par ETL aux normes UL: UL 1741; CSA C22.2 no 290

Les modèles 0799 et 0766-41AD sont évalués 0 à 600VDC/115 ampères 10Ka court-circuit; 0 à 240 VCA/60 ampères 10Ka Court-circuit, température ambiante nominale 75C°.

Le modèle 0999 est évalué 0 à 1000VDC/115 ampères 10Ka court-circuit; 0 à 240 VCA/60 ampères 10Ka Court-circuit, température ambiante 75C°

Degré de pollution extérieure **PD4**, surtension catégorie **CAT II**.

IMPORTANT SAFETY INSTRUCTIONS

Save this manual - It contains important instructions for the 0799, 0999 and 0766-41 AD models that should be followed during the installation of this product. For 0766-41 AD specific directions, please see the additional instructional insert.

Grounding Instructions- The system should be connected to a grounded, permanent wiring system.

The equipment ground on SolaDeck is marked with the:



System wiring and grounding must comply with the latest edition NEC Code, ANSI/NFPA, and/or appropriate codes and is the responsibility of the installer.

Disconnecting means shall be installed in accordance with the Canadian Electrical Code, Part I and all other applicable codes.

Before servicing fuses, disconnect all photovoltaic inputs and output circuits.

Solar panels produce electrical current when light is present and 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.

Enregistrez ce manuel - Il contient des instructions importantes pour les modèles 0799, 0999 et 0766-41 AD qui doivent être suivies lors de l'installation de ce produit. Pour obtenir des instructions spécifiques à la CN 0766-41, veuillez consulter l'encart d'instructions supplémentaire.

Instructions de la terre - Le système doit être connecté à un système de câblage permanent mis à la terre.

Le sol de l'équipement sur SolaDeck est marqué avec le:



Le câblage et la mise à la terre du système doivent être conformes à la dernière édition du code NEC, à l'ANSI/NFPA et/ou aux codes appropriés et relèvent de la responsabilité de l'installateur.

Les moyens de débranchement doivent être installés conformément à la partie I du Code canadien de l'électricité et à tous les autres codes applicables.

Avant d'entretenir les fusibles, débranchez toutes les entrées et tous les circuits de sortie photovoltaïques.

Les panneaux solaires produisent du courant électrique lorsque la lumière est présente et par temps couvert. Ne pas câbler le tableau au combinateur SolaDeck. Effectuez d'abord toutes les connexions à l'intérieur du combineur SolaDeck, puis connectez la baie.

General Wiring Installation Instructions

Acceptable UL recognized components are found in ETL Report # 3171411PRT-002.

Remove any necessary knockouts before securing the SolaDeck to the roof or other surface.

Follow the mounting instructions page 6.

Install components onto the din rail and lock in place.

When combining, secure the bus bar to the fuse holders or breakers.

Install neutral mounted power block on din rail where designated PV neutral or negative and lock in place.

Torque values are listed in the table on page 5.

Conduit, strain relief fittings and hubs must comply with UL 514B.

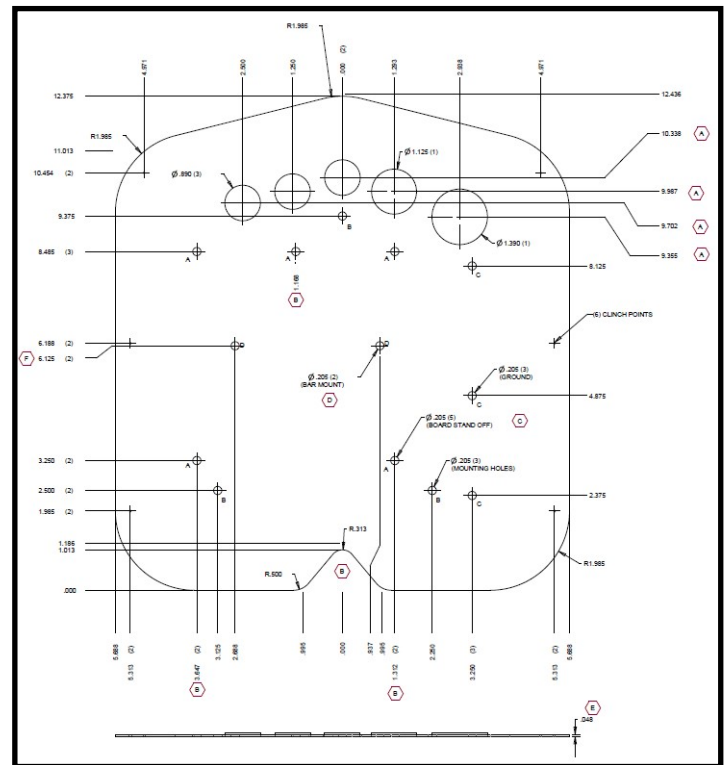
Base plate drawing for knockout sizes and locations

SolaDeck Base showing Dimple Locations



The 2 corner dimples support .5", .75" or 1" fittings or conduit

The 3 center dimples support .5" fittings or conduit



Included Hardware List

**0799 Series and 0999 Model: (5) # 10 – 1", 1/4" drive hex head screws; (5) # 10 bonded seal washers;
(5) 8x32-1/4" self thread hex screws**

**0766-41AD: (9) # 10 – 1", 1/4" drive hex head screws; (5) # 10 bonded seal washers;
(5) 8x32-1/4" self thread hex screws**

Tools Needed for Installation

Utility knife - 1/4" Nut Driver - Pry Bar – Roof Sealant – Drill

Conductor Size, Torque Loads and Ratings

The components and kits in this table can be used in models 0799 & 0766-41AD

Component Description	Conductors		Wire Type	Torque		Voltage	Current	Temp Rating
	1 - AWG	2- AWG		NM	Inch Lbs.			
Entelec ZS6 terminal block	24-10	24-16	Sol/Str	0.5-0.7	6.2-8.85	600V ac/dc	30A	105°C
Entelec ZS10 terminal block	24-6	20-12	Sol/Str	1.0-1.6	8.85-14.16	600V ac/dc	40A	105°C
Entelec ZS16 terminal block	24-4	20-10	Sol/Str	1.6-2.4	14.6-21.24	600V ac/dc	60A	105°C
IMO ER6 terminal block	26-8		Sol/Str	.8-1.2		600V ac/dc	30A	110°C
IMO ER10 terminal Block	16-6		Sol/Str	1.2-1.8		600V ac/dc	30A	110°C
ABB DBL 80 Power block	4		Sol/Str	1.5-2	13.5-18	1000V	80A	110°C
ABB DBL 125 power block	14-6		Sol/Str	2-3	18 - 26.5	1000V	125A	110°C
ABB DBL 175 Power Block	14-6		Sol/Str	2-3	18-26.5	1000V	175A	110°C
Little fuse LPSM CH series	10-14		Sol	2	17.7	600V ac/dc	30A	125°C
Little fuse LPSM CH series	8-14		Str	2	17.7	600V ac/dc	30A	125°C
Bussmann CHPV series	14-10		Sol/Str	2.3	20	600V ac/dc	30A	120°C
Marathon 6SM30AX-C	18-8		Sol/Str		14.75	600V ac/dc	30A	130°C

The components and kits in this table can be used in model 0999

Component Description	Conductors		Wire Type	Torque		Voltage	Current	Temp Rating
	1 - AWG	2- AWG		NM	Inch Lbs			
Entelec ZS50 terminal block	18-0	18-4	Sol/Str	3	26.55	1000V	140A	105°C
IMO ER 16V terminal block	14-4		Sol/Str	1.2-2		1000V	30A	110°C
ABB DBL 80 Power block	4		Sol/Str	1.5-2	13.5-18	1000V	80A	110°C
ABB DBL 125 power block	14-6		Sol/Str	2-3	18 - 26.5	1000V	125A	110°C
ABB DBL 175Power Block	14-6		Sol/Str	2-3	18 - 26.5	1000V	175A	110°C
Little fuse LPHV fuse holders	8-14		Str	2	17.7	1000VDC	30A	125°C
Little fuse LPHV series	10-14		Sol	2	17.7	1000VDC	30A	125°C
Bussmann CHPV series	14-10		Sol/Str	2.3	20	1000VDC	30A	90°C

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

Figure 1

- Determine the location for the SolaDeck on the roof surface.
- Use the template from the bottom of the SolaDeck carton or the SolaDeck cover to trace the cutout area on the shingles.

Figure 2

- Use a pry bar to loosen the shingles, then remove any nails that would interfere with the SolaDeck flashing.

*The flashing will slide beneath the shingles.

- Cut the roofing material to the shape of the template.
- Remove the knockouts needed to penetrate the roof deck & install knockout fittings

Figure 3

- Slide the SolaDeck into place beneath the shingles and mark the knockout locations.
- Remove the SolaDeck and drill a hole through the roof deck 1/3 larger than the knockout holes.
- Determine the size and number of fittings or conduit needed to bring the circuit or string wiring into the SolaDeck from the roof. Use a knockout tool or drill to cut the fitting holes where the base dimples are located.
- Install the fittings, reposition the SolaDeck, and use the 1" screws provided to fasten the SolaDeck to the roof deck from inside the enclosure (locations shown).
- Use roof cement to seal the shingles to the flashing & replace roof nails.

Figure 4

- Install electrical components needed to connect the solar panel circuits.

Figure 5

- When connections are complete, finish by installing the cover using the 8/32 x 3/8" hex head screws provided.

Figure 1



Figure 2



Figure 3

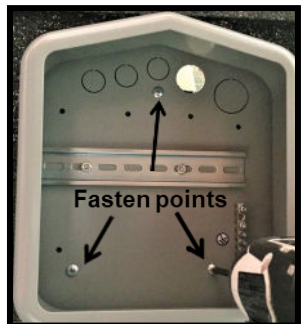


Figure 4



Figure 5



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

Figure 1

- Determine the location for the tile base, the bottom of base should sit on roof deck just above the top edge of tile.
- Lift up the base unit and remove the knockouts needed to penetrate the roof.
- Set the tile base on the roof deck and mark the knockout locations. Drill a hole 1/3 larger than the knockout size then install knockout fitting(s) in the tile base.
- Determine the size and number of fittings or conduit needed to bring the circuit or string wiring into the tile base. Use a knockout tool or drill to cut the fitting holes where the base dimples are located.
- Install the fittings, reposition the tile base and fasten the tile base to the roof deck using the provided 1" screws.
- Cover the flashing with ice & water material.

Figure 1



Figure 2

- Using the provided alcohol wipe, clean the surface of the inside & outside collar of the flashing as well as the outside area of the base.
- Slide aluminum flashing onto base unit to determine your tile height.
- Mark flashing height on sides of the base collar to show where bead of mastic is needed & remove aluminum flashing.
- Place bead of the provided mastic along height marking and press aluminum flashing onto base.

Figure 2



Figure 3

- Form the flashing to match the tile profile.
- Apply another bead of mastic where the base and flashing meet.

Figure 3



Figure 4

- Replace tile over aluminum flashing.
- Install gland fitting or conduit and pull the PV wire through.
- If using a gland fitting, tighten the nut until the gland in the fitting is snug around the PV wire.

Figure 4



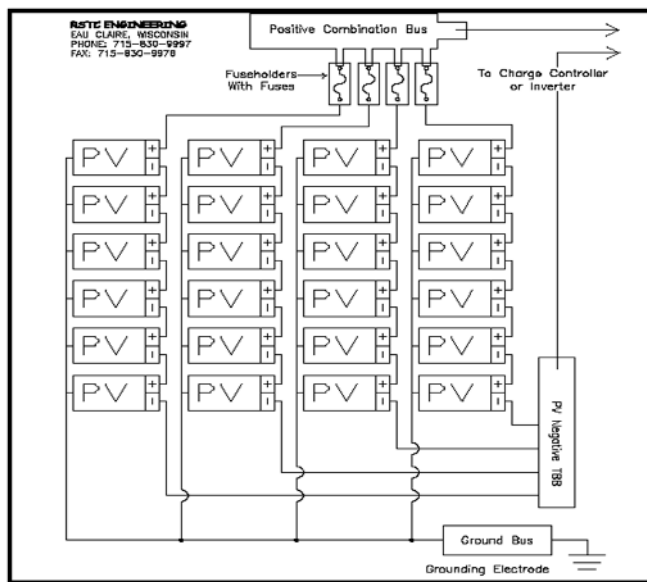
Figure 5

- When connections are complete, finish by installing the cover with the 8/32 x 3/8" hex screws provided.

Figure 5



Typical DC Wiring Schematic



Warranty Information

Warranty repairs must conform to warranty terms.

As with all manufactured devices, replacement may be needed due to damage, unauthorized use, or defect.

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 for 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.

Limited Lifetime Warranty 20 Year Field History

WARRANTOR: RSTC Enterprises Incorporated

ELEMENTS OF WARRANTY: RSTC Enterprises, Inc. warrants this product 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 product.

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 to:

RSTC ENTERPRISES, INC
EAU CLAIRE, WI 54701

1-866-367-7782 or www.rstcenterprises.com/soladeck.com