


# SOLARLOK PRODUCT SOLUTIONS



Solar is becoming an increasingly viable and competitive source of alternative energy. TE Connectivity (TE) is driving the future of solar energy.

We work with you every step of the way to solve your connectivity challenges. Our proven expertise, cross-industry innovation and broad range of connectivity products are establishing the intelligent link between the panel and the grid.

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# SOLARLOK Z-RAIL

## ENHANCED JUNCTION BOX FOR 1500V APPLICATIONS

The SOLARLOK Z-Rail enhanced junction box terminates the foils of crystalline PV panels with clamped connections while supporting voltage ratings of 1500V for UL3730 and 1500V for IEC62790. The SOLARLOK Z-Rail enhanced junction box for 1500V applications is manufactured with durable materials that reduce the stress on individual components, extend the life of the product and increase reliability. The junction box provides a flexible, open system structure, which allows serial or parallel interconnection via a direct wire connection or separable connectors.



### Applications

Photovoltaic installations including those with:

- Extreme water conditions
- Upgraded 1500V voltage in standard use
- Open or accessible installations where decoupling must be limited
- Multi agency approval requirements

### Electrical

- **Rated Current:** 13A
- **Withstanding Voltage:** 1500V DC (UL)  
1500V DC (TUV/IEC)

### Mechanical

- **Overall Junction Box Size:** 115 x 110 x 23.8 mm
- **Operating Temperature:** -40 to +115 °C
- **Ingress Protection Rating:** IP67
- **Applicable Cable:** 2.5-6 mm<sup>2</sup> (14-10 AWG)
- **Connector Interface:** PV4-S (common PV interface)

### Specifications

- **Product Specifications:** [108-2471-1](#)
- **Applications Specifications:** [114-13303-1](#)

### Materials

- **Contact Rail:** Tin plated copper alloy
- **Cover and Base Housing:** PPE + PS

### Standards

- 1000V / 1500V UL approved per UL3730
- 1000V / 1500V TUV approved per EN62790

### Benefits

- Unique rail design for exchangeable diodes
- Material withstands harsh environments
- Extends product lifetime with ammonia and salt water resistant materials
- Rails available for welding and clamping with Omega or S-Clips
- Use of vent for humidity control
- Installation with a line takes 40 seconds or less and no potting necessary

### PV4-S connectors:

- Provides waterproof protection and is rated IP68 (1 m / 24 hours)
- Minimizes power loss by providing low contact resistance



# SOLARLOK Z-RAIL ENHANCED JUNCTION BOX FOR 1500V APPLICATIONS

## Product Selection Information

### SOLARLOK Z-RAIL 1500V

Type	Part Number	Description	Cable length (meters)
PREFERRED CHOICE	<a href="#">2270083-1</a>	4-RAIL, WITH OMEGA-CLIP, NO FIXING TAPE	1.0
STANDARD	<a href="#">1-2270083-1</a>	4-RAIL, WITH OMEGA-CLIP, WITH FIXING TAPE	1.0
STANDARD	<a href="#">2270083-2</a>	4-RAIL, WITH OMEGA-CLIP, NO FIXING TAPE	1.2
STANDARD	<a href="#">1-2270083-2</a>	4-RAIL, WITH OMEGA-CLIP, WITH FIXING TAPE	1.2
PREFERRED CHOICE	<a href="#">2270135-1</a>	4-RAIL, WITH S-CLIP, NO FIXING TAPE	1.0
STANDARD	<a href="#">1-2270135-1</a>	4-RAIL, WITH S-CLIP, WITH FIXING TAPE	1.0
STANDARD	<a href="#">2270135-2</a>	4-RAIL, WITH S-CLIP, NO FIXING TAPE	1.2
STANDARD	<a href="#">1-2270135-2</a>	4-RAIL, WITH S-CLIP, WITH FIXING TAPE	1.2



### SOLARLOK Z-RAIL 1000V

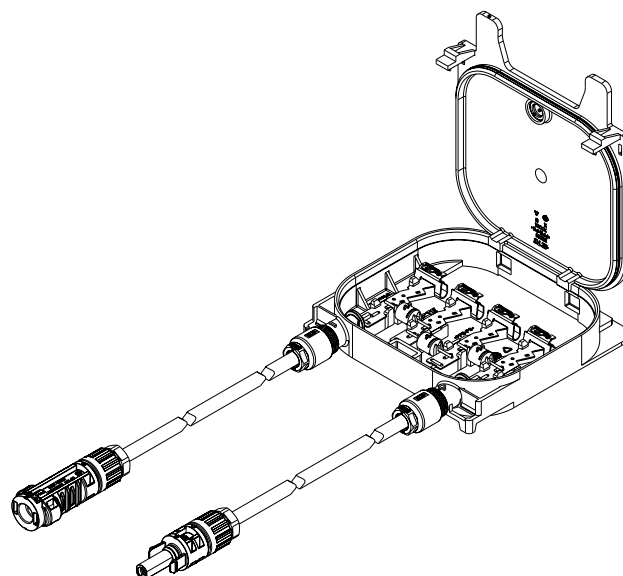
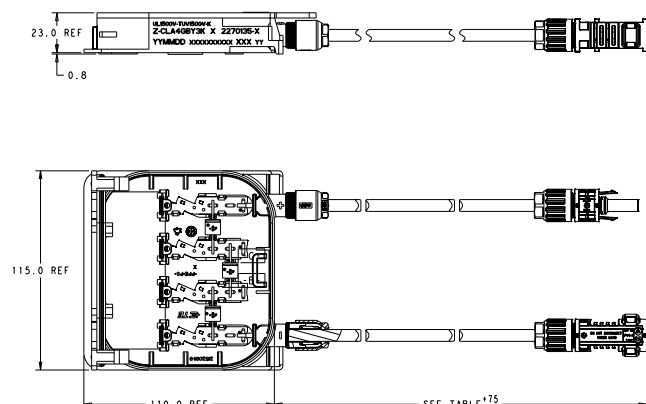
Type	Part Number	Description	Cable length (meters)
PREFERRED CHOICE	<a href="#">2270170-1</a>	4-RAIL, WITH OMEGA-CLIP, NO FIXING TAPE	1.0
STANDARD	<a href="#">1-2270170-1</a>	4-RAIL, WITH OMEGA-CLIP, WITH FIXING TAPE	1.0
STANDARD	<a href="#">2270170-2</a>	4-RAIL, WITH OMEGA-CLIP, NO FIXING TAPE	1.2
STANDARD	<a href="#">1-2270170-2</a>	4-RAIL, WITH OMEGA-CLIP, WITH FIXING TAPE	1.2
PREFERRED CHOICE	<a href="#">2270176-1</a>	4-RAIL, WITH S-CLIP, NO FIXING TAPE	1.0
STANDARD	<a href="#">1-2270176-1</a>	4-RAIL, WITH S-CLIP, WITH FIXING TAPE	1.0
STANDARD	<a href="#">2270176-2</a>	4-RAIL, WITH S-CLIP, NO FIXING TAPE	1.2
STANDARD	<a href="#">1-2270176-2</a>	4-RAIL, WITH S-CLIP, WITH FIXING TAPE	1.2

### SOLARLOK Z-RAIL ACCESSORIES

Type	Part Number	Description
STANDARD	<a href="#">1740873-8</a>	OMEGA-CLIP
STANDARD	<a href="#">2232234-1</a>	S-CLIP
STANDARD	<a href="#">2-2152179-2</a>	DIODE REPAIR-KIT SL1515
STANDARD	<a href="#">2-2152179-1</a>	DIODE REPAIR-KIT F1200DC



## Dimensions



# SOLARLOK PV BAR JUNCTION BOX 1500V

The SOLARLOK PV Bar junction box 1500V is a potting junction box designed with improved robustness, reliability and increased power output. The contact rails are precisely shaped in 3D and extended inside the junction box to optimize thermal balance. Using nearly 100% pure copper with lowest contact resistance possible brings longer and higher power output. The diode used is tuned and strengthened to prevent failure in the field to ensure power continuity. All the connections inside the PV Bar are welded to maximize usage and reliability. PV Bar complies with the highest standard today and is certified for 1500V TUV/IEC and 1500V UL.



## Applications

- Bifacial cell panels & crystalline panels

## Electrical

- **Rated Current:** 15A
- **Withstanding Voltage:** 1000V DC / 1500V DC (UL)  
1000V DC / 1500V DC (TUV)
- **Protection Class:** II

## Mechanical

- **Number of Contact Rails:** 4
- **Temperature Range:** -40C to +85C
- **Wire Size Range:** up to 12 AWG; 4.0 mm<sup>2</sup>
- **Protection Degree:** IP68 closed, potted (1m / 24 hours)

## Specifications

- **Product Specification:** [108-137167](#)
- **Application Specification:** [114-137167](#)

## Materials

- **Contact Base Material:** Copper Alloy
- **Contact Finish:** Tin
- **Cover and Base Housing:** PPE

## Standards

- 1000V / 1500V UL approved per UL3730
- 1000V / 1500V TUV approved per EN62790

## Benefits

- Harvest extra power with advanced thermal balanced junction box
- Achieve long and high power output with contacts made of nearly 100% pure copper
- Maximize power continuity with tuned and strengthened diodes

### PV4-S connectors:

- Provides waterproof protection and is rated IP68 (1 m / 24 hours)
- Minimizes power loss by providing low contact resistance

SOLARLOK PV BAR JUNCTION BOX 1500V

Product Selection Information

SOLARLOK PV Bar 1500V

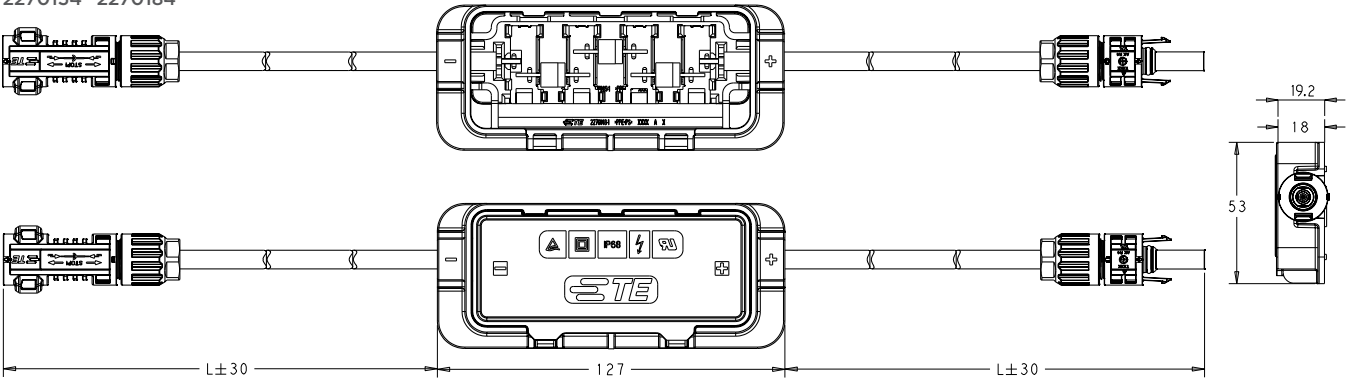
Type	Part Number	Description	Voltage Rating (TUV and UL)	Cable Length (Meters)
STANDARD	<a href="#">2270154-1</a>	PV BAR 4-RAIL JUNCTION BOX	1500V	0.9
PREFERRED CHOICE	<a href="#">2270154-2</a>	PV BAR 4-RAIL JUNCTION BOX	1500V	1
STANDARD	<a href="#">2270154-3</a>	PV BAR 4-RAIL JUNCTION BOX	1500V	1.2

SOLARLOK PV Bar 1000V

Type	Part Number	Description	Voltage Rating (TUV and UL)	Cable Length (Meters)
STANDARD	<a href="#">2270184-1</a>	PV BAR 4-RAIL JUNCTION BOX	1000V	0.9
PREFERRED CHOICE	<a href="#">2270184-2</a>	PV BAR 4-RAIL JUNCTION BOX	1000V	1
STANDARD	<a href="#">2270184-3</a>	PV BAR 4-RAIL JUNCTION BOX	1000V	1.2

Dimensions

2270154 2270184



# SOLARLOK PV EDGE DECENTRALIZED JUNCTION BOX

The SOLARLOK PV Edge decentralized junction box is the first clamping and non-potting junction box in the market using the edge as a relevant position for the mounting without hole drilling. The flaps (available in different shoulder heights) protect the foils and the user so it is a pure IEC & UL approved 1500V solution. Due to a clamping and non-potted design, the installation is extremely quick and no curing time delay of >6hrs applies.



## Applications

- Building integrated photovoltaics (BIPV) panels
- Bifacial solar panels
- Half cell solar panel

## Electrical

- **Rated Current:** 15A standard version  
17A special version
- **Withstanding Voltage:** 1500V DC (UL)  
1500V DC (TUV/IEC)

## Mechanical

- 3x IEC standard
- **Temperature Range:** -40 to +115°C

## Specifications

- **Product Specification:** [108-32122](#)
- **Application Specification:** [114-32157](#)

## Materials - Cover and Base Housing

- Polyphenyl ethers (PPE)
- Polystyrene (PS)

## Standards

- 1500V UL approved per UL3703
- 1500V TUV approved per IEC62790

## Benefits

- Quick installation time with a line and no potting necessary
- Reliability is increased with no holes in the panels that can cause damage
- Better heat transfer in case of shading with diode in separate compartment
- Increase power handling by 2A with thermal pad design
- Reduce foil installation time with the lid and base angled (shaped) design
- Available in E-W and N-S rail directions to cover all possible module layouts
- Provides waterproof protection and is rated IP68 (1 m / 24 hours)
- Use of vent for humidity control
- Includes integrated PV4-S interface into the junction box



## SOLARLOK PV EDGE JUNCTION BOX

### Product Selection Information

#### Glass-Glass Edge Mount Application with Flap



Foil Orientation	Used Clip	Flap	Fixing Tape	Left Box minus coded (male interface)	Center Box (no interface)	Right Box plus coded (female interface)
NORTH - SOUTH	S-CLIP	STANDARD	NO	<a href="#">2306314-2</a>	<a href="#">2306314-5</a>	<a href="#">2306314-1</a>
			YES	<a href="#">1-2306314-2*</a>	<a href="#">1-2306314-5*</a>	<a href="#">1-2306314-1*</a>
		LARGE	NO	<a href="#">2307520-2</a>	<a href="#">2307520-5</a>	<a href="#">2307520-1</a>
			YES	<a href="#">1-2307520-2</a>	<a href="#">1-2307520-5</a>	<a href="#">1-2307520-1</a>
	OMEGA-CLIP	STANDARD	NO	<a href="#">2306316-2</a>	<a href="#">2306316-5</a>	<a href="#">2306316-1</a>
			YES	<a href="#">1-2306316-2</a>	<a href="#">1-2306316-5</a>	<a href="#">1-2306316-1</a>
		LARGE	NO	<a href="#">2307521-2</a>	<a href="#">2307521-5</a>	<a href="#">2307521-1</a>
			YES	<a href="#">1-2307521-2</a>	<a href="#">1-2307521-5</a>	<a href="#">1-2307521-1</a>

#### Traditional Mid-Panel Application or Half-Cell Application

Foil Orientation	Used Clip	Flap	Fixing Tape	Left Box minus coded (male interface)	Center Box (no interface)	Right Box plus coded (female interface)
EAST - WEST	S-CLIP	NO	NO	<a href="#">4-2306315-2</a>	<a href="#">4-2306315-5</a>	<a href="#">4-2306315-1</a>
			YES	<a href="#">5-2306315-2*</a>	<a href="#">5-2306315-5*</a>	<a href="#">5-2306315-1*</a>
	OMEGA-CLIP	NO	NO	<a href="#">4-2306317-2</a>	<a href="#">4-2306317-5</a>	<a href="#">4-2306317-1</a>
			YES	<a href="#">5-2306317-2</a>	<a href="#">5-2306317-5</a>	<a href="#">5-2306317-1</a>

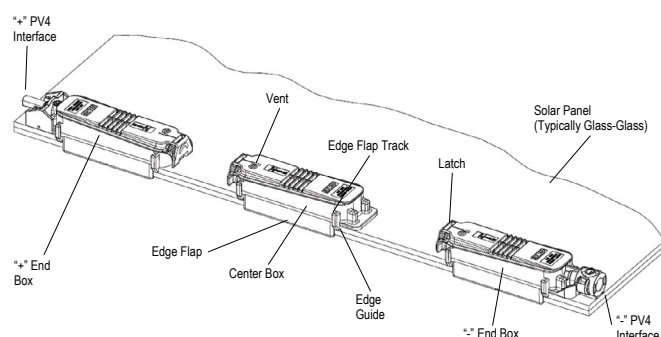
\*PREFERRED PART NUMBERS

#### 1500V PV4-S cable jumpers (4mm<sup>2</sup>/AWG12)

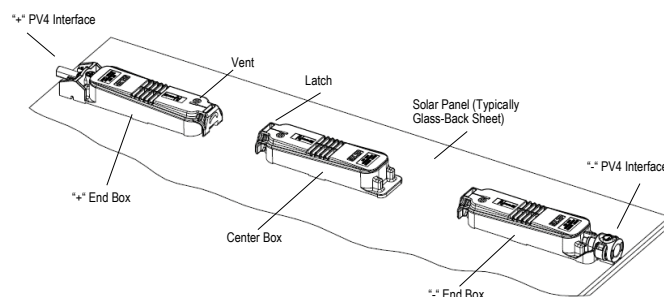
Description	Cable Length (millimeters)	Part Number
PV4-S MALE TO FEMALE CABLE JUMPERS	300	<a href="#">2213759-1</a>
PV4-S MALE TO FEMALE CABLE JUMPERS	500	<a href="#">2213759-3</a>
PV4-S MALE TO FEMALE CABLE JUMPERS	1000	<a href="#">2213759-8</a>



#### Glass-Glass Edge Mount Application with Flap



#### Traditional Mid-Panel Application



# SOLARLOK PCB ENCLOSURE SMART JUNCTION BOX

The SOLARLOK PCB enclosure smart junction box enables the integration of a Printed Circuit Board into the solution. The enclosure (junction box itself with no PCB) is TUV/IEC and UL approved. Special clips allow you to quickly and reliably connect your PCB to the solar panel foils.



## Applications

- Solar panels
- Smart solar solutions

## Electrical

- **Withstanding Voltage:** 1000V DC / 1500V DC (UL)  
IEC and UL approved separately depending upon the PCB enclosed
- **Rated Current:** Depends on the designed electronics of the PCB

## Mechanical

- **Operating Temperature:** -40°C to 90°C
- **Protection Degree:** IP65/67

## Specifications

- **Product Specification:** 108-133063
- **Application Specification:** [114-13303-1](#)
- **Instruction Sheet:** [408-133063](#)
- RoHS & REACH compliant

## Materials

- Polyphenyl Ether (PPE)
- Polystyrene (PS)

## Standards

- Designed to meet UL3730 and IEC62790

## Benefits

- Allows customers to apply a specific PCB
- Enables the rework and replacement of the PCB
- Provides a highly reliable enclosure for a PCB

## PV4-S connectors:

- Provides waterproof protection and is rated IP68 (1 m / 24 hours)
- Minimizes power loss by providing low contact resistance

## PCB Recommended Dimensions

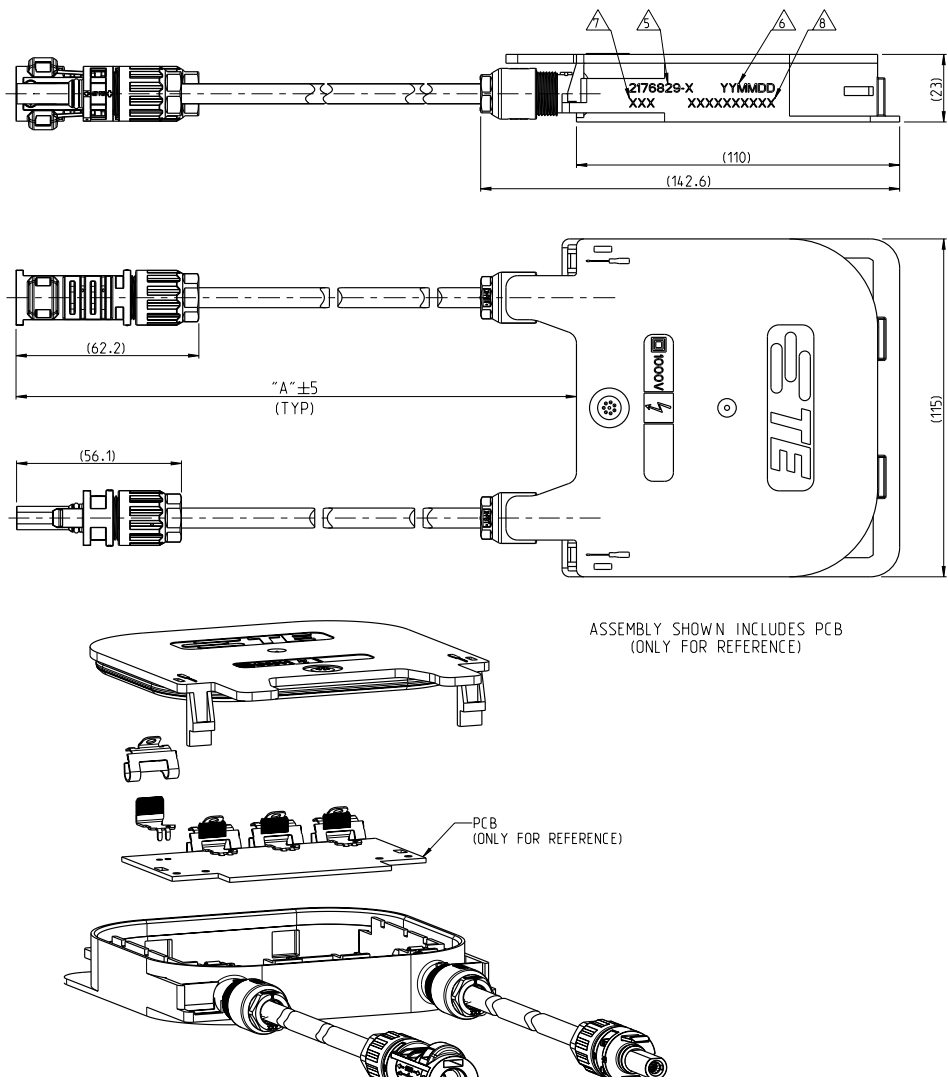
- **Length x width:**  
51 mm x 94 mm (width = contact-rail-side)

SOLARLOK MEDIUM JUNCTION BOX SMART PCB ENCLOSURE

Product Selection Information

Part Number	Description	Cable Length (millimeters)	Contact and clip
<a href="#">2326862-1</a>	MEDIUM SMART PCB JUNCTION BOX	1000	2 X CONTACT RAILS + 2 X S-CLIP
<a href="#">2326862-3</a>	MEDIUM SMART PCB JUNCTION BOX	1000	4 X CONTACTS RAILS + 4 X S-CLIP

Dimensions



# SOLARLOK MICRO JUNCTION BOX

The SOLARLOK micro junction box terminates the foils of thin film, as well as Crystalline PV panels by soldered or welded connections while supporting voltage ratings of 1000V for UL3730 and 1000V for IEC62790. SOLARLOK micro junction box for 1000V applications is manufactured with durable materials that reduce the stress on individual components. The junction box demonstrates that it extends the life of the product and increased reliability and is designed for potting the foil/rail termination.



## Applications

Photovoltaic installations including those with:

- Extreme weather conditions
- 1000 V voltage in standard use
- Open or accessible installations where decoupling must be limited
- With cable applied and PV4 connector
- Multi agency approval requirements

## Electrical

- Short Circuit Current (ISC) 7.5A (TF) / 14 (CR)
- Rated Voltage 1000V (UL3730)  
1000V (IEC62790)

## Mechanical

- Overall junction box size 75 x 65 x 15.7 mm
- Operating Temperature -40 to +85 °C
- Ingress Protection Rating IP67
- Applicable cable 2.5 to 4 mm<sup>2</sup> (14-12 AWG)
- Connector Interface PV4-S (common PV interface)

## Specifications

- Product Specifications: [108-2469](#)
- Application Specifications: [114-13304](#)

## Materials

- Contact rail Tin-plated copper alloy
- Cover and base housing PPE + PS

## Standards

- 1000V DC UL3730
- 1000V DC IEC62790

## Benefits

- Material withstands harsh environments
- Extends product lifetime with ammonia and salt water resistant materials
- Rails available for soldering
- Special potted area for heat dissipation
- Allows for upside down mounting

## PV4-S connectors:

- Provides waterproof protection and is rated IP68 (1 m / 24 hours)
- Minimizes power loss by providing low contact resistance

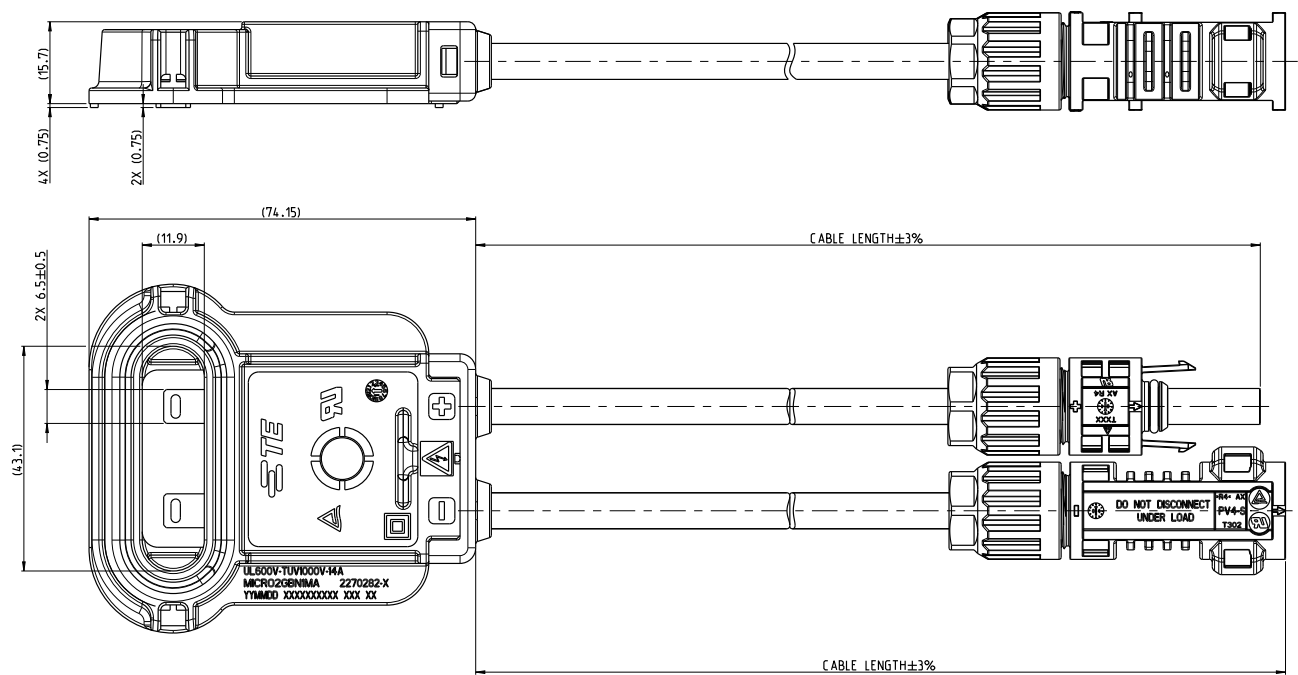


SOLARLOK Micro Junction Box

Product Selection Information

Type	Part Number	Rate Current	Rated Voltage	Cable Length (millimeters)	Wire Size	
					(mm²)	AWG
THIN FILM	<a href="#">2270283-1</a>	7.5A	150V	470	4.0	12
CRYSTALLINE	<a href="#">2270282-1</a>	14A	45V	500	4.0	12

Dimensions



# SOLARLOK SMALL JUNCTION BOX

The SOLARLOK small junction box terminates the foils of Crystalline PV panels with clamped connections while supporting voltage ratings of 1000V for UL3730 and 1000V for IEC62790. The SOLARLOK small junction box for 1000V applications is manufactured with durable materials that reduce the stress on individual components. The junction box demonstrates that it extends the life of the product and increased reliability and also provides a flexible, open system structure, which allows serial or parallel interconnection via a direct wire connection or separable connectors.



## Applications

Photovoltaic installations including those with:

- Extreme weather conditions
- 1000V voltage in standard use
- Open or accessible installations where decoupling must be limited
- Multi agency approval requirements

## Electrical

- Short Circuit Current (ISC) 14A
- Rated Voltage 600V (UL)  
1000V (TUV/IEC)

## Mechanical

- Overall junction box size 138 x 90 x 22 mm
- Operating Temperature -40 to +115 °C
- Ingress Protection Rating IP65
- Applicable cable 2.5 to 6 mm<sup>2</sup> (14-10 AWG)
- Connector Interface PV4-S (common PV interface)

## Specifications

- Product Specifications: [108-18955](#)
- Application Specifications: [114-18488-1](#)

## Materials

- Contact rail: Tin plated copper alloy
- Cover and base housing PPE + PS

## Standards

- 600V DC UL3730
- 1000V DC IEC62790

## Benefits

- No potting junction box
- Special rail design for exchangeable diodes
- Material withstands harsh environments
- Extends product lifetime with ammonia and salt water resistant materials
- Rails available for clamping and welding
- Allows for upside down mounting
- Use of vent for humidity control

### PV4-S connectors:

- Provides waterproof protection and is rated IP68 (1 m / 24 hours)
- Minimizes power loss by providing low contact resistance

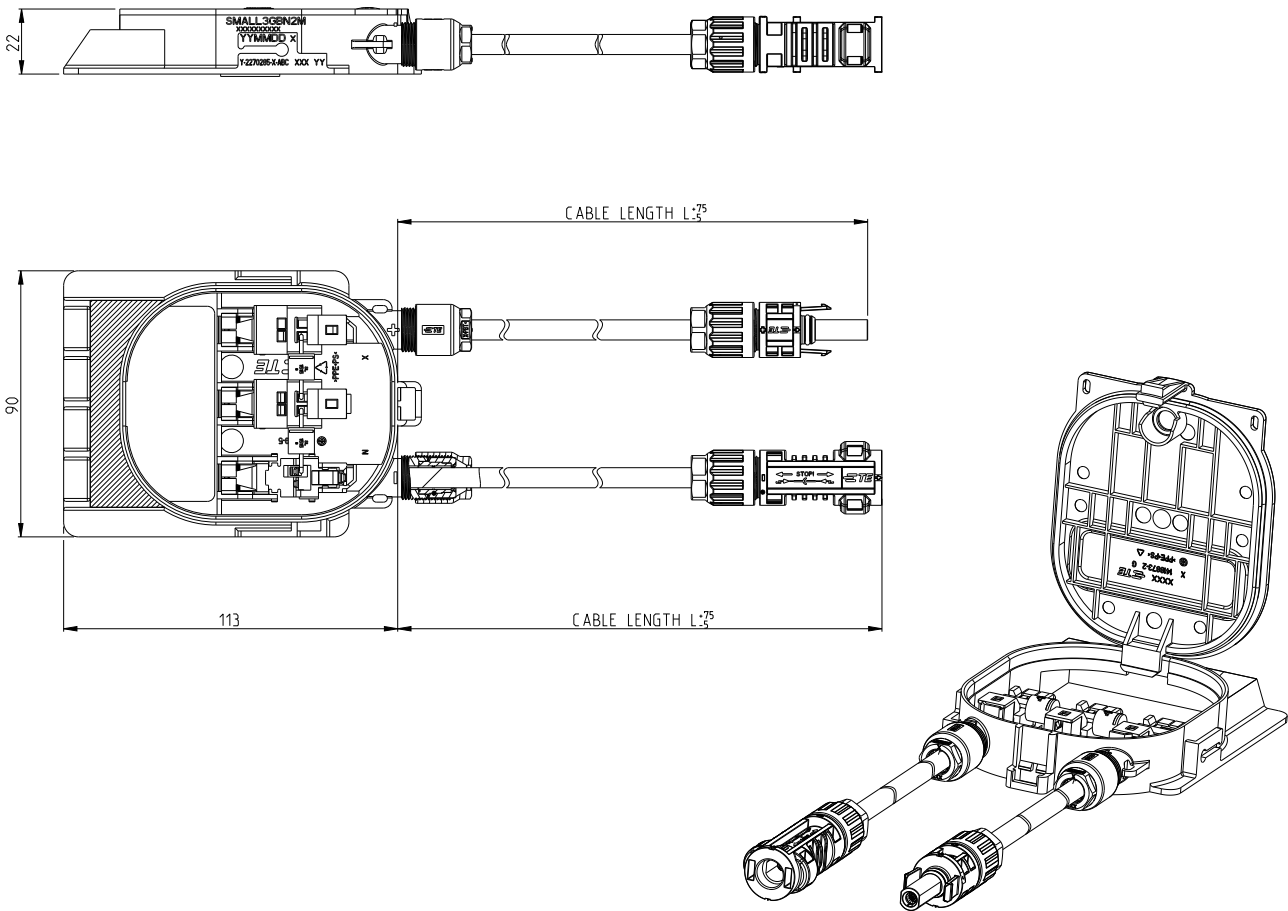
SOLARLOK Small Junction Box

Product Selection Information

JUNCTION BOX WITH MOUNTED CABLE AND CONNECTORS

Type	Part Number	Contact Rails	Diodes	Rated Current (IEC 61215, Edition 2) (Ampere)	Cable Length (millimeters)	Wire Size (mm²)	AWG
STANDARD	<a href="#">2270285-1</a>	3	2	14.0	1000	4.0	12

Dimensions



VIEW WITH ASSEMBLED COVER OPEN FOR REFERENCE

# SOLARLOK WING EDGE JUNCTION BOX

The SOLARLOK wing edge junction box is perfectly designed for building integrated photo voltaic solutions which require performance and quality Integrated in a compact design. It is also used in combination with the slim-line connector system. SOLARLOK wing edge junction box is used in crystalline applications and requires no potting or silicon glue.



## SOLARLOK Wing Edge Junction Box

### Applications

- Solar panels BIPV
- Architectural solutions
- Autoclave production

### Electrical

- Short Circuit Current (Isc): 12A
- Rated Voltage: 1000V

### Mechanical

- Temperature Range: -40°C to +115°C
- Protection Degree: IP67

### Specifications

- Product Specifications: [108-94114](#)
- Application Specifications: [114-18896](#)

### Materials

- Contact Plate: CuFe
- Pin Contact: Silver plated CuSn
- Housing: PPS

### Standards

- Designed to meet 1000V IEC62790

## Benefits

- Suitable solution for automatic lamination
- Allows for easy termination and reliable field installations

## Slim-Line Connector

### Applications

- Solar panels BIPV
- Architectural solutions
- Small size needs



### Electrical

- Rated Voltage: 1000V

### Mechanical

- Temperature Range: -40°C to +85°C
- Wire Size Range: Up to 12 AWG, 4.0 mm<sup>2</sup>
- Protection Degree: IP67

### Specifications

- Product Specifications: [108-94205-1](#)
- Application Specifications: [114-18952-1](#)

### Materials

- Contact Plate: CuFe
- Pin Contact: Silver plated CuSn
- Housing: PPE + PS



## SOLARLOK Wing Edge Junction Box

### Product Selection Information

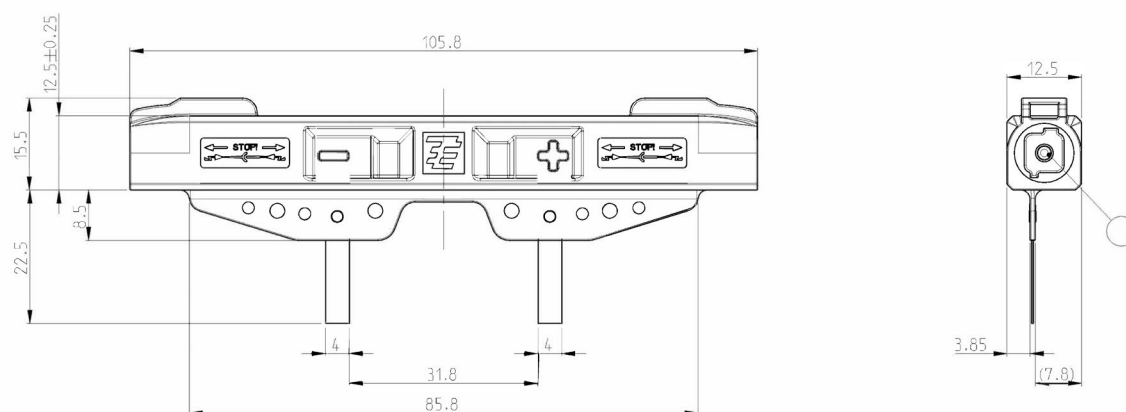
#### SOLARLOK WING EDGE JUNCTION BOX

Type	Part Number	Rated Current	Connection Type
STANDARD	<a href="#">1-1987293-4</a>	10	2-RAIL WING EDGE JUNCTION BOX
STANDARD	<a href="#">2120413-1</a>	X	BLIND PLUG ASSESSORY
STANDARD	<a href="#">1394739-1</a>	X	PLUG COVER

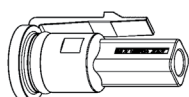
#### SLIM-LINE CONNECTOR

Type	Part Number	mm <sup>2</sup>	AWG	Keying	Package Quantity
STANDARD	<a href="#">1987559-1</a>	2.5	10	PLUS	100
STANDARD	<a href="#">1987559-2</a>	2.5	10	MINUS	100
STANDARD	<a href="#">1-1987559-1</a>	4.0	12	PLUS	100
STANDARD	<a href="#">1-1987559-2</a>	4.0	12	MINUS	100

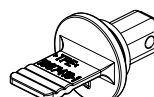
### Dimensions



End Cap



Dust Cap



# AMPULSE HELICASE

## SOLAR JUNCTION BOX

Compact • Weather Resistant

The AMPULSE Helicase solar junction box provides a compact, weather resistant diode enclosure for connecting roof top stand alone solar panel applications. Intelligently designed, the mechanical diode connections maximise thermal performance. Integrated stand offs and pre-defined recesses on the back of the box allow for ease of installation and provide uniform force distribution with optimal placement of sealant and minimal wastes. The cover snaps shut without the use of screws or fasteners and the lipped grommets assure that cable penetrations are dust free and water resistant to IP65 level rating. Integrated strain reliefs help provide a secure connection inside the low profile design.



### Applications

- Solar panel installations

### Electrical

- Operating Voltage: 1000V DC
- Maximum rated current: 8A
- Conductor cross section: 1.5, 2.5 and 4 mm<sup>2</sup>

### Mechanical

- Adhesive Mounting
- Foil attach: Solder
- Maximum foil thickness: 0.5 mm
- Maximum foil width: 6 mm
- Standoff features: 0.7 mm

### Specifications

- Product Specification: [108-32067](#)
- Application Specification: [114-32131](#)
- Designed to meet IEC62790

### Materials

- Housing and Cover: PPE+PS
- Grommet and Seal: Silicone
- Contacts: Copper alloy

### Standards

- Designed to meet 1000V IEC62790

### Benefits

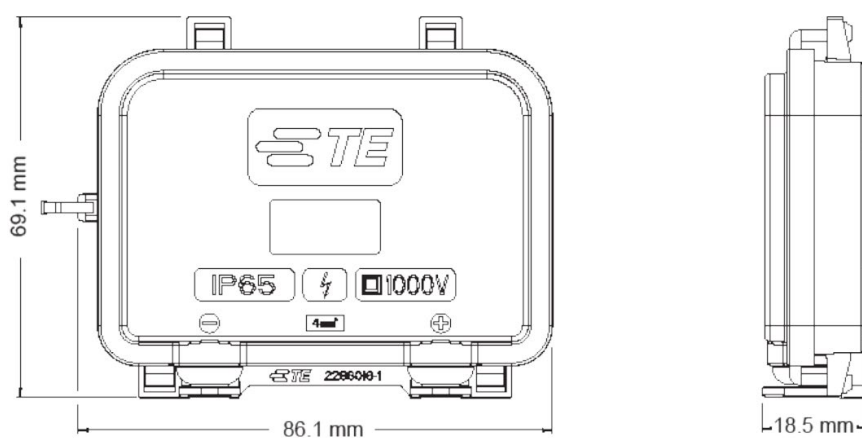
- Sealed design creates a dust-free and water tight enclosure with IP65 rating
- Provides a tight seal with a lipped grommet around the cable penetrations
- Low profile design of 18.5 mm
- Eases assembly with a screw-free snap and seal installation
- Supports both soldered or ring terminal connections
- Pre-defined adhesive space provides proper installation
- Increase thermal management with staggered diode placement
- Material withstands harsh environments

## AMPULSE HELICASE JUNCTION BOX

### Product Selection Information

Type	Part Number	Contact Rails	Diodes	Rated Current	Voltage	Cable Diameter (millimeters)	Foil termination
PREFERRED CHOICE	<a href="#">2286016-1</a>	3	2	8A	1000V	4.5 to 5.6 mm	SOLDER
STANDARD	<a href="#">2286016-3</a>	2	1	8A	1000V	4.5 to 5.6 mm	SOLDER
STANDARD	<a href="#">2286016-4</a>	3	2	8A	1000V	4.5 to 5.6 mm	SCREW

### Dimensions



# SOLARLOK PV4-S CONNECTOR 1500V DC

The SOLARLOK PV4-S connector is an upgrade of the industry leading SOLARLOK PV4 connector to meet a minimum 1500V rating with IP68 protection. The SOLARLOK PV4-S connector has been tested to assure reliable and safe connections of solar arrays. The connectors use industry standard crimp tooling that is readily available and used by installers today.



## Applications

- Solar panels
- Inverters
- Micro inverters
- DC optimizers

## Electrical

- UL 15 A and TÜV 30 A: 2.5 mm<sup>2</sup> / 14 AWG (at 85 °C)
- UL 20 A and TÜV 40 A: 4.0 mm<sup>2</sup> / 12 AWG (at 85 °C)
- UL 30 A and TÜV 45 A: 6.0 mm<sup>2</sup> / 10 AWG (at 85 °C)
- Rated Voltage: 1000V DC / 1500V DC (UL)  
1000V DC / 1500V DC (TUV/IEC)
- Contact Resistance: 0.35mΩ

## Mechanical

- 63mm x 24.5mm (Male)
- 59.5mm x 18.7mm (Female)
- Protection Degree: IP68 (1m / 24 hours)

## Specifications

- Product Specification: [108-137077](#)
- Application Specification: [114-137077](#)
- PV4-PV4-S Intermateability: [501-137294](#)

## Materials

- Housing: PPE & PS
- Contact: Tinned copper

## Standards

- 1000V DC / 1500V DC UL approved - UL6703
- 1000V DC / 1500V DC TUV approved - IEC62852

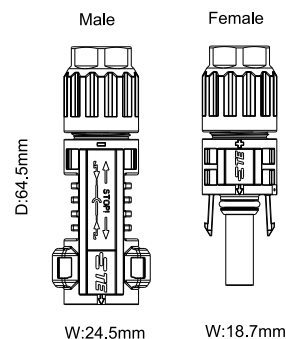
## Benefits

- Provides waterproof protection and is rated IP68 (1 m / 24 hours)
- Minimizes power loss by providing low contact resistance

## Product Selection Information

Part Number	Description
<a href="#">2270024-1</a>	PIN CONNECTOR
<a href="#">2270025-1</a>	SOCKET CONNECTOR

## Dimensions





## SOLARLOK PV4-S CONNECTOR 1500V DC

### Product Selection Information

#### PV4-S Kits for 4 mm<sup>2</sup> - 6 mm<sup>2</sup> Contacts (AWG 12-10)

Type	Part Number	Description	Package Quantity
PREFERRED CHOICE	<a href="#">2270024-1</a>	PV4-S CONNECTOR KIT PIN-MALE (with pin-contact)	1,000 PIECES
PREFERRED CHOICE	<a href="#">2270025-1</a>	PV4-S CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	1,000 PIECES
STANDARD	<a href="#">1-2270024-1</a>	PV4-S CONNECTOR KIT PIN-MALE (with pin-contact)	2,000 PIECES
STANDARD	<a href="#">1-2270025-1</a>	PV4-S CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	2,000 PIECES
STANDARD	<a href="#">2-2270024-1</a>	PV4-S CONNECTOR KIT PIN-MALE (with pin-contact)	100 PIECES
STANDARD	<a href="#">2-2270025-1</a>	PV4-S CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	100 PIECES

#### PV4-S Kits for 2.5 mm<sup>2</sup> Contacts (AWG 14)

Type	Part Number	Description	Package Quantity
PREFERRED CHOICE	<a href="#">2270024-3</a>	PV4-S CONNECTOR KIT PIN-MALE (with pin-contact)	1,000 PIECES
PREFERRED CHOICE	<a href="#">2270025-3</a>	PV4-S CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	1,000 PIECES
STANDARD	<a href="#">1-2270024-3</a>	PV4-S CONNECTOR KIT PIN-MALE (with pin-contact)	2,000 PIECES
STANDARD	<a href="#">1-2270025-3</a>	PV4-S CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	2,000 PIECES
STANDARD	<a href="#">2-2270024-3</a>	PV4-S CONNECTOR KIT PIN-MALE (with pin-contact)	100 PIECES
STANDARD	<a href="#">2-2270025-3</a>	PV4-S CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	100 PIECES

#### PV4-S - Housing Components

Type	Part Number	Description	Package Quantity
STANDARD	<a href="#">2270022-1</a>	PV4-S CONNECTOR HOUSING PIN-MALE (without pin-contact)	1,000 PIECES
STANDARD	<a href="#">2270023-1</a>	PV4-S CONNECTOR HOUSING SOCKET-FEMALE (without socket-contact)	1,000 PIECES
STANDARD	<a href="#">2-2270022-1</a>	PV4-S CONNECTOR HOUSING PIN-MALE (without pin-contact)	100 PIECES
STANDARD	<a href="#">2-2270023-1</a>	PV4-S CONNECTOR HOUSING SOCKET-FEMALE (without socket-contact)	100 PIECES

#### PV4-S - 4 mm<sup>2</sup> - 6 mm<sup>2</sup> Contacts (AWG 12-10)

Type	Part Number	Description	Package Type - Quantity
STANDARD	<a href="#">2270251-2</a>	PIN-MALE CONTACT	REEL OF 2,000 PIECES
STANDARD	<a href="#">2270251-3</a>	PIN-MALE CONTACT	1,000 LOOSE PIECES
STANDARD	<a href="#">2270251-4</a>	PIN-MALE CONTACT	100 LOOSE PIECES
STANDARD	<a href="#">2270226-2</a>	SOCKET-FEMALE CONTACT	REEL OF 2,000 PCS
STANDARD	<a href="#">2270226-3</a>	SOCKET-FEMALE CONTACT	1,000 LOOSE PIECES
STANDARD	<a href="#">2270226-4</a>	SOCKET-FEMALE CONTACT	100 LOOSE PIECES

#### PV4-S -2.5 mm<sup>2</sup> Contacts (AWG 14)

Type	Part Number	Description	Package Type - Quantity
STANDARD	<a href="#">2270253-2</a>	PIN-MALE CONTACT	REEL OF 2,000 PIECES
STANDARD	<a href="#">2270253-3</a>	PIN-MALE CONTACT	1,000 LOOSE PIECES
STANDARD	<a href="#">2270253-4</a>	PIN-MALE CONTACT	100 LOOSE PIECES
STANDARD	<a href="#">2270252-2</a>	SOCKET-FEMALE CONTACT	REEL OF 2,000 PCS
STANDARD	<a href="#">2270252-3</a>	SOCKET-FEMALE CONTACT	1,000 LOOSE PIECES
STANDARD	<a href="#">2270252-4</a>	SOCKET-FEMALE CONTACT	100 LOOSE PIECES

PV4-S series are applicable for outer-cable diameters from 5.5 mm to 7.8 mm

#### Accessories



Plastic tool for disconnect PV4  
PN [1971903-1](#)



Plastic tool for disconnect PV4 & PM style  
PN [2232232-1](#)



Hand Crimping Tool  
4.0 mm - 6.0 mm<sup>2</sup>  
PN [6-1579014-8](#)  
  
Hand Crimping Tool  
2.5 mm - 4.0 mm<sup>2</sup>  
PN [6-1579014-9](#)



Cable Stripper  
PN [4-1579002-2](#)



Dust Cap for Male housing  
PN [2232228-1](#)



Dust Cap for Female housing  
PN [2232227-1](#)

# SOLARLOK PV4-PM CONNECTOR 1000V DC

The SOLARLOK PV4-PM connector for panel mount application is designed to reach 1000V and provide a reliable power connection. With a precision engineered design, it provides a stable power connection and helps achieve the lowest contact resistance to reduce the cost of power.



## Applications

- Solar inverters
- Combiner box
- Micro inverters
- DC optimizers

## Electrical

- UL 15 A and TÜV 25 A: 2.5mm<sup>2</sup> / 14 AWG (at 85°C)
- UL 20 A and TÜV 35 A: 4.0mm<sup>2</sup> / 12 AWG (at 85°C)
- UL 30A and TUV 40A: 6.0mm<sup>2</sup> / 10 AWG (at 85°C)
- Rated Voltage: 1000V (UL)  
1000V (TUV/IEC)
- Contact Resistance: 0.35mΩ

## Mechanical

- 47.9mm x 18.7mm (Male)
- 54.1mm x 24.5mm (Female)
- Protection Degree: IP68 (1m / 24 hours)

## Specifications

- Product Specification: [108-106122](#)
- Application Specification: [114-106122](#)
- PV4-PV4-S Intermateability: [501-137294](#)

## Materials

- Housing: PC
- Contact: Tinned copper

## Standards

- 1000V DC / DC UL - UL6703
- 1000V DC / DC TUV - IEC62852

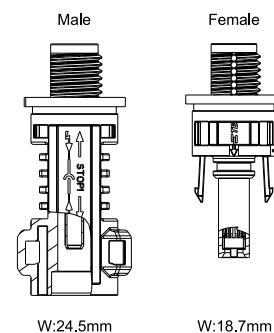
## Benefits

- Precision contact structure helps to minimize power loss
- Provides waterproof protection and is rated IP68 (1 m / 24 hours)

## Product Selection Information

Part Number	Description
<a href="#">1971919-1</a>	PIN CONNECTOR
<a href="#">1971920-1</a>	SOCKET CONNECTOR

## Dimensions



## SOLARLOK PV4-PM CONNECTOR 1500V DC

### Product Selection Information

#### PV4-PM Kits for 4 mm<sup>2</sup> - 6 mm<sup>2</sup> Contacts (AWG 12-10)

Type	Part Number	Description	Package Quantity
PREFERRED CHOICE	<a href="#">1971919-1</a>	PV4-PM CONNECTOR KIT PIN-MALE (with pin-contact)	1,000 PIECES
PREFERRED CHOICE	<a href="#">1971920-1</a>	PV4-PM CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	1,000 PIECES
STANDARD	<a href="#">1971919-2</a>	PV4-PM CONNECTOR KIT PIN-MALE (with pin-contact)	100 PIECES
STANDARD	<a href="#">1971920-2</a>	PV4-PM CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	100 PIECES

#### PV4-PM Kits for 2.5 mm<sup>2</sup> Contacts (AWG 14)

Type	Part Number	Description	Package Quantity
PREFERRED CHOICE	<a href="#">1-1971919-1</a>	PV4-PM CONNECTOR KIT PIN-MALE (with pin-contact)	1,000 PIECES
PREFERRED CHOICE	<a href="#">1-1971920-1</a>	PV4-PM CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	1,000 PIECES
STANDARD	<a href="#">1-1971919-2</a>	PV4-PM CONNECTOR KIT PIN-MALE (with pin-contact)	100 PIECES
STANDARD	<a href="#">1-1971920-2</a>	PV4-PM CONNECTOR KIT SOCKET-FEMALE (with socket-contact)	100 PIECES

#### PV4-PM – Housing Components

Type	Part Number	Description	Package Quantity
STANDARD	<a href="#">2270039-1</a>	PV4-PM CONNECTOR-HOUSING PIN-MALE (without pin-contact)	1,000 PIECES
STANDARD	<a href="#">2270040-1</a>	PV4-PM CONNECTOR-HOUSING SOCKET-FEMALE (without socket-contact)	1,000 PIECES
STANDARD	<a href="#">2270039-2</a>	PV4-PM CONNECTOR-HOUSING PIN-MALE (without pin-contact)	100 PIECES
STANDARD	<a href="#">2270040-2</a>	PV4-PM CONNECTOR-HOUSING SOCKET-FEMALE (without socket-contact)	100 PIECES

#### PV4-S – 4 mm<sup>2</sup> - 6 mm<sup>2</sup> Contacts (AWG 12-10)

Type	Part Number	Description	Package Type - Quantity
STANDARD	<a href="#">2270251-2</a>	PIN-MALE CONTACT	REEL OF 2,000 PIECES
STANDARD	<a href="#">2270251-3</a>	PIN-MALE CONTACT	1,000 LOOSE PIECES
STANDARD	<a href="#">2270251-4</a>	PIN-MALE CONTACT	100 LOOSE PIECES
STANDARD	<a href="#">2270226-2</a>	SOCKET-FEMALE CONTACT	REEL OF 2,000 PCS
STANDARD	<a href="#">2270226-3</a>	SOCKET-FEMALE CONTACT	1,000 LOOSE PIECES
STANDARD	<a href="#">2270226-4</a>	SOCKET-FEMALE CONTACT	100 LOOSE PIECES

#### PV4-S -2.5 mm<sup>2</sup> Contacts (AWG 14)

Type	Part Number	Description	Package Type - Quantity
STANDARD	<a href="#">2270253-2</a>	PIN-MALE CONTACT	REEL OF 2,000 PIECES
STANDARD	<a href="#">2270253-3</a>	PIN-MALE CONTACT	1,000 LOOSE PIECES
STANDARD	<a href="#">2270253-4</a>	PIN-MALE CONTACT	100 LOOSE PIECES
STANDARD	<a href="#">2270252-2</a>	SOCKET-FEMALE CONTACT	REEL OF 2,000 PCS
STANDARD	<a href="#">2270252-3</a>	SOCKET-FEMALE CONTACT	1,000 LOOSE PIECES
STANDARD	<a href="#">2270252-4</a>	SOCKET-FEMALE CONTACT	100 LOOSE PIECES

PV4-S series are applicable for outer-cable diameters from 5.5 mm to 7.8 mm

#### Accessories



Plastic tool for disconnect PV4

PN [1971903-1](#)



Plastic tool for disconnect PV4 & PM style

PN [2232232-1](#)



Hand Crimping Tool 4.0 mm - 6.0 mm<sup>2</sup>

PN [6-1579014-8](#)  
Hand Crimping Tool 2.5 mm - 4.0 mm<sup>2</sup>

PN [6-1579014-9](#)



Cable Stripper

PN [4-1579002-2](#)



Dust Cap for Male housing

PN [2232228-1](#)

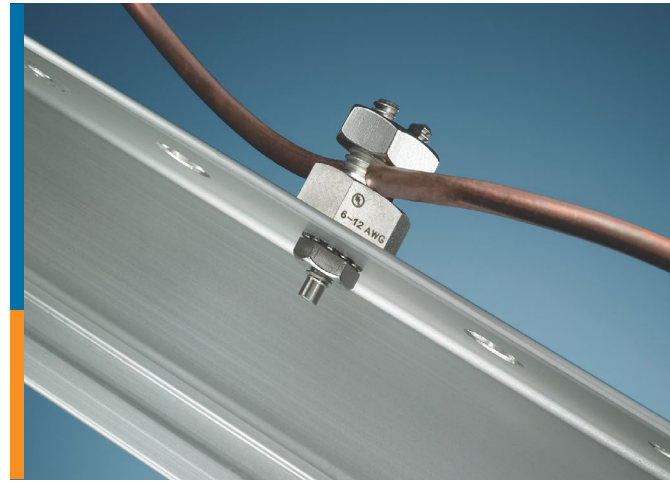


Dust Cap for Female housing

PN [2232227-1](#)

# SOLARLOK GROUNDING BOLT INSTALLATION ACCESSORIES

The SOLARLOK grounding system enables every installer to ground the PV system in a professional way and creates flexibility at the installation. The system contains various bolt and clip solutions.



## Applications

- Solar panels
- Solar inverters
- Micro inverters
- DC optimizers

## Electrical

- Short Term Current Test (UL467):

6 AWG = 1530A (6 seconds)  
8 AWG = 1180A (4 seconds)  
10 AWG = 750A (4 seconds)  
12 AWG = 470A (4 seconds)

## Mechanical

- Securness Test (UL486A-B): 6 AWG = 18lbs (30 minutes)  
8 AWG = 8lbs (30 minutes)  
10 AWG = 5lbs (30 minutes)  
12 AWG = 5lbs (30 minutes)
- Pull out Test (UL486A-B): 6 AWG = 100lbs (1 minute)  
8 AWG = 90lbs (1 minute)  
10 AWG = 80lbs (1 minute)  
12 AWG = 70lbs (1 minute)

## Specifications

- Instruction Sheet: [408-10262](#)
- Product Specifications: [108-2380](#)

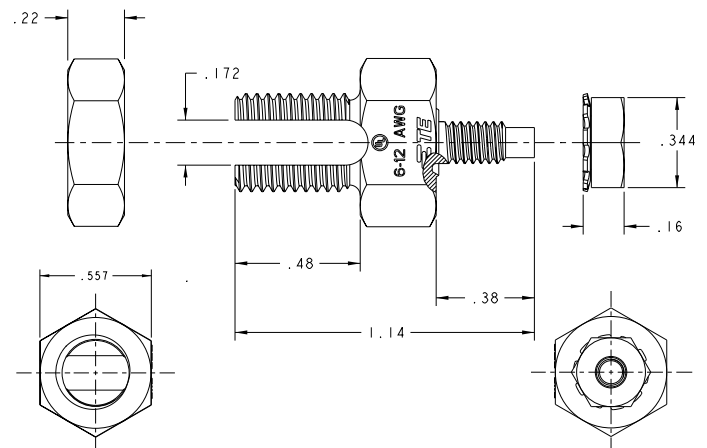
## Materials

- Connector & Hardware: Stainless Steel (Passivated)

## Benefits

- Rugged and compact hex bolt design made from stainless steel
- Quick and easy mounting procedures
- Bottom edge feature cuts through the anodized aluminum surface when securing the hex bolt to the module frame
- Standard tooling can be used with the hex nuts

## Dimensions



## Product Selection Information

Part Number	Description	Thread	Dim "A"	Package Quantity
<a href="#">2058729-1</a>	6-12 AWG	#8-32 UNC	.380	500
<a href="#">2106831-1</a>	LONG SHANK 6-12 AWG	#10-32 UNF	.700	100

# SOLARLOK GROUNDING CLIP INSTALLATION ACCESSORIES

The SOLARLOK grounding clip installation accessories enables every installer to ground the PV system in a professional way and creates flexibility at the installation. The system contains various bolt and clip solutions.

## Applications

- Solar panels
- Solar inverters
- Micro inverters
- DC optimizers

## Electrical

- Meets the tough requirements of photovoltaic grounding applications and the 2008 National Electrical Code.

## Mechanical

- Meets the tough requirements for grounding applications for solid copper wire.
- 12 AWG applications will withstand 70lbs pull while the 10 AWG applications will withstand 80lbs pull

## Specifications

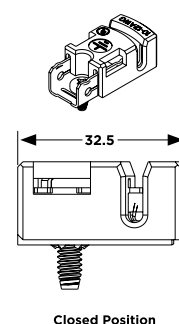
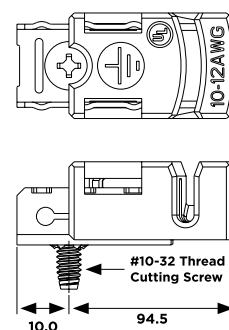
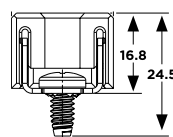
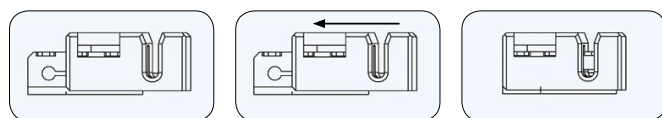
- Instruction Sheet: [408-10160](#)
- Product Specifications: [108-2312](#)
- Application Specifications: [114-13203](#) / [114-106114](#)

## Materials

- Housing: Durable PBT 30% glass filled polyester. Material is outdoor & UV rated
- Contact: High conductivity, copper

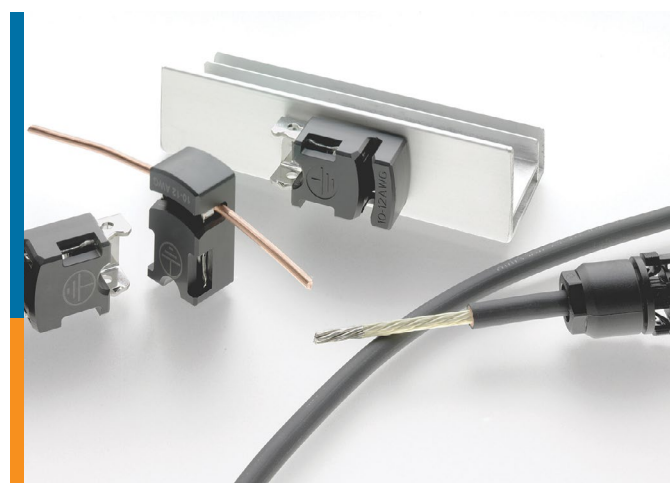
## Dimensions

### 3 Easy Steps to Ground Your PV System



## Product Selection Information

Part Number	Screw	Nut	Package Quantity	Wire Size
<a href="#">1954381-1</a>	#10-32 THREAD CUTTING	NONE	100	10-12 AWG
<a href="#">1954381-2</a>	#8-32 PAN HEAD	#10-32 UNF	100	10-12 AWG
<a href="#">1954381-3</a>	#8-32 PAN HEAD	#8-32 STAR WASHER NUT	100	10-12 AWG
<a href="#">1954381-4</a>	#8-32 LONG SHARK	NONE	100	10-12 AWG
<a href="#">1954381-5</a>	#10-32 THREAD CUTTING	NONE	100	4 - 6 mm <sup>2</sup>



## Benefits

- Product comes as an assembled kit that includes an attachment screw
- Provides four points of contact to the ground wire for high reliability
- Easy to install with simple tools that are readily available
- Removal of the installed ground wire requires a screwdriver, meeting the tooled extration requirements
- RoHS compliant



# TE CONNECTIVITY SOLAR PRODUCTS

VARIOUS, INSTALLATION,  
INVERTER, SYSTEM



TE Connectivity is the one location for a wide range of the solar inverter (micro, central), distribution and combiner boxes components inside or on the outside of the application.

The wide scale of components as board-to-board and wire/ribbon-to-board connectors, terminal blocks, EMI filters, inductors, relays, resistors, switches, storage capacitors and AC/DC components and cable assemblies, DC connectors and solar accessories.

## SOLARLOK - DC cable connectors & Accessories

**DC CONNECTOR  
PV4-PM**



**DC CONNECTOR DUST CAP**



**SOLAR LABELS**



**DC CONNECTOR  
PV4-S**



**DC CONNECTOR PV4  
CONTACT CRIMP**



**INSULATION STRIPPER**



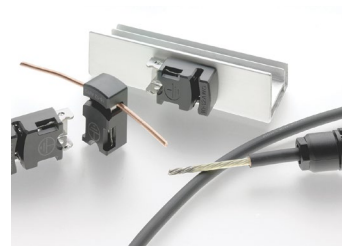
**PV4 CONNECTOR OPENER**



**GROUNDING BOLT**



**GROUNDING CLIP**





## TE Connectivity Inverter Components & Accessories

### AC RELAYS



### AMP-LATCH SYSTEM 50



### AMPMODU 50



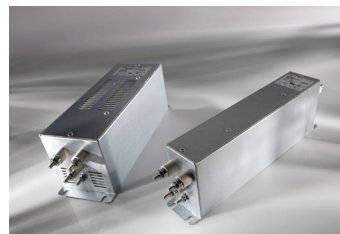
### AMPMODU MTE



### DC RELAYS



### FILTERS



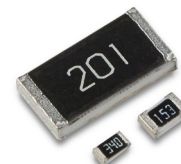
### HTS



### MATE-N-LOK



### RESISTORS



### RJ45 IP65



### TERMINAL BLOCKS





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