SOL-SC-1ST-0-DC-1MPPT-2001 - String combiner box (SCB)

2403338

https://www.phoenixcontact.com/pc/products/2403338

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String combiner box for photovoltaic systems up to 1,000 V DC for connecting 1x 1 string. With surge protection (type 2) and SUNCLIX DC connectors for the input and output side (SUNCLIX mating connectors supplied as standard).

Product description

The Solarline string combiner boxes (SCBs) are used in both small rooftop systems and large ground-mounted systems. The main tasks of the SCBs are the surge protection of the PV system, collecting strings (if necessary), and looping through the protective equipotential bonding conductor for the local equipotential bonding.
Further functions are optional and depend on the equipment.

Examples of optional functions include protecting the strings with string fuses and disconnecting the strings via DC switch disconnectors or DC fire department switches.
You can determine the full scope of functions of the SCB from its item designation (see type key in the SCB packing slip, which can be downloaded in the “Downloads” area).

Your advantages

- Fast installation and startup
- Standard-compliant switchgear and controlgear assembly, thanks to use of DIN EN 61439
- Application-oriented consultation
- Large portfolio of string combiner boxes in stock

Commercial data

Item number	2403338
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DTHTAA
GTIN	4055626370521
Weight per piece (including packing)	1,374 g
Weight per piece (excluding packing)	1,354 g
Customs tariff number	85363030
Country of origin	DE

Technical data

Product properties

Product type	String combiner box (SCB)
Scope of delivery	SUNCLIX DC connector for connecting the SCB

Insulation characteristics

Protection class	II

Electrical properties

General

MPP voltage U_N	max. 1000 V DC
Non-load voltage U_{OC}	max. 1100 V DC
Current per string I_{max}	max. 40 A

Surge protection

EN type	T2
IEC test classification	T2
Protection level U_p	≤ 3.7 kV
Total discharge current I_{total} (8/20) µs	40 kA
Short-circuit current rating I_{SCPV}	40 A

Input data

DC

Number of inputs: Strings	1 (per MPP tracker)
Number of supported MPP trackers	1

Output data

DC

Number of outputs: MPP tracker	1
Number of outputs: ±	1 (per MPP tracker)

Connection data

DC input

Type of cable entry	SUNCLIX
Cable cross section	2.5 mm² ... 6 mm²

Protective bonding and protective grounding conductor

Type of cable entry	Cable gland
Connection method	Screw connection
Cable cross section	2x 16 mm²
External cable diameter	2x 6 mm ... 12 mm

DC output

Type of cable entry	SUNCLIX
Cable cross section	2.5 mm² ... 6 mm²

Dimensions

Housing

Width	130 mm
Height	180 mm
Depth	111 mm

Material specifications

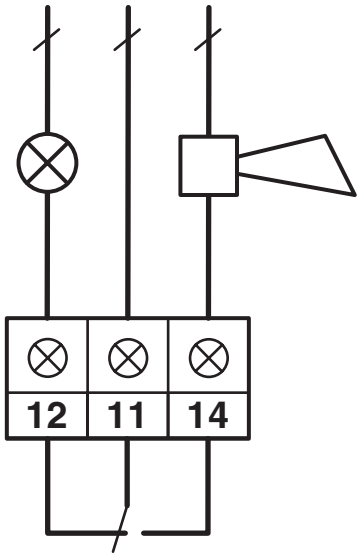
Material Housing	Polycarbonate
Material Cover/door	Polycarbonate (transparent)

Environmental and real-life conditions

Ambient conditions

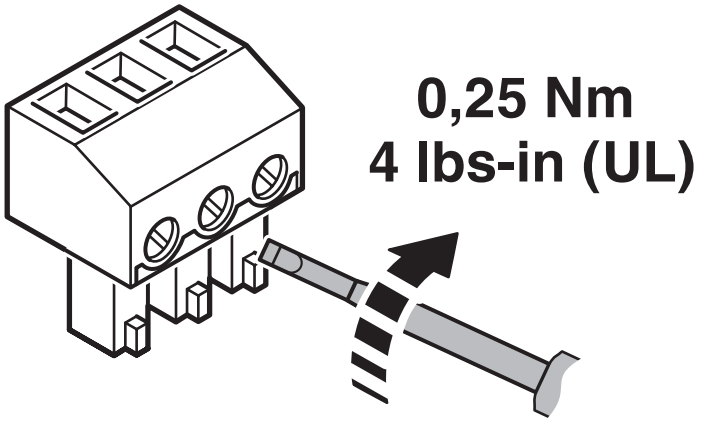
Degree of protection	IP65
Ambient temperature (operation)	-20 °C ... 55 °C

Drawings

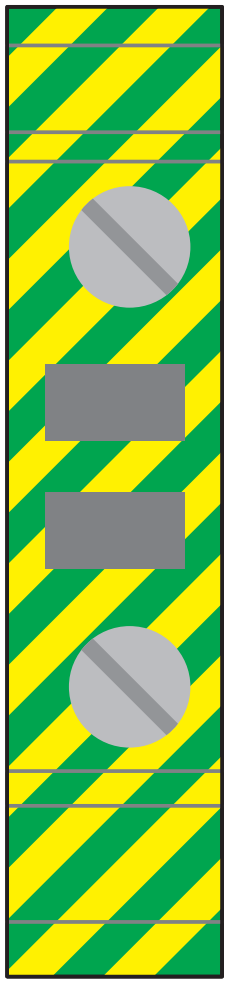


Connection of the remote indication contact on the surge protection

Schematic diagram



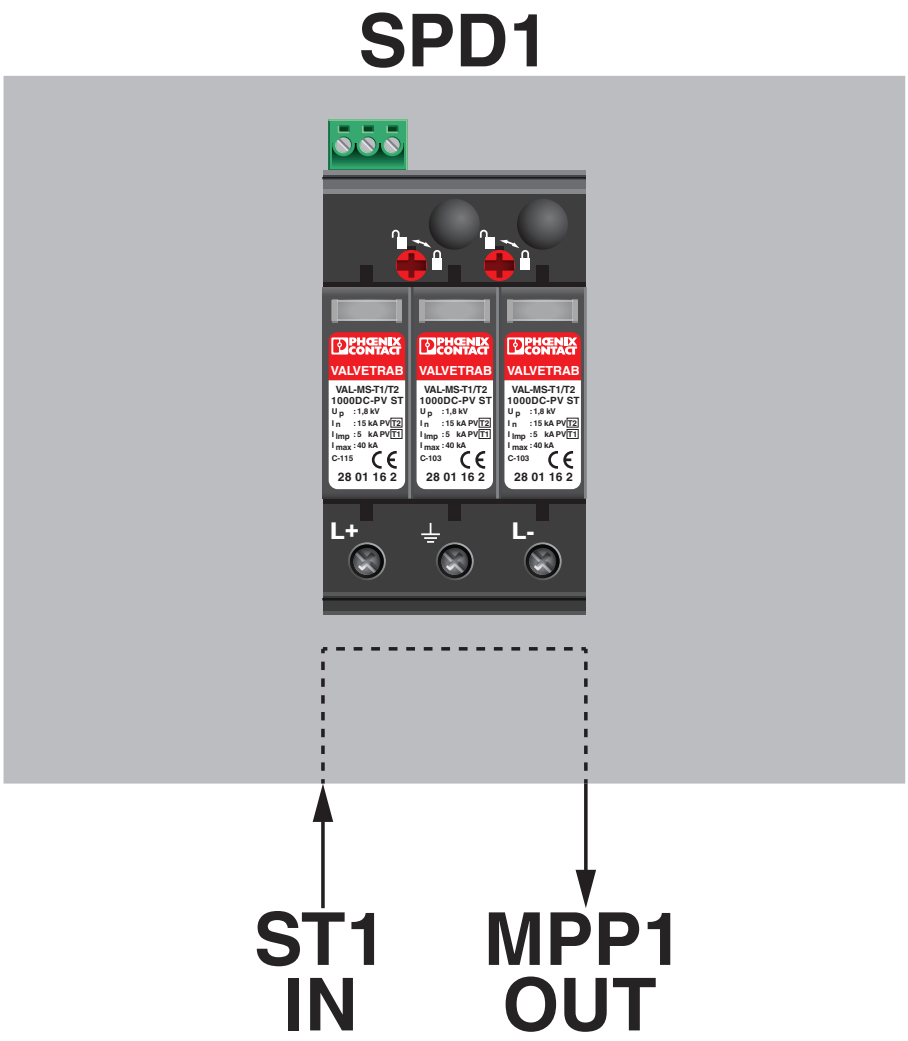
Schematic diagram





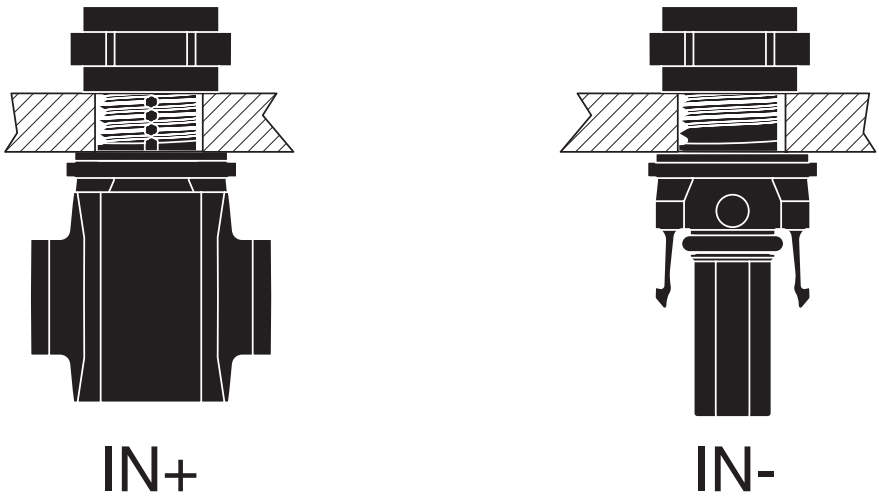
Connection of the protective grounding conductor

Connection diagram



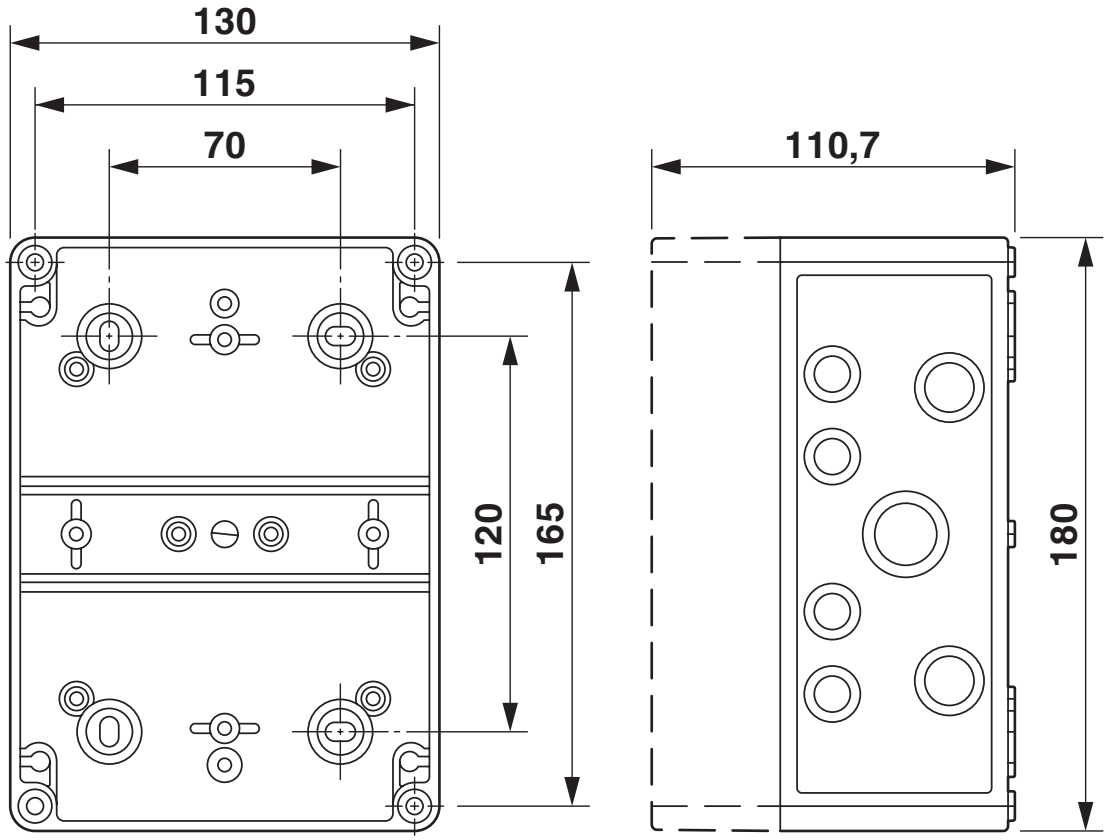
Schematic application drawing

Schematic diagram



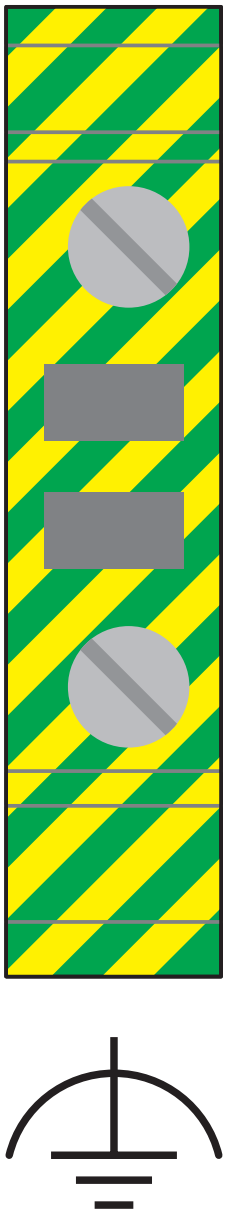
Connection of the PV string

Dimensional drawing



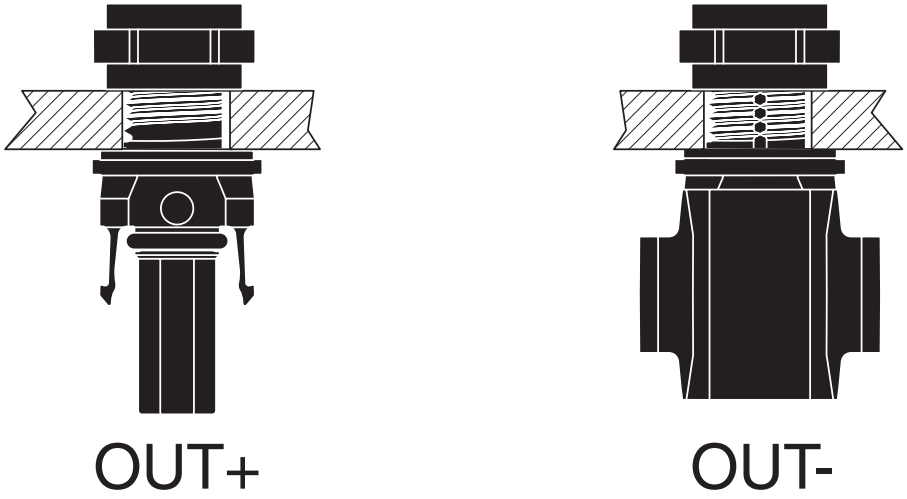
Housing dimensions

Schematic diagram



Connection of the protective equipotential bonding conductor

Schematic diagram



Connection to the inverter

Classifications

ECLASS

ECLASS-13.0	27171490
ECLASS-11.0	27142422

ETIM

ETIM 9.0	EC003857

UNSPSC

UNSPSC 21.0	39121100

Accessories

SOL-WR-1813-AISI304 - Weather protection cover

1579283

https://www.phoenixcontact.com/pc/products/1579283



Canopy to protect the string combiner box (SCB) from environmental influences when installed outdoors, made of stainless steel, with M8 grounding bolt on the back, incl. mounting material for SCB and grounding cable.

VAL-MS 1000DC-PV-ST - Type 2 surge protection plug

2800624

https://www.phoenixcontact.com/pc/products/2800624



Replacement plug for PV arrester combinations from the VAL-MS 1000DC-PV-... product range

PV-C PROTECTION CAP - Protective cap

1785430

https://www.phoenixcontact.com/pc/products/1785430



Protective cap, Range of articles: Sunclix, color: black. self-sealing, without interlock, set consisting of: 1 protective cap for connector side and 1 protective cap for coupling side

PV-ED6/Y-120(2+/1-) - Photovoltaic Y-distributor

1030649

https://www.phoenixcontact.com/pc/products/1030649



Photovoltaic Y-distributor, Range of articles: Sunclix, housing material: PPE, color: black

PV-ED6/Y-120(1+/2-) - Photovoltaic Y-distributor

1030650

https://www.phoenixcontact.com/pc/products/1030650



Photovoltaic Y-distributor, Range of articles: Sunclix, housing material: PPE, color: black

PV-C4F-S 6-16 (+) - Connector

1284634

https://www.phoenixcontact.com/pc/products/1284634



Connector, Range of articles: SUNCLIX, housing material: PPE, color: black, number of positions: 1, min. conductor cross section: 6 mm^2, max. conductor cross section: 16 mm^2, rated voltage: 1500 V DC, rated current: 60 A, Connection method: Spring-cage, Contact connection type: Socket, min. cable diameter: 5.5 mm, max. cable diameter: 10 mm

PV-C4M-S 6-16 (-) - Connector

1284632

https://www.phoenixcontact.com/pc/products/1284632



Connector, Range of articles: SUNCLIX, housing material: PPE, color: black, number of positions: 1, min. conductor cross section: 6 mm^2, max. conductor cross section: 16 mm^2, rated voltage: 1500 V DC, rated current: 60 A, Connection method: Spring-cage, Contact connection type: Pin, min. cable diameter: 5.5 mm, max. cable diameter: 10 mm

PV-C3F-S 2,5-6 (+) - Connector

1386381

https://www.phoenixcontact.com/pc/products/1386381



Connector, Range of articles: Sunclix, housing material: PPE, color: black, number of positions: 1, min. conductor cross section: 2.5 mm^2, max. conductor cross section: 6 mm^2, rated voltage: 1100 V DC, rated current: 35 A, Connection method: Spring-cage, Contact connection type: Socket, min. cable diameter: 5.5 mm, max. cable diameter: 8 mm. Follow-up item to 1774674

PV-C3M-S 2,5-6 (-) - Connector

1386384

https://www.phoenixcontact.com/pc/products/1386384



Connector, Range of articles: Sunclix, housing material: PPE, color: black, number of positions: 1, min. conductor cross section: 2.5 mm^2, max. conductor cross section: 6 mm^2, rated voltage: 1100 V DC, rated current: 35 A, Connection method: Spring-cage, Contact connection type: Pin, min. cable diameter: 5.5 mm, max. cable diameter: 8 mm. Follow-up item to 1774687

PV-AS-MC4/6-150-MN-SET1 - Photovoltaic adapter set

1079531

https://www.phoenixcontact.com/pc/products/1079531



Photovoltaic adapter set, Range of articles: Sunclix, design: Adapter, housing material: PPE, color: black, rated current: 35 A, cable length: 150. Connect these connectors only to other connectors of the same type made by the same manufacturer. When making the connections, always observe the specifications regarding nominal voltage and nominal current. The smallest common value is permissible.

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TOOL-KIT SOLAR - Tool set

1212071

https://www.phoenixcontact.com/pc/products/1212071



Tool case, equipped with: crimping pliers, pressing dies for MC3, MC4 and SOLARLOK connectors, stripping tool for commercially available solar cables, stripping tool for SUNCLIX, VDE cable cutter, VDE screwdriver: PH1, PH2, 0.6x3.5 and 0.8x4.0 slots.

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