

# String combiner box (SCB) - SOL-SC-1ST-0-DC-3MPPT-1000SE



1182571

<https://www.phoenixcontact.com/gb/products/1182571>

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String combiner box for photovoltaic systems up to 1000 V DC for connecting 3 x 1 string. With surge protection (type 1/2) and cable glands for the input and output sides.

## 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
- Large portfolio of string combiner boxes in stock
- Application-oriented consultation

## Commercial Data

Item number	1182571
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DTHAAA
Product Key	DTHTAA
GTIN	4063151217198
Weight per Piece (including packing)	4,222 g
Weight per Piece (excluding packing)	4,222 g
Customs tariff number	85371098
Country of origin	DE

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## Technical Data

### Product properties

Product type	String combiner box (SCB)
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### Insulation characteristics

Protection class	II
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### Electrical properties

#### General

MPP voltage $U_N$	max. 1000 V DC
Non-load voltage $U_{OC}$	max. 1100 V DC
Total current MPP tracker	max. 40 A

#### Strings

Current per string $I_{max}$	max. 40 A
EN type	T1 / T2
Protection level $U_p$	$\leq 3.5$ kV
Total discharge current $I_{total}$ (10/350) $\mu s$	5 kA
Total discharge current $I_{total}$ (8/20) $\mu s$	40 kA

### Input data

#### DC

Number of inputs: Strings	1 (per MPP tracker)
Number of supported MPP trackers	3

### Output data

#### DC

Number of outputs: MPP tracker	3
Number of outputs: $\pm$	1 (per MPP tracker)

### Connection data

#### DC input

Type of cable entry	Cable gland
Connection method	Push-in connection
Cable cross section	2.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
External cable diameter	3 mm ... 6.5 mm

#### Protective bonding and protective grounding conductor

Type of cable entry	Cable gland
Connection method	Screw connection
Cable cross section	2x 16 mm <sup>2</sup>

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External cable diameter	2x 6 mm ... 12 mm
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## DC output

Type of cable entry	Cable gland
Connection method	Push-in connection
Cable cross section	2.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
External cable diameter	3 mm ... 6.5 mm

## Dimensions

### External dimensions

Width / Height / Depth	361 mm / 254 mm / 111 mm (Housing dimensions)
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## 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

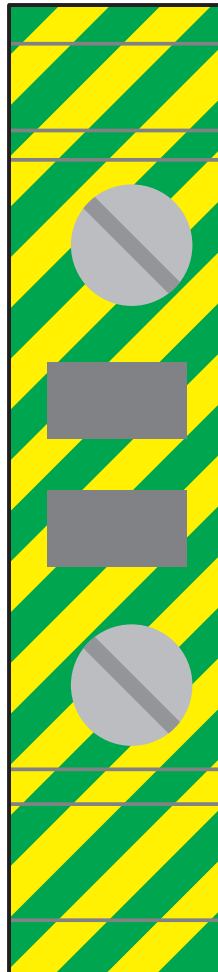
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## Drawings

Schematic diagram



Connection of the protective grounding conductor

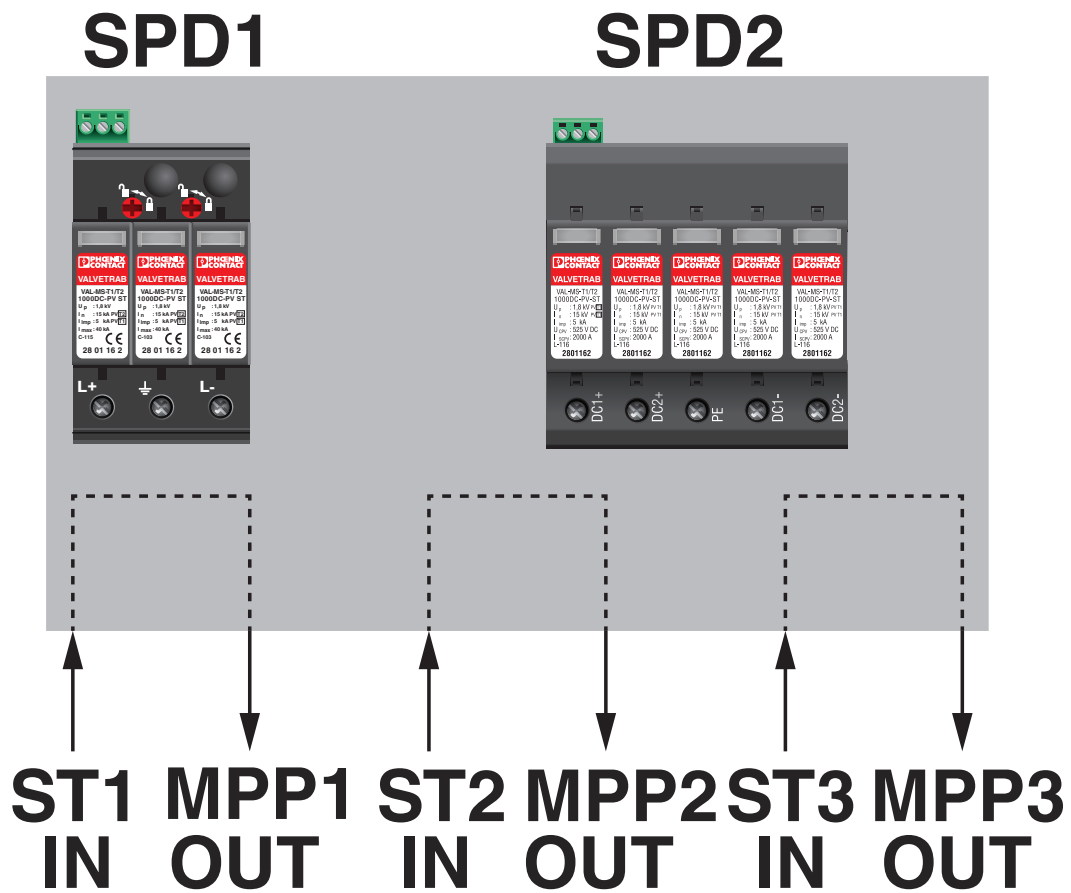
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Connection diagram



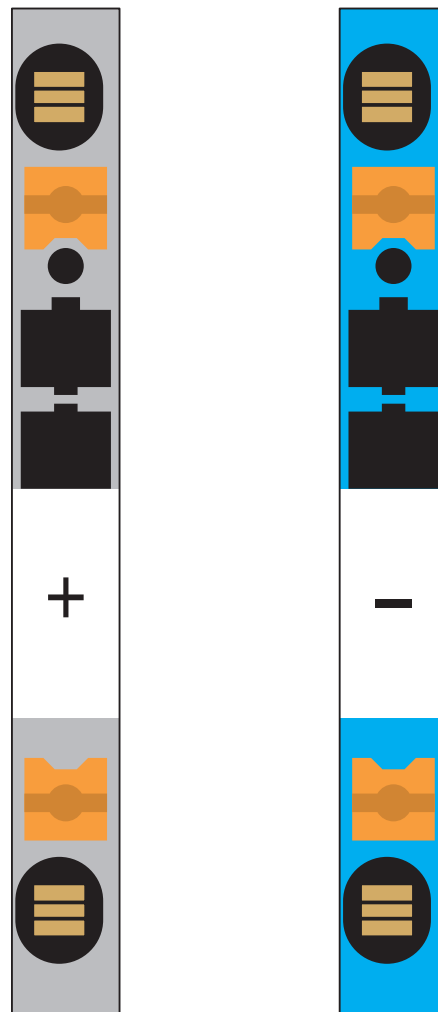
Schematic application drawing

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## Schematic diagram



Connection of the PV strings, as well as connection to the inverter

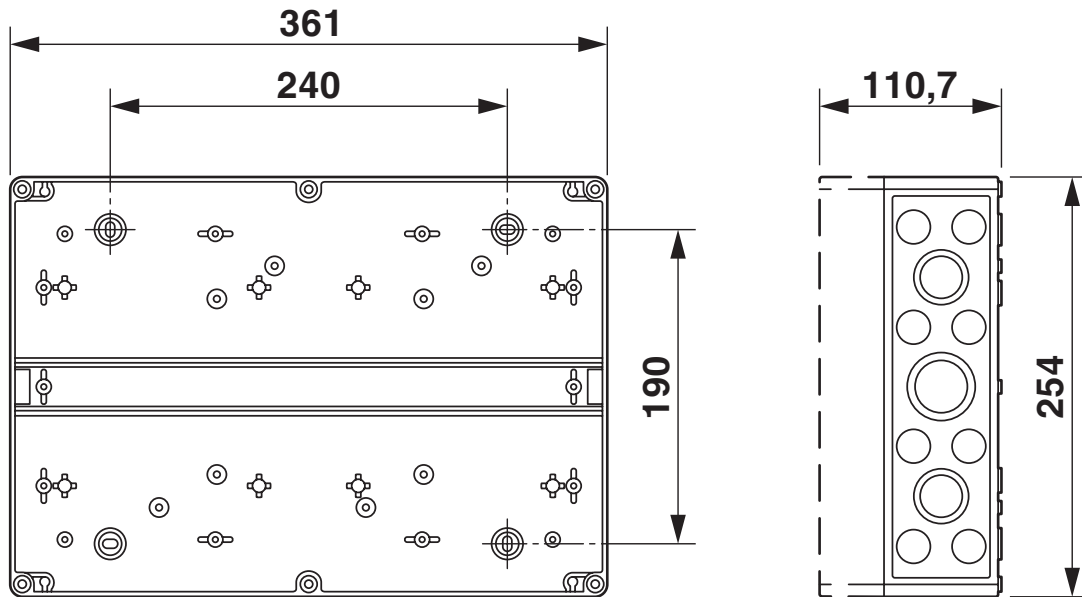
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Dimensional drawing



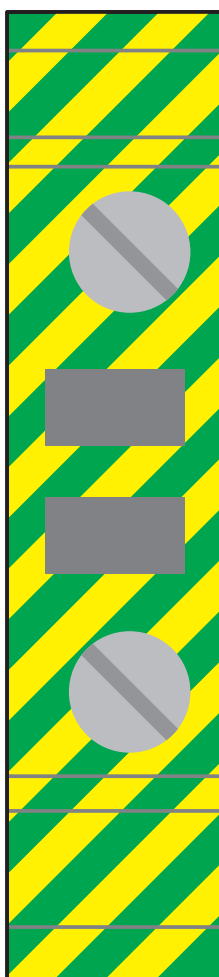
Housing dimensions

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Schematic diagram



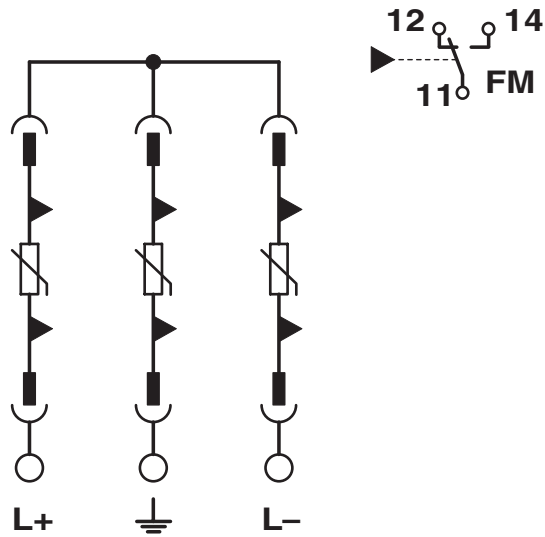
Connection of the protective equipotential bonding conductor

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Circuit diagram



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## Classifications

### ECLASS

ECLASS-9.0	27142422
ECLASS-10.0.1	27142422
ECLASS-11.0	27142422

### ETIM

ETIM 8.0	EC000268
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### UNSPSC

UNSPSC 21.0	39121100
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## Accessories

### Type 1/2 surge protection plug

Type 1/2 surge protection plug - VAL-MS-T1/T2 1000DC-PV-ST - 2801162

<https://www.phoenixcontact.com/gb/products/2801162>



Replacement plug for PV arrester combinations from the VAL-MS-T1/T2 1000DC-PV-... product range

### Tool set

Tool set - TOOL-KIT SOLAR - 1212071

<https://www.phoenixcontact.com/gb/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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PHOENIX CONTACT Ltd  
Halesfield 13, Telford  
Shropshire, TF7 4PG  
01952 681700  
[info@phoenixcontact.co.uk](mailto:info@phoenixcontact.co.uk)