

SOL-SC-3ST-0-DC-2MPPT-1000EQ - String combiner box (SCB)



1356077

<https://www.phoenixcontact.com/in/products/1356077>

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

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 photovoltaic 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 the application note for the type key of the SCB, 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	1356077
Packing unit	1 pc
Minimum order quantity	2 pc
Note	Made to order (non-returnable)
Sales key	*****
Product key	DTHTAA
GTIN	4063151684129
Weight per piece (including packing)	3.2 kg
Weight per piece (excluding packing)	2.75 kg
Customs tariff number	85371098
Country of origin	DE

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Technical data

Notes

Order information:	PV fuses are not installed in the SCB, although it would be technically possible to connect more than 2 parallel PV strings. • Check whether additional protection using PV fuses is required in your specific application to ensure the safety and conformity to standards of the connection.
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Product properties

Product type	String combiner box (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. 13.3 A
Total current MPP tracker	max. 40 A

Surge protection

EN type	T1
IEC test classification	T1
Protection level U_p	≤ 3.5 kV
Total discharge current I_{total} (10/350) μs	5 kA
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	3 (Per MPP tracker)
Number of supported MPP trackers	2

Output data

DC

Number of outputs: MPP tracker	2
Number of outputs: $\pm$	3 (Per MPP tracker)

Connection data

DC input

Type of cable entry	Cable gland
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Connection method	Push-in connection
Cable cross-section range:	2.5 mm ² ... 6 mm ²
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 range:	2x 16 mm ²
External cable diameter	2x 6 mm ... 12 mm

DC output

Type of cable entry	Cable gland
Connection method	Push-in connection
Cable cross-section range:	2.5 mm ² ... 6 mm ²
External cable diameter	3 mm ... 6.5 mm

Dimensions

Housing

Width	361 mm
Height	254 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

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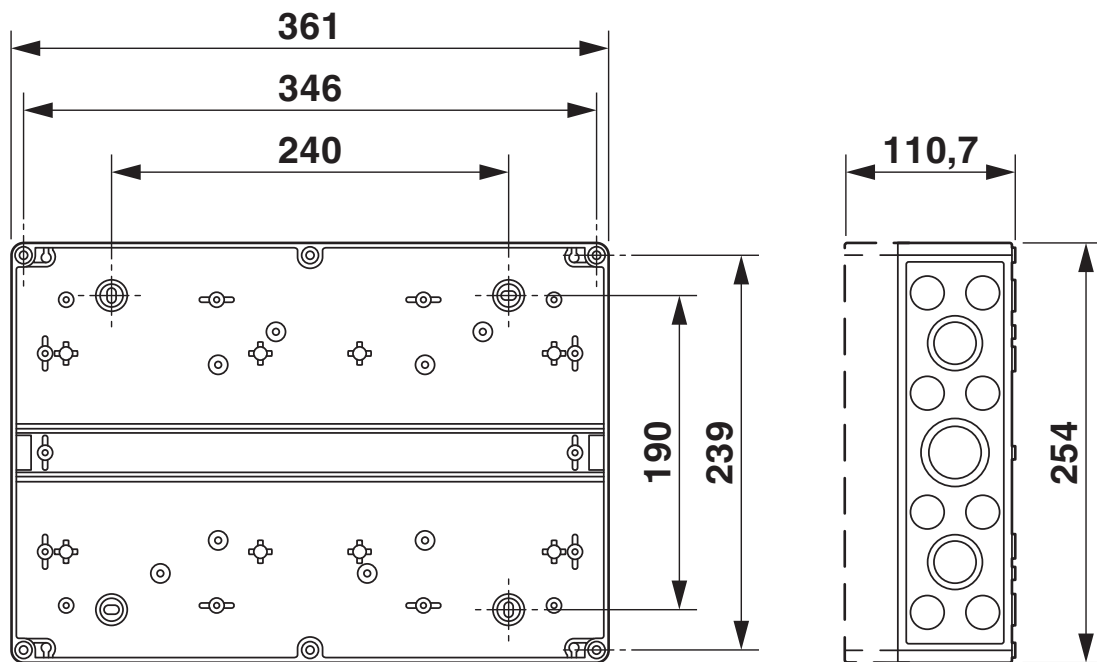


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Drawings

Dimensional drawing



Housing dimensions

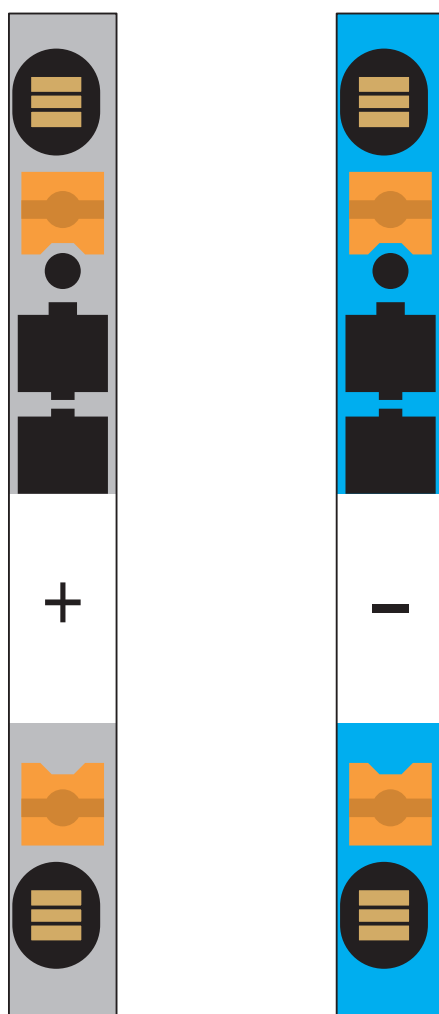
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Schematic diagram



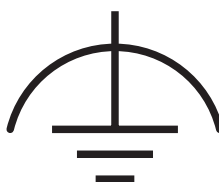
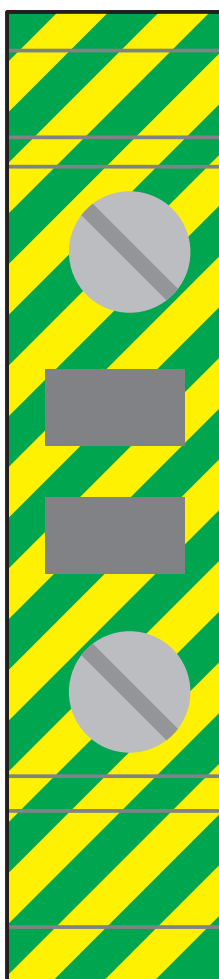
Connection of the PV strings, as well as connection to the inverter

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Schematic diagram



Connection of the protective equipotential bonding conductor

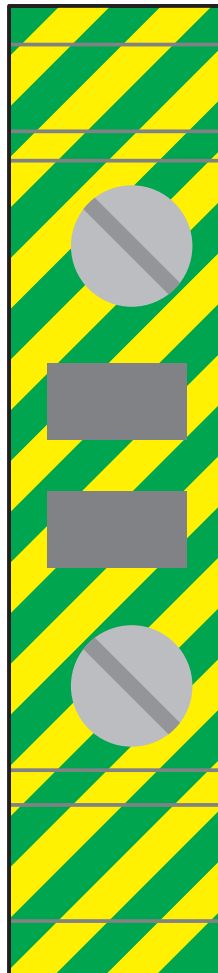
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Schematic diagram



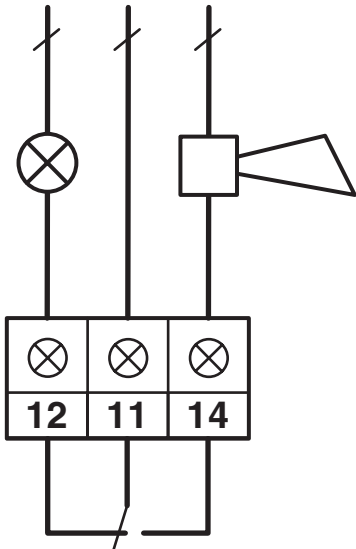
Connection of the protective grounding conductor

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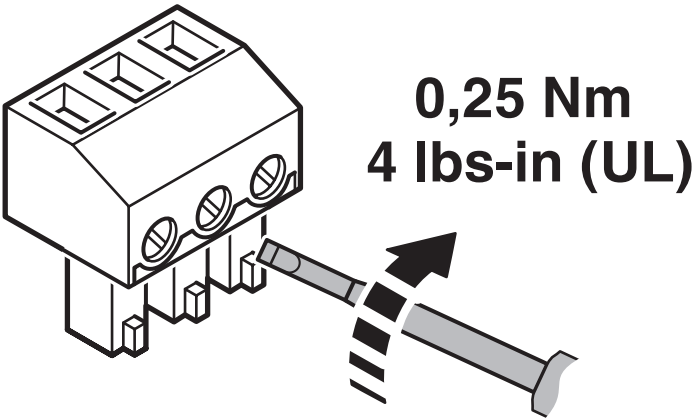


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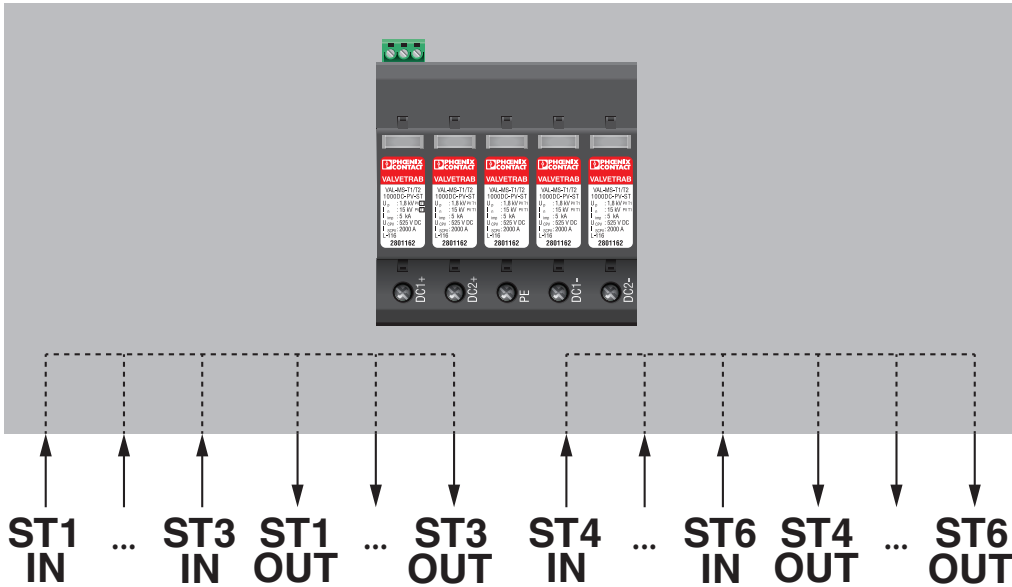
Schematic diagram



Connection of the remote indication contact on the surge protection

Connection diagram

SPD1



Schematic application drawing

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Classifications

ECLASS

ECLASS-11.0	27142422
ECLASS-13.0	27171490

ETIM

ETIM 9.0	EC003857
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UNSPSC

UNSPSC 21.0	39121100
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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Accessories

SOL-WR-3625-AISI304 - Weather protection cover

1579291

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

2801162

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



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

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SEALING PLUG 5X12 RD - Sealing plug

1400253

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Sealing plug, color: red



TOOL-KIT SOLAR - Tool set

1212071

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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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