

SOL-SC-1ST-0-DC-3MPPT-1001 - String combiner box (SCB)



2404301

<https://www.phoenixcontact.com/us/products/2404301>

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String combiner box for photovoltaic systems up to 1,000 V DC for connecting 3x 1 string. With surge protection (type 1/2) 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
- Large portfolio of string combiner boxes in stock
- Application-oriented consultation

Commercial data

Item number	2404301
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DTHTAA
GTIN	4055626396255
Weight per piece (including packing)	3,182.5 g
Weight per piece (excluding packing)	2,750 g
Country of origin	DE

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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
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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	T1
IEC test classification	T1
Protection level U_p	≤ 3.5 kV
Total discharge current I_{total} (10/350) μ s	5 kA
Total discharge current I_{total} (8/20) μ s	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	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	SUNCLIX
Cable cross section	2.5 mm ² ... 6 mm ²

Protective bonding and protective grounding conductor

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

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DC output

Type of cable entry	SUNCLIX
Cable cross section	2.5 mm ² ... 6 mm ²

Dimensions

Housing

Width	254 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

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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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com