

# String combiner box (SCB) - SOL-SC-1ST-0-DC-2MPPT-1001 - 2404299

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String combiner box for photovoltaic systems up to 1000 V DC for the connection of 2x 1 string. With surge protection and SUNCLIX DC connector 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. Their functions include collecting and protecting strings and, if necessary, separating the panels from the rest of the system by means of a switch disconnecter or fire service switch disconnecter.

## Your advantages

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



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 396248
GTIN	4055626396248
Weight per Piece (excluding packing)	2,300.000 g
Custom tariff number	85363030
Country of origin	Germany

## Technical data

### System parameter

System voltage	1000 V DC ( $U_{max}$ )
Number of string inputs	1 (per MPP tracker)
Current per string (max.)	40 A ( $I_{max}$ )
Number of outputs	1 (per MPP tracker)
Number of supported MPP trackers	2

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## Technical data

### Safety equipment

Surge protective device	T1 / T2
Protection level $U_p$	$\leq 3.5$ kV
Total discharge current $I_{total}$ (8/20) $\mu$ s	40 kA
Total discharge current $I_{total}$ (10/350) $\mu$ s	5 kA

### Cable entry

Type of cable entry	SUNCLIX
Cable cross section string input	2.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cable cross section output	2.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cable cross section grounding	16 mm <sup>2</sup> (2x)
Sealing area grounding	6 mm ... 12 mm (2x)

### General data

Material cover/door	Polycarbonate (transparent)
Housing material	Polycarbonate
Degree of protection	IP65
Protection class	II

### Dimensions

Outer dimensions: width, height, depth	180 mm x 180 mm x 111 mm (Housing dimensions)
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### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
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## Drawings

# String combiner box (SCB) - SOL-SC-1ST-0-DC-2MPPT-1001 - 2404299

Schematic diagram



Connection of the protective grounding conductor

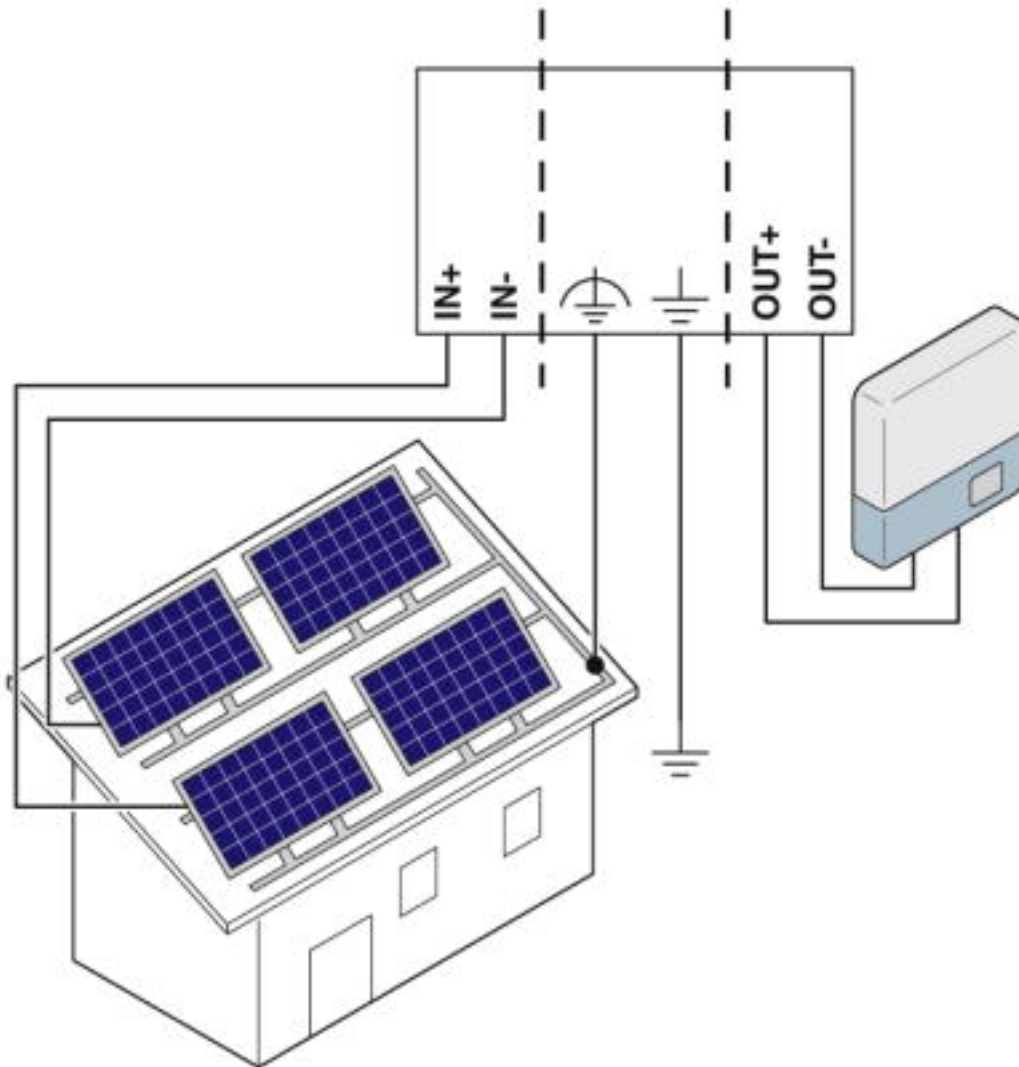
Schematic diagram



Connection of the protective equipotential bonding conductor

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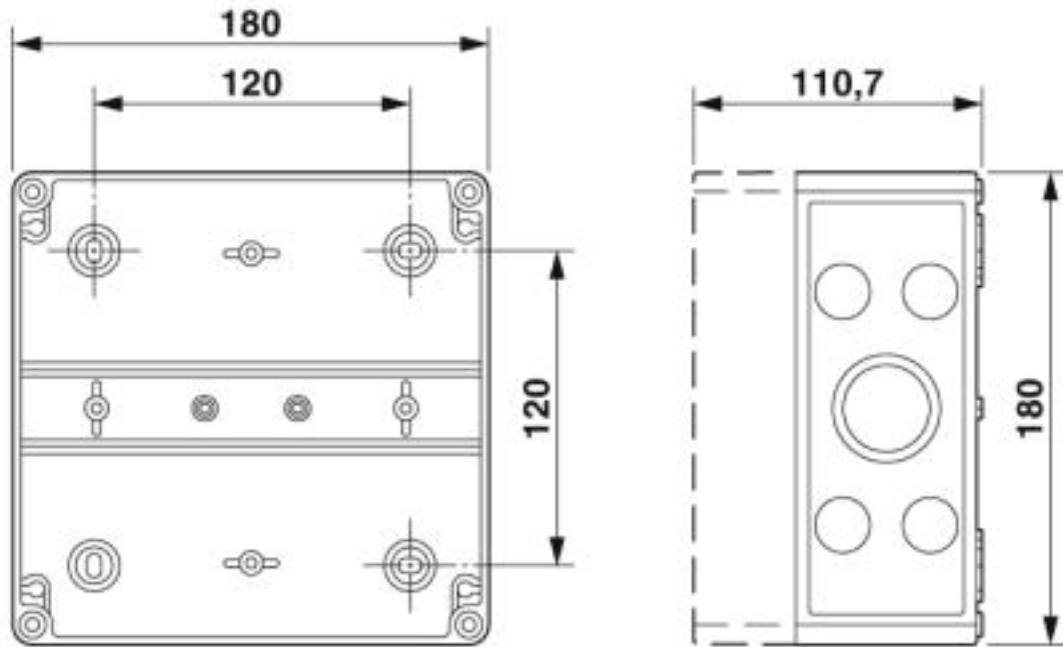
Connection diagram



Schematic application drawing

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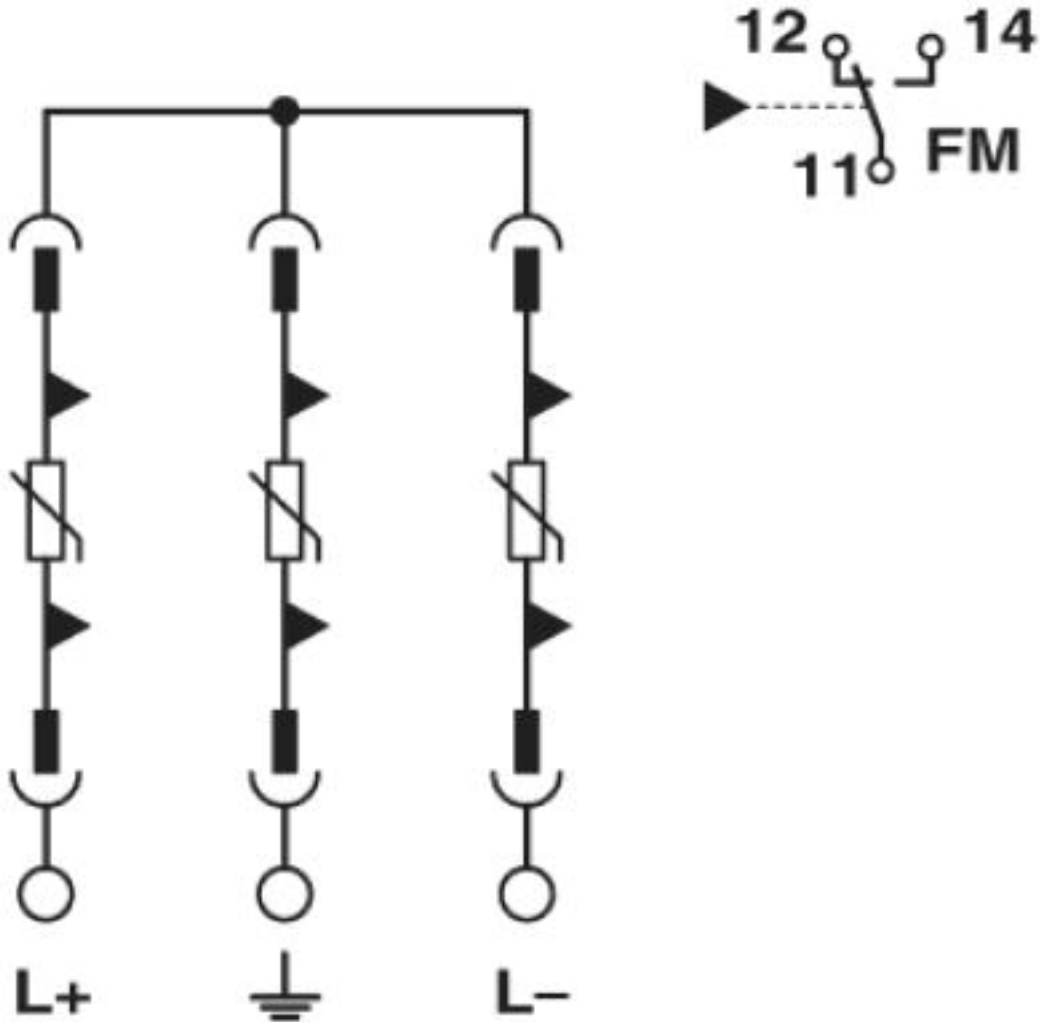
Dimensional drawing



Housing dimensions

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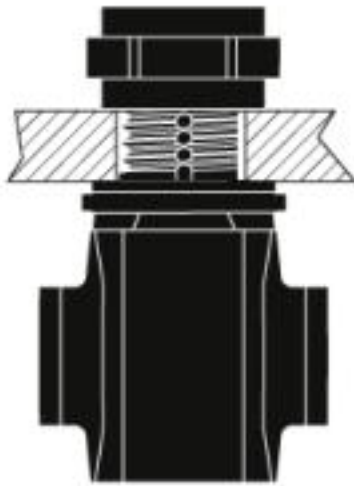
Circuit diagram



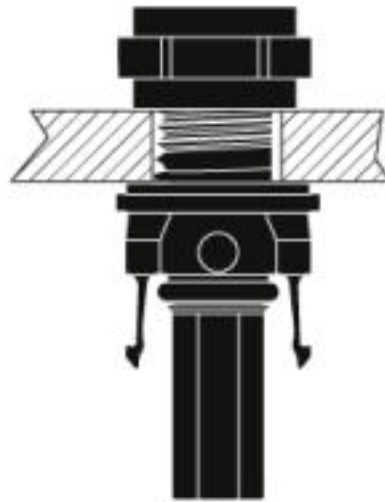
Connection of the remote indication contact on the surge protection

# String combiner box (SCB) - SOL-SC-1ST-0-DC-2MPPT-1001 - 2404299

Schematic diagram



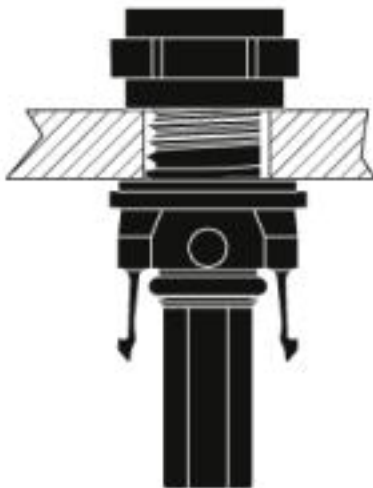
IN+



IN-

Connection of the PV strings

Schematic diagram



OUT+



OUT-

Connection to the inverter

## Classifications

eCl@ss

eCl@ss 10.0.1	27142422
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## Classifications

### eCl@ss

eCl@ss 5.1	27371890
eCl@ss 7.0	27142422
eCl@ss 8.0	27142422
eCl@ss 9.0	27142422

### ETIM

ETIM 4.0	EC000816
ETIM 5.0	EC000268
ETIM 6.0	EC000268
ETIM 7.0	EC000268

## Accessories

### Accessories

#### Photovoltaic connector

Protective cap - PV-C PROTECTION CAP - 1785430

Photovoltaic connector, Range of articles: PV-JB TF, Protective cap, color: black, number of positions: 1



Connector - PV-CF-S 2,5-6 (+) - 1774674



Photovoltaic connector, Range of articles: PV-CF-S, Connector, housing material: PPE, color: black, number of positions: 1, min. conductor cross section: 2.5 mm<sup>2</sup>, max. conductor cross section: 6 mm<sup>2</sup>, rated current: 27 A, Connection method: Spring-cage, Type of contact: Socket. can only be released using a tool

Connector - PV-CM-S 2,5-6 (-) - 1774687



Photovoltaic connector, Range of articles: PV-CM-S, Connector, housing material: PPE, color: black, number of positions: 1, min. conductor cross section: 2.5 mm<sup>2</sup>, max. conductor cross section: 6 mm<sup>2</sup>, rated current: 27 A, Connection method: Spring-cage, Type of contact: Pin. can only be released using a tool



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### Accessories

#### Connector - PV-CF-S 6-16 (+) - 1790784



Photovoltaic connector, Range of articles: PV-CF-S, Connector, housing material: PPE, color: black, number of positions: 1, min. conductor cross section: 6 mm<sup>2</sup>, max. conductor cross section: 16 mm<sup>2</sup>, rated current: 40 A, Connection method: Spring-cage, Type of contact: Socket. can only be released using a tool

#### Photovoltaic Y-distributor - PV-ED6/Y-120(2+/1-) - 1030649



Photovoltaic connector, Photovoltaic Y-distributor, housing material: PPE, color: black. Assembled with SUNCLIX - 1x male (minus) - 2x female (plus); length of single cable 0.12 m, varying number of nodes and customer-specific cable lengths are available on request.

#### Connector - PV-CM-S 6-16 (-) - 1790797



Photovoltaic connector, Range of articles: PV-CM-S, Connector, housing material: PPE, color: black, number of positions: 1, min. conductor cross section: 6 mm<sup>2</sup>, max. conductor cross section: 16 mm<sup>2</sup>, rated current: 40 A, Connection method: Spring-cage, Type of contact: Pin. can only be released using a tool

#### Photovoltaic Y-distributor - PV-ED6/Y-120(1+/2-) - 1030650



Photovoltaic connector, Photovoltaic Y-distributor, housing material: PPE, color: black. Assembled with SUNCLIX - 1x female (plus) - 2x male (minus); length of single cable 0.12 m, varying number of nodes and customer-specific cable lengths are available on request.

#### Photovoltaic adapter set - PV-AS-MC4/6-150-MN-SET1 - 1079531

Photovoltaic connector, Photovoltaic adapter set, type: Adapter, color: black, rated current: 35 A, cable length: 150. Adapter pair (+- / -+), assembled with SUNCLIX - 1 x pin (minus) and MC4 - 1 x socket (plus) or with SUNCLIX - 1 x socket (plus) and MC4 - 1 x pin (minus), free cable length: 0.15 m, cable type: multi-standard (UL/PV1-F), customer-specific cable length available on request

### Replacement plug

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### Accessories

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



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