

SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



String combiner box for photovoltaic systems up to 1000 V DC for connecting 1x 1 string. With surge protection (type 1/2), DC fire service switch disconnecter with remote access and Push-in connection 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	1137053
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	*****
Product key	DTHTCA
GTIN	4063151074302
Weight per piece (including packing)	8,650 g
Weight per piece (excluding packing)	8,650 g
Customs tariff number	85371098
Country of origin	DE

SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

Technical data

Product properties

Product type	String combiner box (SCB)
Design	DC fire department switch

Insulation characteristics

Protection class	I
------------------	---

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

Fire department switch

Rated operating current DC-21B	40 A
Rated operating current DC-PV1	40 A
Power supply	230 V AC
Signal level Remote indication contact	24 V DC (floating)

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	1 (Per MPP tracker)
Number of supported MPP trackers	1

Output data

DC

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

Connection data

DC input

Type of cable entry	Cable gland
---------------------	-------------

SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

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

Fire department switch (emergency switching off)

Type of cable entry	Cable gland
Connection method	Push-in connection
Cable cross-section range:	3x 0.14 mm ² ... 2.5 mm ² (100 V AC ... 240 V AC)
External cable diameter	6 mm ... 12 mm

Fire department switch (remote indication contact)

Type of cable entry	Cable gland
Connection method	Push-in connection
Cable cross-section range:	2x 0.14 mm ² ... 2.5 mm ² (floating, max. 24 V DC)
External cable diameter	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	400 mm
Height	400 mm
Depth	200 mm

Material specifications

Material Housing	Polyester fiberglass reinforced
Material Cover/door	Polyester fiberglass reinforced

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
Ambient temperature (operation)	-20 °C ... 40 °C

Standards and regulations

SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

Standard designation	Low-voltage switchgear and controlgear assemblies - Part 2: Power switchgear and controlgear assemblies
Standards/specifications	EN 61439-2

SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)

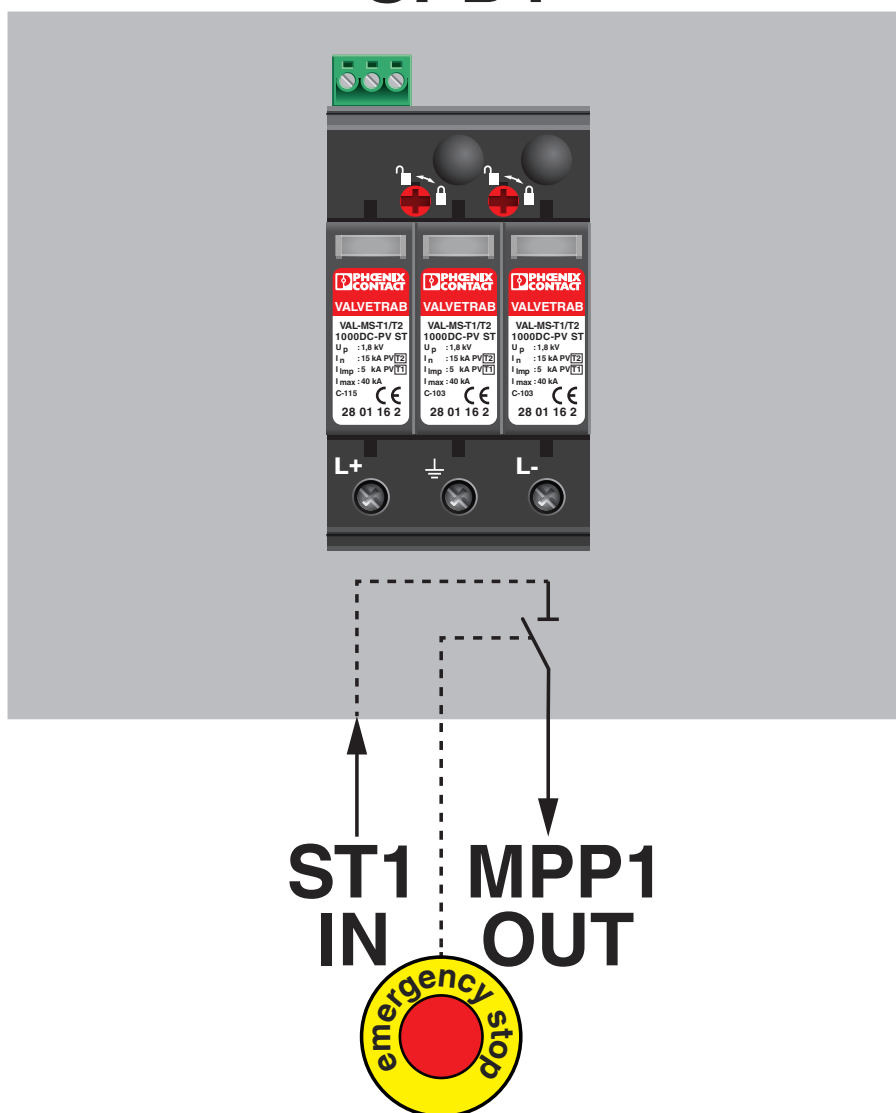
1137053

<https://www.phoenixcontact.com/in/products/1137053>

Drawings

Connection diagram

SPD1



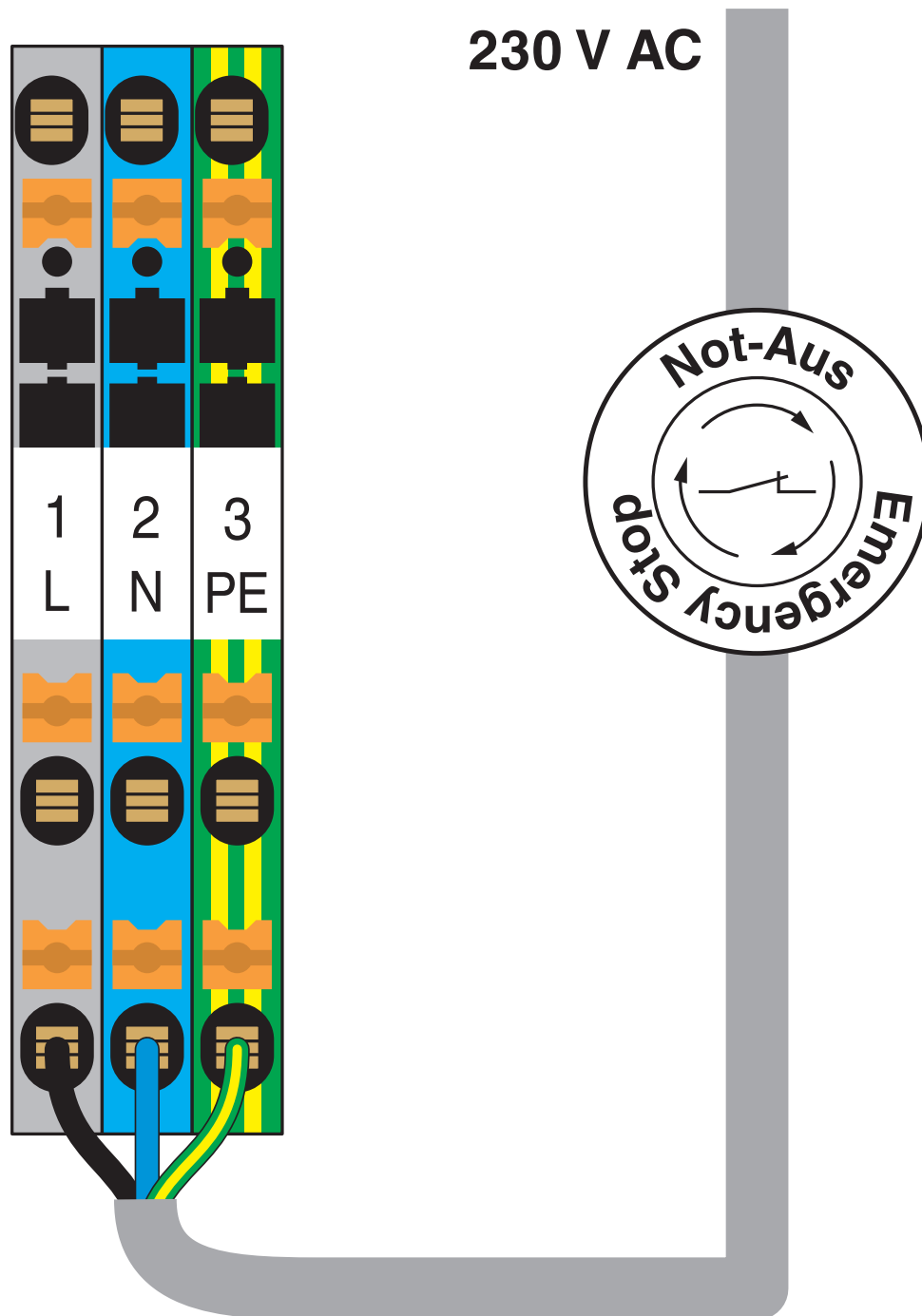
Schematic application drawing

SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)

1137053

<https://www.phoenixcontact.com/in/products/1137053>

Connection diagram



Connection of the emergency switching off operation for the fireman's switch

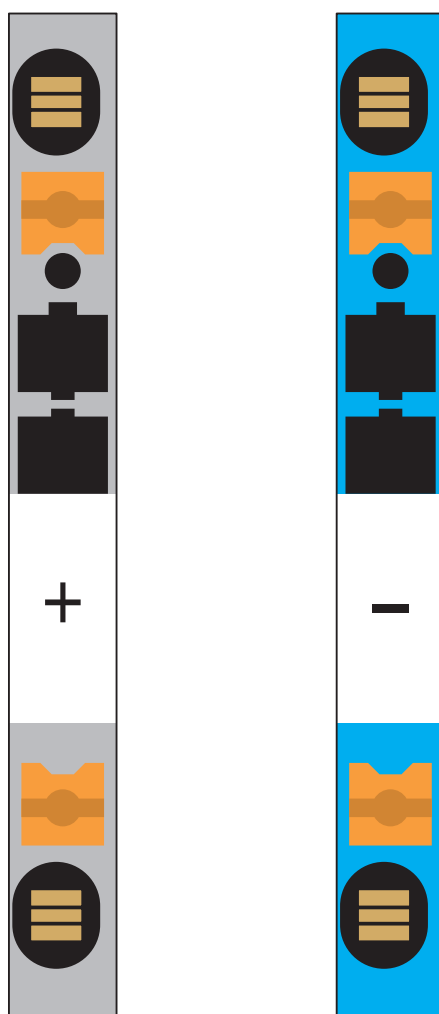
SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

Schematic diagram



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

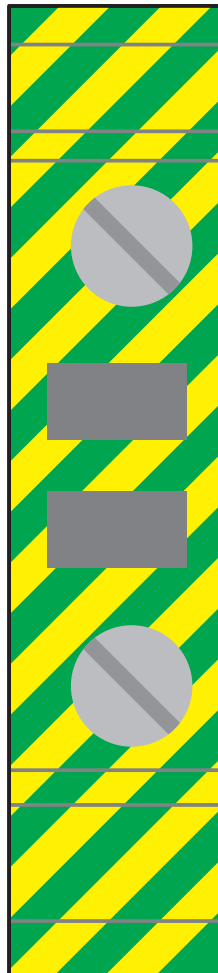
SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

Schematic diagram



Connection of the protective grounding conductor

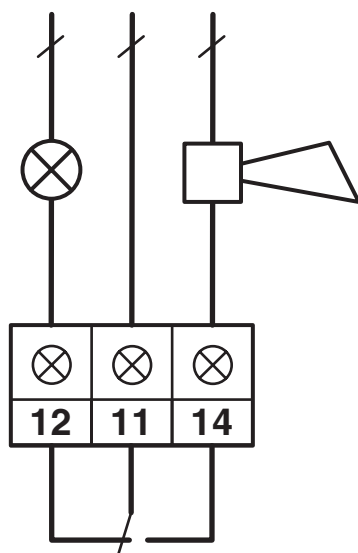
SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



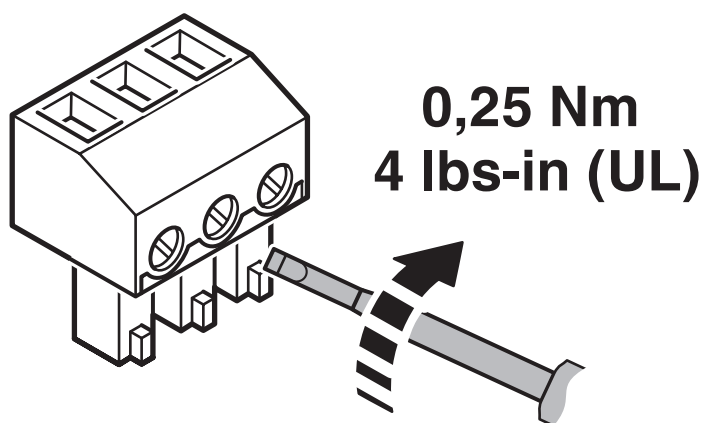
1137053

<https://www.phoenixcontact.com/in/products/1137053>

Schematic diagram



Connection of the remote indication contact on the surge protection



SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

Classifications

ECLASS

ECLASS-11.0	27142422
ECLASS-13.0	27171490

ETIM

ETIM 9.0	EC003857
----------	----------

UNSPSC

UNSPSC 21.0	39121100
-------------	----------

SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

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%
-------------------------------------	----------------------------

SOL-SC-1ST-0-DC-1MPPT-1300FS - String combiner box (SCB)



1137053

<https://www.phoenixcontact.com/in/products/1137053>

Accessories

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

TOOL-KIT SOLAR - Tool set

1212071

<https://www.phoenixcontact.com/in/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.

Phoenix Contact 2025 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT (I) Pvt. Ltd.
A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420
info@phoenixcontact.co.in