# SCK-M-I-4S-20A - PV string monitoring module

2903242

https://www.phoenixcontact.com/us/products/2903242

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CRA READY



SCK measuring module for monitoring photovoltaic systems, 4 x current measurement up to 20 A, 1 x digital input, interface to the SCK communication module. Product is being prepared for compliance with the Cyber Resilience Act (CRA).

## Product description

In PV system monitoring, PV string measurement plays a central role in increasing efficiency. Detect malfunctions and take countermeasures: the SOLARCHECK PV string monitoring system reliably provides you with information on the performance of your photovoltaic system. The system enables you to respond immediately to power losses in individual strings, which may be caused by damaged panels or defective contacts and cabling, for example.

## Your advantages

- Low costs and wiring effort, as an additional power supply unit is not required in the device connection box
- Space-saving installation with the compact design
- Easy integration into monitoring systems with Modbus/RTU communication
- Monitoring of remote indication contacts by means of an additional digital input

## Commercial data

| | |
|---|---|
| Item number | 2903242 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C447 |
| Product key | CMMD11 |
| GTIN | 4046356729697 |
| Weight per piece (including packing) | 253 g |
| Weight per piece (excluding packing) | 240.5 g |
| Customs tariff number | 90303370 |
| Country of origin | DE |

## Technical data

### Notes

Note on application

| | |
|---|---|
| Note on application | As things stand now, we are preparing the product so that, as of December 11, 2027, it will comply with the requirements of the EU Cyber Resilience Act (CRA) based on the information currently available regarding the CRA. |

### Product properties

| | |
|---|---|
| Product type | Current measuring transducer |
| Product family | SOLARCHECK |

Insulation characteristics

| | |
|---|---|
| Pollution degree | 2 |

### Electrical properties

| | |
|---|---|
| Protective circuit | Surge protection; 33 V suppressor diode |

Supply

| | |
|---|---|
| Supply voltage range | via the SOLARCHECK communication module |
| Own current consumption | 43 mA (typical) |
| | 50 mA (maximum) |

### Input data

Signal: digital

| | |
|---|---|
| Description of the input | Digital input |
| Available input sources | floating switch contacts |
| Cable length | ≤ 30 m |

Measurement

| | |
|---|---|
| Number of inputs | 4 |
| Input current range | 0 A DC ... 20 A DC (UL: 0 A DC...25 A DC) |
| Reverse current detection | -1 A DC ... 0 mA |
| LSB: Current | 20 mA |
| Overload capacity | 5 x $I_N$ |
| Temperature coefficient, typical | 0.02 %/K ($T_{K20}$) |
| Maximum transmission error | ± 1 % (From the upper range value) |

### Connection data

| | |
|---|---|
| Connection method | Screw connection |
| Conductor cross-section rigid | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section flexible | 0.2 mm² ... 2.5 mm² |
| Conductor cross-section AWG | 24 ... 12 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

## Interfaces

Data: Data interface to SCK-C-MODBUS

| | |
|---|---|
| Transmission length | ≤ 300 m (0.14 mm²) |
| | ≤ 500 m (1.5 mm²) |
| Protocols supported | Proprietary |

## Dimensions

Item dimensions

| | |
|---|---|
| Width | 22.5 mm |
| Height | 102 mm |
| Depth | 128.5 mm |

Circular conductor

| | |
|---|---|
| Diameter | 9.5 mm |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -20 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 2000 m |
| Permissible humidity (operation) | ≤ 95 % (non-condensing) |

## Approvals

CE

| | |
|---|---|
| Certificate | CE-compliant |

UL, USA/Canada

| | |
|---|---|
| Identification | 508 Listed |

UL, USA

| | |
|---|---|
| Identification | 1741 Recognized |

## EMC data

| | |
|---|---|
| Electromagnetic compatibility | Conformance with EMC directive |
| Low Voltage Directive | Conformance with Low Voltage Directive |
| Noise immunity | EN 61000-6-2 |
| Note | When being exposed to interference, there may be minimal deviations. |

Noise emission

| | |
|---|---|
| Standards/regulations | EN 61000-6-4 |

## Standards and regulations

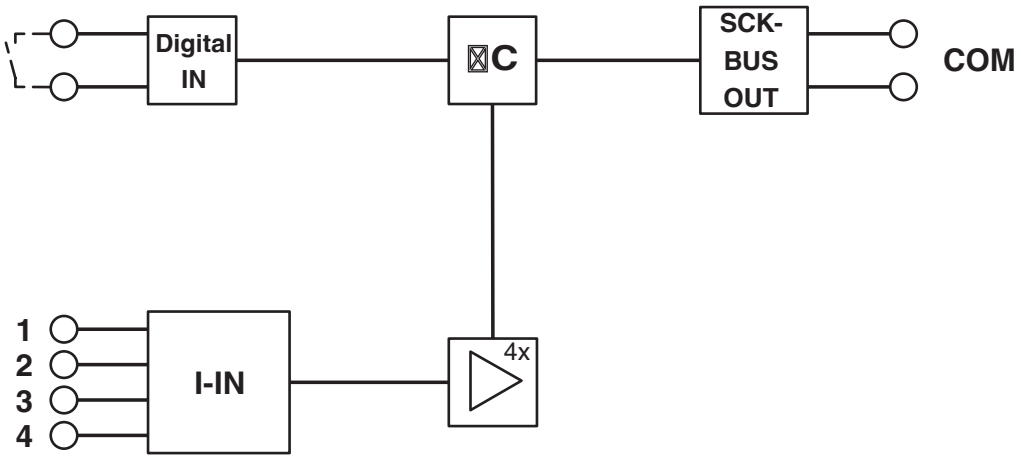
| | |
|---|---|
| Standards/regulations | EN 61010-1 |
| | EN 61010-2-30 |

## Mounting

| | |
|---|---|
| Mounting type | DIN rail: 35 mm |
| | DIN rail mounting |

## Drawings

Block diagram



## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27210123 |
| ECLASS-15.0 | 27210123 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC002475 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 39121000 |

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|---|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|---|---|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | 4deac314-7fc0-4609-8bef-085a361d305c |

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