

# SCK-M-I-8S-20A - PV string monitoring module



2903241

<https://www.phoenixcontact.com/us/products/2903241>

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SCK measuring module for monitoring photovoltaic systems, 8 x current measurement up to 20 A, 1 x digital input, interface to SCK communication module, interface to voltage measuring module

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2903241       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C447          |
| Product key                          | CMMD11        |
| GTIN                                 | 4046356729703 |
| Weight per piece (including packing) | 322.9 g       |
| Weight per piece (excluding packing) | 300 g         |
| Customs tariff number                | 90303370      |
| Country of origin                    | DE            |

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## Technical data

### Product properties

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

### Insulation characteristics

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

### Electrical properties

|                                                 |                                         |
|-------------------------------------------------|-----------------------------------------|
| Maximum power dissipation for nominal condition | 1.15 W                                  |
| 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                   |

#### Signal: analog

|                          |              |
|--------------------------|--------------|
| Description of the input | Analog input |
| Voltage input signal     | 0 V ... 10 V |

### Measurement

|                                  |                                              |
|----------------------------------|----------------------------------------------|
| Number of inputs                 | 8                                            |
| 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 <sub>N</sub>                           |
| Temperature coefficient, typical | 0.02 %/K (T <sub>K20</sub> )                 |
| Maximum transmission error       | ± 1 % (From the measuring range final 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

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Data: Data interface to SCK-C-MODBUS

|                     |                                 |
|---------------------|---------------------------------|
| Transmission length | ≤ 300 m (0.14 mm <sup>2</sup> ) |
|                     | ≤ 500 m (1.5 mm <sup>2</sup> )  |
| 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 |

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## Mounting

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

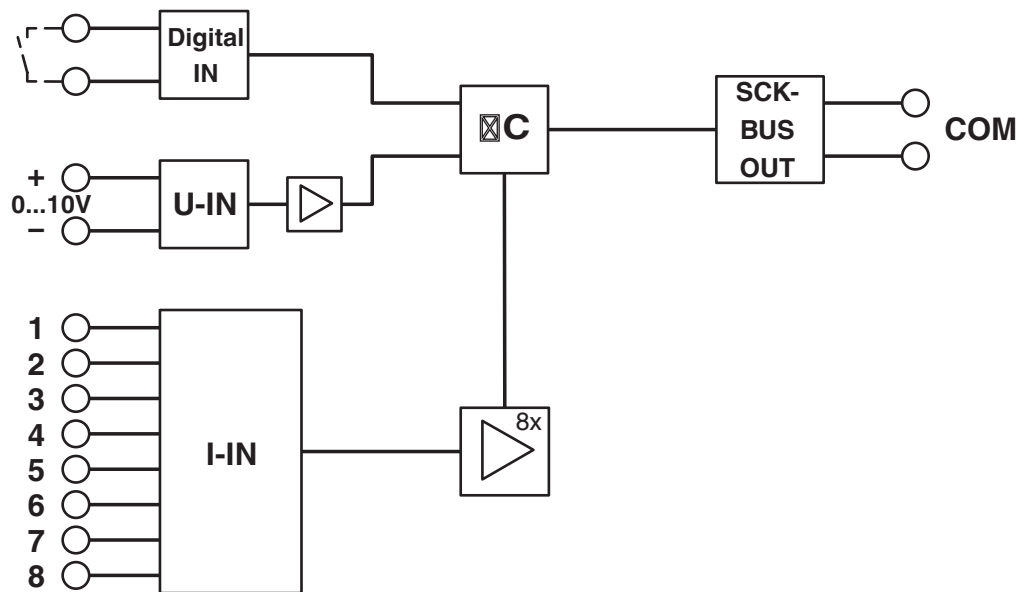
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## Drawings

Block diagram



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## Approvals

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**UL Recognized**

Approval ID: FILE E 325209



**EAC**

Approval ID: RU\*DE.\*08.B.01536/19



**UL Listed**

Approval ID: E140324



**cUL Listed**

Approval ID: E140324

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002475 |
|----------|----------|

### UNSPSC

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

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## 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                                | fb391da0-3fbe-49f0-8eaa-a6224a23c97c |

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