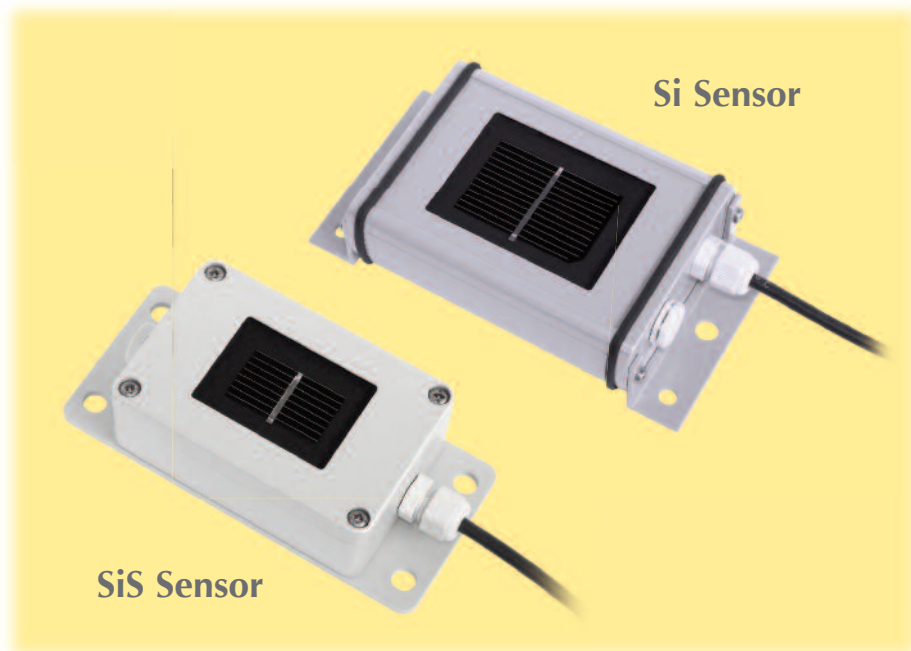


# OUR SOLAR IRRADIANCE SENSORS

Solid and Reliable



- Silicon irradiance sensors provide a simple and cost-effective opportunity to monitor the performance of a solar system at any time.
- Only if the real yield and the actual solar irradiance are measured in parallel, you can realise component failures immediately. Also faults, which are affecting the performance of the solar system only little, can be recognised much better and therefore eliminated earlier.
- Everybody, who wants to ensure, that the PV solar system runs at best performance, cannot abandon to use a silicon irradiance sensor!

## Appreciation of your System Monitoring

Enhance your monitoring system with our solar irradiance sensors. That enables your system with powerful functions for a precise on-site performance calculation and a reliable recognition and alerting, when an error occurs.



**INGENIEURBÜRO**  
Mencke & Tegtmeier GmbH

Meßgeräte für die Solartechnik

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# OUR SENSORS IN AN OVERVIEW

## Versatile and proven

### ADVANTAGES

- Built completely as a solar module, therefore extremely good comparability to energy yields and system performance of PV systems, temperature compensation for higher accuracy
- The optional cell temperature is a very good alternative to directly measured module temperature and leads to a higher accuracy in yield forecasting

### GENERAL DATA

- Solar cell: monocrystalline silicon
- Measurement: possible up to 1400 W/m<sup>2</sup> (depending on sensor type)
- Working temperature: -20°C to 70°C
- Electrical connection: via 3m cable, uv and weatherproof
- Case, protection mode: powder-coated aluminum, IP 65
- Error with temperature compensation compared to pyranometer within the operating range of -20 °C to 70 °C and vertically beam of irradiance): ± 5 %

### TYPES

Type	Signal Irradiance	Signal Cell Temperature
<b>Si-01TC<sup>1,3</sup></b> <b>SiS-01TC<sup>1,3</sup></b>	0 to 1 V for 0 to 1000 W/m <sup>2</sup>	./.
<b>Si-01TCext<sup>3</sup></b> <b>SiS-01TCext<sup>3</sup></b>	0 to 1 V for 0 to 1000 W/m <sup>2</sup>	./.
<b>Si-01TC-T<sup>3</sup></b> <b>SiS-01TC-T<sup>3</sup></b>	0 to 1 V for 0 to 1000 W/m <sup>2</sup>	0.035 to 1.985 V for -20 to +75°C
<b>Si-02<sup>3</sup></b> <b>SiS-02<sup>3</sup></b>	ca. 60 mV for 1000 W/m <sup>2</sup>	./.
<b>Si-02-Pt100<sup>3</sup></b> <b>SiS-02-Pt100<sup>3</sup></b>	ca. 60 mV for 1000 W/m <sup>2</sup>	Pt100
<b>Si-02-Pt1000<sup>3</sup></b> <b>SiS-02-Pt1000<sup>3</sup></b>	ca. 60 mV for 1000 W/m <sup>2</sup>	Pt1000
<b>Si-13TC</b> <b>SiS-13TC</b>	0 to 10 V for 0 to 1300 W/m <sup>2</sup>	./.
<b>Si-13TC-T</b> <b>SiS-13TC-T</b>	0 to 10 V for 0 to 1300 W/m <sup>2</sup>	0.53 to 8.7855 V for -20 to +75°C
<b>Si-420TC</b> <b>SiS-420TC</b>	4 to 20 mA for 0 to 1200 W/m <sup>2</sup>	./.
<b>Si-420TC-T</b> <b>SiS-420TC-T</b>	4 to 20 mA for 0 to 1200 W/m <sup>2</sup>	12.28 to 20 mA for -20 to +76.5°C
<b>Si-RS485-TC-T<sup>2,3</sup></b>	via RS485, protocol: MODBUS, M&T, customer specific	-25 to +75°C
<b>Si-CANopen-T<sup>2,3</sup></b>	via CAN-Bus, protocol: CANopen CiA 437	-25 to +75°C

<sup>1</sup> with internal lithium battery (lifetime of about 8 years)

<sup>2</sup> also with external temperature and windspeed sensor

<sup>3</sup> measuring range up to 1400 W/m<sup>2</sup>

**If you should not find a suitable sensor type for your application we are developing a real specific customer solution for you.**