Global Radiation Sensor   SK10-GLBS-MES

SK10-GLBS-MES
Article no. **40304001**
Surface-mounted IP65/66
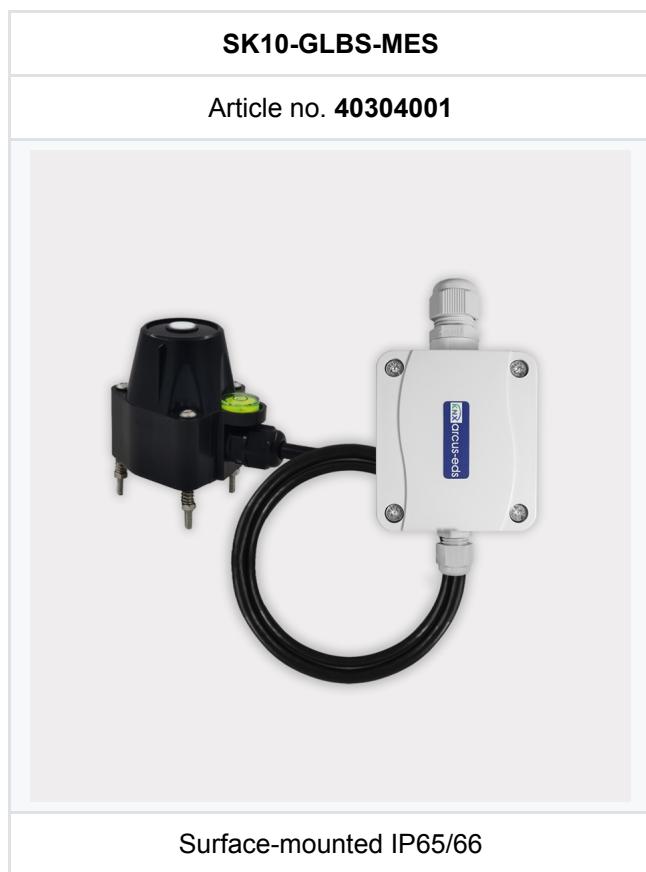
Device Description

The SK10-GLBS-MES measuring system records the global radiation value, which is measured with the BGT-SR1(Z) sensor. The sensor has a measuring range from 400nm to 1100nm wavelength and has a ModBus interface. It is equipped with a horizontal adjustment mechanism and a horizontal air bubble for easy leveling. The KNX connection is made via the KNX-GW-Modbus-RS485-SK10 gateway. A parameterized sample project is available for download.

Applications

- Photovoltaic power generation
- Solar energy system monitoring
- Solar energy resource assessment
- Solar balance research

Subject to change

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SK10-GLBS-MES
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Technical Data

SK10-GLBS-MES	
Supply voltage	KNX 21 .. 32V DC
KNX load	10mA
Operating/storage temperature Bus Coupler	-25 .. +80°C/-25 .. +80°C
Ambient humidity	0 .. 100% non-condensing
Dimensions	see Dimensions
Article number	40304001
ETS-Application	KNX-GW-ModBus
Protection class Bus Coupler	IP65
Sensor BGT-SR1 (Z)	
Output signal	RS485 Modbus
Measuring range	0-2000 W/m²
Resolution	1 W/m²
Accuracy	5%
Wavelength range	400-1100 nm
Operating temperature	-40 .. ~85°C
Cable length	2 m
Protection class	IP66
Output object	
Measured value	2-Byte-Float

Download Sample Project: KNX-GW-ModBus-GLBS

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BGT-SR1(Z) Description

| Cable Assignment	
Red	Supply voltage +
Black	Supply voltage -
Yellow	RS485+ / D+ / A
White	RS485- / D- / B

Default settings:

1. Modbus address is 1
2. Communication configuration: 9600, N, 8, 1
3. The protocol is Modbus-RTU

All sensor parameters are stored in the EEPROM, e.g. Modbus address, baud rate, test bit and communication protocol. To reset the sensor to factory settings, unscrew the base plate and hold the button (see illustration) for three seconds.

Reset Button

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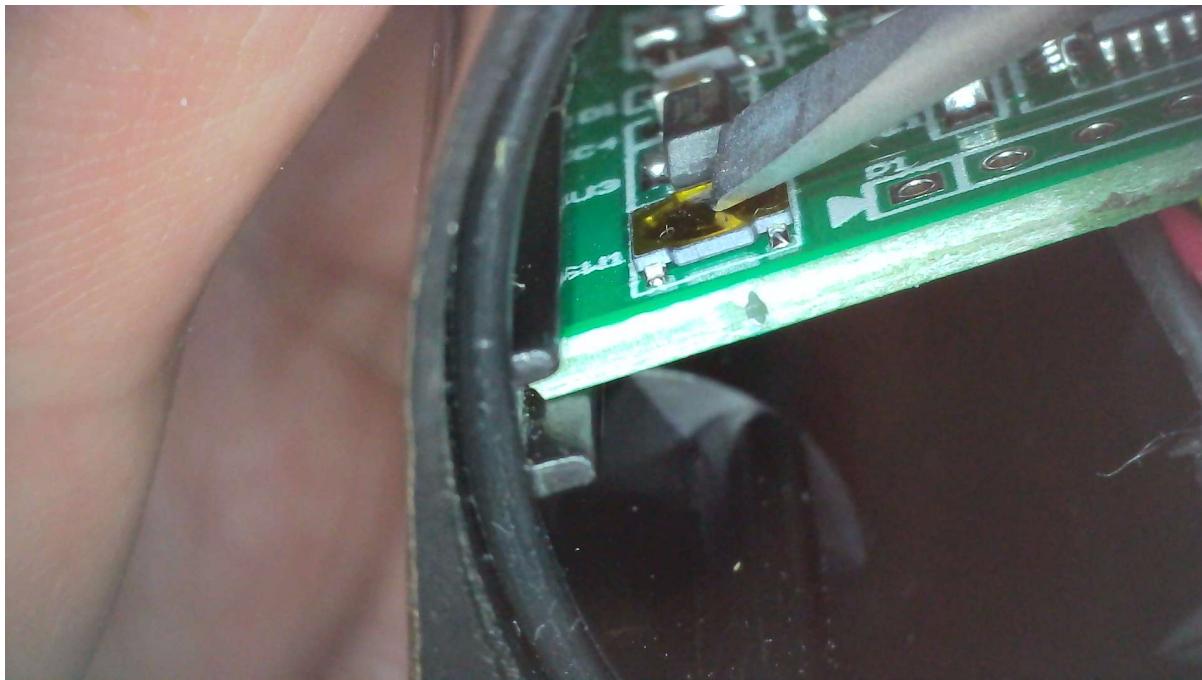
ETS Settings

General Settings

1.1.1 KNX-GW-ModBus-GLBS > General Settings
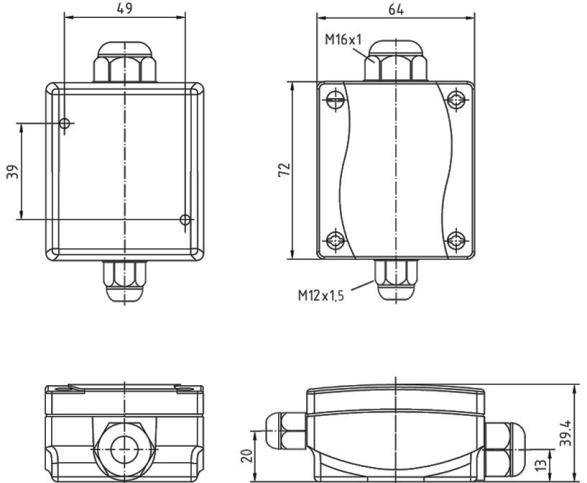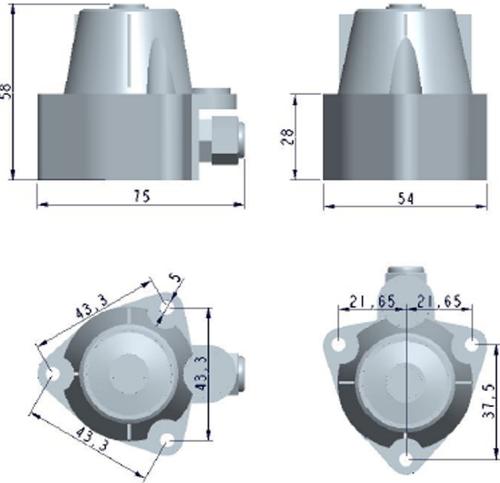
General Settings		
Channel 1: SR [W/m²]	Modbus Reading Cycle	10 sec
	KNX Writing Cycle	1 min
	Timeout	1,0 sec
	Baudrate	9600
	Parity	none
	Number of required Channels	1

Channel Setting

1.1.1 KNX-GW-ModBus-GLBS > Channel 1: SR [W/m²]

General Settings	Channel	○ unconfigured ● configured
Channel 1: SR [W/m²]	Comment	SR [W/m²]

Setup

Send Cyclically	○ No ● Yes
Send on Change	○ No ● Yes
ID	1
Register Number (Register 1 is located at Address 0)	1
Logical Address	0

Correction

Multiplier	1
Offset	0

KNX

Length	16 Bit
Type	Float

Modbus

Register Type	Holding Register
Use Write commands	● No ○ Yes
Custom Type (Swap Bytes)	● No ○ Yes
Length/Type	-- 16 Bit Word unsigned

Dimensions

SK10 Housing	Sensor BGT-SR1(Z)
Surface mounting IP65	Surface mounting IP66

In Case of Bus Voltage Recurrence

The measured values start with their current values. The ETS parameter settings are retained.

Discharge Program and Reset Sensor

To delete the programming (project planning) or to reset the module to the delivery status, it must be disconnected from the power supply (disconnect the AUX voltage). Now press and hold the programming button while reconnecting the AUX voltage and wait until the programming LED lights up (approx. 1-2 seconds). Now you can release the programming button again and the module is ready for a new configuration.
If you release the programming button too early, repeat the procedure.

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Imprint

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Safety regulations

Danger! Installation and assembly of electrical devices may only be carried out by an electrical specialist. Compliance with the corresponding safety regulations of the VDE, TÜV and the responsible Energy supply companies must be ensured by the buyer/operator of the system. No guarantee is assumed for defects and damage caused by improper use of the devices or by not observing the operating instructions.

Warranty

We provide warranty within the scope of the legal provisions. In the event of a malfunction, please contact us and send the device with an error description Our company address mentioned below.

Manufacturer

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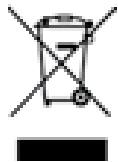
Disposal

The symbol of the crossed -out garbage bin on the device or the packaging means that the product at the end of his service life may not be disposed of with other general waste.

Registered trademarks

The CE sign is a free traffic sign that turns exclusively to the authority and none Assurance of properties.

Registered trademark of the Konnex Association

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