KNX Sensor Solar Radiation, SK08-GLBS

The KNX Sensor Solar Radiation SK08-GLBS is a sensor/controller from the S8 product series which measures global radiation (the sum at the point of measurement of both the direct and diffuse components of solar irradiance). The sensor/controller has an offset sensor element which measures global irradiance in a horizontal position. The SK08-GLBS has an integrated KNX bus coupler and does not require additional voltage. The transducer with the bus coupler is enclosed in a durable, sealed, glass ball-reinforced plastic casing which fulfills protection degree IP65.

In the application software there are several controllers available (two-position or PI controller with continuous or pulsed output). Additional functions include the display of upper and lower thresholds and switching between the set point and threshold.

The sensor is configured with ETS (KNX Tool Software) and the application program. Controlling functions such as signal threshold and other adjustments are parameterized using ETS (KNX Tool Software).

Article-Nr.: 30804000

SK08-GLBS
Solar Radiation Sensor/Controller

Areas of Application and Use:

- Surveillance Systems
- Watering Systems (as a lock function)
- Observation of solar panels with a calculation of its efficiency.
- Calculation of solar power
- Observation of greenhouses

Applicable Sensor:
Silicon global irradiance sensor with a horizontal level and 3 fastening screws, assembly springs, spectral range 400…1100nm, accuracy ±5%.

Measuring Amplifier:
Entrance Area: 0 … 3000 mV

Use:
Electronic Measuring Equipment on flat surfaces, sensor connector facing down

Measuring Range: 0 … 2000 W/m^2

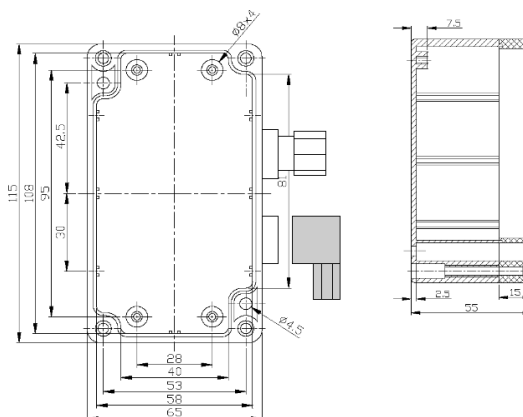Ambient Temperature Transducer: -20 … +80°C
Ambient Temperature Sensor: -40 … +65°C
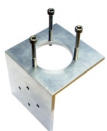
Protection System Casing Transducer: IP65

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Technical Data	SK08-GLBS
Measured Data:	Global radiation in W/m^2
Sending Options	No sending, periodic sending, sending when change occurs
Parameter	Periodic sending with variable cycle duration, sending when change occurs with variable hysteresis
Types	2-byte float, 4-byte float, 2-byte unsigned integer
Controller Modi :	Two-position controller static, two-position controller pulsed, PI controller static, PI controller pulsed (PWM)
Parameter Two-Position Controller Static	Set point, differential gap, controller
Parameter Two-Position Controller Pulsed	Set point, differential gap, controller, cycle duration, threshold pitch
Parameter PI Controller Static	Set point, reset time, proportional factor, controller
Parameter PI Controller PWM	Set point, reset time, proportional factor, controller, cycle duration, threshold pitch
Lock Function:	Parameter driven lock and release
Controller for Control Variable Output:	Switching output (1/0), 1-Bit
	Switching output pulsed, parameter driven duty cycle and cycle duration, 1 Bit
	Switching output pulsed, parameter driven cycle duration, duty cycle variable driven (PWM) with threshold pitch, 1 Bit
	Control variable static, 1-byte
Control Variable Periodic Sending	None or 10-250 seconds parameter driven
Threshold:	Upper threshold, lower threshold
Auxiliary Quanities:	Set point, lower threshold, upper threshold
Bus Power Failure	Saving changed auxiliary quantities is parameter driven
Calibration:	None
Ambient Temperature:	Storage -20...+70°C, Operation -20...+65°C (transducer and sensor)
Ambient Temperature Humidity:	0...95% rH not condensating
Accuracy:	+/- 5%
Resolution:	1 W/m^2
Operating Voltage:	EIB/KNX bus voltage 21-32V DC
Power Consumption ca.:	240 mW (at 24V DC)
Auxiliary Supply:	Not required
Bus Coupler:	Integrated
Start-up with ETS:	**ARC_S8.VD2 Product: SK08-GLBS**
Circuit Points:	EIB-2-pole clamps (red/black)
Protection Class:	IP65
Assembly Type Transducer:	Assembly with 2 screws finery
Casing Transducer:	Plastic grey
Casing Dimensions:	115 mm x 64mm x 56 mm (L x H x D)
Article Number:	**30804000**
Sensor:	Silicon photodiode
Sensor cable:	0,6 m with plug IP65

Model:			
SK08-GLBS		**KNX Sensor Solar Radiation**	
SK08-GLBS		Sensor, Measuring Amplifier, Bus Coupler	**30804000**
GLBS-DAV6450		Sensor (Replacement) for SK08-GLBS	**91110021**
GLBS-MA		Mounting Acessories for GLBS-Sensor	**91110021**

Start-up:
The KNX Sensor is set up using the ETS (KNX Tool Software) and the applicable application program. The sensor is delivered unprogrammed. All functions are programmed and parameterized with ETS. Please read the ETS instructions.

Assembly:
The sensor SK08-GLBS is intended for outdoor use. It fulfills protection class IP65. The sensor is attached to the wall with two screws.

SK08-GLBS opened for assembly
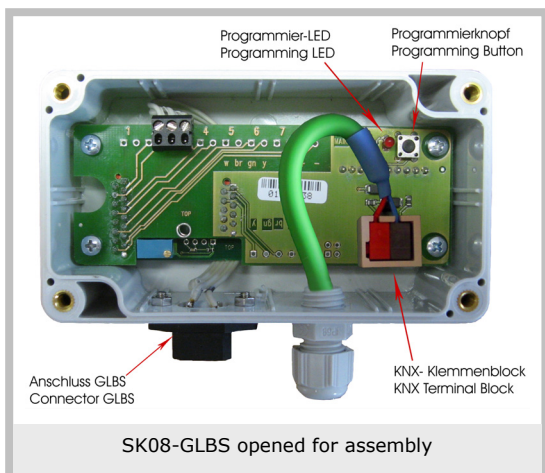
The transducer lid is opened by loosening the screws.

The external measuring electrode (single-rod measuring cell) cable is screwed into the side of the BNC case. First attach the sensor to the wall or ceiling, then insert the KNX Bus cable into the slot on the side of the casing (PG Connection). Detach the bus clamp from the device, attach the cable and replace the clamp onto the board. After successfully programming the device, screw the cover back on.
→ Be careful not to damage the electronics with tools and cable heads.

In Case of Bus Voltage Recurrence:
All changes made using the help key for the KNX/EIB bus are saved if the device has been correctly parameterized. The controller and outputs start with the current values. The ETS parameter settings are saved.

Discharge Program and Reset Sensor:
Should the sensor crash due to a programming malfunction, the previous project can be deleted by pressing the programming button. Hold the programming button down while connecting the EIB bus clamp and wait until the programming LED display appears. This will take 5 – 10 seconds. Any calibrations undertaken will be lost.

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Safety Guidelines:
Attention! Installing and assembling electrical devices must only be done by an electronics specialist.
The customer should be aware of and adhere to the safety guidelines of VDE, TÜV and the appropriate energy provider. Our guarantee does not include defects and damage caused by improper use or non-compliance of operating instructions.

Warranty:
We provide a warranty as required by law. Please contact us in case of malfunction and send the device with a full description of the fault to the address below.

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