UV Sensor "UV-Radial"

Waterproof side looking UV sensor

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GENERAL FEATURES

Properties of this sensor

The "UV-Radial" is a waterproof side looking sensor. The main application is monitoring of UV lamp bundles that are aligned radial around the sensor. The sensor is available with radiation protection hose. The sensor contains integrated electronics and is shielded against electromagnetic interference. Sensor configuration options are spectral response, signal output type and measuring range. The signal output is either a voltage of 0 to 5 V, a current of 4 to 20 mA, CAN bus interface or USB. The UV sensor is available with a PTB traceable calibration.

The measuring range of **analog sglux UV sensors** is 3 orders of magnitude corresponding to 5 mV to 5 V or 4.02 mA to 20 mA output. The highest sensitivity range is 1 nW/cm² to 1 µW/cm². The lowest sensitivity range is 20 mW/cm² to 20 W/cm². The **digital sglux UV sensors** contain an integrated microprocessor that converts the UV radiation into 125kbit/s digital CAN bus data. A large dynamic range of 5 orders of magnitude allows to measure low radiation and strong radiation without changing the probe. Customers may specify any range between the mentioned limits.

Page 3 of this datasheet allows to enter requirements of the needed sensor. After selection you may forward this document to factory or agent, or alternatively use the sensor probe online configurator at www.sglux.com. Please contact us for assistance.

SPECIFICATIONS

Fixed Specifications **Parameter**	**Value**
Dimensions	please refer to drawing on page 2
Weight	27 g
Temperature Coefficient (30 to 65°C)	0.05 to 0.075%/K
Operating Temperature	-25 to +80°C
Storage Temperature	-40 to +80°C
IP Protection Class	IP68 at window side, IP65 at plug side, on request IP68 for submerge applications

Configurable Specifications **Parameter**	**Value** (page 3 shows more detailed information)
Spectral Sensitivity	Broadband UV, UVA, UVB, UVC, UV-Index, Bluelight and UV+VIS
Signal Output	0 to 5 V or 4 to 20 mA or CAN bus signal (125kbit/s) or USB
Current Consumption	for 0 to 5 V = < 30 mA / for 4 to 20 mA = signal out / digital = < 17 mA
Connections	cable = 2 m cable with tinned leads on free end plug = 5 pin male connector with 2 m cable with tinned leads on free end CAN = 2 m cable with 8 pin male connector (to converter or else) USB = with 1.5 m cable with USB-A plug
Measuring Range	between 1 nW/cm² to 1 µW/cm² and 20 mW/cm² to 20 W/cm² for analog or 100 µW/cm² to 20 W/cm² for digital sensors (see questionaire sheet)

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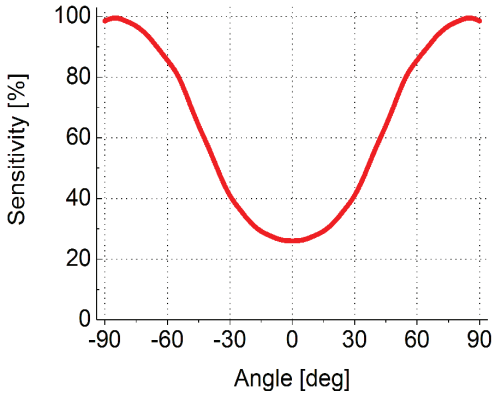
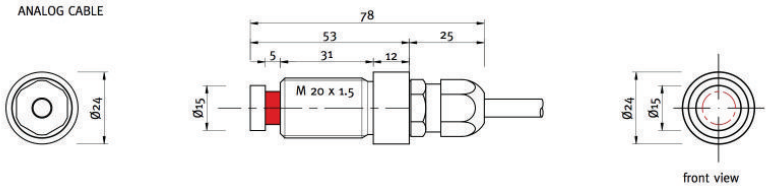
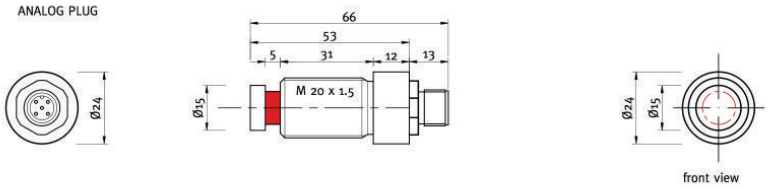
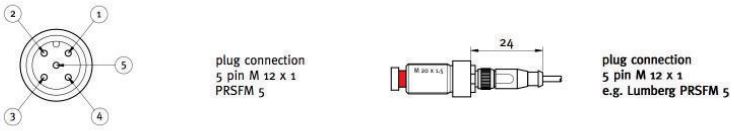
FIELD OF VIEW

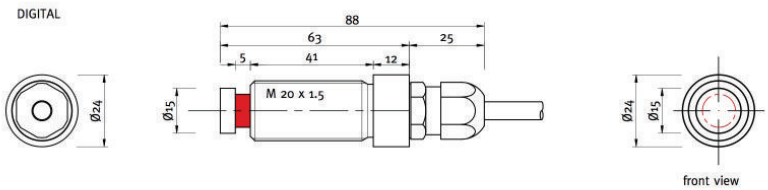


DRAWING









UV Sensor "UV-Radial"

Requirements questionaire sheet

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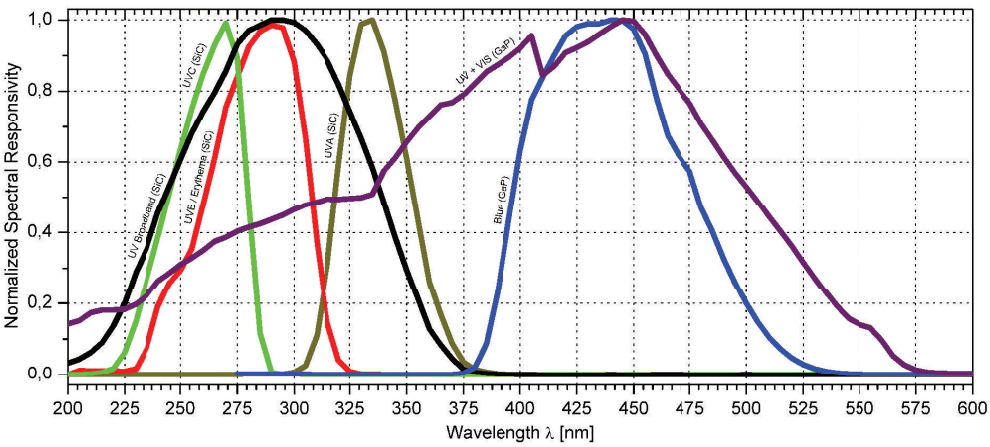
STEP 1 ⇢ Configuration of Normalized Spectral Responsivity



Please select

- ☐ Broadband UV (SiC)
- ☐ UVC (SiC)
- ☐ UVB/Erythema (SiC)
- ☐ UVA (SiC)
- ☐ Blue (GaP)
- ☐ UV + VIS (GaP)

STEP 2 ⇢ Signal Output Type Selection

Please tick your selection. The pin configuration is shown in drawings on page 2.

Output Type	Description	Connection = "cable"	Connection = "male plug"
☐ 0 to 5 V	0 to 5 V voltage output proportional to radiation input. Supply voltage is 7 to 24VDC, current consumption is < 30 mA.	☐ V_- = brown, V_+ = white, V_{out} = green, shield = black	☐ V_- = 1, V_+ = 4, V_{out} = 3
☐ 4 to 20 mA	4 to 20 mA current loop for PLC controllers. The current is proportional to the radiation, supply voltage is 24VDC.	☐ V_- = brown, V_+ = white, shield = black	☐ V_- = 1, V_+ = 4
☐ CAN bus signal	VSCP protocol according to the following specifications: http://download.sglux.de/probes-digital/vscp-protocol/	Pins 1 & 7 = CAN low Pins 3 & 8 = CAN high Pins 2 & 4 & 5 = GND	
☐ USB	The signal is transmitted via standard USB-A plug to a computer. Software and 1.5 m cable are included.		

STEP 3 ⇢ Measurement Range Selection

Please mark your approx. max. UV intensity to be measured. The dynamic range for analog UV sensors is 3 orders of magnitude and for digital UV sensors it is 5 orders of magnitude.

max. UV intensity	1µW/cm²	10µW/cm²	100µW/cm²	1 mW/cm²	10mW/cm²	100mW/cm²	1 W/cm²	10 W/cm²	20 W/cm²

Sensor Probes Overview and Accessories

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SENSOR PROBES OVERVIEW

UV-Surface ⇢ Top looking surface-mount UV sensor

For UV radiation reference measurements of radiation exposed to a surface (diameter 38 mm).

UV-Air ⇢ Threaded body UV sensor

With M22x1.5 thread for many mounting possibilities i.e. inside UV radiation chambers.

UV-Cosine ⇢ Waterproof cosine corrected UV sensor for outdoor use

Stain repellent for outdoor or in-water measurements. Particularly suited for UV-Index measurements.

UV-Water-G3/4 ⇢ 10 bar water pressure proof UV sensor with G3/4“ thread

Used in pressurized water systems. Suited for low and medium pressure lamps.

UV-Water-PTFE ⇢ 10 bar water pressure proof UV sensor with G1/4“ thread

Used in pressurized water systems. Suited for low pressure lamps.

UV-DVGW ⇢ UV sensor for DVGW (40°) certified water purifiers

Complies with standard DVGW294-3(2006), suited for certified water purifiers.

UV-DVGW-160 ⇢ UV sensor for DVGW (160°) and OENORM certified water purifiers

Complies with standard DVGW294-3(2006) and OENORM 5873, suited for certified water purifiers with 160° FOV.

UV-Cure ⇢ Sensor for strong UV irradiation, working temperature up to 170° (338°F)

To control curing processes or other high temperature operations where strong UV light is present.

TOCON-Probe ⇢ Miniature UV sensor

Miniature UV sensor in M12x1 housing. Available with 0 to 5 V voltage output.

ACCESSORIES FOR ANALOG SENSOR PROBES

Sensor Monitor 5.0
measuring and control module

RADIKON ⇢
converter box and measurement controller

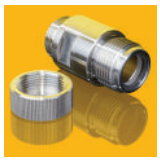
ACCESSORIES FOR DIGITAL SENSOR PROBES

UVTOUCH ⇢
digital multi-channel UV radiometer

DIGIBOX ⇢
CAN-to-USB converter

Control Pad ⇢
windows 8 based 10.1" tablet computer display unit

WINDOWS



WIN294 ⇢
measurement window acc. to DVGW 294-3 and OENORM M5873