UV Sensor "UV-Cosine_UVI"

Waterproof cosine corrected UV sensor for UV-Index measurements

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GENERAL FEATURES

Properties of this sensor

This UV sensor is designed for very high accuracy UV-Index measurements. The measurement mean error of this sensor is 1.3% only. The spectral response curve and the field of view (cosine type) are in near perfect accordance with the requirements defined in the ISO 17166 standard. The housing is made of PTFE. It is waterproof and stain repellent with a male threaded body (M20x1.5). The sensor contains integrated electronics and is shielded against electromagnetic interference. The sensor can be configured as 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.

Page 3 of this datasheet allows to enter the signal output 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
Spectral Sensitivity	UV-Index (erythema curve) according to ISO 17166, measurement mean error 1.3 %
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)
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 Other cable lenghts on request.
Measuring Range	up to 30 UVI

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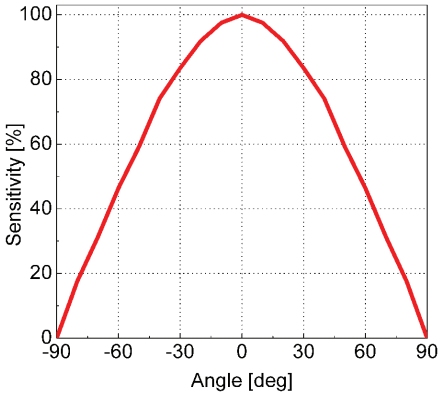
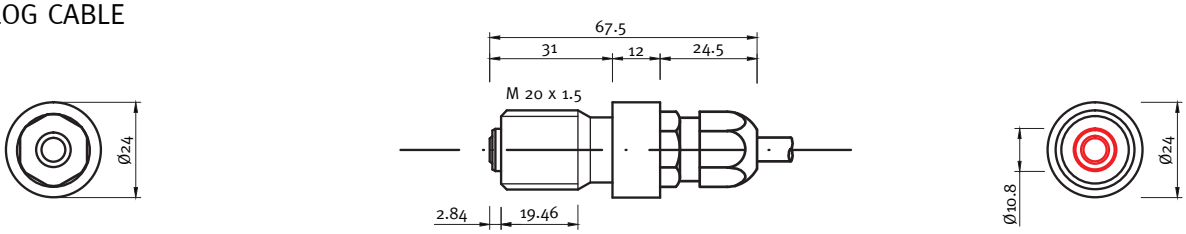
FIELD OF VIEW

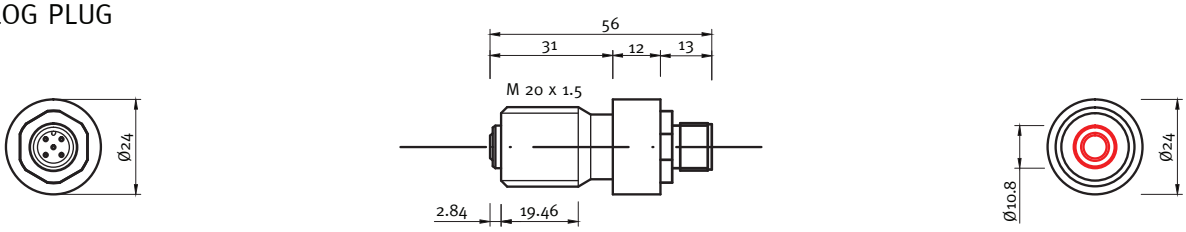


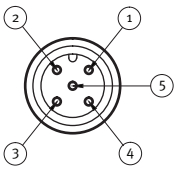
DRAWING

ANALOG CABLE

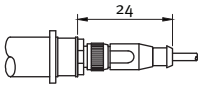


ANALOG PLUG



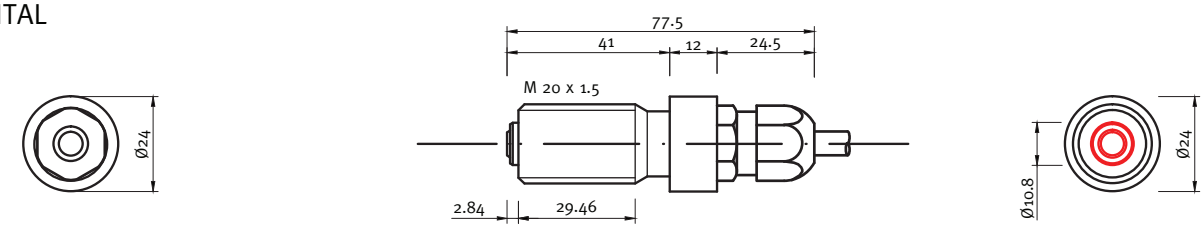


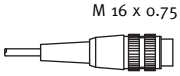
connector view
5 pin M 12 x 1
RSFM5



plug connection
5 pin M 12 x 1
e.g. Lumberg PRSFM 5

DIGITAL





KFV 80 plug

pin layout

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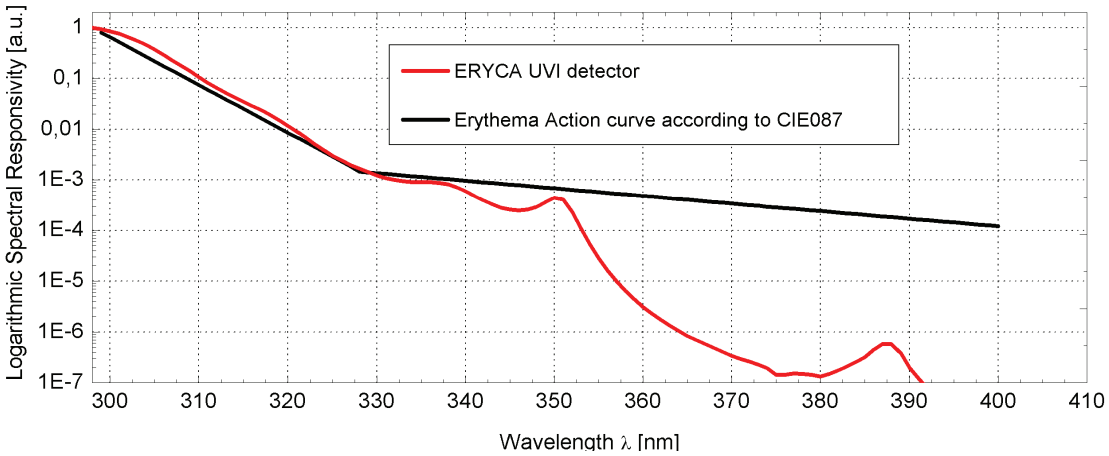
Requirements questionaire sheet

STEP 1 ⇢ Normalized Spectral Responsivity



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. Other cable lengths on request.		

Products for UV-Index measurements

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PHOTODIODES AND SENSORS (MEASUREMENT MEAN ERROR ‹ 1.3%)

SiC UV photodiodes

UV-Index photodiodes, different active chip areas and housings, with erythema filter

SiC TOCONs

UV-Index hybrid sensor in a TO5 housing with 0 - 5 V signal output, with erythema filter

TOCON_PTFE24V_UVI

UV-Index hybrid sensor (TOCON) in PTFE housing (male thread M12x1), EMC safe, with erythema filter

TOCON_UVI

UV-Index hybrid sensor (TOCON) in PTFE housing (with G1/4" thread), EMC safe, with erythema filter

UV-Surface_UVI

top looking surface-mount UV sensor probe with cosine FOV, EMC safe, with erythema filter

UV-Cosine_UVI

waterproof UV-Index sensor probe with cosine FOV, EMC safe, for outdoor use, with erythema filter

UV-INDEX DISPLAYS AND NETWORK COMPUTERS

UV-Index reference radiometer

Reference radiometer for UV-Index measurements, incl. calibrated (PTB traceable) UVI sensor probe

Skylink UV transmitter

network computer with UV-Index sensor

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