

UV Sensor "UV-ÖNORM"

Calibrated UV sensor for ÖNORM certified water purifiers with 160° field of view

GENERAL FEATURES



The „UV-ÖNORM“ is a calibrated UV sensor for DVGW and OENORM certified water purifiers with 160° field of view. It is suitable for low pressure and medium pressure lamps. It complies with the guidelines DVGW W294-3(2006) and OENORM 5873 and the novel standard DIN 19294.

SENSOR SPECTRAL RESPONSIVITY

The below figure 1 shows the sensor's microbicidal weighted spectral responsivity.

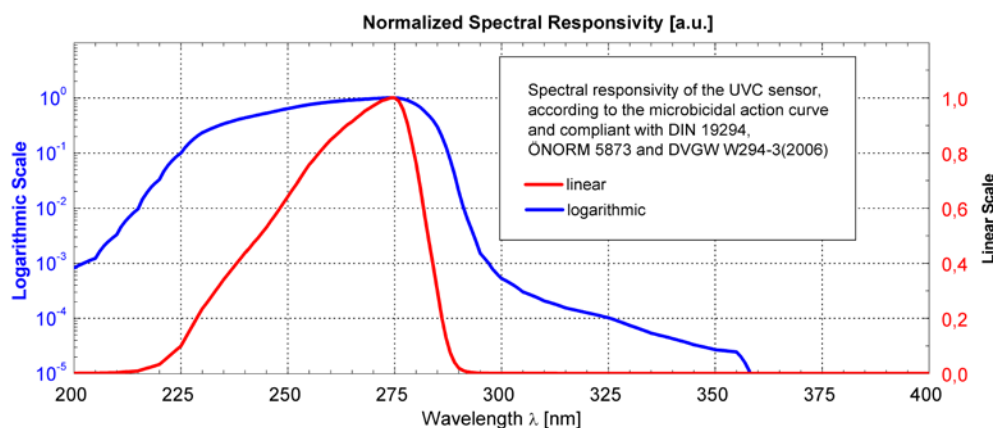


Figure 1: sensor's spectral responsivity

GENERAL SPECIFICATIONS

FIXED SPECIFICATIONS

Parameter	Value
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Dimensions, Field of view	Please refer to drawings and graph on page 4.
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Weight	195 g
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Temperature coefficient (30 to 65°C)	0.05 to 0.075%/K
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Operating temperature	-20 to +80°C
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Storage temperature	-40 to +80°C
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Humidity	< 80%, non condensing
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Time constant	0.1s +/-20% - other time constants on request, device has 1st order low pass characteristics
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Spectral sensitivity	UVC, according to DVGW W294-3(2006), OENORM 5873, DIN 19294 f1Z = 0.15
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IP protection class	68 at window side, 67 at plug side
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SIGNAL OUTPUT SPECIFICATIONS

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Signal Output 0 to 5 V or 0 to 10V 0 to 5V or 0 to 10V voltage output proportional to the irradiance

Supply voltage 7.5 to 24 VDC (0 to 5V output), 12 to 24 VDC (0 to 10V output)

Current consumption < 30mA

Connections GND=2(white), V+=4(black), V_{OUT}=1(brown)
2m cable length, other lengths available (max.20m)

Dark offset voltage < 3 mV

Measurement range 3 orders of magnitude

Signal Output Photo Current photodiode current approx. 1 nA ... 1 µA, needs external transducer such as the sglux Radikon Simple. This signal output allows operating temperatures between -40°C and 170°C.

Connections shielded high temperature resistant wire cable with open wires (BNC plug on request), 2m cable length

Measurement range The measurement range depends on the applied transducer.

Signal Output 4 to 20 mA 4 to 20mA current loop for PLC controllers - The current is proportional to the irradiance.

Supply voltage 24 VDC +/-10% (down to 12V possible if compliance voltage and loop resistance is considered)

Current consumption =signal out

Connections I_{OUT}=2(white), V+=4(black)
2m cable length, other lengths available (max.20m)

Measurement range 3 orders of magnitude

Sensor compliance voltage 8.5 V

Max. loop resistance 645 Ohm @ 24V and 145 Ohm @12V

offset 4 mA +/- 0.01 mA

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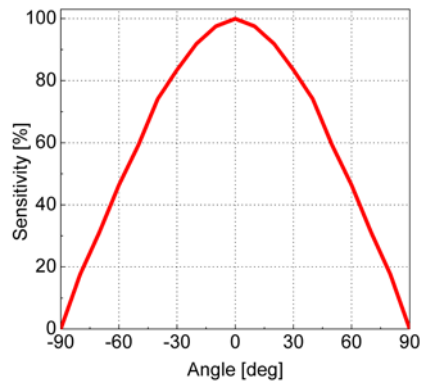
▶ 3/4

Signal Output USB	USB output with USB-A (to computer) or µUSB connector (to smartphone)
Supply voltage	5V (USB powered)
Current consumption	< 17 mA
Connections	USB2.0-A connector (to computer, free software "UVPLOT" is available) or USB2.0-micro-B connector (to a smartphone device like the Radiometer SXL55) 2m cable length.
Measurement range	4 orders of magnitude
Signal Output CAN bus	CAN Bus with VSCP protocol for integration into a bus system or to be used with the sglux UVTOUCH or the sglux Digibox
Supply voltage, current consumption	5 to 24 V +/- 10%
Connections	8-pin M16 x 0.75 connector: Pins 1&7 = CAN low, Pins 3&8 = CAN high, Pin 6=V+, Pins 2&4&5 = GND, 2m cable length, other lengths available
Measurement range	4 orders of magnitude
Available displays and converters	UVTOUCH and Digibox
Signal Output MOD bus	MOD bus RTU over RS-485 (connection parameters programmable)
Supply voltage, current consumption	5 to 24V +/-10%, typ. 20mA, max. 25mA
Connections	5-pin M12 connector at sensor side and Binder cable M12-A Series 763 with open wires, Shield =1 (shield), V+ = 2 (red), GND = 3 (black), B = 4 (white), A = 5 (blue)

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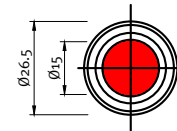
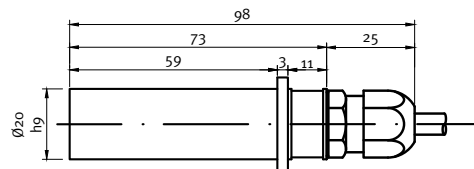
Calibrated UV sensor for ÖNORM certified water purifiers with 160° field of view

FIELD OF VIEW



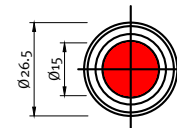
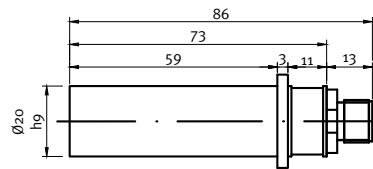
DRAWING (values in mm)

ANALOG CABLE

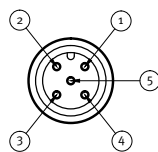


window view

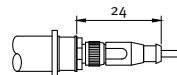
ANALOG PLUG



window view

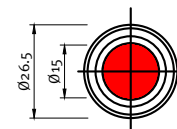
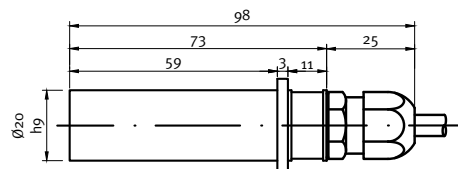


connector view
5 pin M 12 x 1
RSFM5



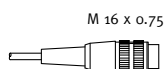
plug connection
5 pin M 12 x 1
e.g. Lumberg PRSFM 5

DIGITAL



window view

CAN



KVF 80 plug



pin layout

USB



USB Type A



Micro USB

Sensor Probes Overview

LABORATORY & EXPERIMENTS



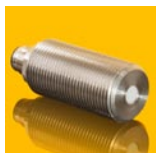
UV-Surface

Universal radiometric UV sensor for calibration and reference measurements, cosine correction. Often used with radiometer SXL55.



UV-Cosine

Waterproof dirt repellent UV sensor for outdoor measurement, cosine field of view. Also available as UVI sensor (ERYCA), M20x1.5 thread.



UV-Air

Axial measuring screw-in UV sensor very good EMC properties, M22x1.5 thread.



TOCON-Probe

Miniature UV sensor with 0 to 5 V voltage output, M12x1 thread.

SPECIAL APPLICATIONS



UV-Arc

Waterproof UV sensor for measurement of electric arcs between overhead contact wires and pantograph, complies with EN 50317, G3/4" thread.



sglux ERYCA

high accuracy UV-Index sensor, measurement uncertainty is < 5%. The sensor complies with ISO 17166, M20x1.5 thread.



UVI-Solo

like sglux ERYCA but configured as a ready-to-mount system (available for pole or railings assembly).



UvLink One

wireless UV sensor with a display unit for intensity and dose measurement.

DUTY SENSORS MONITORING UV DISINFECTION OF AIR, SURFACES AND WATER



UV-Sanitize

UV sensor for monitoring of air and surface UV disinfection systems, configurable for monitoring of Hg low pressure lamps, excimer lamps or xenon flash lamps, M20x1.5 thread.



UV-Water-G3/4

UV sensor for operation in pressurized water (10 bar), for Hg medium and low pressure lamps.



UV-Water-PTFE

PTFE UV sensor for operation in pressurized water (10 bar), only for Hg low pressure lamps or LEDs, G1/4" thread.



UV-ÖNORM / UV-DVGW

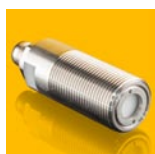
UV sensor for DVGW(160°) and ÖNORM certified water purifiers, also available as UV-DVGW (40°). The sensors comply with ÖNORM M5873, DVGW W294(06), DIN19294



UV-Radial

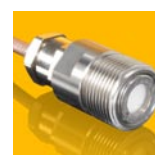
Waterproof side looking UV sensor for monitoring of lamp bundles, for operation in a cladding tube or directly in water, M20x1.5 thread.

HIGH UV RADIATION



UV-Cure

UV sensor for high irradiance (>100mW/cm²) for LED curing or cooled medium pressure lamps, M22x1.5 thread (temperature sensor available).



UV-Cure_HT

Like UV-Cure but for temperatures up to 170°C, e.g. for uncooled medium pressure systems, M22x1.5 thread.