

PLC sensors with analog output



PLC sensor

The PLC UV/VIS sensors serve as precision sensors for the measurement of UV irradiances and illuminances in systems with programmable logic controllers (PLCs). Spectral range, measuring range, operating voltage, and output signal can be selected to match the measurement task and the PLC. The integrated electronics generate a signal voltage that is transmitted with the low interference cable to the PLC. The built-in diffusers provide the required cosine correction. The sensors are calibrated with traceability to the PTB (Physikalisch Technische Bundesanstalt, the German national test authority); after being calibrated, they are shipped with a factory calibration certificate.

Excellent long-term stability is achieved through the use of appropriate materials. Of course, a repair and spare parts service is available for many years. Our product range includes eight spectral ranges and three measuring ranges for the sensors. This means that sensors can be optimally adapted to the application. Going further, the sensors are available for special cases and with customer-specific measurement and spectral ranges.

For small control tasks, the PLC sensors can be connected to an RM-32 panel meter. The RM-32 shows the current irradiance on a 3.5-digit digital display and switches two relay contacts with adjustable warning and alarm signals.

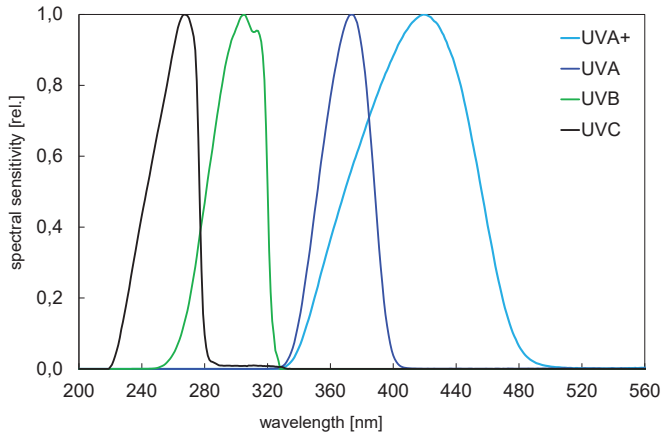
Applications:

- UV and illumination sensors for PLC
- Control of UV-LED and spot light sources
- Precise measurement of irradiance

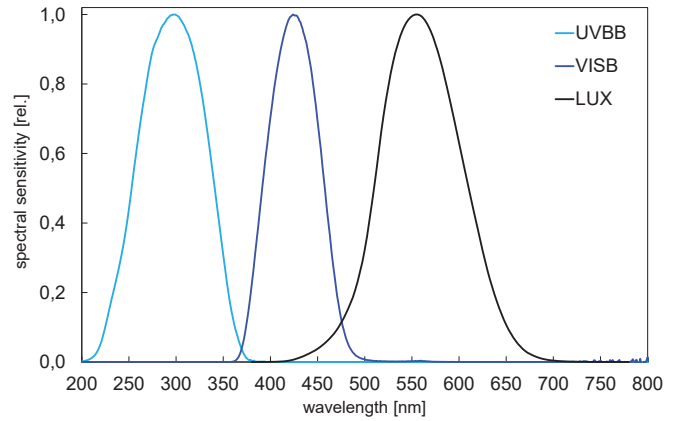
HIGHLIGHTS

- Direct PLC operation
- Selectable signal output
- Long-term stability
- Recalibrateable sensors
- Integrated electronics
- Selectable measurement ranges
- Shutter & mount available

TECHNICAL DATA



Spectral sensitivity UVA+, UVA, UVB and UVC sensors



Spectral sensitivity UVBB, VISB and VISL sensors

TECHNICAL DATA

Operation voltage	24 V, 12 V, 5 V or ± 5 V
Current input	< 15 mA
Signal output	4 - 20 mA, 0 - 10 V, 0 - 2 V
Measuring range	0 - 100 mW/cm ² 0 - 200 mW/cm ² 0 - 5000 mW/cm ²
Dimensions	80 x 40 x 20 mm
Weight	150 g
Connecor	5-pole M12
Operation temperature	0 to 60 °C
Storage temperature	-10 to 60 °C
Humidity	< 80% non-condensing

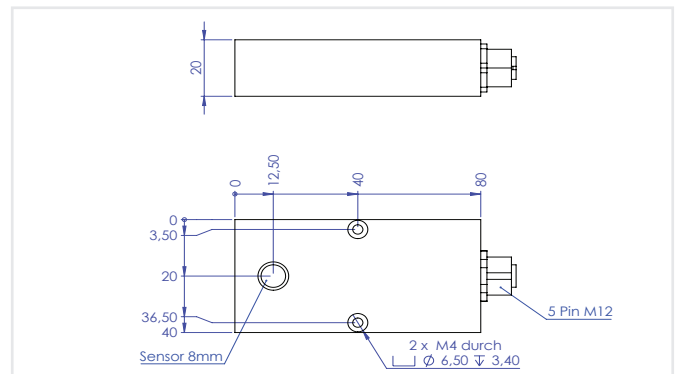
SENSOR SPECTRAL RANGES

UVC	200 - 280 nm
UVB	280 - 315 nm
UVA	315 - 400 nm
UVA+	330 - 450 nm
UVBB (broad-band)	230 - 400 nm
VISB	400 - 480 nm
LUX	380 - 780 nm, V(λ)

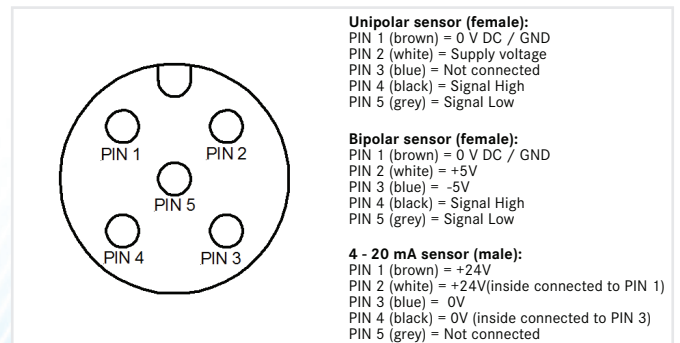
OPTIONAL ACCESSORIES



optional: panel meter RM-32



Dimensions PLC sensor



Connector

PART NUMBERS

PLC sensor PLC [S] [V] [A] [M]

Cables for sensors with voltage output

sensor cable, 2 m	920310
sensor cable, 5 m	920310-5
sensor cable, 10 m	920310-10

Cables for sensors with current output

sensor cable, 2 m	920310-I
sensor cable, 5 m	920310-I5
sensor cable, 10 m	920310-I10

RM-32, 230 V Version 670029

RM-32, 115 V Version 670028

Shutter, operated with 24V 860507

EXAMPLES

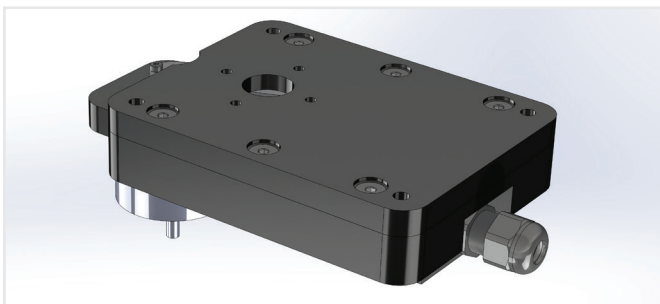
PLC1111 = UVC-PLC sensor with operation voltage of 24 V with signal output 0-10 V and measuring range 0 - 100 mW/cm²

PLC3222 = UVA-PLC sensor with operation voltage of 12 V with signal output 0 - 2 V and measuring range 0 - 200 mW/cm²

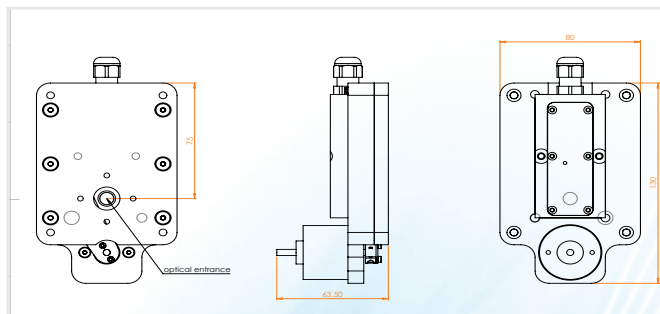
SCOPE OF DELIVERY

PLC sensor, factory calibration certificate

Please specify type when ordering.



optional: shutter



Dimensions shutter

PLC [S] [V] [A] [M]

↑ ↑ ↑ ↑

[M] Measuring range	
1	100 mW/cm ²
2	200 mW/cm ²
3	5000 mW/cm ²
9	special

[A] Signal output	
1	0 - 10 V
2	0 - 2 V
3	4 - 20 mA
9	special

[V] Operating voltage	
1	24 VDC
2	12V DC
3	±5 VDC
4	5 VDC
9	special

[S] Spectral range	
1	UVC
2	UVB
3	UVA
4	VISB
6	LUX
7	UVA+
8	UVBB
9	special

OPTIONAL: SHUTTER

To protect the sensor against contamination and aging (at extremely high irradiance and periodic reference measurements) we recommend our shutter. Shutter is operated at 24 V.

Since 1981, Opsytec Dr. Gröbel GmbH manufactures UV sensors. All sensors are calibrated in our own laboratory.

