

UV sensors SUV 13

- Sensor for monitoring irradiance in UV systems
- stainless steel housing made of 1.4404 or 1.4462
- Pressure tight front window
- Adaptable to different requirements by means of options
- Variants of this type available for special applications
e.g., SUV13.5 (Teflon housing) and SUV13.9 (vacuum-proof, ATEX)

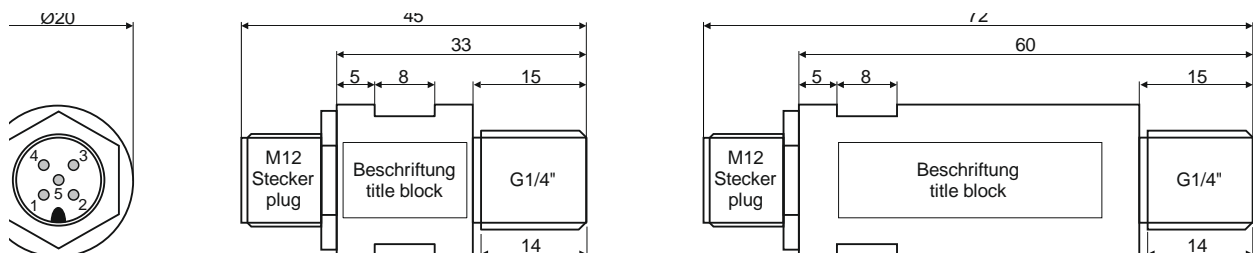


Technical data

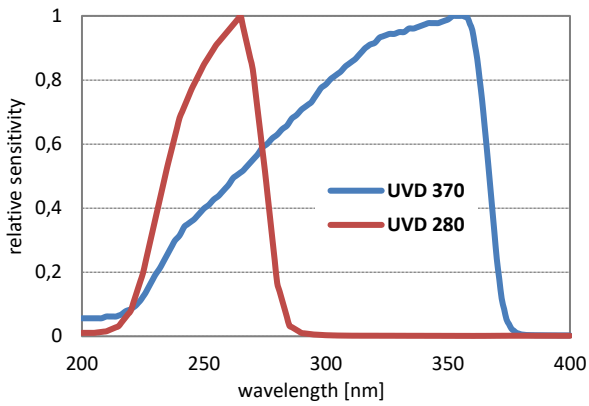
	Voltage sensors Y1	Current sensors Y2	Digital sensors Z4, Z4Y1, Z4Y2
Marking	sensor type, calibration value in W/m ² (in case of integrated electronic), serial number (optionally additional customized labeling)		
Geometry	sensor body Ø20 mm, wrench size 17 mm, G1/4" screw in thread (see sketch)		
UV entrance window	UV transparent quartz glass Ø 6.0 mm		
Screw-in torque	max. 20 Nm		
Compressive strength	up to 16 bar overpressures		
Ambient temperature	operating temperature: 0...60°C, storage temperature: -40...70°C (in dry condition)		
Supply voltage	5 - 24 V DC	12 - 24 V DC	7 - 24 V DC
Operation current	max. 2 mA	max. 25 mA	Z4: 50 mA, Z4Y1: 4 mA, Z4Y2 : 22 mA
Connection assignment	<p>1: +U_{out} 2: -U_{out} / GND 3: -U_B / GND 4: +U_B</p>	<p>1: +U_B 2: +U_B 3: I_{out} 4: I_{out}</p>	<p>1: RS 485 A 2: RS 485 B 3: +U_B 4: -U_B / GND 5: +U_{out}</p>
Configuration	Option	Description	
Housing	1.4404 1.4462	standard optional (salt water resistant)	
Entrance window	A1 A2	Standard: UV transparent quartz glass window optional: quartz glass window + diffusor, (opening angles see graphic directional sensitivity)	
UV diode	B7 (old -) B6 (old B)	standard: UVD370, 220...370 nm (see graphic spectral sensitivity) optional: UVD280, 220...280 nm (more available on request)	
Connection	C CF	plug M12 (standard for all analogue types) socket M12 (standard for all digital and digital/analog types)	
Damping	D1 (old D)	integrated damping element (recommended for medium pressure applications)	
Internal Electronic	none Y1 (T) Y2	only diode build in, output current in the range of nA, external signal amplifier necessary voltage output 0 – 4.5 V DC (optional temperature output) current output 4 – 20 mA, current loop, two wire circuit	
Output signal	Y3 (T) Z4 Z4 Y1 Z4 Y2	voltage output 0 – 10 V DC (optional temperature output) digital sensor with RS485 uvt-protocol (output UV und temperature value) digital sensor with voltage output 0 – 4.5 V DC (calibratable via KUV) digital sensor with current output 4 – 20 mA, current loop, two wire circuit (calibratable via KUV)	
Calibration values	ND MD	calibration in front of low-pressure lamp with 50, 100 W/m ² (other values possible in consultation) calibration in front of medium pressure lamp with 1000 W/m ² (other values possible in consultation)	

Separate product information sheets are available for the appropriate monitors and connection cables.

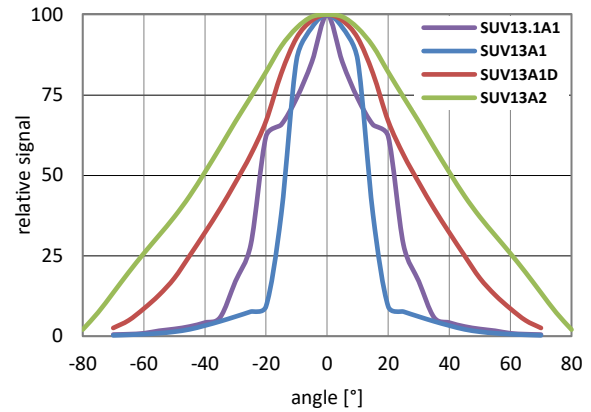
Sensor body SUV13 with internal electronic (long) / sensor body SUV13.1 without internal electronic (short)



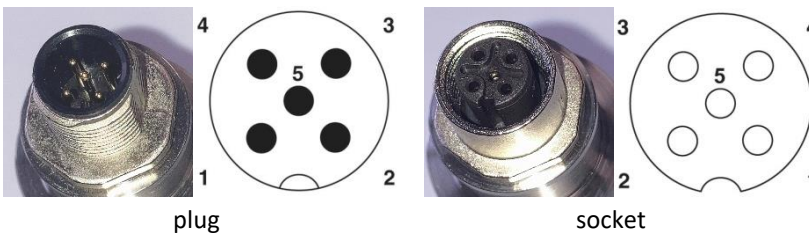
Spectral sensitivity



Directional sensitivity



Contact numbering of the sensor plug / socket (valid for all standard sensors)



Top view to plug / socket

Please refer to the following tables for the contact assignment and the assignment to the internal cable colors.

ATTENTION!



Avoid connection errors! Incorrect connection can lead to damage to the connected devices and is not covered by our warranty!

Connection assignment on analog sensors (plug)

type	relative sensor	cable colors	absolute calibrated sensors			cable colors	
	diode	Z2 (coaxial cable) cable at sensor	Y1 voltage	Y1T voltage/temp.	Y2 current	Z1 recommended	Z3 cable at sensor
1	cathode	white (inner core)	Uout UV	Uout UV	+UB / Iout UV (current loop)	brown	yellow
2			Uout GND	Uout TEMP		white	brown
3	anode	red (outer conductor)	-UB / GND	-UB / Uout GND	-UB / Iout UV (current loop)	blue	green
4			+UB	+UB		black	white
5	-	-	-	-	-	-	
housing	shield	red	shield	shield	shield	red*	red*

* Z1: shield connected to the housing of the sensor, Z3: shield not connected to the housing of the sensor

Connection assignment on digital and digital/analog sensors (socket)

type	digital sensors		digital/analogue sensors				cable colors
	Z4 digital	Z1G-D cable	Z4Y1 digital/analogue voltage	Z1G-UD cable	Z4Y2 digital/analogue current	Z1G-ID cable	cable at sensor
1	RS485 A	brown	RS485 A ¹	-	RS485 A ¹	-	yellow
2	RS485 B	white	RS485 B ¹	-	RS485 B ¹	-	white
3	+UB	blue	+UB	blue	+UB / Iout UV (current loop)	blue	green
4	-UB / GND	black	-UB	black	-UB / Iout UV (current loop)	black	brown
5	-	-	Uout UV	grey	-	-	grey
housing	shield	red*	shield	red*	shield	red*	red*

* shield connected to the housing of the sensor
1 do not connect, only used by the KUV2.4WR during recalibration