

SLUX – Luxmeter with silicon photodiode (Rev.1 010117)



Description

The SLUX sensor is a luxmeter used to detect the measure of the illuminance in offices, factories, shopping centers, theaters, museums, sports facilities, street lighting, galleries and horticultural plants.

SLUX is suitable for both indoor and outdoor applications (IP66 protection degree) as it uses filters and photodiodes specifically designed to adapt their spectral response to the region of interest; on request it is possible to reduce the sensitivity of the transmitter for the measurement of very intense sources.

Luxmeters SLUX series are available in the versions with analog linearized outputs in voltage (0...10Vdc) or in current (4...20mA).

Operation Principle

The generated current from the silicon photodiode invested by the light is converted into an electrical signal proportional to the illuminance.

Advantages

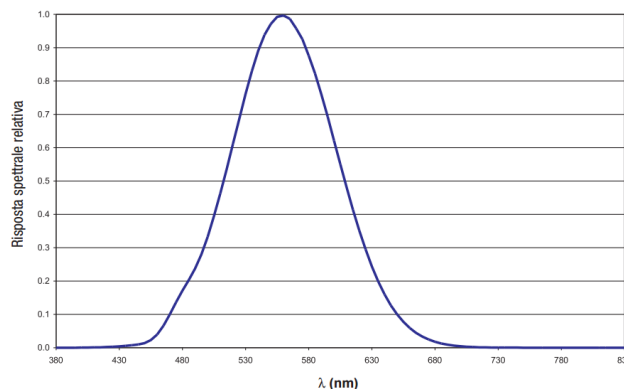
- ✓ Good quality/price ratio
- ✓ High measurement sensitivity
- ✓ Output signal easy to interface with the most common dataloggers and PLC
- ✓ Excellent sturdiness and reliability
- ✓ Immunity from noises

Main applications

The excellent sensor response to the cosine law allows to use the luxmeter also when the sun has a very low elevation, so to detect right measurements during all seasons of the year.

- ✓ Micro-climate and environmental confort
- ✓ Civil and Industrial plants
- ✓ Energy saving
- ✓ Agriculture and Zootechnics
- ✓ Research and environmental measurements

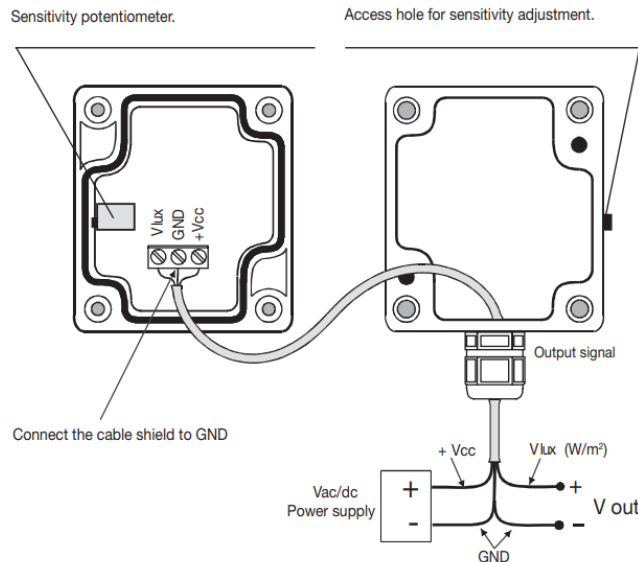
Technical features



Model	SLUXA	SLUXB	SLUXC
Typical Range	20...2000 lux	0,2...20 klux	2...200klux
Spectral range	Curve V(λ)		
Transducer	Silicon Photodiode		
View Angle	Correct according to the Cosine law		
Versions and outputs:	-I: Out: 4...20mA / Power: 10...40Vdc -V: Out: 0...10Vdc / Power: 16...40Vdc		
Consumption	10mA		
Working Temperature	-20...+60°C		
Maintenance	>36 months (after checking and cleaning the diffuser)		
Housing	Anodized Aluminum and teflon		
Dimensions / weight	ø80xh80mm / 160g (STF-UNI bracket excluded)		

Electrical Connection

Once established the suitable sensor position for the installation, it must provide to connect the electrical wires inside the transducer. Unscrew the 4 screws that close the sensor cover, raise up the cover, then the inside part appears as follows:



The terminal board is easily individuabile, is provided with 3 clamps with the following labels:

- Gnd → is the ground of the power supply and output signal
- +Vcc → is the clamp where the positive (+Vdc) of power supply must be connected
- Vlux (output) → is the sensor signal output to connect to the positive pin input of the datalogger/plc

Mounting

Install the luxmeter away from obstacles that can throw the sun's reflection (or their shadows) on the sensor. The luxmeter should be positioned so that the signal cable comes out toward North Pole if used in the northern hemisphere (on the opposite side when installed in the southern hemisphere), in accordance with ISO TR9901 and the dell'WMO recommendations.

In order to facilitate the luxmeter installation, the sensor is supplied with the universal bracket mod.STF-UNI which allow the installation on vertical and horizontal poles $\varnothing 25...43\text{mm}$.

