

# OPERATION MANUAL



## Brightness sensor with (measuring) transducer 0...10 V 0...1.000, 0...10.000, 0...100.000 Lux

### Description



### Technical data

Brightness sensor with transducer	
Measuring range	0...1.000, 0...10.000, 0...100.000 Lux
Sensor	Photodiode
Maximum spectral sensitivity	600 nm
Output supply	0...10 V DC, linear scaling
CE-Conformance	2014/30/EU
Accuracy	<math>\pm 10\%</math> at vertically incidence of light
Operating temperature	-20...+75 °C
EMV-Noise emission	EN 61000-6-3:2001
EMV-Noise withstanding	EN 61000-6-1:2001
Protection	IP65
Power supply	12...24 V AC/DC
Current consumption	approx. 6,2 mA
Over voltage protection	Varistor and RC filter
Connection	Cable Connection M16 x 1,5, clamping range: 4,5...10,0 mm
Dimensions (B x H x T) without the coupling of the brightness-sensor	59 x 65 x 38

### Performance features

- Standard signal 0...10 V
- Measuring range 0...1.000 Lux mainly suitable for indoor use for measuring artificial light
- Measuring range 0...10.000 Lux mainly suitable for industrial applications with very intense artificial light
- Measuring range 0...100.000 Lux mainly suitable for measuring solar radiation
- High long term stability
- Sensor and transducer compactly combined in a casing
- Three-point calibration guarantees high accuracy over the entire measuring range
- High-quality plastic casing (IP65)

### Application areas

- Building automation, dark/light switching operations
- Brightness sensor for rain-protected weather stations
- Brightness sensor for switching of appliances in applications with solar panels
- Brightness sensor for use at high solar irradiation
- OEM applications

### Description

The brightness sensor is a light sensor for the building automation. It is protected against overvoltage and transients and is suitable for continuous operation.

Further aspects are the possible choice between AC or DC supply and the output of the measurement as a 0...10 V standard signal.

A variety of possible applications result from the determination of the brightness for the dynamic control of devices - like a sun sensor - in the home and building automation.

For the measurement of the illumination level a precise and long-term stable photodiode with industrial performance data is used. The processing of the measured signal is done through advanced sensor technology. The high sensitivity in a wide range of luminance intensity as well as the wiring make it possible to use the sensor under very bright lighting conditions.

### Supply

The supply is guaranteed with a +12...24 V AC/DC voltage.

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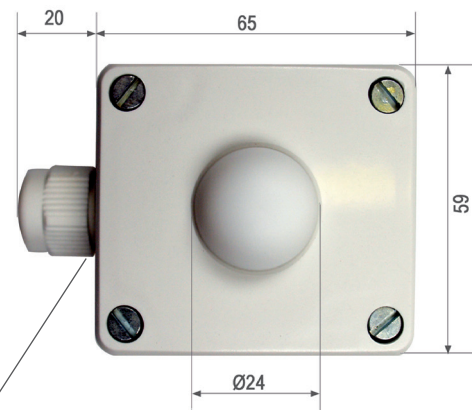
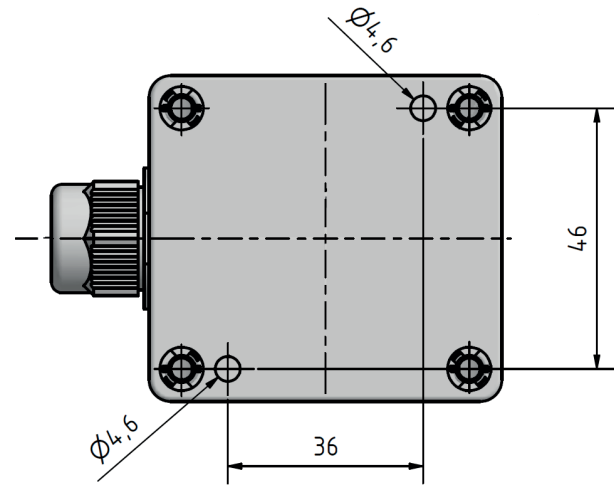
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### Installation of the brightness sensor

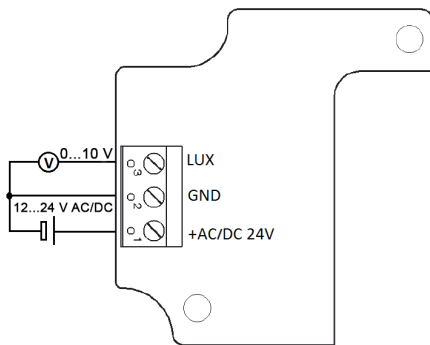
The brightness sensor can be mounted on a surface with two screws. For this purpose, two holes with a diameter of 4.6 mm are located on the underside of the device. The holes are accessible when the housing cover is removed. The housing has IP65 protection when the cover is closed. In order to guarantee tightness even after prolonged use, it is not recommended to mount the device vertically with the cable gland.

### Connection

For the connection shielded connection cables should preferentially be used. Especially in EMI-disturbed areas this has to be taken into account. The shielding has to be grounded.



M 16 x 1,5,  
Clamping range 4,5-10,0



Pin	Description	Designation
1	Operating voltage 12...24 V DC	+AC/DC 24 V
2	Ground	GND
3	Voltage output 0...10 V	LUX

### Attention

Please avoid extreme mechanical and inappropriate exposure. The device/product is not suitable for potential explosive areas and medical-technical applications.

Article	Article number	Application area
Brightness sensor with transducer 0...1.000 Lux	0555 3002	mainly suitable for indoor use for measuring artificial light
Brightness sensor with transducer 0...10.000 Lux	0555 3004	mainly suitable for industrial applications with very intense artificial light
Brightness sensor with transducer 0...100.000 Lux	0555 3001	mainly suitable for measuring solar radiation