

The light intensity sensor / twilight sensor PHOTASGARD® AHKF with three switchable measuring ranges (three devices in one) measures the luminous intensity and is used to control luminaires, lighting systems, Venetian blinds and canvas blinds, etc., to monitor lighting conditions at workplaces, in greenhouses, storage halls, workshops, corridors, in outdoor areas, in industrial halls, in offices as well as in residential and business facilities, for daylight-dependent constant light control, as light intensity or twilight sensor and to control sunshade equipment avoiding unnecessary heating-up of rooms. Therefore it minimizes your variety of types and stockkeeping while covering a greater range of universal applications. The sensor used in PHOTASGARD® light intensity sensors was specifically adapted to the sensitivity of the human eye. Its greatest sensitivity is in the range of 350 nm to 820 nm. Therefore with its special filter the sensor is predestined for exposure measurement of daylight and / or for measuring artificial light of high colour temperature (similar to sunlight). The case of the sensor is hermetically tight, the vision panel is protected by a glass plate.

TECHNICAL DATA:

Power supply:.....24V AC/DC,

current consumption max. 10mA at 24V DC

Sensor:.....photodiode with glass case

Measuring ranges:.....0..500 Lux / 20 kLux / 60 kLux,

multi-range switching (via jumpers) see schematic diagram

(other individual ranges optional, arbitrarily selectable, e.g. 100 kLux)

Output:.....4..20mA (active) or 0-10V (linearised)

Ambient temperature:.....-10...+50 °C

Electrical connection:.....0.14 - 1.5 mm², via terminal screws on circuit board

Measuring error:.....< ± 10% of final value

Temperature drift:.....< ± 5% of final value / 10K

Enclosure:.....plastic, material polyamide, 30% glass-globe-reinforced, with quick-locking screws, colour pure white (similar: RAL 9010)

Dimensions:.....72 x 64 x 39.4 mm

Installation:.....on-wall

Cable gland:.....M16, including strain relief

Protection class:.....III (according to EN 60730)

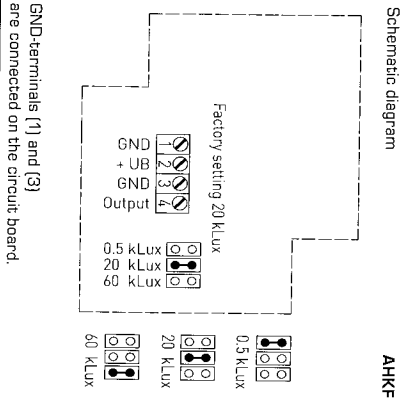
Protection type:.....IP 65 (according to EN 60529)

Standards:.....CE conformity,

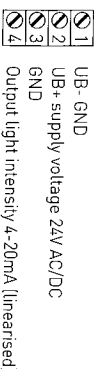
electromagnetic compatibility according to EN 61326+A1+A2,

EMC directive 2004/108/EC

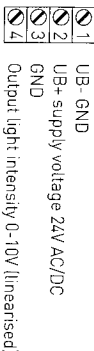
Schematic diagram



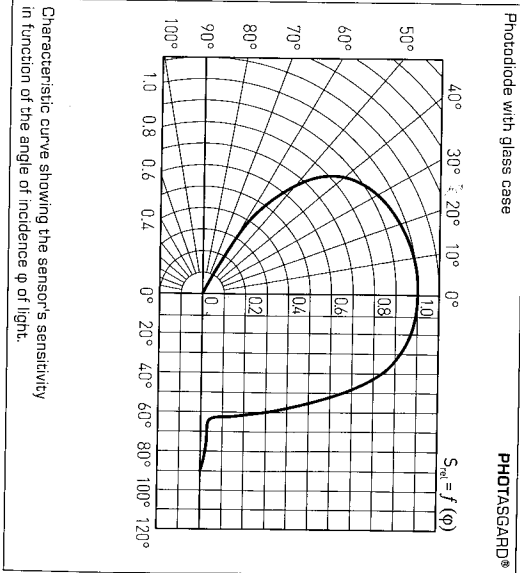
Connecting diagram



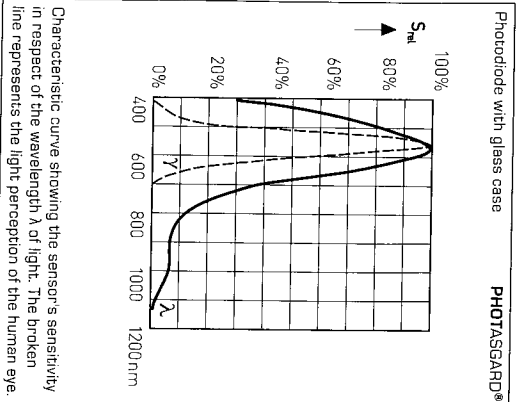
Connecting diagram



Photodiode with glass case



Photodiode with glass case



The sensor used in PHOTASGARD® light intensity sensors (photodiode with glass case) was specifically adapted to the sensitivity of the human eye. Its greatest sensitivity is in the range of 350 nm to 820 nm. Therefore with its special filter the sensor is predestined for exposure measurement of daylight and / or for measuring artificial light of high colour temperature (similar to sunlight). The case of the sensor is hermetically tight, the vision panel is protected by a glass plate.

Type/WG1	Measuring Range	Output
AHKF-0.5/1/20 I	Light Intensity (selectable)	Light Intensity
AHKF-0.5/1/20 U	0..500 Lux / 20 kLux / 60 kLux	4...20mA (linearised)
Optional:	0..500 Lux / 20 kLux / 60 kLux	0-10V (linearised)
	Other individual measuring ranges	

General notes

- The sensor is mounted inside the enclosure cover. Make sure not to damage the cable / sensor when opening enclosure.
- If necessary for mounting and / or electric wiring, unplug connector carefully and plug it back on again in the same position after mounting and electric wiring.
- Protect sensor surface against any kind of dirt and / or damage.
- Scratches, dirt, and also partial shading falsify the measuring result.
- Applying overvoltage will destroy the device.
- If this device is operated beyond the specified range, all warranty claims are forfeited.

Our "General Terms and Conditions for Business" together with the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry" (ZVEI conditions) including supplementary clause "Extended Retention of Title" apply as the exclusive terms and conditions.

In addition, the following points are to be observed:

- These instructions must be read before installation and putting in operation and all notes provided therein are to be regarded!
- Devices must only be connected to safety extra-low voltage and under dead-voltage condition. To avoid damages and errors the device (e.g. by voltage induction) shielded cables are to be used, laying parallel with current-carrying lines is to be avoided, and EMC directives are to be observed.
- This device shall only be used for its intended purpose. Respective safety regulations issued by the VDE, the states, other control authorities, the TUV and the local energy supply company must be observed. The purchaser has to adhere to the building and safety regulations and has to prevent perils of any kind.
- No warranties or liabilities will be assumed for defects and damages arising from improper use of this device.
- Consequential damages caused by a fault in this device are excluded from warranty or liability.
- These devices must be installed by authorised specialists only.
- The technical data and connecting conditions of the mounting and operating instructions delivered together with the device are exclusively valid. Deviations from the catalogue representation are not explicitly mentioned and are possible in terms of technical progress and continuous improvement of our products.
- In case of any modifications made by the user, all warranty claims are forfeited.
- This device must not be installed close to heat sources (e.g. radiators) or be exposed to their heat flow. Direct sun irradiation or heat irradiation by similar sources (powerful lamps, halogen spotlights) must absolutely be avoided.
- Operating this device close to other devices that do not comply with EMC directives may influence functionality.
- The device must not be used for monitoring applications, which solely serve the purpose of protecting persons against hazards or injury, or as an EMERGENCY STOP switch for systems or machinery, or for any other similar safety-relevant purposes.
- Dimensions of enclosures or enclosure accessories may show slight tolerances on the specifications provided in these instructions.
- Modifications of these records are not permitted.
- In case of a complaint, only complete devices returned in original packing will be accepted.

These instructions must be read before installation and putting in operation and all notes provided therein are to be regarded!

SUPPLY VOLTAGE:

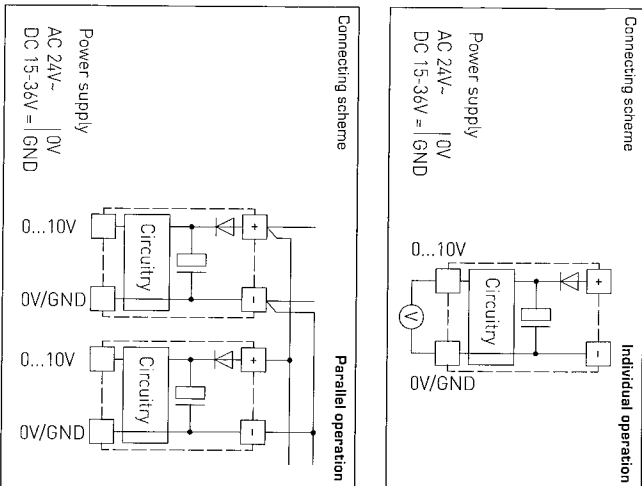
For operating voltage reverse polarity protection, a one-way rectifier or reverse polarity protection diode is integrated in this device variant. This internal one-way rectifier also allows operating 0 – 10V devices on AC supply voltage.

The output signal is to be tapped by a measuring instrument. Output voltage is measured here against zero potential (0V) of the input voltage! When this device is operated on **DC supply voltage**, the operating voltage input UB+ is to be used for 15..36V DC supply and UB- or GND for ground wire!

When several devices are supplied by one 24V AC voltage supply, it is to be ensured that all "positive" operating voltage input terminals (+) of the field devices are connected with each other and all "negative" operating voltage input terminals (-) (= reference potential) are connected together (in-phase connection of field devices). All outputs of field devices must be referenced to the same potential!

In case of reversed polarity at one field device, a supply voltage short-circuit would be caused by that device. The consequential short-circuit current flowing through this field device may cause damage to it.

Therefore, pay attention to correct wiring!



PHOTASGARD® AHKF

S+S REGELTECHNIK



Maßzeichnung
Dimensional drawing
Plan codé
Таблицный чертёж

AHKF

