

Outdoor light intensity sensors / twilight sensors with multi-range switching and active output

The light intensity sensor / twilight sensor **PHOTASGARD® AHKF** with six switchable measuring ranges (six 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-dependant constant light control, as light intensity or twilight sensor and as sun protection control to avoid unnecessary room heating. Therefore it minimizes your variety of types and stock keeping 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. With its special filter, the sensor is therefore ideally suited for measuring exposure to daylight and / or for measuring artificial light of high colour temperature (similar to sunlight).

TECHNICAL DATA

Power supply:	24V AC (±20%); 15...36V DC for U variant 15...36V DC for I variant, depending on working resistance, residual ripple stabilised ±0.3V
Working resistance:	$R_a(\text{ohm}) = (U_b - 14 \text{ V}) / 0.02 \text{ A}$ for I variant
Load resistance:	$R_L > 5 \text{ kOhm}$ for U variant
Power consumption:	< 1 W at 24 V DC; < 2 VA at 24 V AC
Sensor:	light sensor (see beginning of this chapter)
Measuring ranges:	multi-range switching (via DIP switches) with 6 switchable measuring ranges 0...500 Lux / 1 kLux / 2 kLux / 5 kLux / 20 kLux / 60 kLux (other individual ranges optional, e.g. 100 kLux)
Output:	4...20 mA or 0-10 V (2- or 3-wire connection)
Measuring error:	< 5 % of final value
Ambient temperature:	-30...+70 °C
Electrical connection:	0.14 - 1.5 mm², via terminal screws on circuit board
Enclosure:	plastic, UV-stabilised, material polyamide, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), enclosure cover is transparent!
Enclosure dimensions:	72 x 64 x 43.3 mm (Tyr 1)
Cable gland:	M16x1.5, including strain relief, exchangeable, max. inner diameter 10.4 mm
Installation:	on-wall
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61 326, EMC directive 2014 / 30 / EU



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Measuring ranges (selectable)	DIP 1	DIP 2	DIP 3	DIP 4
0...500 Lux	OFF	OFF	OFF	—
0... 1 kLux	ON	OFF	OFF	—
0... 2 kLux	OFF	ON	OFF	—
0... 5 kLux	ON	ON	OFF	—
0... 20 kLux	OFF	OFF	ON	—
0... 60 kLux	ON	OFF	ON	—

Connecting diagram

AHKF-U

- 1 UB+ supply voltage 24V AC/DC
- 2 Output light intensity 0-10V in lux
- 3 UB- GND

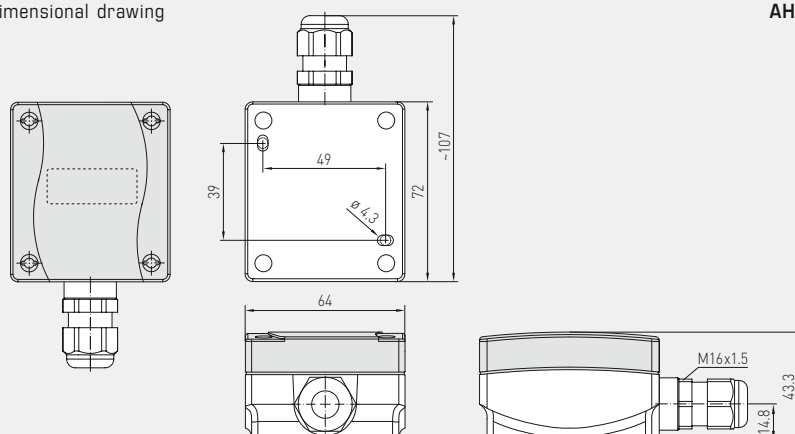
Connecting diagram

AHKF-I

- 1 UB+ supply voltage 24V AC/DC
- 2 Output light intensity 4...20mA in lux

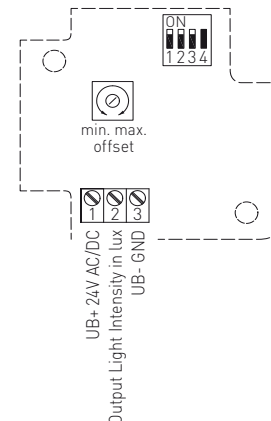
Dimensional drawing

AHKF



Schematic diagram

AHKF



PHOTASGARD® AHKF – Outdoor light intensity sensors / twilight sensors

Type / WG01	Measuring Range Light Intensity (adjustable)	Output Light Intensity	Item No.	Price
AHKF				
AHKF-I	0...500 Lux / 1 / 2 / 5 / 20 / 60 kLux	4 ... 20 mA	1601-1112-1000-000	85,00 €
AHKF-U	0...500 Lux / 1 / 2 / 5 / 20 / 60 kLux	0-10V	1601-1111-1000-000	85,00 €
Extra charge:	Other individual measuring ranges optional, e.g. 100 kLux			on request