

Wall-mounted Motion Sensors (180 degrees), BMU 180/2K

Introduction



This wall-mounted motion sensor is an electronic on/off switch. It employs a passive infrared detector to sense invisible, moving infrared radiation and then triggers a switching action. *Suitable primarily for resistive loads (other clearances to follow)*

A selector switch at the front of the sensor module provides easy selection of **3 functional modes**:

“Always-On” (I), “Always-Off” (0) and “Automatic” (A) – no tools or disassembly of the sensor is required.

The built-in twilight sensor lets you define an **ambient threshold light level** above which the motion sensing is deactivated (so your lights will not switch on in bright daylight). This threshold can be adjusted continuously to suit the requirements of your application.

The **delay time** (time before the sensor switches off when there is no more movement) can be adjusted between approx. 5 seconds and 320 seconds. Any movement retriggers this time.

Technical Data

Power Supply	230V AC +/- 10%, 50-60Hz
Switching Capacity	min 40W, max 400W, suitable primarily for resistive loads <i>(other clearances to follow)</i>
Power Consumption	Approx. 1 Watt
Delay Time	Approx. 5 seconds to 320 seconds (at 50 Hz). Turn left to shorten the delay time. At 60 Hz power supply the delay times are shorter.
Threshold light level	Continuous adjustment. To lower the threshold, turn to the left.
Observation area	1 Level, approx. 180 degrees
Range	approx. 6m
Operating temperature	0°C to +50 °C
Protection Grade	IP 20
Fuse	T 1.6A

Mounting Advice

Please comply to the relevant regulations and guidelines for the installation of electrical products (by qualified personell only). Before you begin the installation make sure that the mains voltage is switched off.

The sensor needs to be installed in a fixed position as any own movement is sensed like an external motion. By covering parts of the lense the observation angle can be reduced. The highest range is achieved with motions perpendicular to the sensor.

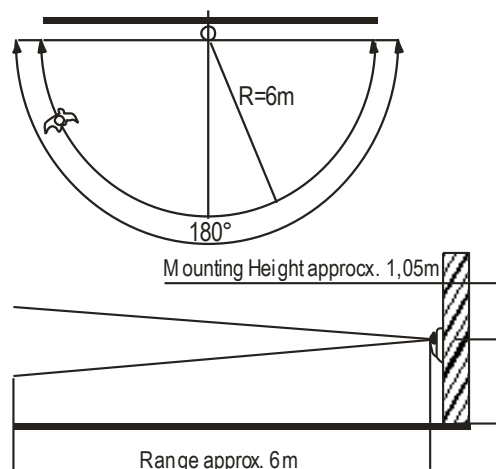
Recommended height for best performance is in approx. 1m to 1,7m height along a wall.

Please note: Infrared light does not permeate through hard matter (e.g. glass). Please ensure direct visibility.
Take care not to apply any direct pressure to the lense. When the lense is damaged exposure to dangerous voltage can occur.

When adjusting the lightlevel threshold please consider the intensity of the artificial illumination. The threshold should be **higher** than the light level when there is only artificial light because otherwise the lamps will be switched by the ceiling lights. The sensor should not be mounted in the direct light of the luminaire.

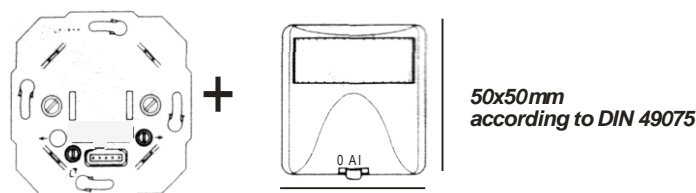
When switching fluorescent lamps please set the delay time to maximum. Please also check the suitability of the fluorescent lamp gear and electronic transformers before use with an motion sensor (starting behaviour / preheat feature, permitted number of switching cycles, etc.).

Range and Observation Area



Installation Instructions

Power Element + Sensor Element with selector switch “0-A-I”



The sensor consists of two parts:

- Power Element
- Sensor Element

- 1.) **Switch off mains power, double check!**
- 2.) Connect power component to wiring in the installation opening in the wall:
 - a. Hot wire to terminal L
 - b. Switched hot wire (consumer) to terminal ←
- 3.) Mount the power component into the installation opening.
- 4.) Select the required delay time and light level threshold
- 5.) Clip on the sensor element and the frame.
- 6.) Place selector switch into position “A”
- 7.) Switch mains power supply on again.

Following the correct installation and the switching-on of the power supply, the sensors wil switch on for the preset time and installation is ready for operation. The same thing happens when there was an interruption of the mains power supply. Delay time and light

threshold might need fine-tuning later. The adjustment elements both have a noticeable stop. Do not turn any further.

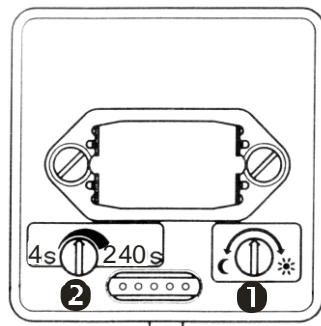
Adjustments

On the rear side of the sensor element there are two adjustment screws for light threshold level (1) and for delay time (2).

Daytime operation : turn right

Night time operation: turn left

With the rotating knob (2), the delay time can be adjusted between 5 seconds to 320 seconds. Should a movement be detected during this time, the delay time will be retriggered.



Trouble Shooting

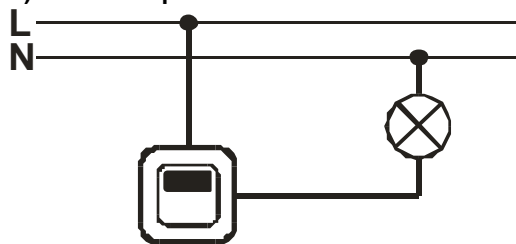
Symptom	Possible Cause	Remedy
Sensor does not switch on	No mains power supply available / connected	Check power supply.
Light remains off constantly	Lamp is broken	Change lamp
	There is an additional switch that is not switched on	Turn the additional switch on
	Selector switch is on "CONSTANT OFF" Position ("0")	Change to position "A" or "I"
	Light level threshold set too dark in a bright room	Adjust knob (1) to brighter setting.
	A closing switch was used instead of an opener.	Change switch
	Lens is very dirty or covered	Clean or clear the lens
	Electrical wiring is damaged	Check electrical wiring
Light is always on	There is always movement in the observation area	Check for infrared sources and remove them
	Sensor is bypassed by another other switch	Check switch
	Selector switch is on "I"	Set to "A" or "I"
Light switches on and off unintendedly	Reset after power supply interruption	Normal procedure, no action required
	Bright sunlight hits the sensor directly	Cover lens or choose different sensor location
	Warm air moves by, draft	Stop draft or choose different location

Care and Maintenance

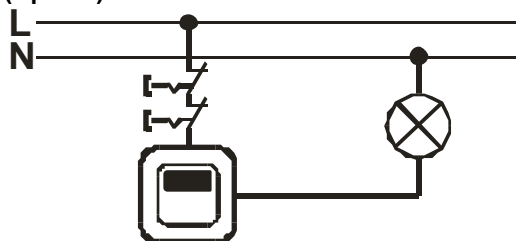
Dirt on the sensor lense can reduce the observation range. Clean the lens occasionally, do not use chemical detergents.

Wiring Examples

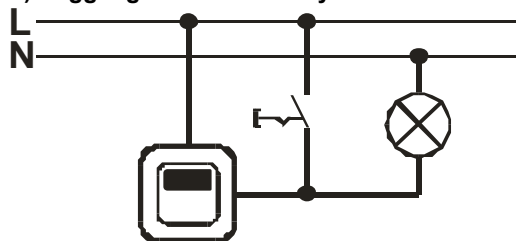
1.) Basic Setup:



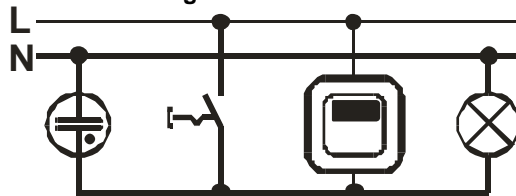
2.) Switching sensor on through several switching elements (Opener):



3.) Toggling between "Always-On" & Motion Sensing:



4.) Toggling between "Always-On" & Motion Sensing and Feedback through control switch:



5.) Parallel switching of several sensors:

