Helvar — freedom in lighting

Flush-Mount PIR Switching Sensor (SF-PIR-SW-01)

The SF-PIR-SW-01 is a PIR-triggered switch suitable for mounting into a ceiling void. It allows simple selection of presence or absence detection to control both lighting and nonlighting loads.

Configurable for any room occupancy style, it switches on the connected load if the area is occupied and the illuminance is lower than the specified level (with the photocell activated).

Similarly, it switches off the load if the area is unoccupied for the set time.

In absence mode, the unit can also be operated from a mains-rated retractive wall switch.

The SF-PIR-SW-01 has the following main elements:

- A mode selector with the following options:
  - Presence: auto on, auto off
  - Absence: manual on, auto off
- An illuminance threshold adjuster (10 lx to 1000 lx)
- A time adjuster (up to 40 min).

By setting the illuminance threshold adjuster to the maximum point, the unit is also suitable for nonlighting loads.

Key Features

- Easily selectable presence or absence detection.
- Provides load control in response to changes in room occupancy and illuminance.
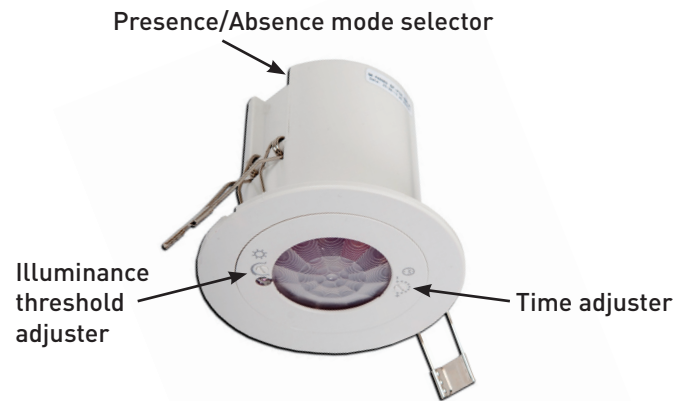- Simple out-of-the-box operation.
- Energy saving.

Operation

Presence Mode (Default Mode)

Out of the box, the time-out adjuster is set to 10 s, and the illuminance threshold adjuster is set to maximum (photocell inactive). With the illuminance threshold adjuster set to maximum, the sensor will always switch on the connected load when movement is detected. There are nine time periods available from the time-out adjuster (from 10 s to 40 min).
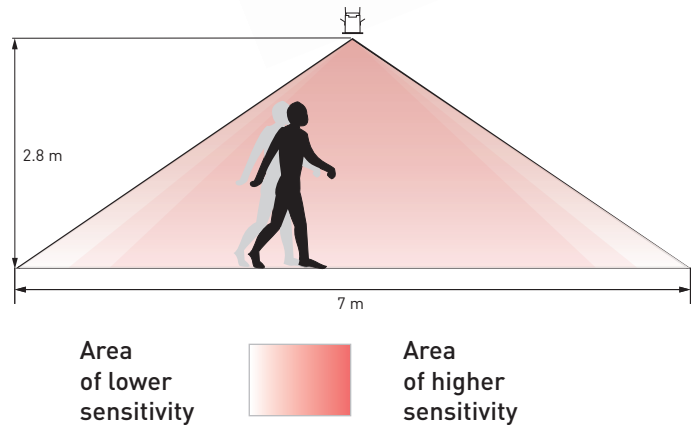
Multiple sensors can be connected to the same load in order to extend the detection zone (see 'Multiple sensors' on page 2).

Absence Mode

With the mode selector set to absence detection mode, pressing a retractive switch connected to the sensor will switch on the connected load. Then, if no presence is detected for the selected time period, or if the retractive switch is pressed shortly, the load will be switched off.
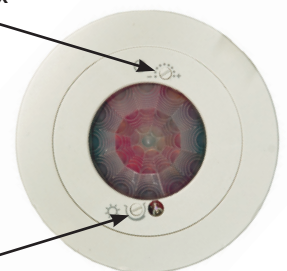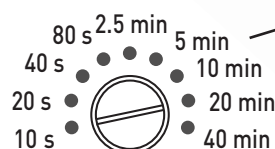

Presence/Absence mode selector

Illuminance threshold adjuster

Time adjuster

Detection Pattern

2.8 m

7 m

Area of lower sensitivity

Area of higher sensitivity

Illuminance and Time Settings

Illuminance threshold adjuster

1000 lx

Photocell inactive

10 lx

Time adjuster

80 s 2.5 min 5 min
40 s 10 min
20 s 20 min
10 s 40 min

Technical Data

Electrical data

External power:	Terminal block Wire section: 0.5 mm² – 2.5 mm² solid or stranded
Cable rating:	All cables must be mains rated.
Mains supply:	230 VAC, 50 Hz
Loads:	6 A resistive (e.g. heater) 4 A incandescent 3 A fluorescent ballast / LED driver 1 A inductive (e.g. fan/motor) Mains LED lamps: Equivalent to 1000 W halogen load Min. load: 2 W resistive, suitable for most energy saving lamps, LEDs and emergency fittings.
External protection:	6 A maximum (MCB or fuse)
Illuminance:	10 lx to 1000 lx and maximum (photocell inactive) at the PIR switch.

Sensors

Presence detector:	PIR (Passive InfraRed)
Detection range:	360° with up to 7 m diameter when mounted at a 2.8 m ceiling height
Time:	10 s to 40 min

Mechanical data

Mounting hole diameter:	75 mm
Bezel diameter:	85 mm
Recommended clearance depth (incl. 50 mm for cabling):	80 mm (without protective cover) 100 mm (with protective cover)
Material (casing):	Flame-retardant polycarbonate
Finish / Colour:	Matt / White RAL9003
Weight:	100 g
IP code:	IP20

Operating conditions

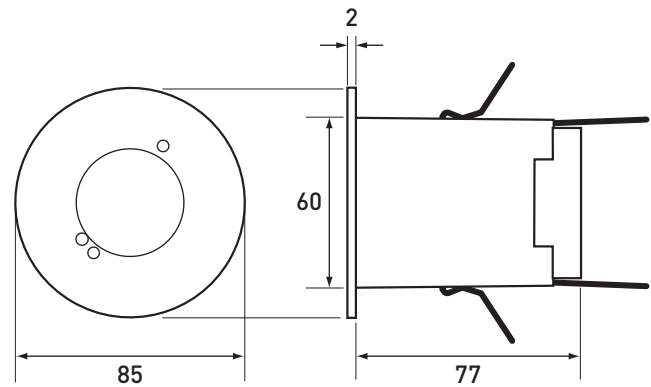|	
Ambient temperature:	+10 °C to +35 °C *Note: The temperature difference between the detection target and the background must be at least 4 °C.*
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	–10 °C to +70 °C

Conformity and standards

EMC emission:	EN60669-2-1:2004 inc A12:2010
EMC immunity:	EN60669-2-1:2004 inc A12:2010
Safety:	EN60669-2-1:2004 inc A12:2010
Environment:	Complies with WEEE and RoHS directives.

Version information

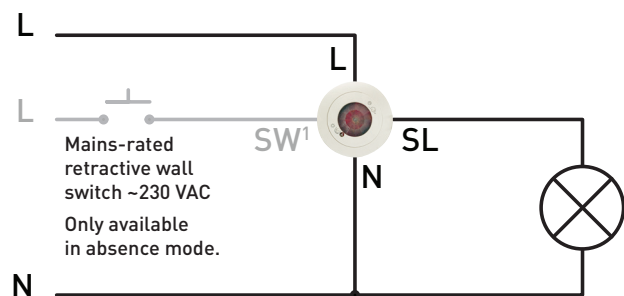|	
Hardware version:	Rev. 1

Dimensions (mm)

Hole diameter: ø75 mm

Connections

Single sensor

L: Live in
N: Neutral in
SW[1]: Switch input (only in absence mode)
SL: Switched live

Multiple sensors
(Presence detection mode only)