Data sheet

SENSOTEC Sensor SR

110058475   SENSOTEC Sensor SR HF2
110058476   SENSOTEC Sensor SR PIR

| HF2 | PIR |

The HF2 is a radar sensor designed for built-in applications. Detection takes place through glass and non-metallic materials so that the modules can be used inside luminaires without any problems.

Small. Flat. Compact. Unobtrusive presence detector. 360° passive infrared sensor with a presence range of 4x4m (presence and radial) or 6x6 (tangential). With patented Fresnel lens.

Function description

We offer two of our most innovative sensors for direct communication with the Philips SR interface: The small and compact PIR sensor with its patented Fresnel lens and the high-resolution HF2 high-frequency sensor. The HF sensor module, designed for built-in applications, is equipped with technology from STEINEL. Detection takes place through glass and non-metallic materials so that the module can be easily installed inside lights, mirror cabinets, etc.

In addition, a special lens with an improved presence and motion detection range has been developed for the PIR sensor. The connection is made in the simplest possible way directly via the Philips XITANIUM SR interface. Additional control units or major installation work are not required. It is conveniently operated by remote control.

- Constant-lighting control
- Dimming of main and/or basic light
- Can be remotely controlled

Benefits

- Can be connected directly to Philips XITANIUM SR
- HF can be integrated behind non-metallic luminaire covers
- User-related remote control (RC) for a better overview: RCS2 service remote control and RC4 user remote control
- Selectable constant-lighting control with light-level teach-in function (Teach)
- Optional control of main and basic light
- Can be connected without the need for tools, no major installation work

Further information on the individual sensors

Sensor technical specifications

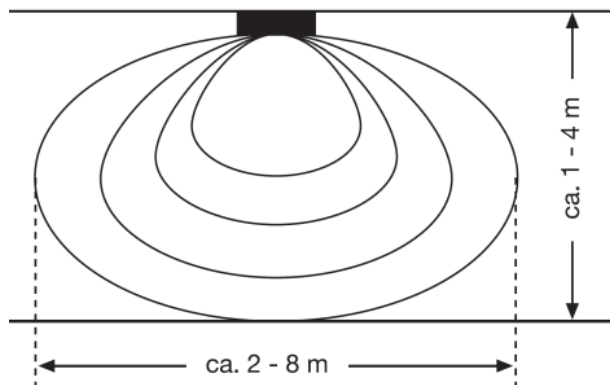|	Sensor SR HF2	Sensor SR PIR
Article number	110058475	110058476
Type	9007	9006
Dimensions	52 × 40.5 × 29.2mm Hole spacing 61mm 3D data available online	46.4 × 20.4 × 18.5mm Hook distance 35mm 3D data available online
Features	Motion detector Light sensor Feedback indicator Parameterization interface	Motion detector Light sensor Feedback indicator Parameterization interface
Sensor technology	High-frequency technology	Passive infrared technology
Transmitter power	1 - 2mW	-
Transmission frequency	5,8GHz	-
Light measurement range	2 - 2000lx	2 - 2000lx
Angle of coverage	360° with 160° angle of aperture	360° with 90° angle of aperture
Reach	Max. Ø 8m for mounting height 4m	Max. 6 × 6m for mounting height 3m
Connection	0.34 - 0.75mm^2	0.34 - 0.75mm^2
Current consumption	12mA	6mA
IP rating:	IP20	IP20
Protection class	III	III
Temperature range	–20 to +60°C (tc +60°C)	–20 to +60°C (tc +60°C)
Approval marks / Conformity	CE	CE

Dimensional drawings
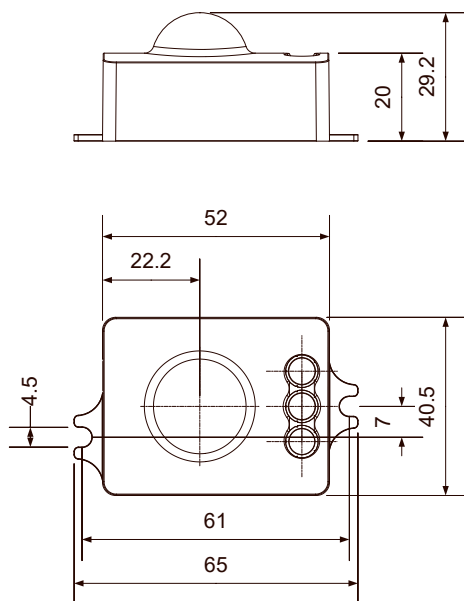
Sensor SR HF2

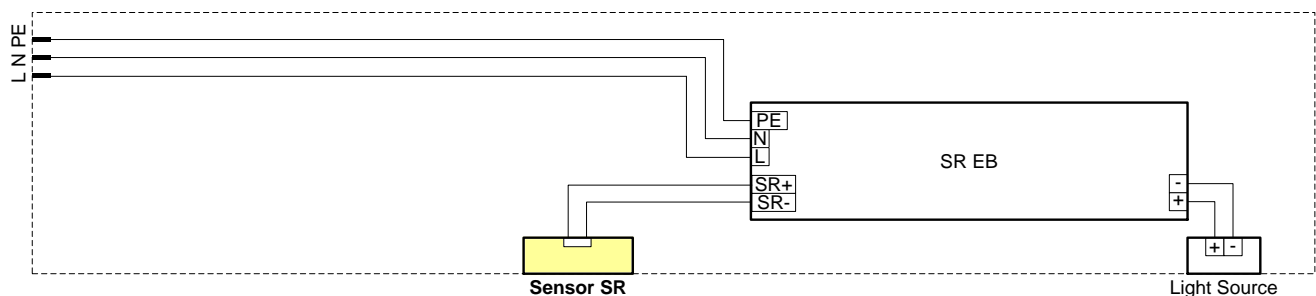Sensor SR PIR

Dimensional drawings

Sensor SR HF2

ca. 1 - 4 m

ca. 2 - 8 m

Sensor SR PIR

ca. 1 - 3 m

ca. 2 - 6 m
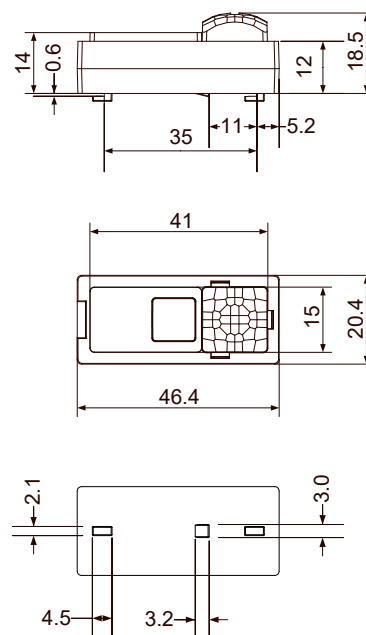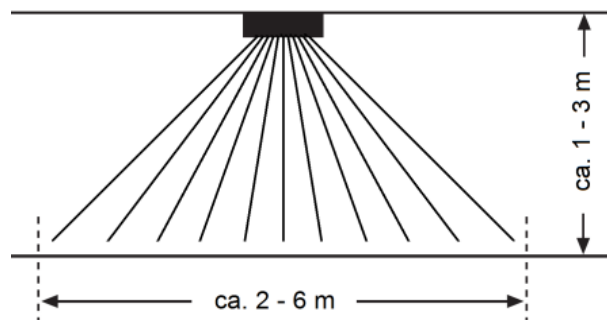
Wiring

Luminaire with SR-capable ballast

Sensor SR

SR EB

Light Source

Safety precautions

- Electrical devices must only be assembled and installed by qualified electricians.
- Fire hazard. The maximum permissible load must not be exceeded.
  Risk of electric shock. Disconnect before attempting work on the unit or load. Take into account all circuit breakers supplying dangerous voltages to the unit or load.
- Risk of electric shock. Before installing the sensor, check the enclosure to make sure it is not damaged. Never open the enclosure.
- Keep button cell batteries away from children. Immediately seek medical advice if button cell batteries are swallowed.
- Explosion hazard. Do not recharge batteries. Do not throw batteries into fire.
- The sensor is not suitable for use in burglar alarm systems or other alarm equipment.

Installation benefits

- Easily clips onto the enclosure (PIR).
- Simple screw connection into the housing (HF).
- Connection via a 2-core terminal.
- Protected against polarity reversal.
- Extremely compact size.
- The sensor is supplied with power via the two-wire SR interface.
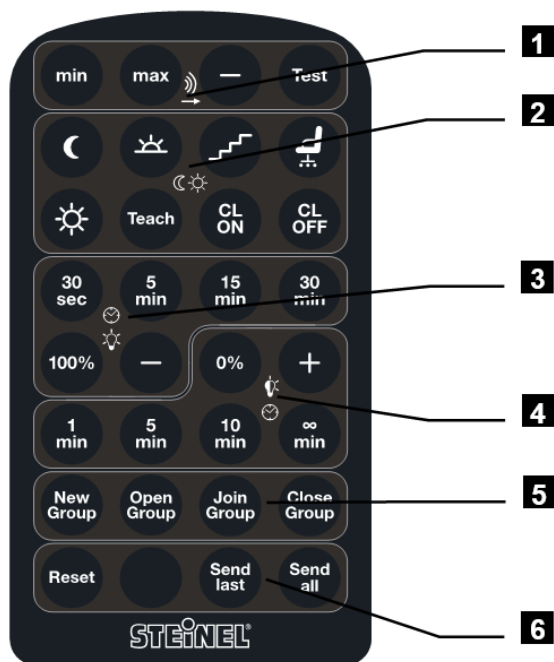
Installation advice HF

- For indoor use only.
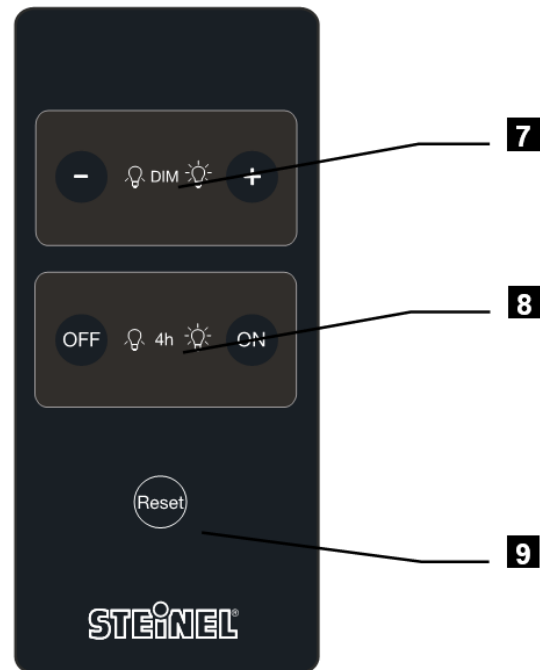- Pay attention to luminaire materials (interference, reflections, attenuation).

Installation advice PIR

- Provide an aperture 15mm wide × 41mm long.
- Suitable for a material thickness of 0.5 - 2mm.
- The sensor must have an unobstructed line of vision to the object being detected.

Remote controls

SENSOTEC Remote Control RCS2
(service remote control)

RC4
(user remote control)

Description of buttons / functions

1 Reach setting / test mode
Reach can be set directly to minimum or maximum ("min, max" buttons) and, if necessary, reduced in 10% steps ("-" button). In test mode ("Test" button"), reach can be checked with a shortened stay-ON time of 5 seconds. When selecting test mode, daylight operation is activated and basic light switched OFF. The mode is terminated manually by re-pressing the "Test" button, otherwise automatically after 2 minutes.

2 Activation basis / constant-lighting control
When constant-lighting control is deactivated ("CL OFF" button), any movement / human presence will only switch the main light ON if ambient light is below the selected ambient light level thresholds ("moon, twilight, stairs, office" buttons, approx. 2, 40, 100, 300 lx). If the luminaire is currently providing basic light or if daylight operation is activated ("Sun" button), it switches directly to main light. It is also possible to teach in the current ambient light level ("Teach" button). If constant-lighting control is activated ("CL ON" button), specific light-level settings can be programmed for controlling lighting ("Moon, Twilight, Stairs, Office" buttons, approx. 500, 600, 700, 800 lx). Teaching brightness is more practical and provides greater precision. To do this, the chosen level of brightness must be selected via main light level or light adjustment before starting the teaching cycle ("Teach" button).

3 Main light level / stay-ON time
The main light level can be set directly to maximum ("100%" button) and, if necessary, reduced in 5% steps ("-" button) down to a minimum main light level of 55%. The main light stay-ON times can be set to between 30 seconds and 30 minutes ("30 sec, 5 min, 15 min, 30 min" buttons). Main light is activated in response to movement if the activation condition is met. Once the stay-ON time has elapsed, the light returns to basic light (if this is activated) or the luminaire switches OFF if basic light is deactivated.

4 Basic light level / stay-ON time
The basic light level can be set directly to minimum ("0%" button) and, if necessary, increased in 5% steps ("+" button) to a maximum basic light level of 45%. At 0% basic light, basic light is permanently deactivated. The basic light stay-ON times can be set to between 1 minute and 10 minutes ("1 min, 5 min, 10 min" buttons). It is also possible to activate basic light so that it stays on all the time ("∞ min" button).

5 Grouping
No function

6 Parameter reset
If necessary, the current parameter set can be reset to factory settings ("Reset" button on SENSOTEC remote control RCS2).

7 Light adjustment
If necessary, the current light level can be adjusted in 5% steps ("DIM +, -" buttons). The newly adopted value will be maintained until the next time the luminaire is switched ON/OFF.

8 Override mode
Override mode ("4 h ON, OFF" buttons) deactivates normal sensor operation for 4 hours. When override mode is selected for permanent lighting, the luminaire permanently assumes the configured main-light level. Permanently OFF switches the luminaire OFF permanently and in spite of any movement activity. This, for example, is required during presentations. Light can also be adjusted in override mode.

9 State reset

Although the user remote control is unable to clear parameters intentionally, it can be used to terminate the current operating state, return to sensor mode and assume the initial state = "no movement / light OFF" ("Reset" button on RC4 remote control.

Feedback indicator flash pattern

	Meaning	Application
Short flash (1 x 100 ms)	"Confirmation"	Remote control command successfully processed
Double flash (2 x 100 ms)	"Completed"	State has been reset / teach cycle completed / test mode terminated
Dreifaches Blinken (3x100ms)	„Reset"	Parameters have been reset
Langes Aufblinken (1x700ms)	"Fault"	Maximum basic light already reached / minimum main light already reached / minimum reach already reached

Relationship between power consumption and light perception

Light level is selected on the basis of the way in which it is perceived. The following table of values shows the relationship between possible basic / main light settings and the relative output in percent.

Remark: The dimming curve of the driver should be set to logarithmic.

Basic light level setting	Relative output		Main light setting	Relative output
0 %	0.0 %		55 %	11 %
5 %	1.0 %		60 %	15 %
10 %	1.3 %		65 %	18 %
15 %	1.7 %		70 %	24 %
20 %	2.2 %		75 %	29 %
25 %	2.7 %		80 %	38 %
30 %	3.5 %		85 %	48 %
35 %	4.3 %		90 %	61 %
40 %	5.7 %		95 %	76 %
45 %	7.1 %		100 %	100 %

Factory settings

	Sensor HF2	Sensor PIR
Reach	100%	100%
Switch-ON threshold	Office	Office
Constant-lighting control	deactivated	deactivated
Main light level	100%	100%
Main light stay-ON time	5min	5min
Basic light level	0%	0%
Basic light stay-ON time	1min	1min

Conformity / marks of conformity

CE R CERTIFIED

Note

As attenuation and reflections can cause a high-frequency sensor to behave differently in any luminaire, we cannot accept any liability for the sensor not working as expected in the particular luminaire it is being used in. However, we are able to provide accreditation. Please contact our OEM Account Manager to find out what assistance we can give you in designing the sensor module into a luminaire. The customer must also guarantee and take responsibility for the way in which the other components behave in the luminaire (lamp, ballast etc.).

This product data sheet provides no guarantee of qualities within the meaning of the statutory warranty provisions for the product described.