

## SENSOTEC Sensor DEXAL

110067680  
110067681

SENSOTEC Sensor DX HF2  
SENSOTEC Sensor DX PIR



### Function description

To permit direct communication with the DEXAL interface, we offer two of our best and most innovative sensors: the ED PIR sensor with its patented multi-segment sensor lens and the high-resolution HF2.

Designed for integrated applications, the HF sensor modules feature the latest technology from STEINEL. Capable of detecting movement through glass and non-metallic materials, either module can be installed without a problem inside luminaires, mirror cabinets etc.

In addition, a special lens with an enhanced human-presence and movement detection zone has been developed for the PIR sensor.

Connection is extremely easily as it is made directly via the DEXAL interface. They require no additional control units nor do they involve any major installation work. It is operated via remote control for practical convenience.

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

### Benefits

- Can be connected directly to DEXAL
- HF2 can be integrated behind non-metallic luminaire covers
- User-specific remote controls (RC) for clearer organisation of control activities: service RCS2 and user RC4
- 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

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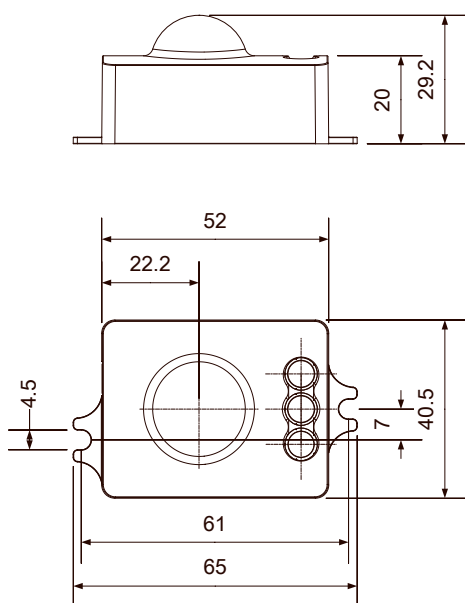
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### Sensor technical specifications

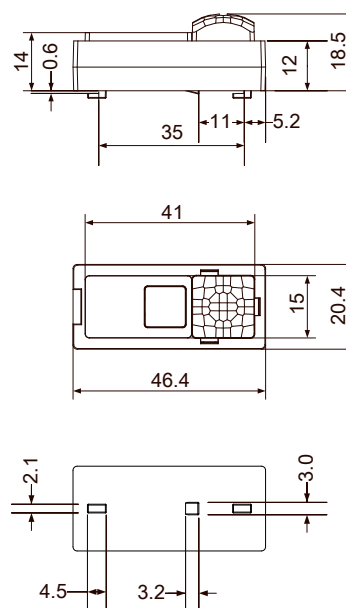
	Sensor DX HF2	Sensor DX PIR
Type	9007	9006
Dimensions	52 x 40.5 x 29.2 mm Hole spacing 61 mm	46.4 x 20.4 x 18.5 mm Hook spacing 35 mm
Features	Motion detector Light sensor Feedback indicator Configuration interface	Motion detector Light sensor Feedback indicator Configuration interface
Sensor technology	High-frequency technology Pin antenna	Passive infrared technology
Transmitter power	1 - 2 mW	-
Transmission frequency	5.8 GHz	-
Light measurement range	2 - 2000 lx	2 - 2000 lx
Angle of coverage	360° with 160° angle of aperture	360° with 90° angle of aperture
Detection zone for movement	At a mounting height of 4 m: max. Ø 8 m	At a mounting height of 3 m: max. 6 x 6 m
Connection	0.34 – 0.75 mm <sup>2</sup>	0.34 – 0.75 mm <sup>2</sup>
Current consumption	12mA	6mA
IP rating:	IP20	IP20
Protection class	III	III
Temperature range	-20°C to +60°C	-20°C to +60°C
Conformity	CE	CE

### Technical drawings

Sensor SR HF2



Sensor SR PIR



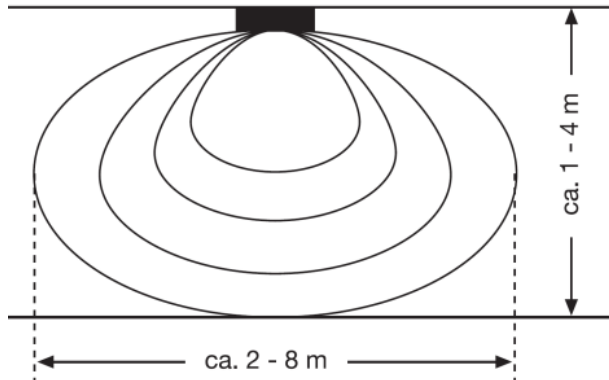
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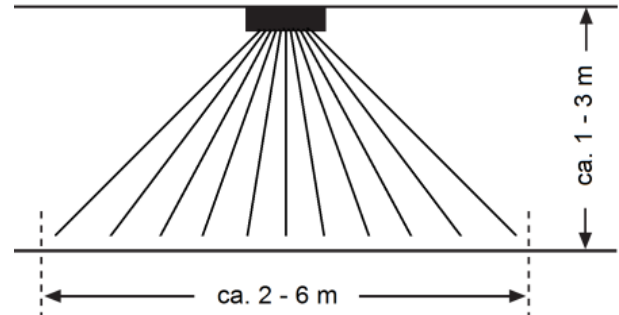
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### Detection zones

Sensor DX HF2

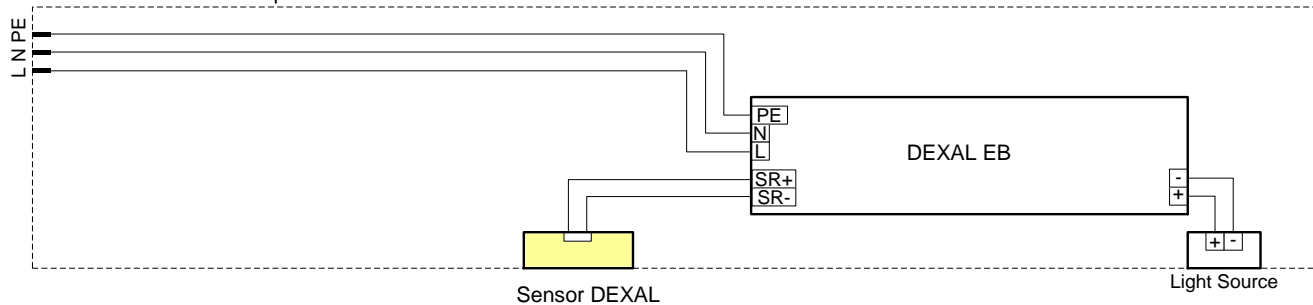


Sensor DX PIR



### Wiring

Luminaire with an DEXAL-capable ballast



### 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-core DALI bus line

### Installation advice HF

- For indoor use only.

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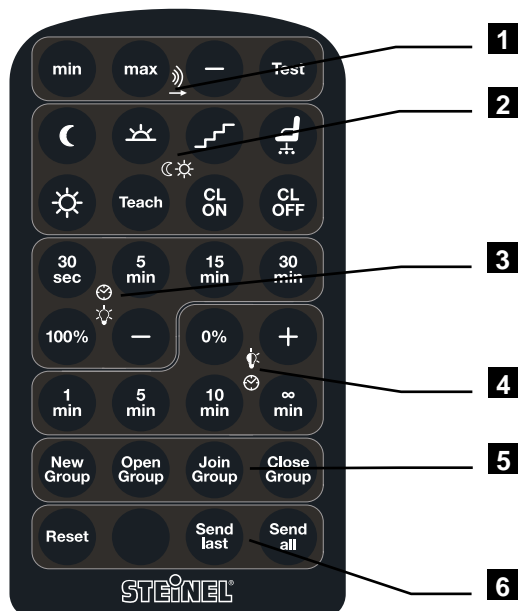
- Pay attention to luminaire materials (interference, reflections, attenuation).
- The connected electronic ballast must not exceed the specifications at any time.

assistance designin by STEINEL technical staff

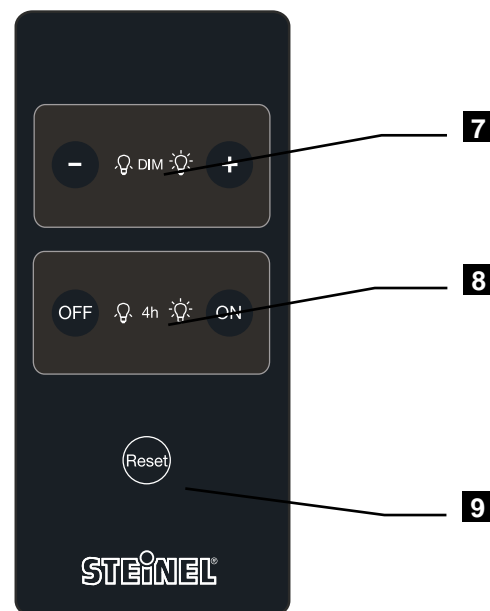
### Installation advice PIR

- Provide an aperture 15 mm wide × 41 mm long
- Suitable for a material thickness of 0.5 - 2 mm
- 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.

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### 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
Triple flash (3 x 100 ms)	"Reset"	Parameters have been reset
Long flash (1 x 700 ms)	"Fault"	Maximum basic light already reached / minimum main light already reached / minimum reach already reached

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### 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	5 min	5 min
Basic light level	0%	0%
Basic light stay-ON time	1 min	1 min

### Conformity / marks of conformity



### 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.