



Model Number

RaDec-M

Radar sensor

Features

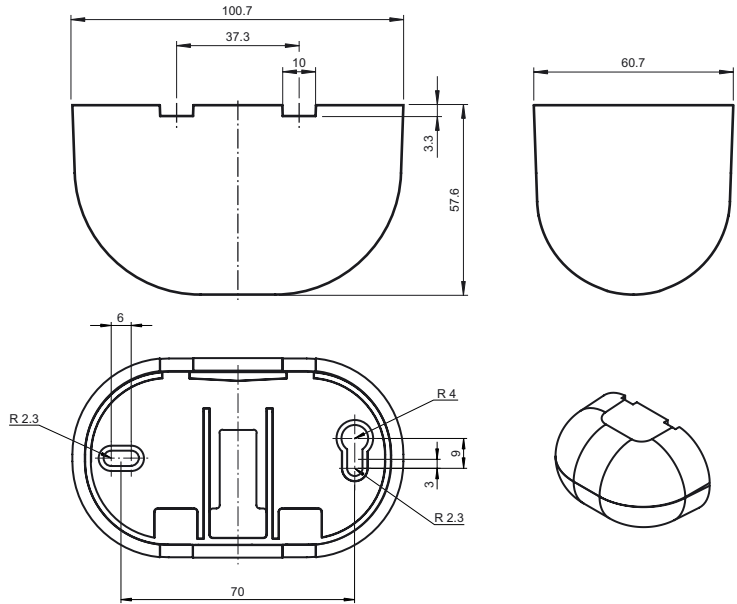
- Standard radar motion sensor with basic functionality
- Reliable detection of people and vehicles
- Simplest adjustment of the sensing range
- Wide range of sensitivity adjustment
- Wall and ceiling mountable

Product information

The RaDec series are affordable microwave motion sensors that combine all the key requirements of door manufacturers in a compact, stylish device that is both user-friendly and easy to install. An integrated micro-processor with 24 GHz microwave technology ensures high reliability even under difficult conditions. The sensor also offers two adjustable sensing areas, different operating modes, an installation height of 4 m, and operates in a temperature range of -20°C to +60°C.

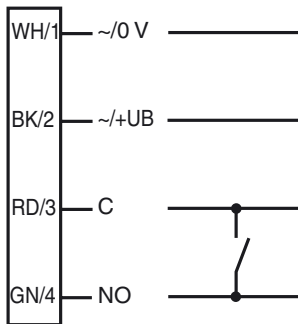
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Dimensions

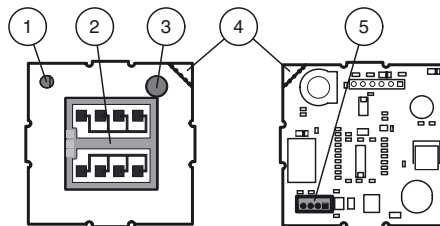


Electrical connection

Option:



Indicators/operating means



| | |
|---|--|
| 1 | LED red |
| 2 | Antenna |
| 3 | Potentiometer |
| 4 | Predetermined breakaway tab (Relay switching mode) |
| 5 | Connector |

Technical data

General specifications

| | |
|-----------------------------------|---|
| Sensing range | broad: 2000x 4500 mm (DxW) at 2200 mm mounting height and 30° tilt angle narrow: 4500x 2000 mm (DxW) at 2200 mm mounting height and 30° tilt angle |
| Function principle | Microwave module |
| Detection speed | min. 0.1 m/s |
| Setting angle | 0 ... 90 ° in 5 ° increments |
| Operating frequency | 24.15 ... 24.25 GHz K-Band |
| Operating mode | Radar motion sensor |
| Transmitter radiated power (EIRP) | < 20 dBm |

Functional safety related parameters

| | |
|--------------------------------|-------|
| MTTF _d | 970 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Indicators/operating means

| | |
|--------------------|------------------------|
| Function indicator | LED red |
| Control elements | potentiometer |
| Control elements | sensitivity adjustment |

Electrical specifications

| | | |
|------------------------|----------------|---------------------------------|
| Operating voltage | U _B | 12 ... 36 V DC , 12 ... 28 V AC |
| No-load supply current | I ₀ | ≤ 50 mA at 24 V DC |
| Power consumption | P ₀ | ≤ 1.7 W |

Output

| | | |
|--------------------|------------------------|-------|
| Switching type | NO/NC | |
| Signal output | relay | |
| Switching voltage | max. 48 V AC / 48 V DC | |
| Switching current | max. 0.5 A AC / 1 A DC | |
| Switching power | max. 24 W / 60 VA | |
| De-energized delay | t _{off} | 0.5 s |

Directive conformity

| | |
|--|---|
| Radio and telecommunication terminal equipment | |
| Directive 2014/53/EU | yes This device can be used in all countries within the European Union. Use in North America is not permitted. In other countries, all applicable national regulations must be observed. |

Ambient conditions

| | |
|-----------------------|--------------------------------|
| Operating temperature | -20 ... 60 °C (-4 ... 140 °F) |
| Storage temperature | -30 ... 70 °C (-22 ... 158 °F) |
| Relative humidity | max. 90 % non-condensing |

Mechanical specifications

| | |
|----------------------|---|
| Mounting height | max. 4000 mm |
| Degree of protection | IP54 |
| Connection | Connecting cable 2.5 m included with delivery |
| Material | |
| Housing | black polycarbonate (PC) |
| Mass | 130 g |
| Dimensions | 101 mm x 60 mm x 59 mm |

Suitable series

| | |
|--------|-------|
| Series | RaDec |
|--------|-------|

Approvals and certificates

| | |
|----------------|----------------|
| EAC conformity | TR CU 020/2011 |
|----------------|----------------|

Functional principle

Microwave sensors are microwave scanners that use the principle of the Doppler radar. The most important requirement for microwave detection is that the object to be detected is moving. Some applications include controlling automatic and industrial doors.

The microwave sensors emit microwaves of a defined frequency in order to detect people and large objects moving at speeds between 100 mm/sec and 5 m/sec. Stationary people or objects are not detected. Based on the latest 24 GHz technology with integrated microprocessor control, these sensors provide a high degree of reliability even in difficult operating conditions. The 24 GHz frequency, known as the 'K-band,' is reserved by CETECOM for this application area worldwide.

Typical applications

- Opening impulse sensors for automatic doors and industrial doors
- Monitoring approach areas to elevators
- Motion sensors for people and objects
- Impulse sensors for escalators

Detection area



Accessories

RaDec Weather Cap

Weather hood for radar sensors series RaDec

RMS/RaDec Ceiling Kit wh

Ceiling mount kit for radar sensors in the RMS and RaDec Series

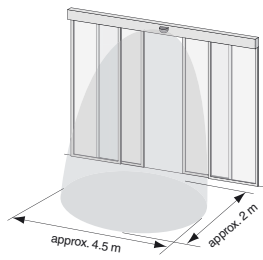
Other suitable accessories can be found at www.pepperl-fuchs.com

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Sensing Range

A narrower or wider sensing area can be achieved with turning the plug-in antenna.

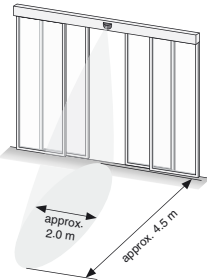
Wide:



Mounting height 2200 mm / tilt angle 30°
Antenna position:



Narrow:



Mounting height 2200 mm / tilt angle 30°
Antenna position:



The detection field can be swivelled in 10 steps from 0° ... 90°.

Sensitivity Settings

The sensitivity potentiometer can be used to adjust the size of the detection field.

