



Model Number

RaDec-M

Radar sensor

Features

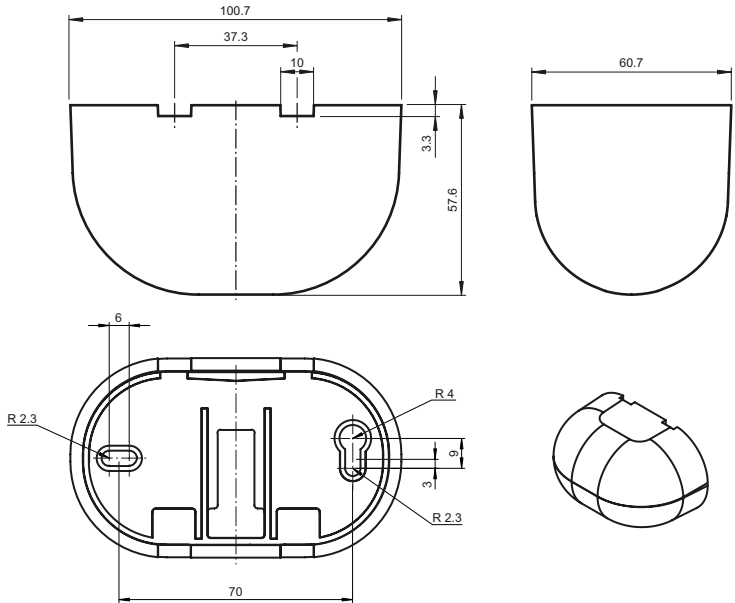
- Standard radar motion sensor with basic functionality
- Reliable detection of people and vehicles
- Simplest adjustment of the sensing range
- Wide range of sensitivity adjustment
- Wall and ceiling mountable

Product information

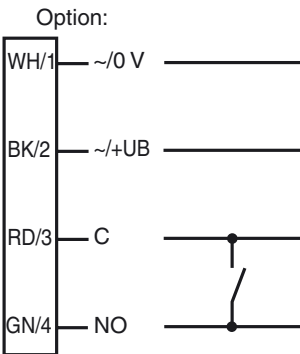
The RaDec series are affordable microwave motion sensors that combine all the key requirements of door manufacturers in a compact, stylish device that is both user-friendly and easy to install. An integrated microprocessor with 24 GHz microwave technology ensures high reliability even under difficult 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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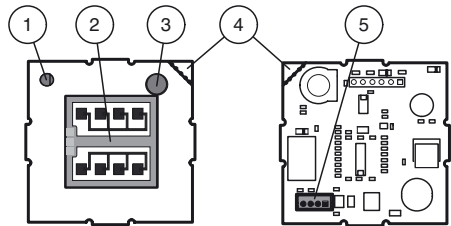
Dimensions



Electrical connection



Indicators/operating means



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

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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

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
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Approvals and certificates

CE conformity	2014/53/EU This device can be used in all countries within the European Union. In other countries, all applicable national regulations must be observed.
EAC conformity	TR CU 020/2011
FCC approval	No - Use in North America is not permitted.

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

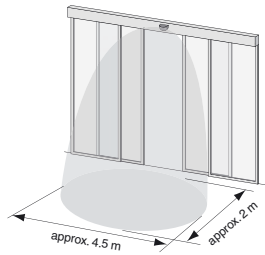
Ceiling mount kit for radar sensors in the RMS and RaDec Series

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

Sensing Range

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

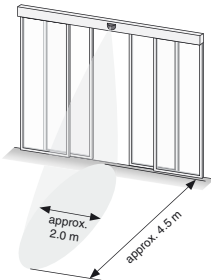
Wide:



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.

