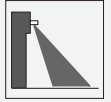


# Radar sensor

## RaDec-M-NA

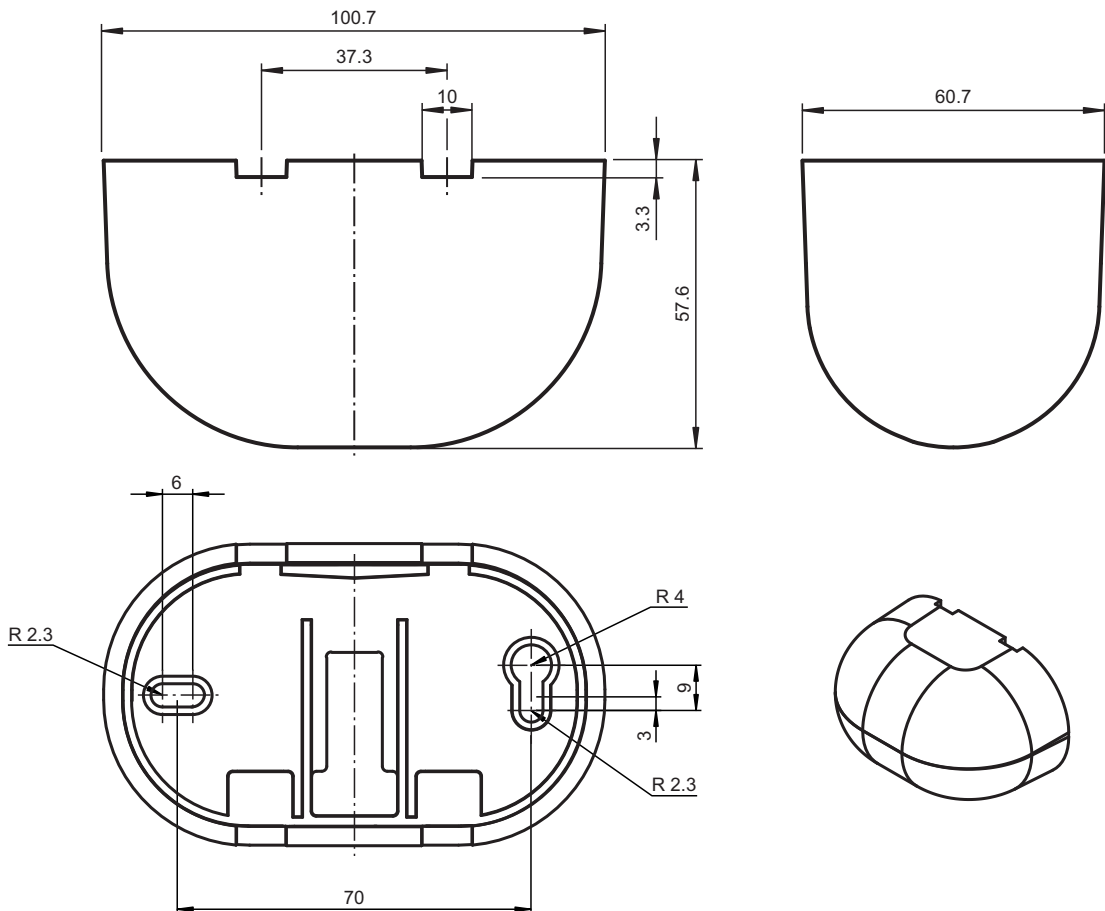


- Standard radar motion sensor with basic functionality
- Reliable detection of people and vehicles
- Simplest adjustment of the sensing range
- Wide range of sensitivity adjustment
- Wall and ceiling mountable
- Version with FCC-frequency

FCC-approved standard radar motion sensor with basic functionality. 2 m x 4.5 m detection range. Max 4 m mounting height. Black housing. Relay contact output. Cable connection.

### Function

### Dimensions



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

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## Technical Data

<b>General specifications</b>			
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	24.075 ... 24.175 GHz K-Band		
Operating mode	Radar motion sensor		
Transmitter radiated power (EIRP)	< 20 dBm		
<b>Functional safety related parameters</b>			
MTTF <sub>d</sub>	970 a		
Mission Time (T <sub>M</sub> )	20 a		
Diagnostic Coverage (DC)	0 %		
<b>Indicators/operating means</b>			
Function indicator	LED red		
Control elements	potentiometer		
Control elements	sensitivity adjustment		
<b>Electrical specifications</b>			
Operating voltage	U <sub>B</sub>	12 ... 36 V DC , 12 ... 28 V AC	
No-load supply current	I <sub>0</sub>	≤ 50 mA at 24 V DC	
Power consumption	P <sub>0</sub>	≤ 1.7 W	
<b>Output</b>			
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 <sub>off</sub>	0.5 s	
<b>Approvals and certificates</b>			
FCC approval	FCC Rules part 15 / This device can be used in the USA.		
IC approval	RSS210 Issue 8.0 / This device can be used in Canada.		
Approvals	Use in countries within the European Union is not permitted. In other countries, all applicable national regulations must be observed.		
<b>Ambient conditions</b>			
Operating temperature	-20 ... 60 °C (-4 ... 140 °F)		
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)		
Relative humidity	max. 90 % non-condensing		
<b>Mechanical specifications</b>			
Mounting height	max. 4000 mm		
Degree of protection	IP54		
Connection	Connecting cable 2.5 m included with delivery		
Material			
Housing	PC/ABS black		
Mass	130 g		
Dimensions	101 mm x 60 mm x 59 mm		
<b>Suitable series</b>			
Series	RaDec		

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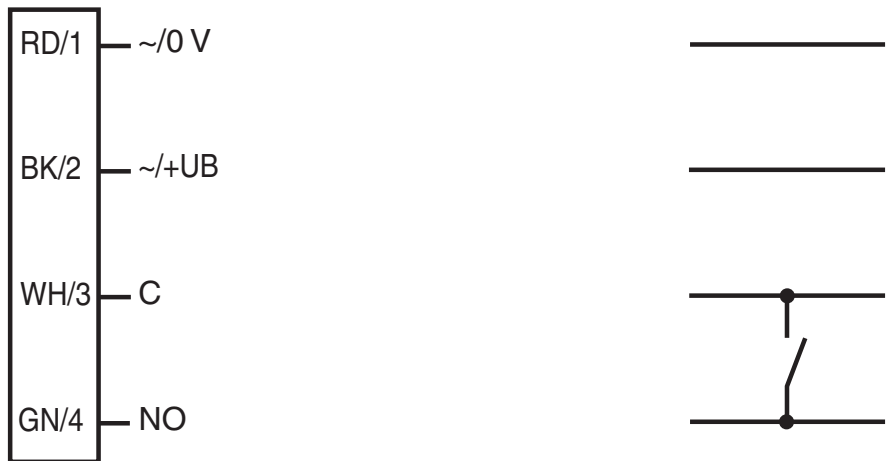
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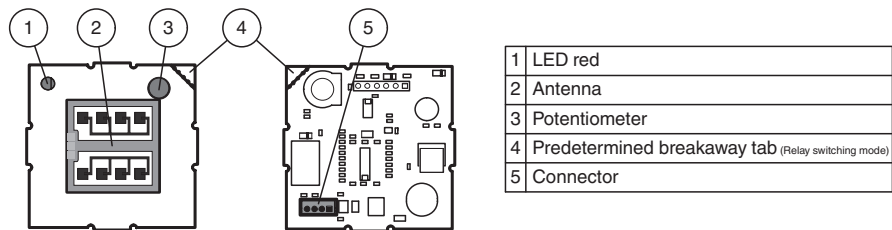
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**Connection Assignment**




**Assembly**



**Application**



**Accessories**

	<b>RaDec Weather Cap</b>	Weather hood for radar sensors series RaDec
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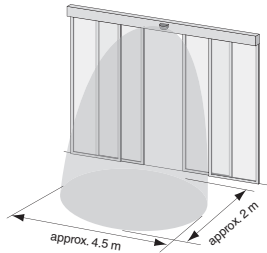
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## Commissioning

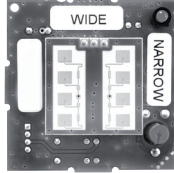
### Sensing Range

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

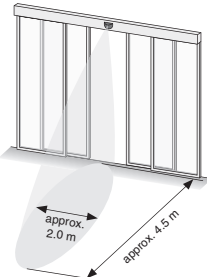
Wide:



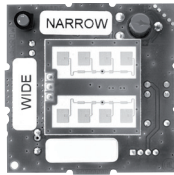
Mounting height 2200 mm / tilt angle 30°  
Antenna position:



Narrow:



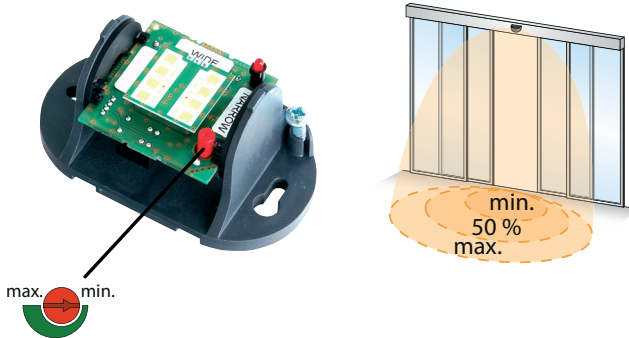
Mounting height 2200 mm / tilt angle 30°  
Antenna position:



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.



## Accessories

Other suitable accessories can be found at [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

## Function 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.

## Application

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

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- Impulse sensors for escalators

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