



**Model Number**

**RMS-M**

Radars sensor

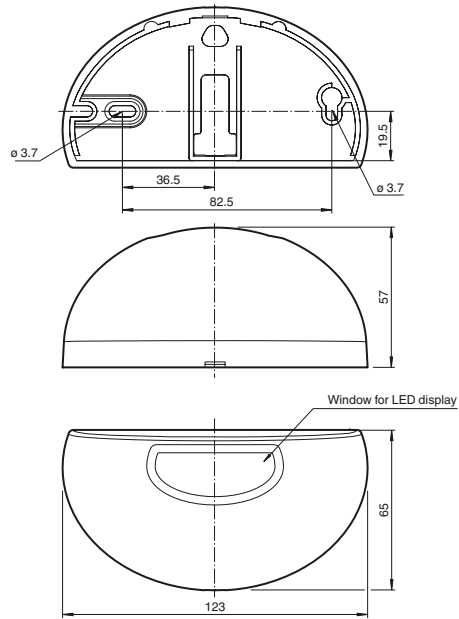
**Features**

- Microwave motion sensor with basic functionality
- Reliable detection of people and vehicles
- Simplest adjustment of the sensing range
- Easily programmable

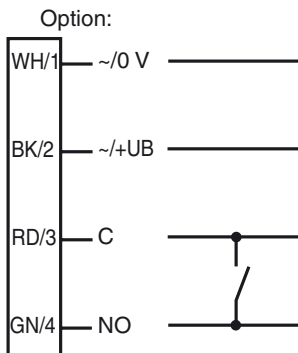
**Product information**

An effective opening of doors or industrial doors can be achieved very flexibly with the RMS microwave motion sensor series. The RC versions offer remote-controlled adjustment of parameters. Ultramodern microcontroller evaluation technology guarantees a variety of field sizes and universal use even in difficult conditions. An integrated microprocessor with 24 GHz-microwave technology ensures high reliability even under difficult usage conditions. The sensor also offers two adjustable detection areas and different operating modes, an installation height up to 4 m and operates in a temperature range of -20 ... +60 °C.

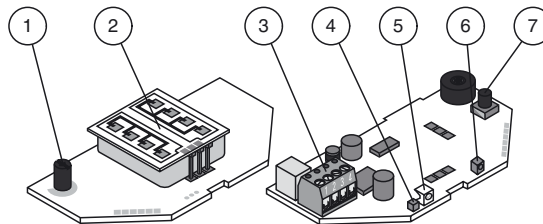
**Dimensions**



**Electrical connection**



**Indicators/operating means**



1	Potentiometer
2	Antenna
3	Terminal
4	IR-transmitter (RC version only)
5	LED (red/green)
6	IR-receiver (RC version only)
7	Programming button

Release date: 2013-06-14 13:03 Date of issue: 2013-06-19 184361\_eng.xml

Subject to modifications without notice

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776-4411  
fa-info@pepperl-fuchs.com

Copyright Pepperl+Fuchs  
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**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
Marking	CE
Setting angle	0 ... 40 ° 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 <sub>d</sub>	850 a
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %

**Indicators/operating means**

Function display	LED red/green
Controls	Potentiometer and programming button for setting: Method of connection, dropout time, response time, Interference behavior
Controls	sensitivity adjustment

**Electrical specifications**

Operating voltage	U <sub>B</sub>	12 ... 30 V DC , 12 ... 24 V AC
No-load supply current	I <sub>0</sub>	≤ 50 mA at 24 V DC
Power consumption	P <sub>0</sub>	≤ 1 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 <sub>off</sub>	0.2 ... 10 s adjustable (1 sec factory setting)

**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
Protection degree	IP54
Connection	plug-in screw terminals 4-pin , 5 m connecting cable included with delivery
Material	
Housing	ABS, anthracite
Mass	120 g
Dimensions	123 mm x 65 mm x 57 mm

**Suitable series**

Series	RMS
--------	-----

**Compliance with standards and directives**

Directive conformity	
R&TTE Directive 1995/5/EC	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.
Standard conformity	
Standards	EN 62311, EN 60950-1, EN 301 489-1, EN 301 489-3, EN 300 440-2

**Operating 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.

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.

The microwaves emitted by the emitter are reflected back from the ground or other surfaces to the receiver. If there is no motion in the monitored zone, the emitted and reflected frequencies are identical. Nothing is detected. If people, animals or objects are moving in the monitored zone, the reflected frequency changes and therefore triggers a detection.

Microprocessor-controlled motion sensors based on the latest 24 GHz technology provide a high degree of reliability even under difficult operating conditions. The 24 GHz frequency, known as 'K-band,' is reserved by CETECOM for this application area worldwide.

**Detection range**

**Typical applications**

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

**Detection area**



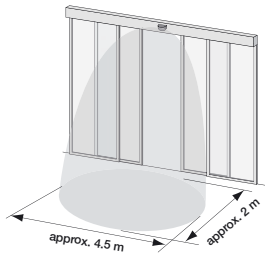
**Accessories**

**RMS Weather cap**

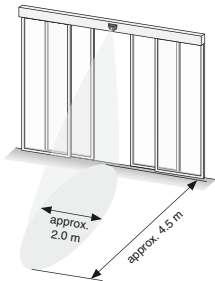
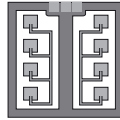
All-weather hood for RMS series microwave sensors, for ceiling and wall installation

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

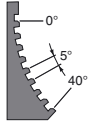
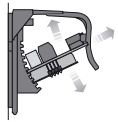
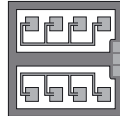
### Installation instructions



Installation height 2200 mm / angle of detection field 30°  
 Antenna position:



Installation height 2200 mm / angle of detection field 30°  
 Antenna position:



The detection field can be swivelled in 5 steps from 0 to 40°. The guide plate can be inserted on a slant.

### Sensitivity settings

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



### Function display

LED green	Ready for operation
LED red	Relay active
LED green flashing	Command received
LED red flashing	Error
LED green/red flashing	Initialisation (for about 10 seconds after switching on)