

Radar sensor

RMS-FRW/164



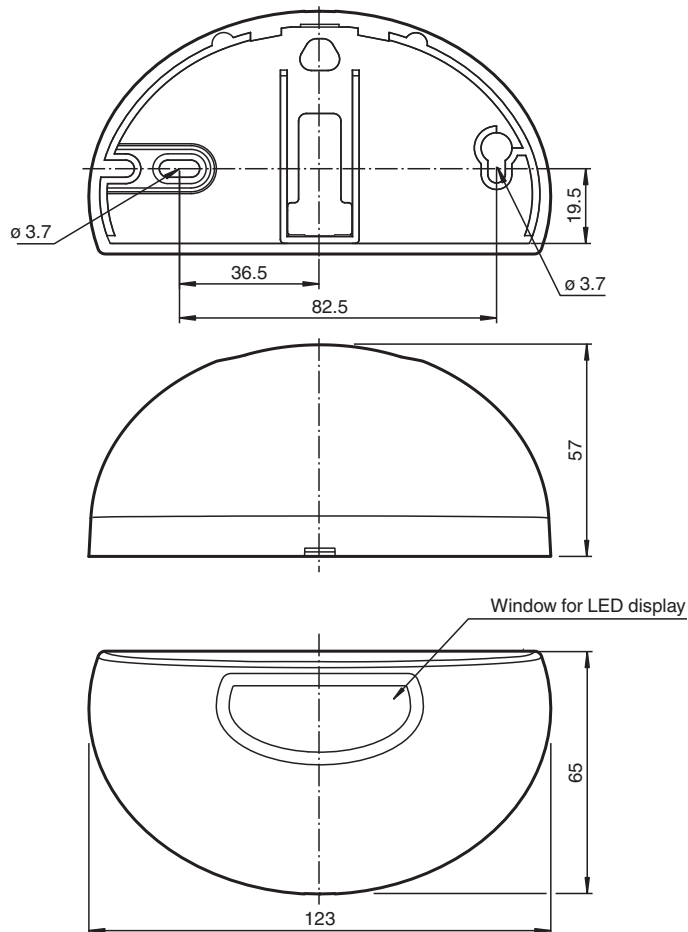
- Microwave motion sensor with integrated self-monitoring for escape and emergency routes
- Approved in accordance with AutSchR (German directive governing automatic sliding doors for rescue routes)
- Direction detection
- Cross traffic suppression
- Easily programmable
- Programmable by remote control
- Version with frequency output

Premium radar motion sensor with integrated self-monitoring for escape and emergency routes, can be operated remotely, detection range 2.5 m x 3.5 m, max. installation height 4 m, black housing, frequency output, cable connection



Function

Dimensions



Release date: 2022-02-28 Date of issue: 2022-02-28 Filename: 206471_eng.pdf

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

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PF PEPPERL+FUCHS

Technical Data

General specifications	
Sensing range	2500 x 3500 mm (DxW) at 2200 mm mounting height and 0° inclination angle
Function principle	Microwave module
Detection speed	min. 0.1 m/s
Setting angle	0 ... 10 ° in 5 ° increments
Operating frequency	24.05 ... 24.25 GHz K-Band
Operating mode	Radar motion sensor
Transmitter radiated power (EIRP)	< 20 dBm
Functional safety related parameters	
Performance level (PL)	PL d
Category	Cat. 3
MTTF _d	850 a
PFH _d	6.46 E-8
Diagnostic Coverage (DC)	60 %
Indicators/operating means	
Function indicator	LED red/green , LED Row green
Control elements	Navigation key or Programming via menu driven remote control
Factory setting	sensitivity adjustment : 7 Cross traffic suppression : 1 Immunity : 2
Electrical specifications	
Operating voltage	U _B 12 ... 36 V DC
No-load supply current	I ₀ < 200 mA at 24 V DC
Power consumption	P ₀ < 3 W
Inrush current	900 mA
Output	
Switching type	NO/NC
Signal output	Frequency output
Output 3	
Output type	Frequency output
Output rated operating current	max. 50 mA
Residual voltage	≤ 2 V DC
Pulse/Pause ratio	1:1 , deviation max. 10 %
Output frequency	100 Hz
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 with the exception of Great Britain and France. In other countries, all applicable national regulations must be observed.
Standard conformity	
Standards	1999/5/EG; EN 62311, EN 60950-1, EN 301 489-1, EN 301 489-3, EN 300 440-2 Additionally: EN 61508; EN 13849-1; DIN EN 18650-1; DIN EN 18650-2; AutSchR 1997/12
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. 3000 mm
Degree of protection	IP54
Connection	8-pin strip connector with cable 3 m connecting cable included with delivery
Material	
Housing	ABS, anthracite
Mass	140 g
Suitable series	

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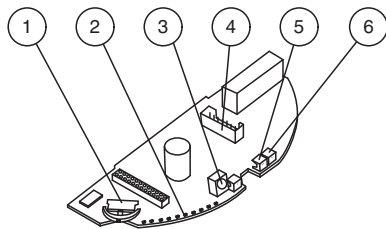
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Technical Data

Series	RMS
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Pin	Signal	Color
1	+12 ... 36 V DC	white
2	GND	brown
3	Fout +	green
4	Uin -	yellow
5	Uin +	grey
6	No Connection	pink
7	No Connection	blue
8	No Connection	red

Assembly






1	Navigation button
2	Bar graph with 10 LEDs
3	IR receiver
4	Connecting plug
5	LED (red/green)
6	IR transmitter

Application



Accessories

	RMS Weather Cap	All-weather hood for RMS series microwave sensors, for ceiling and wall installation
	RMS Remote Control	Infrared remote control for RMS series and RAVE
	RMS/RaDec Ceiling Kit wh	Ceiling mount kit for radar sensors in the RMS and RaDec Series

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Functional principle

Radar sensors are microwave scanners that adopt the principle of the Doppler radar. The most important requirement for microwave detection is that the object to be detected is moving.

The radar 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 vehicles are moving in the monitored zone, the reflected frequency changes and triggers a detection.

Based on the latest 24 GHz technology with integrated microprocessor control, these sensors provide a high level 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 sensor for automatic doors and industrial doors in escape and emergency routes
- Motion sensor for people and objects