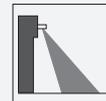




## Radar motion sensor

### ECHO-D black



- Standard radar motion sensor
- Detection of people and objects for automatic doors
- Bidirectional sensing and adjustment of detection field
- Remote control or push button for functionality setting
- Wall and ceiling mountable

Standard radar motion sensor with basic functionality, detection range 2 m x 4.5 m, max. installation height 4 m, black housing, solid-state relay, cable connection



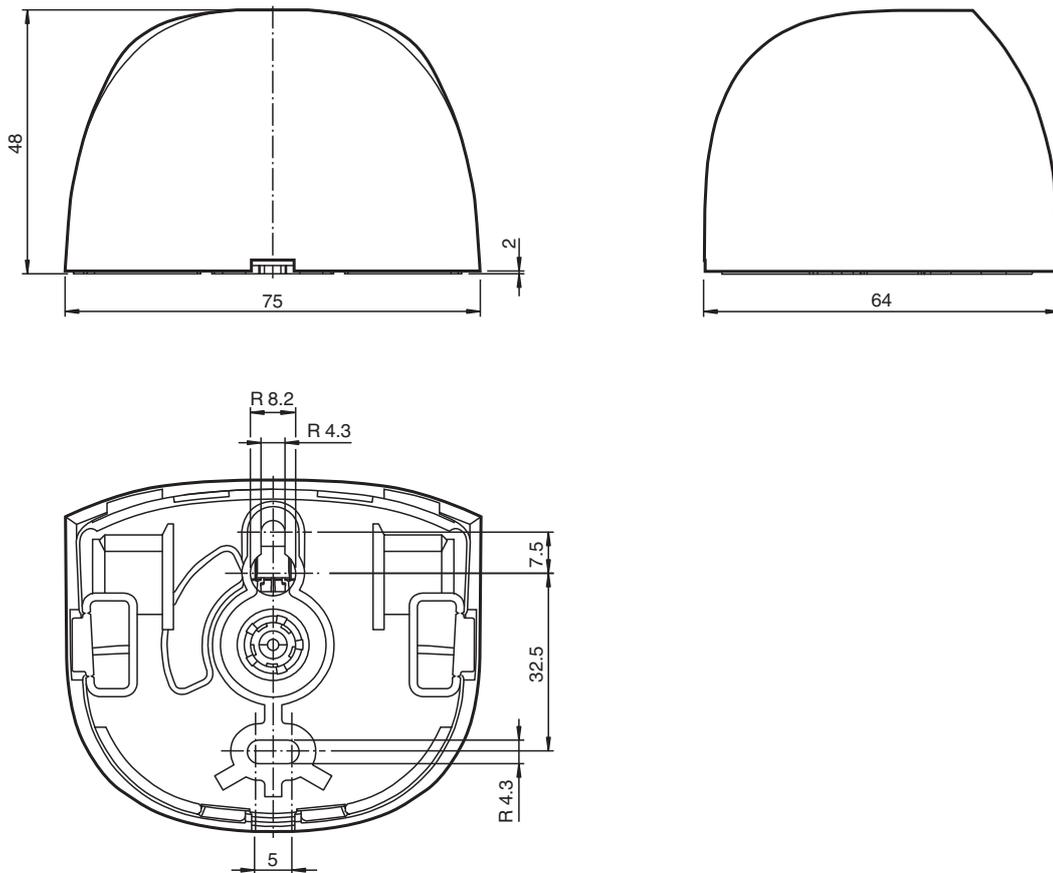
### Function

This device is a radar motion sensor with basic functionality. The functionality is based on the 24 GHz radar technology. The basic functionality which can be activated includes among others direction detection, cross-traffic suppression, and immunity. The sensor is integrated in a simple and well-designed housing. The opening impulse sensor is easy to mount and to commission. The built-in antenna enables bidirectional sensing. This version has a wide detection area.

### Application

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

**Dimensions**



**Technical Data**

<b>General specifications</b>	
Sensing range	2000 x 4500 mm (DxW) at 2200 mm mounting height and 30° inclination angle
Function principle	Microwave module
Detection speed	min. 0.05 m/s
Setting angle	
Rotation angle	-40 ... 40 ° in 5 ° increments
Inclination 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
<b>Functional safety related parameters</b>	
MTTF <sub>d</sub>	
Mission Time (T <sub>M</sub> )	20 a
Diagnostic Coverage (DC)	0 %
<b>Indicators/operating means</b>	
Function indicator	detection : LED green push button indication : LED yellow / green
Control elements	Push button for selection of operating modes : sensitivity , direction detection , cross-traffic suppression , slow-motion mode , relay switching type , hold time , immunity
<b>Electrical specifications</b>	
Operating voltage	U <sub>B</sub> 12 ... 24 V DC ± 10 %
No-load supply current	I <sub>0</sub> ≤ 55 mA at 24 V DC
Power consumption	P <sub>0</sub> ≤ 1.32 W

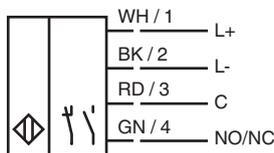
Release date: 2024-02-23 Date of issue: 2024-02-23 Filename: 70133579\_eng.pdf

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

## Technical Data

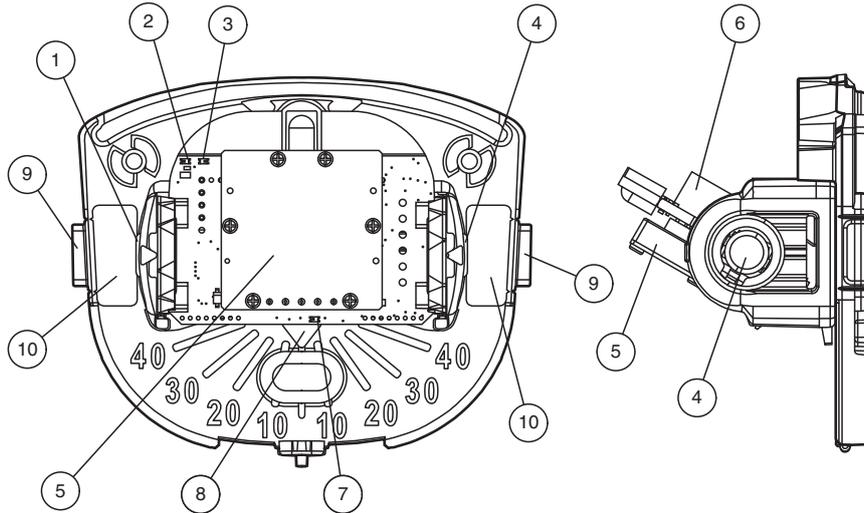
Output	
Switching type	Normally open/closed (NO/NC)
Signal output	solid-state relay
Switching voltage	max. 28 V AC / 36 V DC
Switching current	max. 0.1 A AC / 0.1 A DC
Hold time	1.5 s / 3 s
Approvals and certificates	
CE conformity	2014/53/EU This device can be used in all countries within the European Union. In other countries, all applicable national regulations must be observed.
CCC approval	CCC approval / marking not required for products rated ≤36 V
Ambient conditions	
Operating temperature	-20 ... 55 °C (-4 ... 131 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)
Relative humidity	max. 90 % non-condensing
Mechanical specifications	
Mounting height	max. 4 m
Degree of protection	IP54
Connection	Connecting cable 2.5 m included with delivery
Material	
Housing	PC (Polycarbonate)
Mass	approx. 70 g
Dimensions	75 mm x 64 mm x 50 mm
Height	64 mm
Width	75 mm
Depth	50 mm

## Connection



Release date: 2024-02-23 Date of issue: 2024-02-23 Filename: 70133579\_eng.pdf

**Assembly**



1	Push button, left: -
2	Push button and detection indication: LED green
3	Push button indication: LED yellow
4	Push button, right: +
5	Antenna

6	Connector
7	Detection: LED green
8	Rotation angle
9	Side cable entry (optional)
10	Cable entry (default)

**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 doors and industrial doors.

The microwave sensors emit microwaves of a defined frequency to detect people and large objects moving at speeds between 0.05 m/s ... 2 m/s. Stationary people or objects are not detected.

Based on the latest 24 GHz technology with integrated microprocessor control, these sensors provide a high level of reliability, even in difficult operational conditions. The 24 GHz frequency, known as 'K-band,' is reserved by CETECOM for this application area all round the world.

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