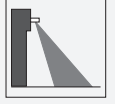


## Radar motion sensor ECHO-M black



- Basic radar motion sensor
- Detection of people and objects for automatic doors
- Simplest adjustment of the sensing range
- Wall and ceiling mountable

Basic radar motion sensor, detection range 2 m x 4 m, max. installation height 3 m, black housing, solid-state relay, cable adapter



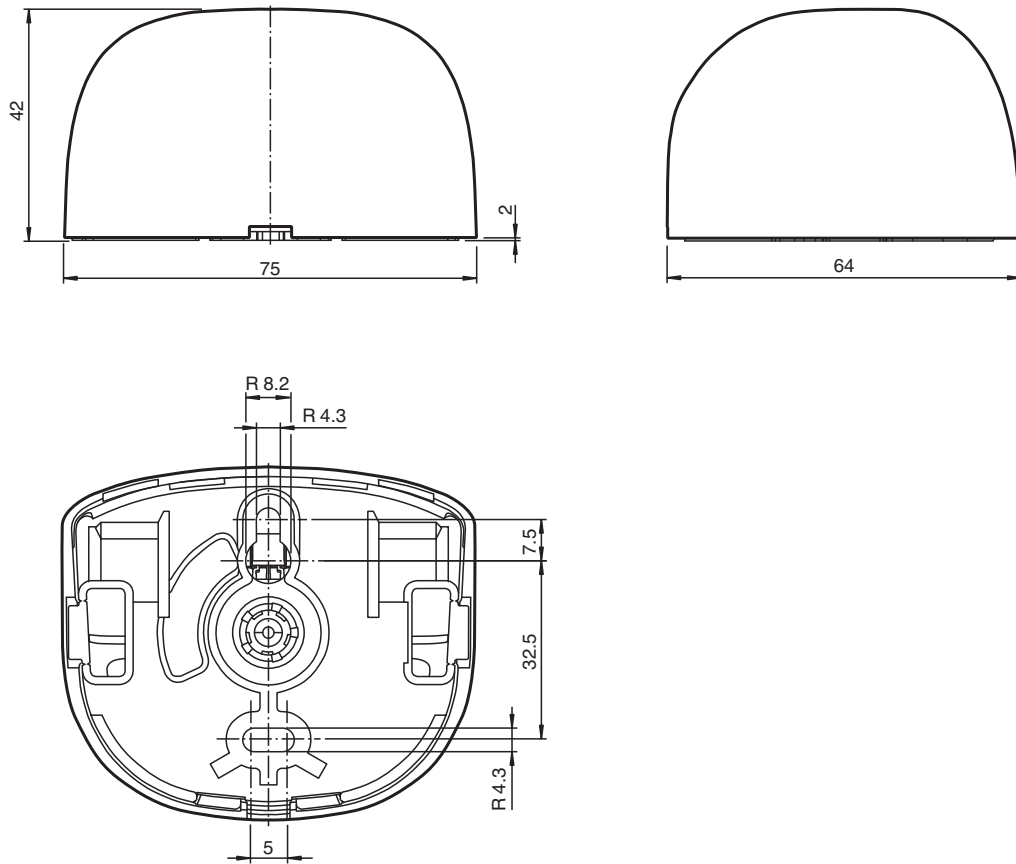
### Function

This device is a radar motion sensor with basic functionality. The functionality is based on the 24 GHz radar technology. 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 unidirectional 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 4000 mm (DxW) at 2200 mm mounting height and 30° inclination angle
Function principle	Microwave module
Detection speed	min. 0.1 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)	< 13 dBm
<b>Functional safety related parameters</b>	
MTTF <sub>d</sub>	766 a
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
Control elements	sensitivity adjustment with push button
<b>Electrical specifications</b>	
Operating voltage	U <sub>B</sub> 12 ... 24 V DC ± 10 %
No-load supply current	I <sub>0</sub> ≤ 50 mA at 24 V DC
Power consumption	P <sub>0</sub> ≤ 1.2 W

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## Technical Data

### Output

Switching type	Normally open (NO)
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

### 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 $\leq 36$ V

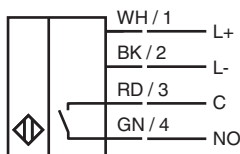
### Ambient conditions

Operating temperature	-20 ... 55 °C (-4 ... 131 °F)
Storage temperature	-30 ... 70 °C (-22 ... 158 °F)
Relative humidity	max. 90 % non-condensing

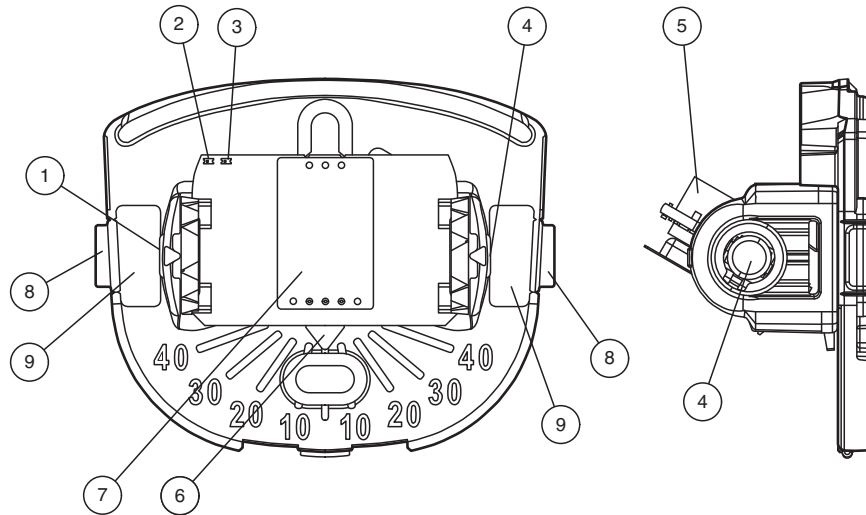
### Mechanical specifications

Mounting height	max. 3 m
Degree of protection	IP54
Connection	cable Adapter 35 mm included with delivery ; for conductor cross section 0.2 ... 0.5 mm <sup>2</sup>
Material	
Housing	PC (Polycarbonate)
Mass	approx. 70 g
Dimensions	75 mm x 64 mm x 44 mm

## Connection



## Assembly



1 Push button, left: -	6 Rotation angle
2 Detection indication: LED green	7 Antenna
3 Push button indication: LED yellow	8 Side cable entry (optional)
4 Push button, right: +	9 Cable entry (default)
5 Connector	



## 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 100 mm/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.

## Accessories

	<b>RADAR Ceiling Kit wh</b>	Ceiling mount kit for RADAR sensors
	<b>Radar Cable 2.5m</b>	Connection cable between connector socket and on-site connection

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