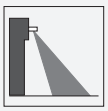
Radar motion sensor

ECHO-D white narrow



- 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 4 m x 2 m, max. installation height 4 m, white housing, solid-state relay, cable connection

Function

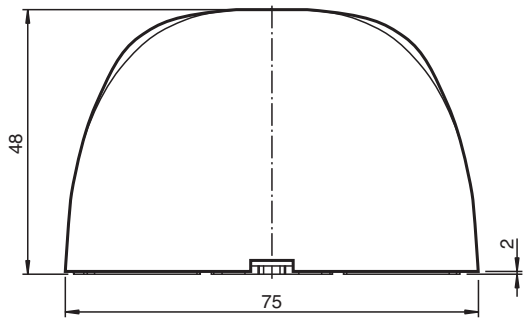
This device is a radar motion sensor with basic functionality. The functionality is based on the 24 GHz radar technology.
The basic functionality which can be activated includes among others direction detection, cross-traffic suppression, and immunity.
The sensor is integrated in a simple and well-designed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

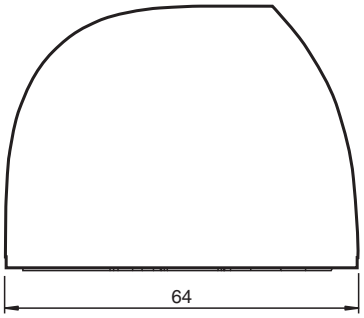
Application

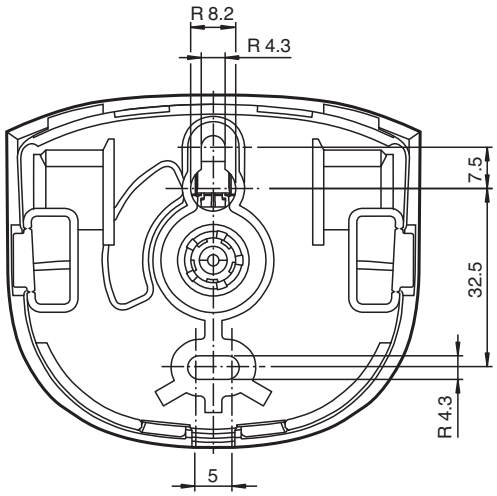
- Opening impulse sensors for automatic doors and industrial doors
- Monitoring approach areas to elevators
- Motion sensors for people and objects
- Impulse sensors for escalators

Release date: 2026-02-13 Date of issue: 2026-02-13 Filename: 70154120_eng.pdf

Dimensions







Technical Data

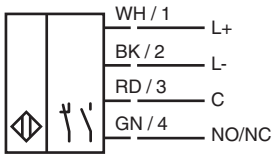
General specifications		
Sensing range		4000 x 2000 mm (DxW) at 2200 mm mounting height and 30° inclination angle
Function principle		
Detection speed		min. 0.05 m/s
Setting angle		
Rotation angle		-40 ... 40 ° in 5 ° increments
Inclination angle		0 ... 90 ° in 5 ° increments
Operating frequency		24.15 ... 24.25 GHz K-Band
Operating mode		Radar motion sensor
Transmitter radiated power (EIRP)		< 13 dBm
Functional safety related parameters		
$MTTF_d$		696 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
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
Electrical specifications		
Operating voltage	U_B	12 ... 24 V DC ± 10 %
No-load supply current	I_0	≤ 55 mA at 24 V DC
Power consumption	P_0	≤ 1.32 W

Release date: 2026-02-13 Date of issue: 2026-02-13 Filename: 70154120_eng.pdf

Technical Data

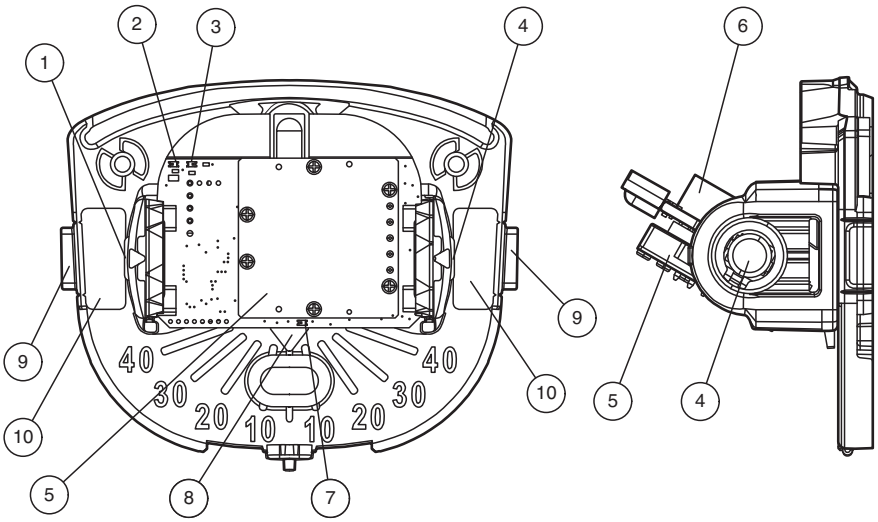
Output		
Switching type		Normally open/closed (NO/NC)
Signal output		solid-state relay
Switching voltage		max. 28 V AC / 36 V DC
Switching current		max. 0.1 A AC / 0.1 A DC
Hold time		1.5 s / 3 s
Approvals and certificates		
CE conformity		2014/53/EU This device can be used in all countries within the 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 Assignment



Release date: 2026-02-13 Date of issue: 2026-02-13 Filename: 70154120_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.

Release date: 2026-02-13 Date of issue: 2026-02-13 Filename: 70154120_eng.pdf