

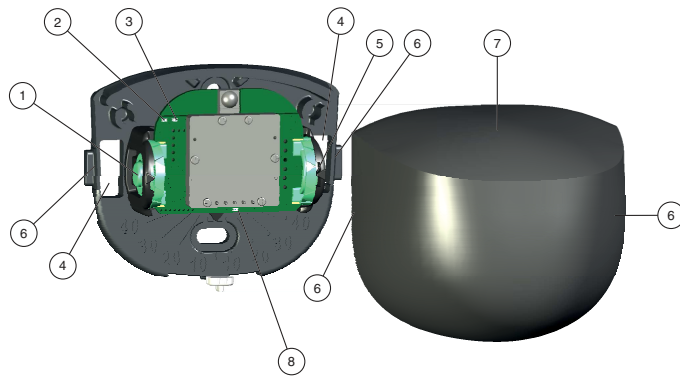
ECHO-D

Safety

This device must be installed and maintained only by qualified, trained personnel. Observe the safety requirements of EN 60950-1. Operate the sensor only with an SELV supply with a limited output of up to 100 W. Use a T2.5 A fuse, for example, to reliably limit the power output.

Use standard electrostatic discharge precautions when handling sensitive components.

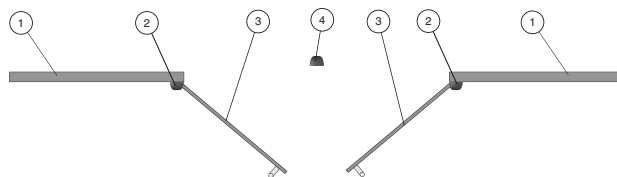
Description



- 1 Push button, left: -
- 2 Push button and detection indication: LED green
- 3 Push button indication: LED yellow
- 4 Cable entry (default)
- 5 Push button, right: +
- 6 Side cable entry (optional)
- 7 Cover
- 8 Detection: LED green

Application

Installation Notes for Double Swing Door



- 1 Wall
- 2 ECHO-D (narrow)
- 3 Door
- 4 ECHO-D

Mount the sensor (2) facing the opening door blade directly above the hinge. Preferably, use ECHO-D **narrow** at the door hinge side. The sensor is slightly tilted towards the door, approximately 20°.

To ensure that the moving door blade is suppressed, enable cross-traffic suppression.

There are no restrictions for the sensor (4) facing away from the door.

Installation Notes for outdoor installation or close to fluorescent lamps

Turn on Immunity to suppress influences from rain, vibration and fluorescent lamps.

Installation Notes for cross traffic suppression

Tilt the sensor between 30° ... 45°.

Removing the Cover

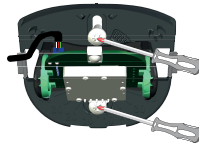
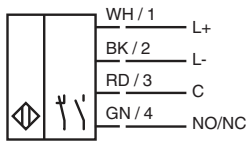
Before wall mounting



After wall mounting

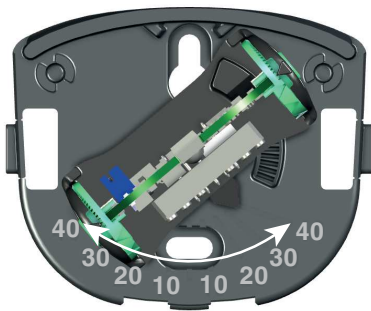


Installation

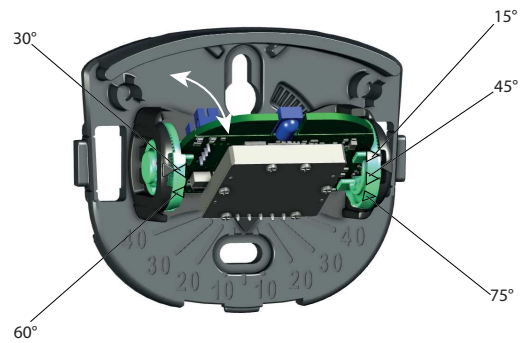


1. Insert the cable.
2. If necessary, break off the side cable entry.
3. Fasten the device with the provided screws.
4. Adjust the device in the desired vertical and horizontal angle.
5. Connect the cable to the terminal.

Mechanical Adjustments



Rotation angle: -40° ... +40° in steps of 5°



Inclination angle: 0° ... 90° in steps of 5°

Detection area size at mounting height 2.2 m with inclination angle 30°



- ECHO-D**
- Width: 4.5 m
 - Depth: 2 m



- ECHO-D narrow**
- Width: 2 m
 - Depth: 4 m

Technical Data

General specifications	
Operating frequency	24.15 ... 24.25 GHz K-Band
Transmitter radiated power (EIRP)	< 20 dBm
Electrical specifications	
Operating voltage	12 ... 24 V DC ± 10 %
No-load supply current	≤ 55 mA at 24 V DC
Power consumption	≤ 1.32 W
Output	
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)

Mechanical specifications

Mounting height	max. 4 m
Degree of protection	IP54
Mass	approx. 70 g
Dimensions	75 mm x 64 mm x 50 mm

Commissioning

When the operating voltage is applied, the sensor starts up. The yellow and green LED flash for approximately 8 s. The sensor is ready for operation.



Note

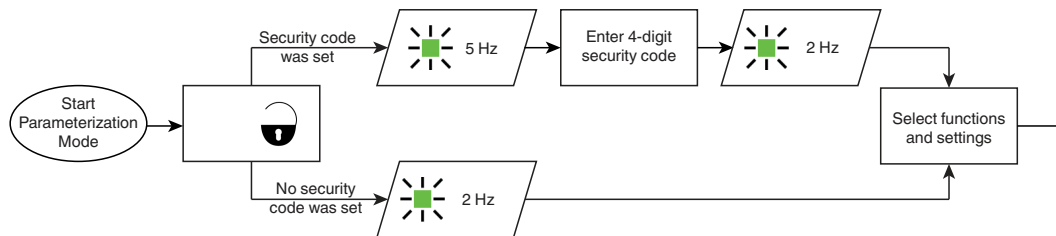
When the following settings apply, the direction detection will be set to **approaching only**:

- Direction detection: approaching and receding
- Cross-traffic suppression: on

Commissioning via RADAR RC

We recommend the use of the remote control, in order to comfortably parameterize the sensor.

Parameterization Mode



Setting Detection Area Size

	→ Key	→ ① ... ⑨
Sensitivity	SENS	1 = small detection area... 9 = large detection area default: 7

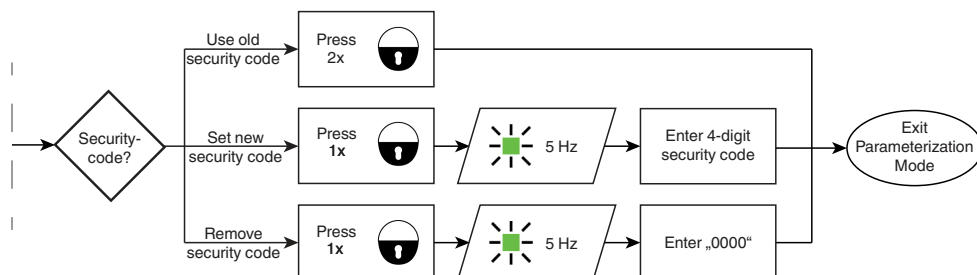
Selecting Functions and Setting Adjustment Range

	→ Key	→ ①	②	③	④
Relay switching type	OUT	relay n.o.	relay n.c.	open	closed
Hold Time	TIME	1.5 s	3 s		
Immunity	IMM	normal	high		
Direction Detection	DIR	approaching and receding	approaching only		
Cross-traffic suppression	SUPP	off	mounting height < 2.5 m	mounting height 2.5 m ... 3.5 m	mounting height > 3.5 m
Slow-motion mode	STEP	enabled	disabled		

bold = Factory setting

Resetting to Factory Settings

	→ Key	→ ⑨
Factory setting	SET	Sensor returns to factory setting.





Tip

Check the settings of the device by walking within range of the sensor.

Comissioning via Push Button

To set the detection area size and the value of the menu, use the push buttons "+" and "-."

Action / Result		LED green (mode)	LED yellow (value)	LED green (detection)
Setting Detection Area Size				
Setting mode 1	Press "+" OR "-"	The yellow LED indicates the value of the function. 1 = small detection area ... 9 = large detection area	OFF = 1x ... 9x default: 7x	= detection

Action / Result		LED green (mode)	LED yellow (value)				LED green (detection)	
Entering programming mode								
	Press "+" AND "-" (< 5 s)	The flashing green and yellow LED indicate that programming mode is activated.	1x ... 6x	1x ... 4x			= OFF	
Setting the menu and setting the value								
	Press "+" AND "-"	The next menu is selected. Pressing again after last menu is reached, exits programming mode.	see table "menu and values" below				= OFF	
	Press "+" OR "-"	If the maximum or minimum set value is reached, the yellow LED flashes.					= OFF	
Menu and values				1x	2x	3x	4x	= OFF
Menu 1	Relay switching type	1x	relay n.o.	relay n.c.	open	closed		
Menu 2	Hold time	2x	1.5 s	3 s				
Menu 3	Immunity	3x	normal	high				
Menu 4	Direction detection	4x	approaching and receding	approaching only				
Menu 5	Cross-traffic suppression	5x	off	mounting height < 2.5 m	mounting height 2.5 m ... 3.5 m	mounting height < 4 m		
Menu 6	Slow-motion mode	6x	enabled	disabled				
Exiting programming mode								
	Press "+" AND "-" beyond last menu.	The sensor saves last entered values and goes back to normal operation.	= OFF	= OFF			= detection	
Setting mode 2	No action for 60 s							

Action / Result		LED green (mode)	LED yellow (value)	LED green (detection)
Resetting to factory settings				
Setting mode 3	Press "+" AND "-" (> 5 s).	Sensor returns to factory settings	LEDs turn on and off sequentially.	

bold = Factory setting