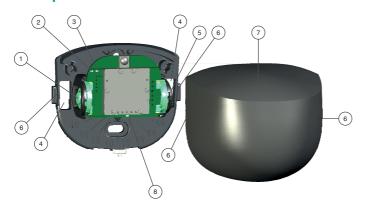
## **ECHO-D**

## 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**



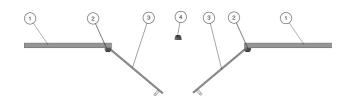
- 1 Push button, left: -
- 2 Push button and detection indication: LED green

1

- 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

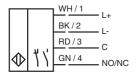


After wall mounting



## Installation

ECHO-D

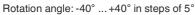




- 1. Insert the cable.
- 2. If necessary, break off the side cable entry.
- 3. Fasten the device with the provided screws.
- 4. Adjust the device in the desired vertical and horizontal angle.
- 5. Connect the cable to the terminal.

# **Mechanical Adjustments**







 $60^{\circ}$  Inclination angle:  $0^{\circ}$  ...  $90^{\circ}$  in steps of  $5^{\circ}$ 

## 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	$\leq$ 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)



## 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

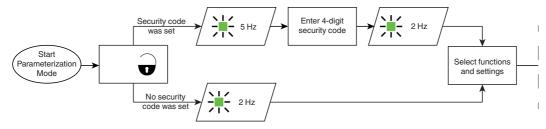
When the following settings apply, the direction detection will be set to approaching only:

- · 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**



## **Selecting Functions and Setting Adjustment Range**

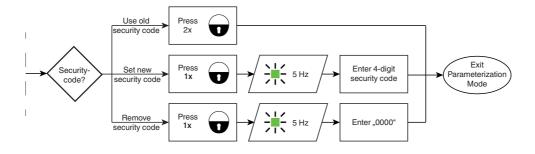
•					
#	→ Key	<b>→</b> 1	2	3	4
Relay switching type	OUT	relay n.o.	relay n.c.	open	closed
Hold Time	TIME	1.5 s	3 s		
Immunity	IMM	normal	high		
Direction Detection	DIR	approaching and receding	approaching only		
Cross-traffic sup- pression	SUPP	off	mounting height < 2.5 m	mounting height 2.5 m 3.5 m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

**bold** = Factory setting

## **Resetting to Factory Settings**



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 "-."

Acti	on / Result		LED green (mode)	LED yellow (value)	LED green (detection)			
Sett	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 - 1 9x - 1 9x - 1 default: 7x - 1	= detection			

			LED green					LED green
Acti	on / Result			LED yello	ow (value)			(detection)
Ente	Entering programming mode							
	Press "+" AND "-" (< 5 s)	The flashing green and yellow LED indicate that programming mode is activated.	1x				= 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
	If the maximum or minimum set value is reached, the yellow LED flashes.							= OFF
	Menu and value	es		1x -1-	2x -1-	3x -1-	4x -1-	= OFF
	Menu 1	Relay switching type	1x 🕌	relay n.o.	relay n.c.	open	closed	
	Menu 2	Hold time	2x -1-	1.5 s	3 s			
	Menu 3	Immunity	3x 🚉	normal	high			
	Menu 4	Direction detection	4x -1-	approachi ng and receding	approach ing only			
	Menu 5	Cross-traffic suppression	5x 21	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							
g 2	Press "+" AND "-" beyond last menu.	The sensor saves last entered values and goes back to normal operation.	S = OFF				= detection	
Setting mode 2	No action for 60 s							

Action / Result		LED green (mode)	LED yellow (value)	LED green (detection)					
Res	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



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