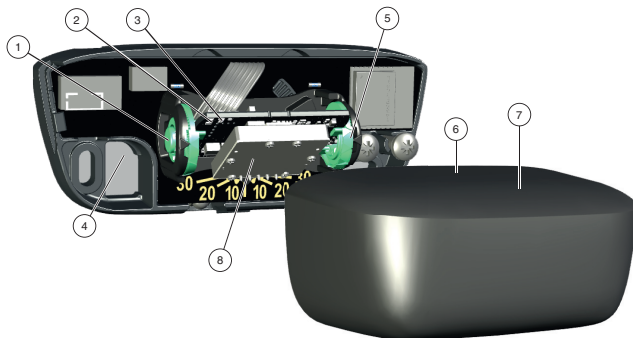


RaCon-D

Safety

This device must be installed and maintained only by qualified, trained personnel. Observe the safety requirements of EN IEC 62368-1. Operate the sensor only with an SELV (ES1) supply with a limited output of up to 100 W (PS2). Use standard electrostatic discharge precautions when handling sensitive components.

Description

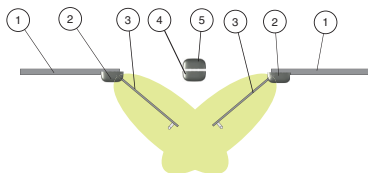


- 1 Push button, left: -
- 2 Push button and detection indication: LED green
- 3 Push button indication: LED yellow
- 4 Cable entry (default)
- 5 Push button, right: +
- 6 Top cable entry (optional breakout area)
- 7 Cover
- 8 Detection: LED green

Application

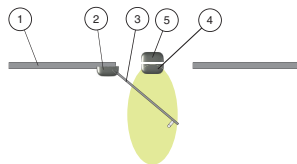
Installation Notes for Swing Door

Double Swing Door



- 1 Wall
- 2 RaCon-D (door hinge side)
- 3 Door
- 4 RaCon-D (center)
- 5 RaCon-D

Single Swing Door



Mount the sensor (2) facing the opening door leaf directly above the hinge.

When mounting on the swing doors, the sensor can be either mounted on the door hinge side (2) or centrally above the door (4). Set the detection field (SET) mode to match the mounting position. For mounting on the door hinge side (2), set the sensor's rotational angle approximately to 30° looking towards the center of the swing door.

There are no restrictions for the sensor (5) facing away from the door.

Removing the Cover

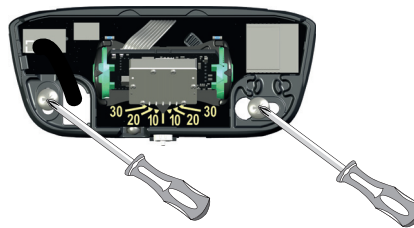
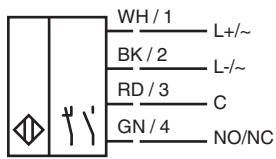
Before wall mounting



After wall mounting

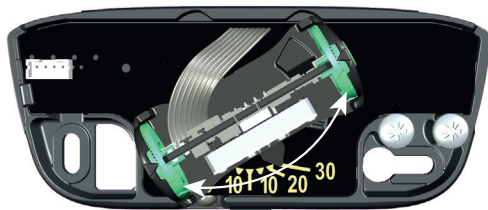


Installation

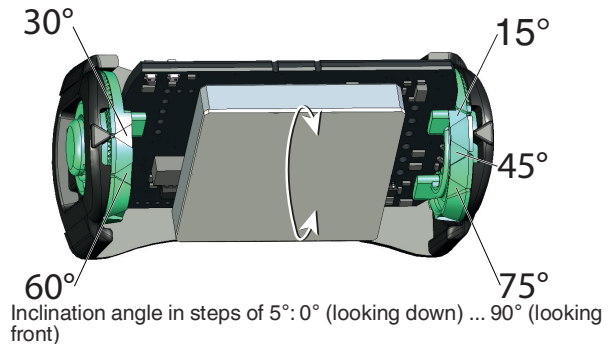


1. Insert the cable.
2. If necessary, break off the cable entry under the base.
3. Fasten the device with the provided screws.
4. Connect the cable to the terminal.

Mechanical Adjustments



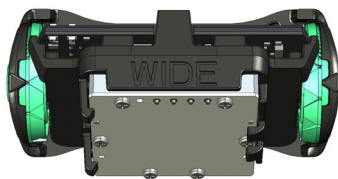
Rotation angle in steps of 5°: -30° ... +30°



Inclination angle in steps of 5°: 0° (looking down) ... 90° (looking front)

Detection area size at mounting height 2.2 m

To change between wide and narrow configuration, rotate the antenna accordingly.



- RaCon-D (wide)**
- Inclination angle: 60°
 - Width: 4.5 m
 - Depth: 2 m



- RaCon-D (narrow)**
- Inclination angle: 60°
 - Width: 2 m
 - Depth: 4 m

Technical Data

General specifications

Operating frequency	24.15 ... 24.25 GHz K-Band
Transmitter radiated power (EIRP)	< 13 dBm

Electrical specifications

Operating voltage	12 ... 24 V AC/DC ; 50 ... 60 Hz ; ± 10 %
No-load supply current	≤ 50 mA at 24 V DC
Power consumption	≤ 1.2 W ≤ 1.5 VA

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

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.
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Ambient conditions

Operating temperature	-25 ... 55 °C (-13 ... 131 °F)
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Mechanical specifications

Degree of protection	IP54
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Commissioning

When the operating voltage is applied, the sensor starts up. The yellow and green LED flash for approximately 4 s. The sensor is ready for operation.

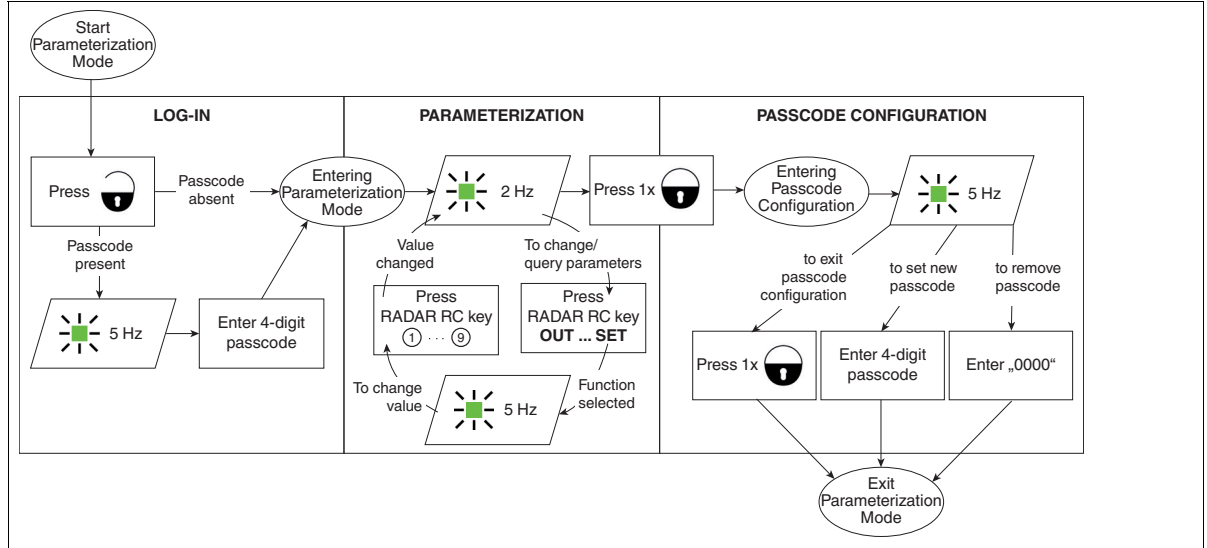
Note

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

- Cross-traffic suppression: ON
- Swing door suppression: low / medium / high

Commissioning via RADAR RC

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



When selecting the menu and setting the value, the status is indicated by the green LED:

- Function is selected: 5 Hz
- Selected parameter is valid: 2 Hz

For further information, see table "menu and values" below.

Action / Result	
Setting Detection Area Size	
Press "SENS" and the desired value.	1 = small detection area... 9 = large detection area default: 7

Action / Result	
Querying function's value	
To check the function's value, press the respective function key followed by "?" button. Value is indicated by the green and yellow LED flashes.	
Resetting to factory settings	
Press "SET" followed by "9". Sensor returns to factory settings.	



Tip

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

Commissioning 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				
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)
Entering parameterization mode When entering the parameterization mode, the green LED for detection is disabled.			
Press "+" AND "-" (< 5 s)	The flashing green and yellow LED indicate that parameterization mode is activated.	1x ... 7x	1x ... 9x
Setting the menu and setting the value			
Press "+" AND "-"	The next menu is selected. Pressing again after last menu is reached, exits parameterization mode.	see table "menu and values" below	
Press "+" OR "-"	If the maximum or minimum set value is reached, the yellow LED flashes.		

Menu and values	RADAR RC Key	Yellow Green 	①	②	③	④	⑤	⑥	⑦	⑧	⑨
			Relay switching type	OUT	1x	Relay n.o.	Relay n.c.	Open	Closed		
Hold time	TIME	2x	1.5 s	2 s	3 s	5 s	7 s	10 s	15 s	20 s	OPT
Immunity	IMM	3x	Low / OFF	High / ON							
Direction detection	DIR	4x	Approaching and receding	Approaching only	Approaching only, then bidirectional	Receding only	Receding only, then bidirectional				
Cross-traffic suppression	SUPP	5x	OFF	ON							
Slow-motion mode	STEP	6x	OPT	Disabled	Enabled						
Mounting height	D/ OPER	7x	< 2.5 m	2.5 m ... 3.5 m	> 3.5 m						
Swing Door Suppression	SET	8x	OFF	Low	Medium	High					

Bold = factory setting

OPT =

- Hold time OPT active: door closing time adjusted based on pedestrian's walking speed
- Slow-motion mode OPT active: door opening time adjusted based on pedestrian's walking speed
- Slow-motion mode OPT and hold time OPT active: door closes and opens optimally

Action / Result		LED green (mode)	LED yellow (value)
Exiting parameterization mode			
Press "+" AND "-" beyond last menu.	The sensor saves last entered values and goes back to normal operation.	= OFF	= OFF
No action for 60 s			

Action / Result		LED green (mode)	LED yellow (value)	LED green (detection)
Resetting to factory settings				
Press "+" AND "-" (> 5 s).	Sensor returns to factory settings	Top LEDs flash alternately, starting with green.		
Resetting passcode				
Press "-" (> 5 s).	The sensor is ready to receive a new passcode for the next 1.5 minutes. After that, the remote control will be disabled.	Top LEDs flash alternately, starting with yellow.		
Enabling and disabling the Bluetooth® function (for RaCon-D-BLE only)				
Press "+" (> 5 s).	The sensor's Bluetooth® function is toggled from ON to OFF or OFF to ON depending on the current state.	Top LEDs flash alternately, starting with green.		