FAAC

**COMBINED BIDIRECTIONAL OPENING AND SAFETY SENSOR
WITHOUT ANY MONITORING FUNCTION**

1   Description

Cover

Push-Buttons

Radar motion sensor

IR-Presence sensor

Radar Antenna

IR-Prism

Radar tilt angle indication

45°
30°
15°

Main Connector

IR curtain adjustment screw

2   Symbols and LED

LED turns on	LED flashing slowly	LED flashing quickly	Motion detection	Presence detection	Tip

LED display during normal function		
	GREEN LED	Motion detection
	RED LED	Presence detection
	ORANGE LED	See chapter 4: Troubleshooting

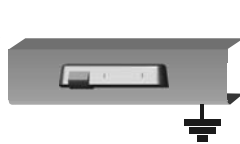## 3   Installation

1   Tips

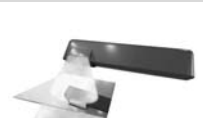|		
Avoid touching electronical parts!	Avoid touching optical parts!	Make sure the operator cover is fixed properly and electrically earthed.
Avoid vibrations!!!	Do not cover the sensor!	Avoid moving objects in proximity to the sensor!
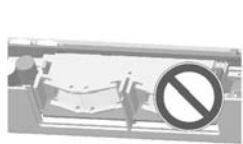
Avoid discharge lamps and fluorescent lighting in proximity of the detection field!
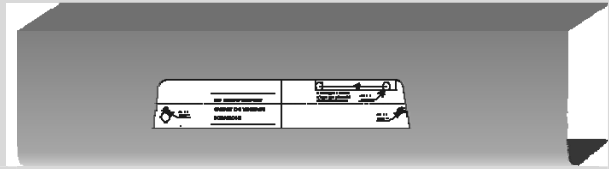
Avoid highly reflective objects in the infrared field!
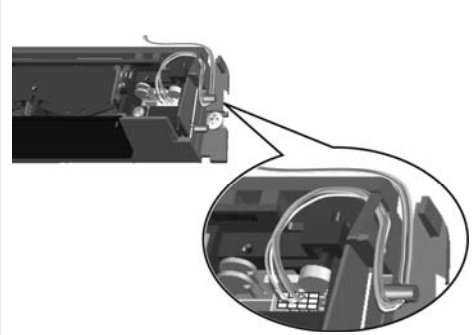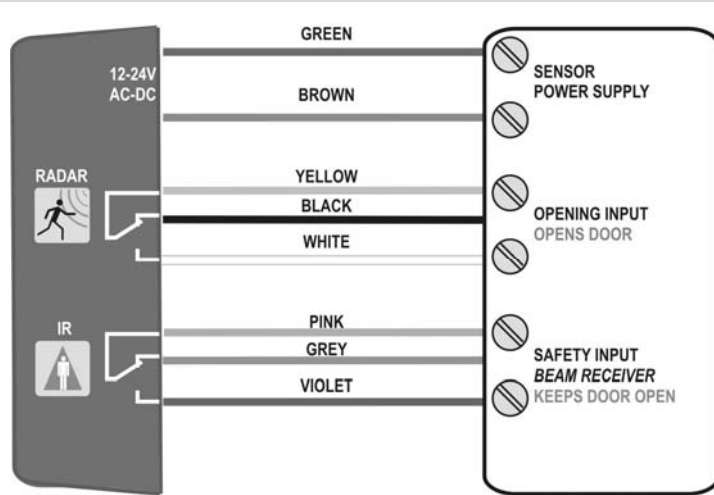
2   Mounting the sensor

Mount the sensor at a maximum height of 5cm from the bottom line of the door operator.
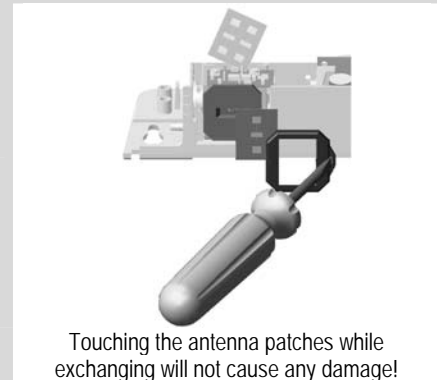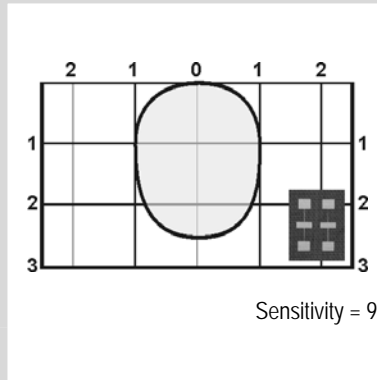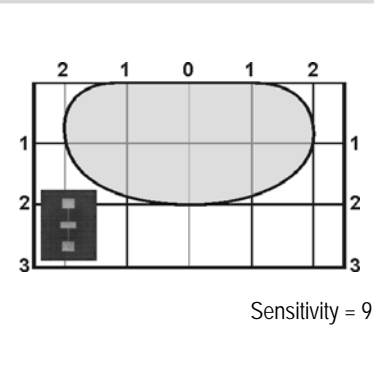
max. 5cm

Use the mounting template to drill holes and position the sensor.

3   Wiring the sensor

GREEN		SENSOR POWER SUPPLY
12-24V AC-DC	BROWN	
RADAR	YELLOW	
	BLACK	OPENING INPUT
		OPENS DOOR
	WHITE	
IR	PINK	
	GREY	SAFETY INPUT
		BEAM RECEIVER
	VIOLET	KEEPS DOOR OPEN

To ensure good water protection, place the cable as shown above.

4   Radar motion sensing field: width

Sensitivity = 9

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Touching the antenna patches while exchanging will not cause any damage!

5   Radar motion sensing field: depth

45°
0° 15° 30°

15° 30° 45°

15
30
45

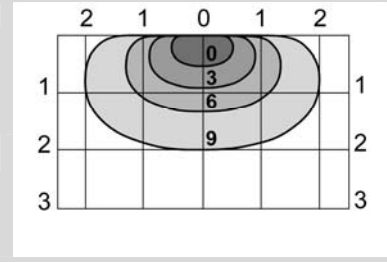Sensitivity = 9

15
30
45
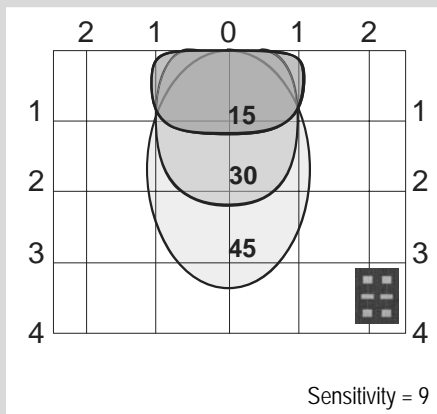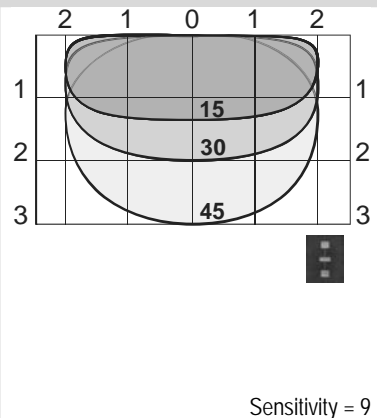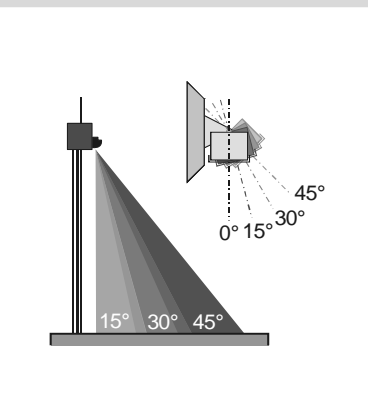
Sensitivity = 9

6 Setting the radar sensitivity by push button

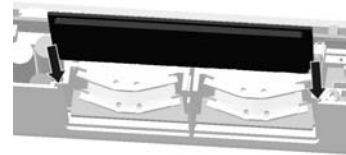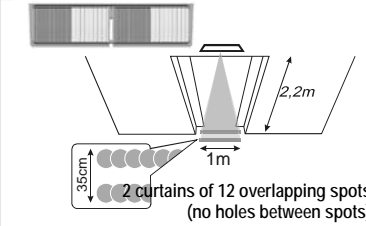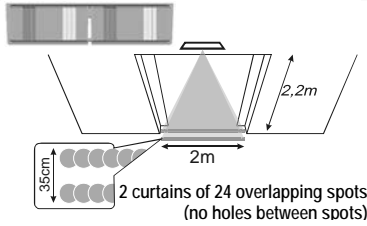**+** Each **short press** on the right button increases the size of the radar sensing field.

− Each **short press** on the left button decreases the size of the radar sensing field.

7 IR presence sensing field : width

2,2m
2m
35cm
2 curtains of 24 overlapping spots (no holes between spots)

2,2m
1m
35cm
2 curtains of 12 overlapping spots (no holes between spots)

Make sure to introduce the front prism into the foreseen slides in front of the lenses!

Above 3 m mounting height, use the narrow prism!

8 IR presence sensing field: depth (negative angle available)

0°   −4°

min. 5cm   min. 5cm
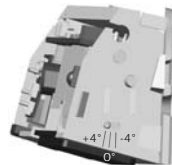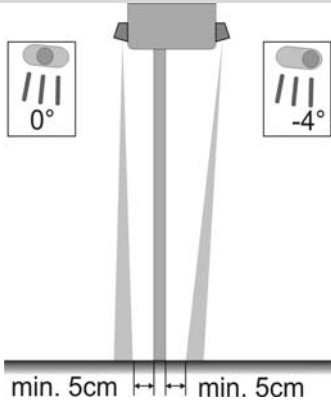
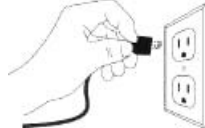The pin shown here above indicates the angle adjusted.

To approach the curtain to the door, turn the screw clockwise. To tilt the curtain out, turn the screw counterclockwise.

← Keep a **minimum distance of 5cm** between the door and the curtain.

9 Launching a setup

Short setup

Cut and restore power.
Recommended after adjustments by push buttons.

The sensor takes a new reference picture.

Assisted setup

Press and hold the right push button until the LED flashes RED-GREEN.
Recommended after first installation or mechanical adjustments of the IR-module.

The sensor performs a door opening and closing cycle to check the influence of the door leaves on the safety curtain.

LED display during setup

Setup-process active: the sensor learns its environment. After finishing the setup process, the sensor shows the following behavior:

RED-GREEN LED

	NO LED	The sensor successfully finished its setup.
	RED LED flashing quickly	The sensor 'sees' the door movement and can not finish its setup (see troubleshooting).
	ORANGE LED continuously on	The sensor encounters signal saturation (see troubleshooting).

4   Troubleshooting

SYMPTOMS	POSSIBLE CAUSES	CORRECTIVE ACTION
Red LED flashing quickly after an assisted setup.	The sensor 'sees' the door movement and can not finish its setup.	Adjust the position of the IR curtains.
Orange LED permanently ON.	The sensor encounters signal saturation.	Use the wide-field prism and/or slightly increase the IR curtains angle (turning the screw counterclockwise). Launch an assisted setup.
Orange LED flashes	The sensor signals an internal fault.	Cut and restore the power supply. If the orange LED lights up again, replace faulty sensor.
Red LED ON	The sensor detects a presence.	Wait the time set in "maximum duration of presence detection" setting or launch an assisted setup (with right push button).
Unwanted presence detection	The sensor is not placed properly and/or the front face is not properly fixed.	Fasten the sensor firmly and/or check whether the front face prism is placed into the foreseen slides (see section 6) and not in the sensor cover.

5   Technical Specifications

Supply voltage	: 12V (– 5%) to 24V (+10%) AC/DC
Mains frequency	: 50 - 60 Hz
Power consumption	: < 3 W
Mounting height	: 1.8 m to 3 m
3-color LED	: RED (presence detection) – GREEN (motion detection) – ORANGE (signal saturation, error)
Temperature range	: -25°C to +55°C
Degree of protection	: IP54
Dimensions	: 262 mm (L) x 55 mm (H) x 44 mm (D)
Weight	: 250 g
Housing material	: ABS + LURAN S
Minimum length of cable	: ± 2.6 m

	MOTION SENSOR	PRESENCE SENSOR
Detection mode	Motion - Bidirectional Minimum detection speed: 5 cm/s (measured in sensor axis)	Presence Typical response time: < 128ms (max. 500 ms)
Technology	Microwave and microprocessor Transmitter frequency: 24.175 GHz Transmitter radiated power: < 20 dBm EIRP Transmitter power density: < 5 mW/cm²	Focused active infrared Spot diameter (standard): 0.1m max Number of spots: 24 (12 with narrow field prism) Number of curtains: 2
Detection field	Width Depth Wide 4 m 2 m Narrow 2 m 2,5 m	Width Depth Wide 2 m 0,35 m Narrow 1 m 0,35 m
Angle	From 15° to 50° in elevation (adjustable)	From - 4° to + 4° (adjustable)
Output specification	Relay (free of potential contact): Max. contact voltage: 42V AC/ DC Max. contact current: 1A (resistive) Max. switching power: 30W (DC) / 60VA (AC)	Relay (free of potential contact): Max. contact voltage: 42V AC/ DC Max. contact current: 1A (resistive) Max. switching power: 30W (DC) / 60VA (AC)
Output holdtime	0.5s	0.1/1s
Max. presence detection time		30s (standard) 10s + curtain 2 in motion detection only (during 2h in case of disturbances)
Number of reference pictures		2

Sensing field dimensions given at 2.2m mounting height.
Specifications are subject to changes without prior notice.

6   Accessories (sold individually)

XAC