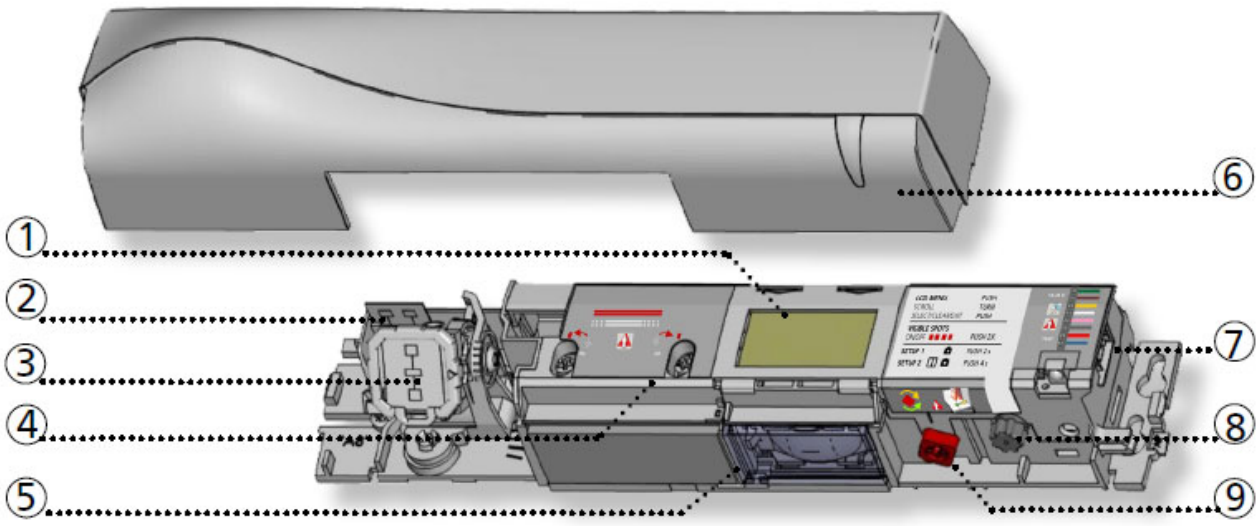
RO570900

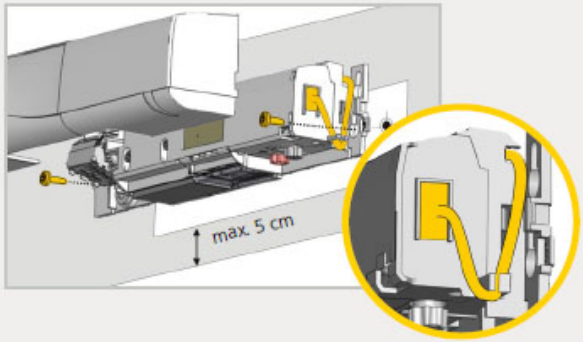
Radar sensor

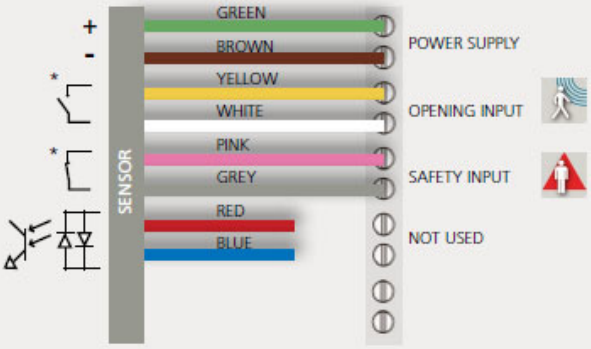
DESCRIPTION



1. LCD
2. radar antenna (narrow field)
3. radar antenna (wide field)
4. IR-curtain width adjustment
5. IR-lenses
6. cover
7. main connector
8. main adjustment knob
9. IR-curtain angle adjustment knob

1 MOUNTING & WIRING

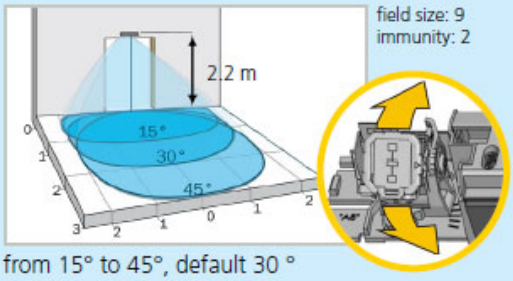




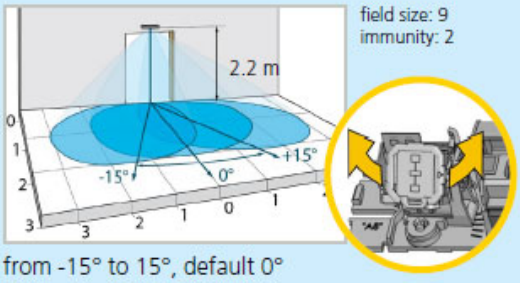
* Depending on OUTPUT CONFIGURATION settings

2 RADAR OPENING IMPULSE FIELD

ANGLE

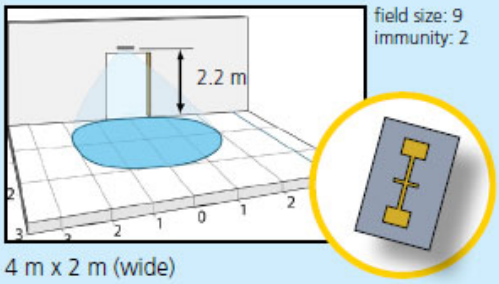


from 15° to 45°, default 30 °

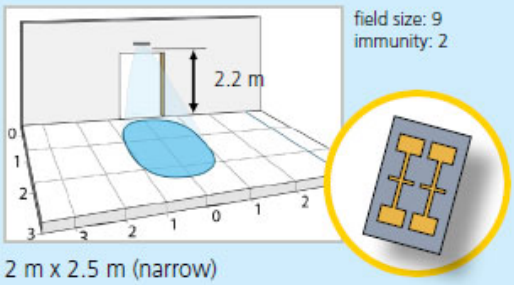


from -15° to 15°, default 0°

WIDTH



4 m x 2 m (wide)

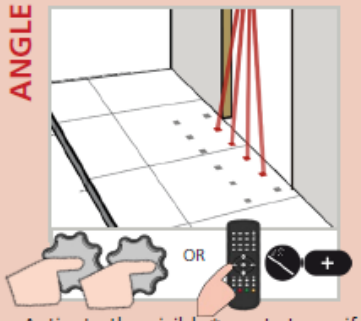


2 m x 2.5 m (narrow)

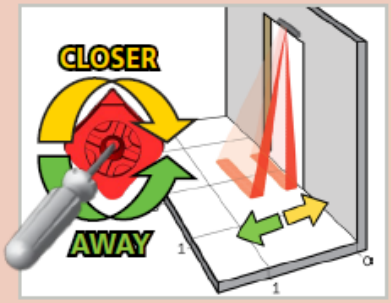
The size of the detection field varies according to the mounting height of the sensor.

3 INFRAFED SAFETY FIELD

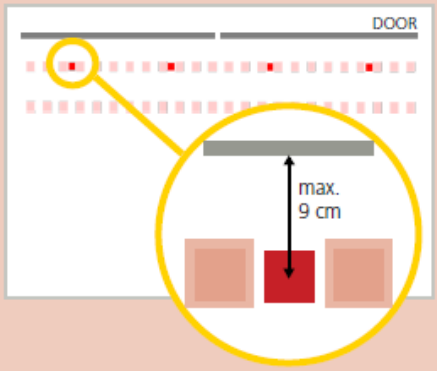
ANGLE



Activate the visible* spots to verify the position of the IR-curtain.

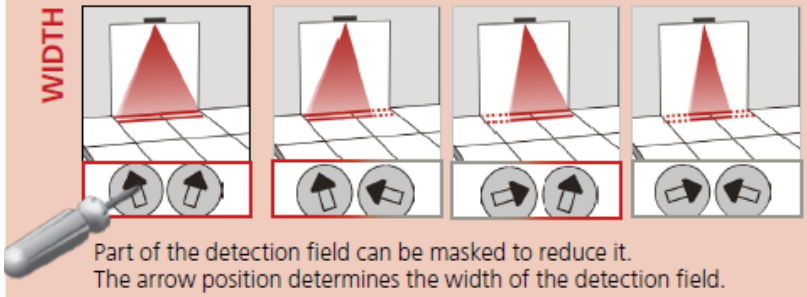


If necessary, adjust the IR-curtain angle (from -7° to 4°, default 0°).

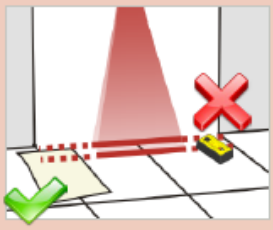


* Visibility depends on external conditions. When spots are not visible, use the Spotfinder to locate the curtains.

WIDTH



Part of the detection field can be masked to reduce it.
The arrow position determines the width of the detection field.

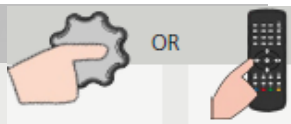


Always verify the actual detection field width with a piece of paper and not the Spotfinder, which detects the whole emitted field.

Additional adjustments are possible by LCD or remote control (see p. 5)

The size of the detection field varies according to the mounting height and the settings of the sensor.
The full door width must be covered.

4 SETTING



Choose one of the following presettings or adjust the sensor manually (see p.5):

STANDARD: standard in- and outdoor installations	Presettings Standard	1
CRITICAL ENVIRONMENT: critical installations due to surroundings or weather	Presettings Critical env.	2
SHOPPING STREET: installations in narrow streets with pedestrian traffic	Presettings Shopping str.	3

5 SETUP

⚠ STEP OUT OF THE INFRARED FIELD!

SETUP 1 (QUICK)
reference picture

2 s

SETUP 2 (ASSISTED)
test of full door cycle + reference picture

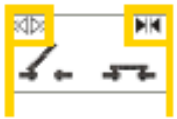
4 s

0

⚠ TEST THE GOOD FUNCTIONING OF THE INSTALLATION BEFORE LEAVING THE PREMISES!

HOW TO USE THE LCD?

DISPLAY DURING NORMAL FUNCTIONING



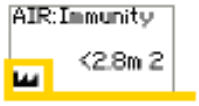
Opening Impulse | Safety

Negative display = active output

To adjust contrast, push and turn the grey button simultaneously.

During normal function only.

FACTORY VALUE VS. SAVED VALUE

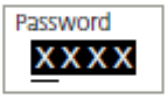


displayed value = factory value

displayed value = saved value

NAVIGATING IN MENUS

Push to enter the LCD-menu



Enter password if necessary

Not during the first minute after power-on of the sensor.

Select your language before entering the first LCD-menu.

During the first 30 seconds after power-on of the sensor or later in the diagnostics menu.

Scroll menu items

Select **Back** to return to previous menu or display.

Select **More** to go to next level:
- basic settings
- advanced settings
- diagnostics

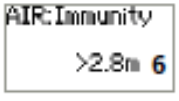
CHANGING A VALUE

Scroll menu up-down

Push to select parameter

current value is displayed

Scroll values up-down



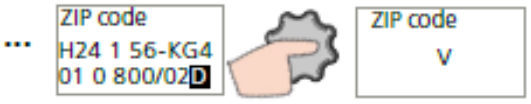
more values are displayed

Push to save new value

new value is displayed

CHANGING A ZIP CODE

See application note on ZIP CODE

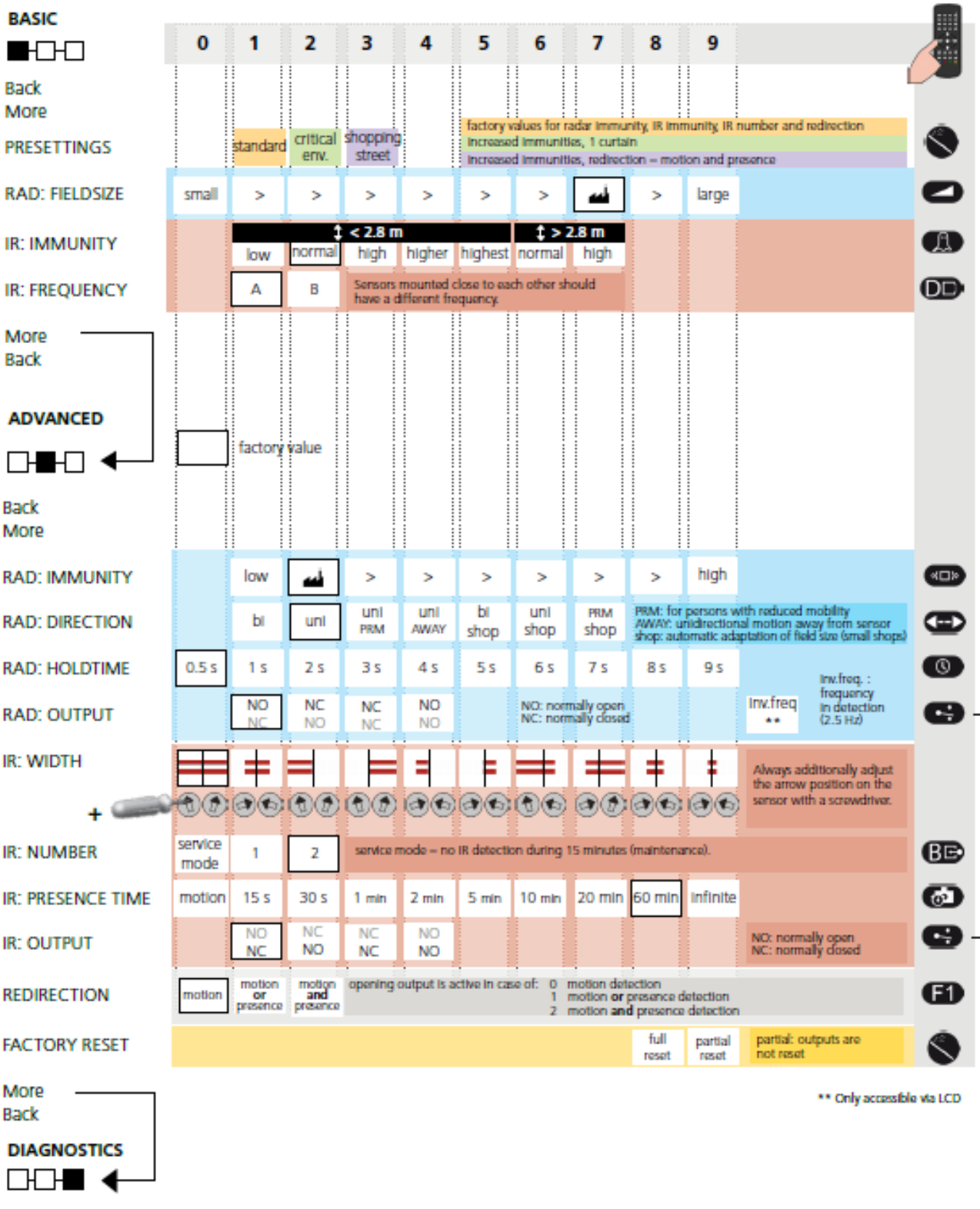


Validate the last digit in order to activate the new ZIP code:
- v = valid ZIP code, values will be changed accordingly
- x = invalid ZIP code, no values will be changed
- v/x = valid ZIP code, but from a different product. Only available values will be changed.

VALUE CHECK WITH REMOTE CONTROL

Pressing a parameter symbol on your remote control, displays the saved value directly on the LCD-screen. Do not unlock first.

OVERVIEW OF SETTINGS



ZIP CODE — *all parameter settings in zipped format (see application note on ZIP CODE)*

ID # — *unique ID-number*

ERROR LOG — *last 10 errors + day indication*

IR: SPOTVIEW — *view of spot(s) that trigger detection*

IR: C1 ENERG — *signal amplitude received on curtain 1*

IR: C2 ENERG — *signal amplitude received on curtain 2*

POWERSUPPLY — *supply voltage at power connector*

OPERATINGTIME — *power duration since first startup*

RESET LOG — *delete all saved errors*

PASSWORD — *LCD and remotre control password (0000= no password)*

LANGUAGE — *language of LCD-menu*

ADMIN — *enter code to access admin mode*

TROUBLESHOOTING

E1	ORANGE LED flashes 1 x.	The sensor signals an internal fault.	1 Replace sensor.
E2	ORANGE LED flashes 2 x.	The power supply is too low or too high.	1 Check power supply (in the diagnostics menu of the LCD). 2 Check wiring.
E4	ORANGE LED flashes 4 x.	The sensor receives not enough IR-energy.	1 Decrease the angle of the IR-curtains. 2 Increase the IR-immunity filter (values >2.8 m). 3 Deactivate 1 curtain.
E5	ORANGE LED flashes 5 x.	The sensor receives too much IR-energy.	1 Slightly increase the angle of the IR-curtains. 2 Decrease the IR-immunity filter (values 1-3 <2.8 m).
		The sensor is disturbed by external elements.	1 Eliminate the cause of disturbance (lamps, rain cover, door controller housing properly grounded).
E8	ORANGE LED flashes 8 x.	IR power emitter is faulty.	1 Replace sensor.
	ORANGE LED is on.	The sensor encounters a memory problem.	1 Cut and restore power supply. 2 If orange LED lights up again, replace sensor.
	RED LED flashes quickly after an assisted setup.	The sensor sees the door during the assisted setup.	1 Move the IR-curtains away from the door. 2 Install the sensor as close to the door as possible. If needed, use a bracket accessory. 3 Launch a new assisted setup.
	RED LED lights up sporadically.	The sensor vibrates.	1 Check if the sensor is fastened firmly. 2 Check position of cable and cover.
		The sensor sees the door.	1 Launch an assisted setup and adjust the IR angle.
		The sensor is disturbed by external conditions.	1 Increase the IR-immunity filter to value 3. 2 Select presetting 2 or 3.
	GREEN LED lights up sporadically.	The sensor is disturbed by rain and/or leaves.	1 Select presetting 2 or 3. 2 Increase radar-immunity filter.
		Ghosting created by door movement.	1 Change radar field angle.
		The sensor vibrates.	1 Check if the sensor and door cover is fastened firmly. 2 Check position of cable and cover.
		The sensor sees the door or other moving objects.	1 Remove the objects if possible. 2 Change radar field size or angle.
	The LED and the LCD-display are off.		1 Check wiring.
	The reaction of the door does not correspond to the LED-signal.		1 Check output configuration setting. 2 Check wiring.
	The LCD or remote control does not react.	The sensor is protected by a password.	1 Enter the right password. If you forgot the code, cut and restore the power supply to access the sensor without entering a password during 1 minute.

LED SIGNAL

Motion detection

Presence detection

LED flashes

LED flashes x times

LED flashes red-green

LED flashes quickly

LED is off

INSTALLATION

The sensor should be fixed firmly to avoid extreme vibrations.

Do not cover the sensor.

Avoid moving objects and light sources in the detection field.

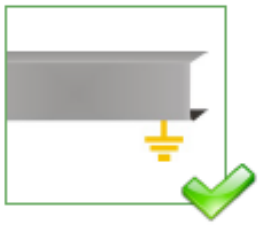
Avoid highly reflective objects in the infrared field.

MAINTENANCE

It is recommended to clean the optical parts at least once a year or more if required due to environmental conditions.

Do not use aggressive products to clean the optical parts.

SAFETY



The door control unit and the door cover profile must be correctly earthed.

Only trained and qualified personnel may install and setup the sensor.

Always test the good functioning of the installation before leaving the premises.

The warranty is invalid if unauthorized repairs are made or attempted by unauthorized personnel.

- The device cannot be used for purposes other than its intended use. All other uses cannot be guaranteed by the manufacturer of the sensor.
- The manufacturer of the door system is responsible for carrying out a risk assessment and installing the sensor and the door system in compliance with applicable national and international regulations and standards on door safety.
- The manufacturer of the sensor cannot be held responsible for incorrect installations or inappropriate adjustments of the sensor.

TECHNICAL DATA

Supply voltage:	12 V - 24 V AC +/-10% ; 12 V - 30 V DC +/-10%
Power consumption:	< 2.5 W
Mounting height:	2 m to 4 m
Temperature range:	-25°C to +55°C; 0-95% relative humidity, non condensing
Degree of protection:	IP54
Noise:	< 70 dB
Expected lifetime:	20 years

* The Equipment must be powered by a SELV limited power source ensuring double insulation between primary voltages and the Equipment supply. The supply current should be limited to max 3A.

		
Detection mode:	Motion Min. detection speed: 5 cm/s	Presence Typical response time: < 200 ms (max. 500 ms)
Technology:	Microwave doppler radar Transmitter frequency: 24.150 GHz Transmitter radiated power: < 20 dBm EIRP Transmitter power density: < 5 mW/cm²	Active infrared with background analysis Spot: 5 cm x 5 cm (typ) Number of spots: max. 24 per curtain Number of curtains: 2

Specifications are subject to changes without prior notice.
All values are measured in specific conditions and with a temperature of 25°C.

ACCESSORY

Remote control **AR000001**

Rain cover **AR000002**

Mounting plate **AR000003**

Infrared spotfinder**AO000293**

Warning: If this has a direct impact on personal safety, the use of these products is prohibited.