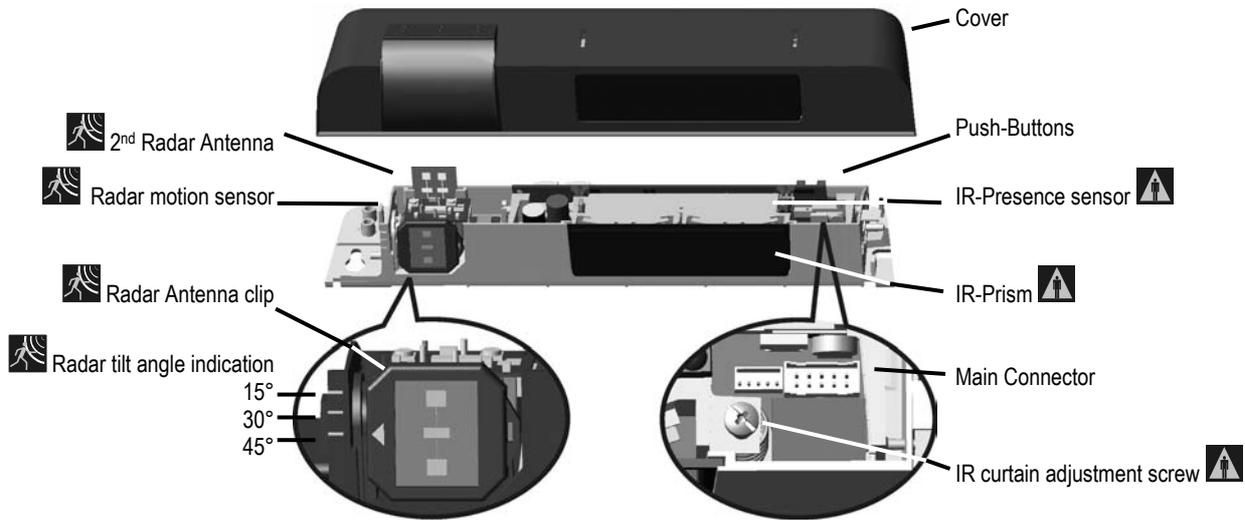


1 Description



2 Symbols



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 5: Troubleshooting

3 Installation

1 Tips



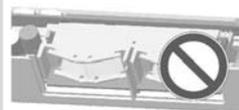
Use the Remote-Control to adjust the sensor.



Use the Spotfinder to locate the safety curtains.



Avoid touching electrical 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!



High intensity lamps in proximity of the detection field can cause disturbances.

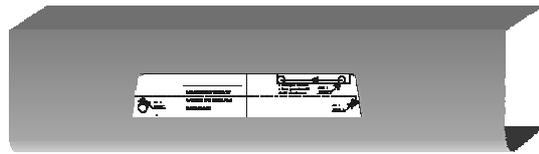


Highly reflective objects in the infrared field can cause disturbances.

2 Mounting the sensor

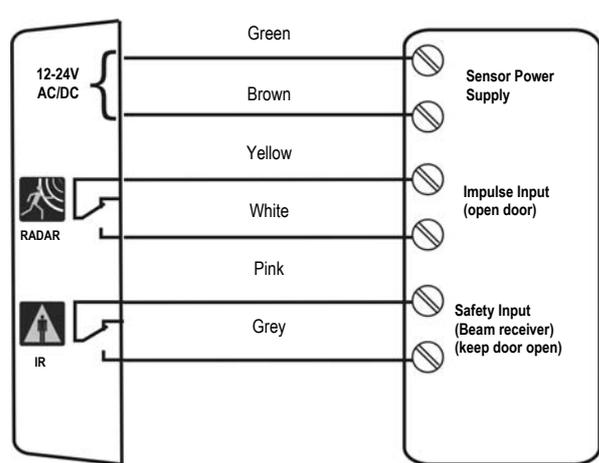


Mount the sensor at a maximum height of 5cm from the bottom line of the door operator.



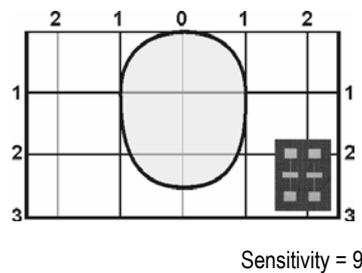
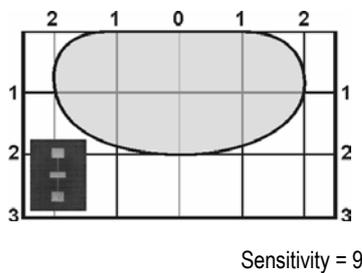
Use the mounting template to drill holes and position the sensor.

3 Wiring the sensor



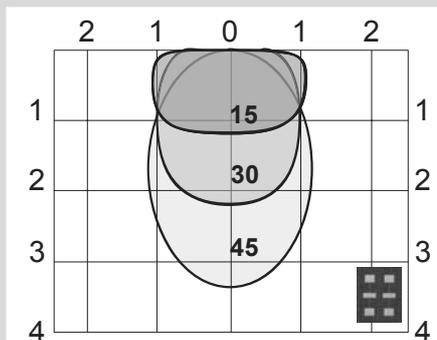
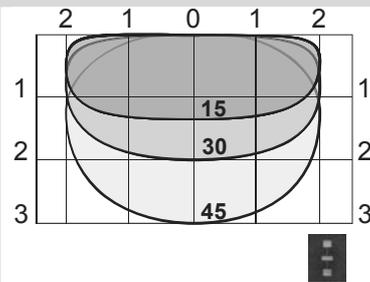
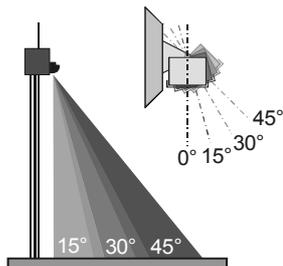
To ensure a good water protection, place the cable as shown above.

4 Radar motion sensing field : width



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

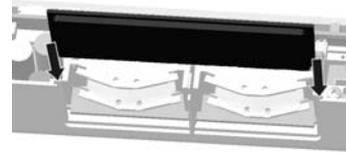
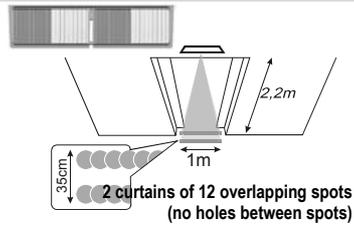
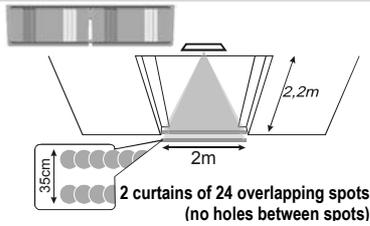
5 Radar motion sensing field : depth



6



IR presence sensing field : width



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

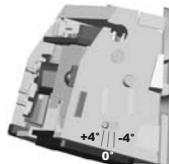
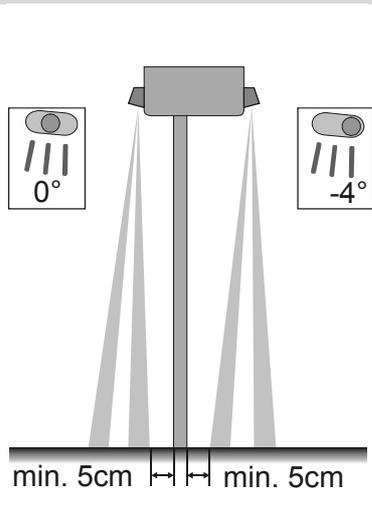


Above 3 m mounting height, use the narrow prism!

7



IR presence sensing field : depth (negative angle available)



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.



Use the Spotfinder (accessory) to locate and adjust the position of the curtains.



When mounting one sensor on each side of the door above a highly reflective threshold, select different frequencies to avoid crosstalk between the sensors (see setting "Installation configuration" on p.5).

8



Remote Control adjustments (only when factory settings do not match)

Unlock the sensor to enter into adjustment session (if no access code has been entered)	Press Unlock key RED LED flashes slowly
To change the value of a parameter (ex. Maximum duration of presence detection)	Select parameter to change RED LED flashes quickly Enter new value RED LED flashes slowly
... to change any other parameters (ex. Output Configuration)	Select parameter to change RED LED flashes quickly Enter new value RED LED flashes slowly
To check the value of a parameter (ex. maximum duration of presence detection)	Select parameter to check RED LED flashes quickly Press Question Mark GREEN GREEN GREEN GREEN ... RED LED flashes slowly The number of green flashes indicate the value of this parameter
Lock the adjustment session and go back to normal function	Press Lock key twice

8.a



Important Remote Control adjustments

Unlock	
Check values	
Lock	

Sensitivity

0 (min) → 9 (max)
Factory value : 7

IR curtain immunity

1	normal
2	increased
3	rain-mode
4	snow-mode
5	snow-mode enhanced



Number of IR curtains

1	1 curtain (safety curtain close to the door)
2	2 curtains
3	2 nd curtain in dynamic mode

Output configuration

	Motion-Out	Presence-Out
1	active	passive
2	passive	active
3	passive	passive
4	active	active

Max. duration of presence detection

0	30 seconds
1	1 minute
2	2 minutes
3	5 minutes
4	10 minutes
5	20 minutes
6	60 minutes

Setup

		launch a setup
	0	launch an assisted setup
	1-7	select pre-setting
	9	restore factory settings

8.b



Launch a setup (to take a reference picture)

Unlock the sensor to enter into adjustment session	Press Unlock key	RED LED flashes slowly	
To launch an assisted setup → recommended after mechanical adjustments of the IR sensor module. → recommended once after the first installation	Press Setup key followed by 0	RED/GREEN LED alternating	The sensor performs a door opening and closing cycle to check the influence of the door leaves to the safety curtains. See Troubleshooting if RED LED flashes quickly after setup.
To launch a setup → recommended after change of parameters by remote control	Press Setup key twice	RED/GREEN LED alternating	The sensor only takes a new reference picture.

LED display during sensor assisted setup

RED/GREEN LED alternating	Setup-process active: the sensor learns its environment. After finishing the setup process, the sensor shows the following behavior:
RED LED flashing quickly	The sensor 'sees' the door movement and can not finish its setup.
ORANGE LED continuously on	The sensor encounters a signal saturation (ex. due to a highly reflective floor).
No LED turns on	The sensor successfully finished its setup.

8.c



Additional Remote Control adjustments

Safety output redirection **F1**

0 ♦ **no redirection**

1 transfer presence detection to motion output

2 motion output activated if motion and presence detection

Hold time

0 ♦ (0.5s) → 9 (9s)

Detection mode ←→

1 bidirectional mode

2 ♦ **unidirectional mode**

3 unidirectional mode with MTF

4 unidirectional mode reverse

Immunity ◀▶

1 quasi-presence

2 ♦ **normal**

3 increased

4-9 additional increased immunities

Installation Configuration

	Mounting Height	Pulse Frequency
1 ♦	low	low
2	high	low
3	low	high
4	high	high

Door control **F2**

1 ♦ **normal**
(LED in normal mode)

2 door permanently open (red LED ON)

3 door permanently closed (red LED OFF / No monitoring reply)

4 Installation Tips

High mounting height (>3m)	<p>If the sensor is installed higher than 3m above the floor, make sure to use the narrow prism (see chapter "3 Installation" § 6). Also, set the sensor to "High Mounting":</p> <p> 2 Installation Configuration High Mounting Height</p> <p>or</p> <p> 4</p>
Outside installation	<p>Set the sensor to presetting 3 or 4 to increase the immunity of the sensor:</p> <p> 3 Presetting 3 External installation, vulnerable users</p> <p> 4 Presetting 4 External installation, normal users</p>
Rain/Snow	<p>If the sensor is exposed to rain or snow, use the URC (Universal Rain Cover)</p> <p>Set the sensor to presetting 3 or 4 to increase the immunity of the sensor. You can reduce the influence of rain and snow even more when selecting the RAIN or SNOW mode for the IR curtain immunity:</p> <p> 3 RAIN mode</p> <p> 4 SNOW mode</p> <p> 5 SNOW mode enhanced</p>
Reflective environments	<p>The additional increased radar immunity modes (4-9) reduce disturbances of the motion sensor in highly reflective environments (airlocks, curved and round sliding doors, metallic environments etc.).</p> <p> 4-9 Additional increased immunities</p>
Inside installation	<p>If the sensor is installed inside a building, set the sensor to presetting 1 or 2:</p> <p> 1 Presetting 1 Internal installation, vulnerable users</p> <p> 2 Presetting 2 Internal installation, normal users</p>
Setup	<p> 0 Assisted Setup (~14sec) Sensor checks the influence of the door leaves to the IR curtains (performs a door open/door close cycle)</p> <p> 2 Standard Setup (~4sec) Sensor only learns its environment</p> <p>After adjusting the sensor for the first time, it is recommended to launch an "Assisted Setup". Refer to chapter "3 Installation" § 8.2 for more information about the LED display)</p> <p>If the IR sensor module "sees" the door movement, move the curtains out of the door leaves.</p>
Access Code	<p>The access code is recommended to set sensors close to each other with remote control. The access code can be composed of 1 to 4 digits (factory values or no access code : 0 or 0000). No code is required to unlock during the first minute after powering.</p>
Overlapping IR-curtains	<p>Overlapping IR-curtains from sensors installed side-by-side may cause disturbances due to crosstalk (interferences). Select different frequencies on each sensor to avoid crosstalk (see setting "Installation configuration" on p.5). Attention: avoid curtains that are overlapping by more than 30cm (at 2,2m mounting height, using the wide prism).</p>
Only one single Impulse input on door controller	<p>If your door controller has only one single impulse input for motion impulse (open the door) and no safety input (keep the door open), use the "Safety Output Redirection" to transfer the safety detection (IR sensor module) to the motion impulse output and connect only the motion output to your door controller:</p> <p>F1 1 Safety Output Redirection 1 (= transfer presence detection to the motion output)</p>
Check the wiring	<p>Push the left push button to release the outputs. The door should close and the LED should switch off.</p>
Push Buttons	<p>For more information on the use of the push buttons, ask our application note.</p>
Monitoring of safety sensor	<p>If your door controller monitors its safety sensors, you have to order an ACTIV8 ONE ON or ACTIV8 ONE PULSE.</p>

5 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 ON	The sensor encounters a 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 the remote control or 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.
Door keeps recycling open-closed.	The sensor is disturbed by the door motion because it sees the door or because of vibrations.	Green LED signals a motion detection: increase the radar angle. Increase the radar immunity. Red LED signals infrared detection: increase the IR curtains angle (turning the screw counterclockwise).
The door is not closing. LED OFF	On-Off switch at door control is in wrong position or is faulty. Improper output configuration on the sensor.	Check to insure that On-Off switch for door is in the ON or AUTOMATIC position. Check the output configuration setting on each sensor.
The presence detection is disturbed by the rain (red LED)		Increase the immunity of the curtains (immunity 3 up to 5)
The radar detection is disturbed by the rain (green LED).		Check whether the unidirectional mode is selected and the MTF function is disabled. Increase the radar immunity.
The sensor does not unlock when access code is entered.	Improper code being entered.	Cut and restore power supply. No code is required to unlock during the first minute after powering. Press on "unlock", then on "lock" and introduce a new access code.
The sensor does not respond to the remote control.	1. Batteries in the remote control are dead or not installed properly. 2. Remote control badly pointed.	1. Check to insure that the batteries are installed correctly or replace batteries. 2. Point the remote control towards the sensor.
In airlock vestibules, the sensor sees the opposite door.		Increase radar immunity.
In metallic environments, the sensor detects objects outside of its detection field.		Increase radar immunity.

6 Technical Specifications

Supply voltage	: 12V (- 5%) to 24V (+10%) AC/DC
Mains frequency	: 50 - 60 Hz
Power consumption	: < 3 W
Mounting height	: 1.8m to 4m
3-color LED	: RED (presence detection) – GREEN (motion detection) – ORANGE (signal saturation, error)
Temperature range	: -25°C to +55°C
Degree of protection	: IP54
Norm conformity	: R&TTE 1999/5/EC; EMC 89/336/EEC
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
Range of Remote Control	: 5m

	 MOTION SENSOR	 PRESENCE SENSOR																		
Detection mode	Motion Minimum detection speed: 5 cm/s (measured in sensor axis)	Presence Typical response time: < 128ms (< 500ms in extreme cases)																		
Technology	Microwave and microprocessor Transmitter frequency: 24.175 GHz Transmitter radiated power: < 20 dBm EIRP Transmitter power density: < 5 mW/cm ²	Focused active infrared and self-monitored microprocessor Spot diameter (standard): 0.1m max Number of spots: 24 or 12 spots by curtain Number of curtains: 2																		
Detection field	<table border="1"> <thead> <tr> <th></th> <th>Width</th> <th>Depth</th> </tr> </thead> <tbody> <tr> <td>Wide</td> <td>4 m</td> <td>2 m</td> </tr> <tr> <td>Narrow</td> <td>2 m</td> <td>2,5 m</td> </tr> </tbody> </table>		Width	Depth	Wide	4 m	2 m	Narrow	2 m	2,5 m	<table border="1"> <thead> <tr> <th></th> <th>Width</th> <th>Depth</th> </tr> </thead> <tbody> <tr> <td>Wide</td> <td>2 m</td> <td>0,35 m</td> </tr> <tr> <td>Narrow</td> <td>1 m</td> <td>0,35 m</td> </tr> </tbody> </table>		Width	Depth	Wide	2 m	0,35 m	Narrow	1 m	0,35 m
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	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 to 9s (adjustable)	0,1/1s (fixed)																		

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

7 Accessories (sold individually)

