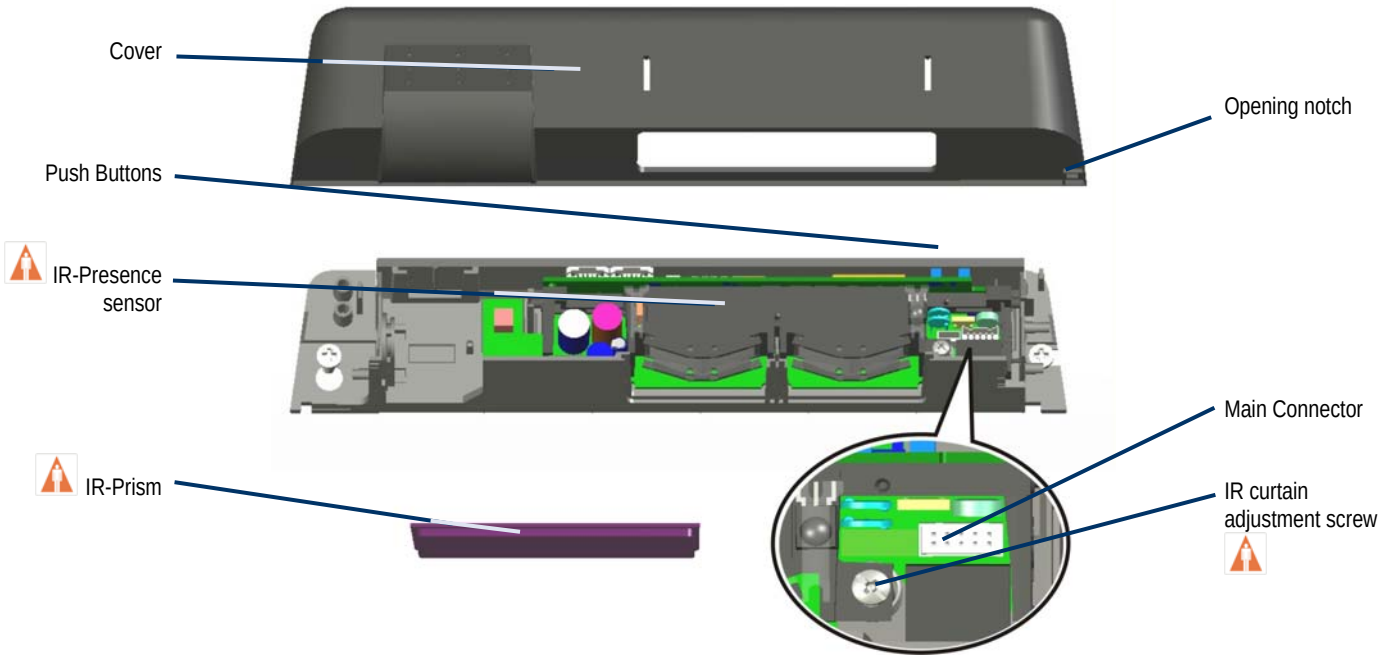
IRIS OFF
USER'S GUIDE

ACTIVE INFRARED SAFETY SENSOR FOR AUTOMATIC DOORS

1 DESCRIPTION



2 SYMBOLS AND LED

LED turns on	LED flashing slowly	LED flashing quickly	Presence detection	See page x	Factory value

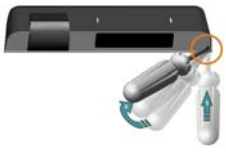
LED display during normal function

RED LED	Presence detection	
ORANGE LED	Troubleshooting	6

3 INSTALLATION

Use the Remote Control to adjust the sensor.

Use the Spotfinder to locate the safety curtains.



To remove the cover, use a screwdriver as indicated.

Make sure the door controller cover is fixed properly and electrically earthed.

Avoid touching optical parts!

Avoid vibrations!

Do not cover the sensor!

Avoid moving objects in proximity to the sensor!

Avoid HF lamps and fluorescent lighting in the infrared field!

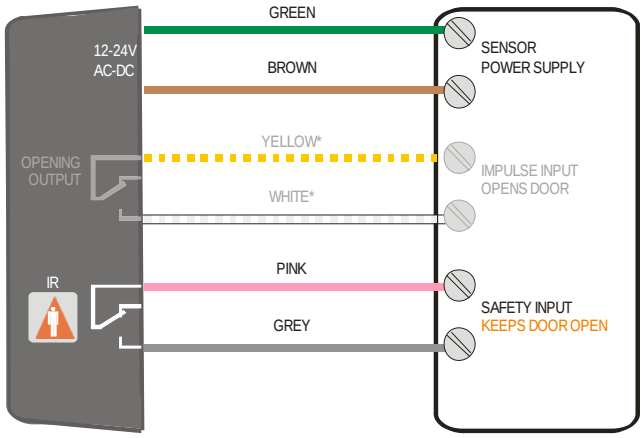
Avoid highly reflective objects in the infrared field!

1 Mounting the sensor

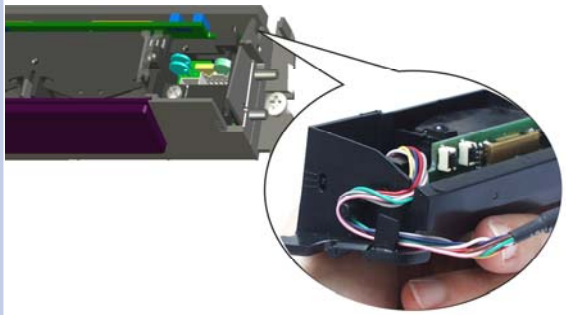
Mount the sensor at a maximum height of 5 cm from the bottom line of the door controller.

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

2 Wiring the sensor

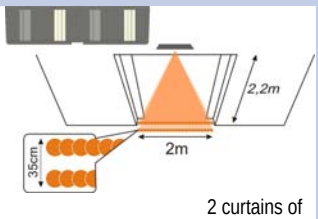


* For the assisted setup of the sensor, the sensor needs to launch an opening cycle of the door. Therefore the opening output should be wired to the impulse input of the door controller.

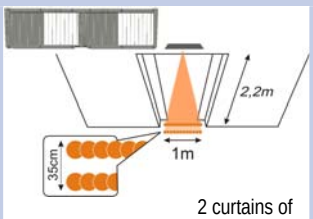


To ensure waterproof installation, place the cable as shown above.

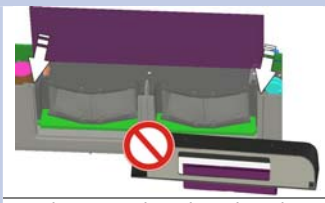
3 IR presence sensing field: width



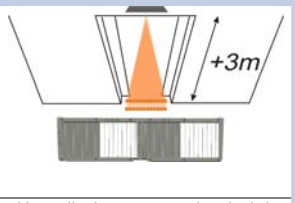
2 curtains of
24 overlapping spots
(no gaps)



2 curtains of
12 overlapping spots
(no gaps)

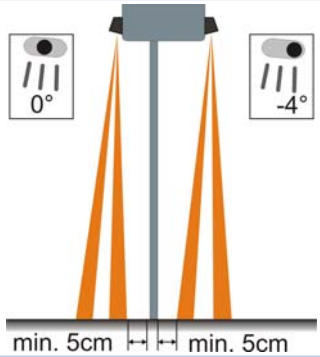


Make sure to introduce the prism into the guiding grooves in front of the lenses and not into the cover!

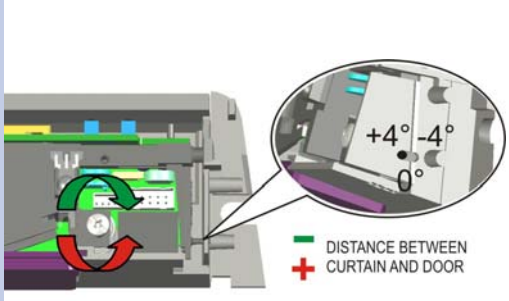


If installed at a mounting height of 3 m or more, use the narrow prism.

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



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



To reduce the distance between curtain and door, turn the screw clockwise. To increase the distance, turn the screw counterclockwise. The pin indicates the angle.

Use the Spotfinder 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.

5 Remote control adjustments (only if factory values do not match)

Unlock the sensor to enter into adjustment session (see p.5 for info on the use of an access code)		RED LED flashes slowly		
To **change** the value of a parameter (ex. IR curtain immunity)		RED LED flashes quickly	0-9	RED LED flashes slowly
To **change** any other parameters (ex. Output Configuration)		RED LED flashes quickly	0-9	RED LED flashes slowly
To **check** the value of a parameter (ex. Max duration of presence detection)		RED LED flashes quickly	?	GREEN LED Number of flashes = value of this parameter ... RED LED flashes slowly
Lock the adjustment session and go back to normal function			LED OFF	

5.1 Important remote control adjustments

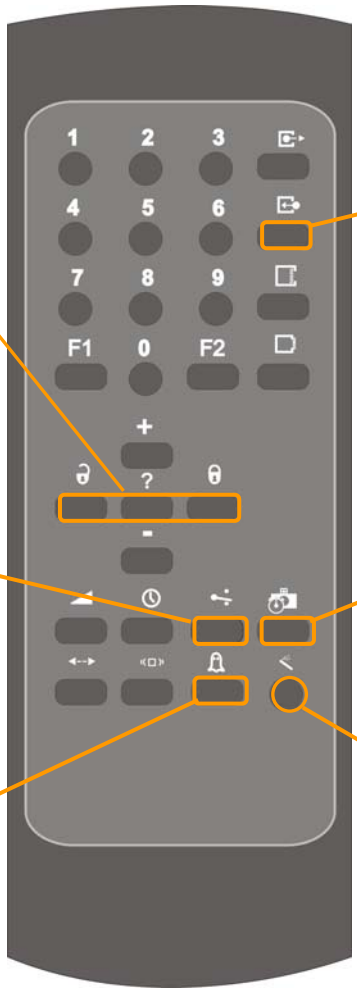
UNLOCK
CHECK VALUES
LOCK

OUTPUT CONFIGURATION

	OPENING	SAFETY
1	active - NO	passive - NC
2	passive - NC	active - NO
3	passive - NC	passive - NC
4	active - NO	active - NO

IR CURTAIN IMMUNITY

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



NUMBER OF IR CURTAINS

1	1 curtain (curtain closest to door)
2	2 curtains

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 setup	
0	launch assisted setup
9	restore factory settings

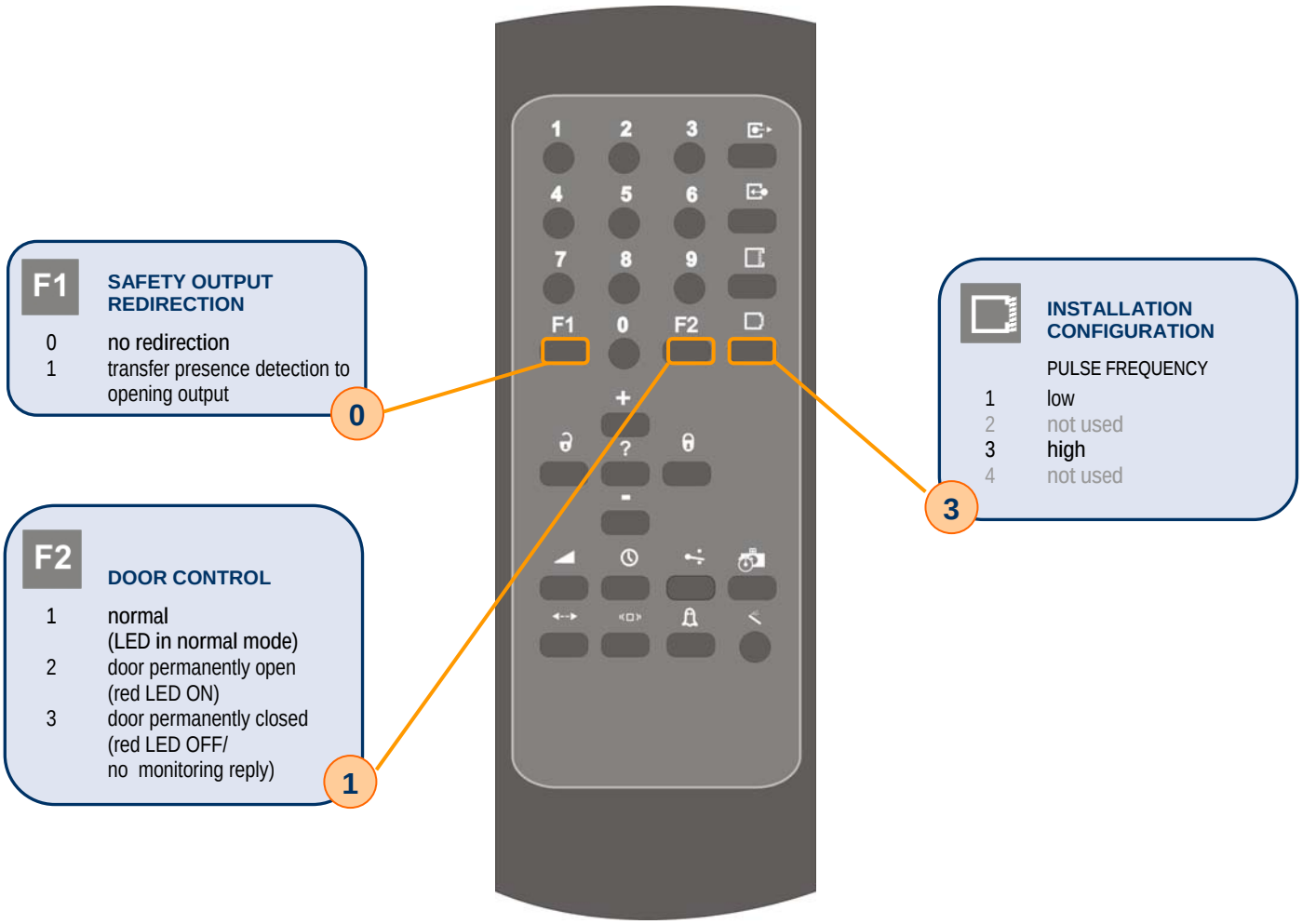
5.2 Launching a setup

Unlock the sensor to enter into adjustment session.		 RED LED flashes slowly		
To launch an assisted setup → recommended after mechanical adjustments of the IR sensor module. → recommended once after the first installation		 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.
	This setup is only effective if the relay output (opening) has been wired to the door controllers opening impulse input. This is required to create a door opening/closing cycle.			
To launch a setup → recommended after change of parameters by remote control			 RED/GREEN LED alternating	The sensor only takes a new reference picture.

LED display during sensor assisted setup

Setup process active:	After finishing the setup process, the sensor shows the following behaviour:		
 RED/GREEN LED alternating		RED LED flashing quickly	The sensor 'sees' the door movement and can not finish its setup.
		ORANGE LED continuously on	The sensor encounters signal saturation (ex. due to highly reflective floor). 6
		No LED turns on	The sensor successfully finished its setup.

5.3 Additional remote control adjustments



High mounting height (>3m)

If the sensor is installed higher than 3m above the floor, make sure to use the narrow prism. 2

Rain/Snow

If the sensor is exposed to rain or snow, use the URC (Universal Rain Cover)
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:

3	RAIN mode	
4	SNOW mode	
5	SNOW mode enhanced	

Setup

0	Assisted Setup (~14sec)	Sensor checks the influence of the door leaves on the IR curtains (performs a door open/door close cycle)
	Standard Setup (~4sec)	Sensor only learns its environment

4

After adjusting the sensor for the first time, it is recommended to launch an “assisted Setup”.
If the IR sensor module “sees” the door movement, move the curtains out of the door leaves.

Access Code

The access code is recommended to set sensors that are installed close to each other with remote control. If you forget the programmed code, you can still gain access to the sensor during the first minute after powering up. During this time, unlocking the sensor does not require entering an access code. You can then program a new code or remove the code by entering LOCK 0000.

1-9 1-9 1-9 1-9	Save an access code (between 1 and 4 digits)
0 0 0 0	Delete the access code (0 or 0000)

Overlapping IR-curtains

Overlapping IR-curtains from sensors installed side-by-side may cause disturbances due to crosstalk.
Select different frequencies on each sensor to avoid crosstalk (see setting "Installation configuration" on p.4).
Attention: avoid curtains that are overlapping by more than 30 cm (at 2,2m mounting height, using the wide prism).

4

Only one single impulse input on door controller

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:

F1 1	Safety Output Redirection	1 (= transfer presence detection to the motion output)

Check the wiring

Push the left push button to release the outputs. The door should close and the LED should switch off.

Push Buttons

For more information on the use of the push buttons, ask our quick reference guide “How to use push buttons”.

Monitoring of safety sensor

If your door controller monitors its safety sensors, you have to use an IRIS ON or PULSE.

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. 2
Red LED permanently ON after an assisted setup.	The sensor fails the IR test.	1. Cut and restore the power supply. 2. Launch a new assisted setup. If the LED still stays ON, replace the sensor. 4
Red LED ON	The sensor detects a presence.	Wait as long as the time set in the "maximum duration of presence detection" setting or launch an assisted setup (with the remote control or right push button). 3-4
Red LED ON The presence detection is disturbed by the rain.		Increase the immunity of the curtains (value 3 - 5) 3
Orange LED flashes	The sensor signals an internal fault.	Cut and restore the power supply. If the orange LED flashes again, replace faulty sensor.
Orange LED ON	The sensor encounters signal saturation.	1. Use the wide field prism and/or slightly increase the IR-curtains angle (turning the screw counterclockwise). 2. Launch an assisted setup. 2+4
The door is not closing. LED OFF	1. On-Off switch at door control is in wrong position or is faulty.	Check to insure that On-Off switch for door is in ON or AUTOMATIC position.
	2. Improper output configuration on the sensor.	Check the output configuration setting on each sensor. 3
Unwanted presence detection	1. The sensor is not placed properly.	Fasten the sensor firmly.
	2. The front face is not properly fixed.	Check whether the front face prism is placed into the guiding grooves and not in the sensor cover. 2
Door keeps recycling open-closed.	The sensor is disturbed by the door motion because it sees the door or feels vibrations.	Increase the IR curtains angle by turning the screw counterclockwise. 2
The sensor does not respond to the remote control.	1. Batteries in the remote control are not installed properly or dead.	Verify whether the batteries are installed correctly or replace batteries.
	2. Remote control badly pointed.	Point the remote control towards the sensor.
The sensor does not unlock when access code is entered.	Wrong 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. 5

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
2-coloured LED	: RED (presence detection) – ORANGE (signal saturation, error)
Temperature range	: -25°C to +55°C
Degree of protection	: IP54
Norm conformity	: 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

	PRESENCE SENSOR
Detection mode	Presence Typical response time: < 128ms (max. 500 ms)
Technology	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	Width / Depth Wide 2 m 0,35 m Narrow 1 m 0,35 m
Angle	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)
Output holdtime	0,1/1s (fixed)

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

7 ACCESSORIES


Remote Control


Spotfinder


ACA


ABA


Prisms 1m -2m

Prism 1m centre

Prism 50cm right

Prism 50cm right high energy

Prism 50cm left

Prism 50cm left high energy

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