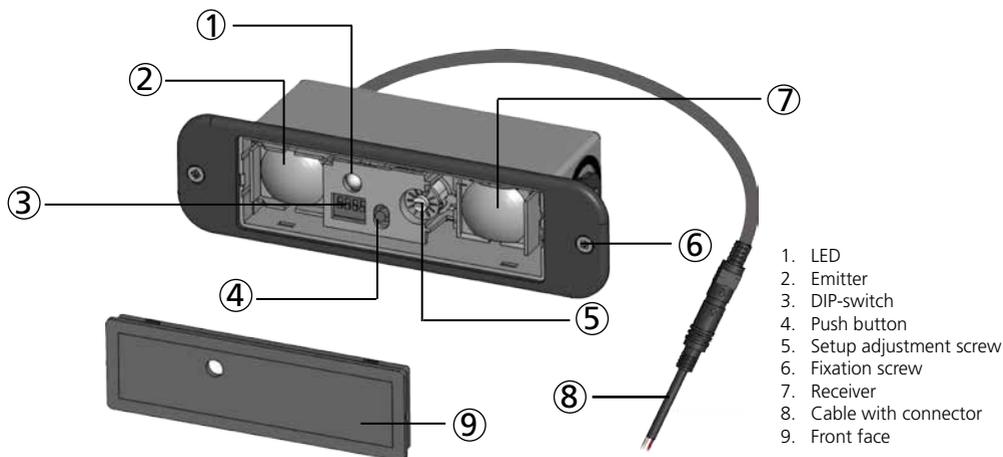


1SAFE

User's Guide for product version 0301 and higher
See product label for serial number

Active infrared safety sensor
for automatic doors*

DESCRIPTION



1. LED
2. Emitter
3. DIP-switch
4. Push button
5. Setup adjustment screw
6. Fixation screw
7. Receiver
8. Cable with connector
9. Front face

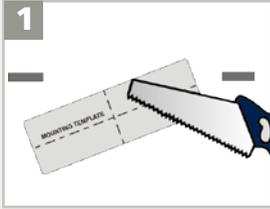
TECHNICAL SPECIFICATIONS

Technology:	active infrared
Detection mode:	presence detection by distance measurement
Detection field:	35mm x 70mm (at 2.2m mounting height)
Light indicator:	red LED: is ON during detection - orange LED flashes 1x after power on
Response time:	64ms
Mounting height:	0.6m - 3m
Supply voltage:	12V - 24V AC/DC -5% / + 10%
Mains frequency:	50 - 60 Hz
Max. current consumption:	120mA @ 24V AC / 80mA @ 24V DC
Standard output:	relay (free of potential contact)
Max. contact voltage:	42V AC/DC
Max. contact current:	1A (resistive)
Max. switching power:	30W (DC) / 60VA (AC)
Monitoring input:	1 optocoupler (free of potential contact)
Max. contact voltage:	30V
Voltage threshold:	High state: >10V - Low state: <1V
Hold time:	0.5s
Reflectivity:	min. 10% at IR-wavelength of 850nm
Temperature range:	-25°C - +55°C; 0-95% rel. humidity, non condensing
Degree of protection:	IP53
Dimensions:	145mm (L) x 40mm (H) x 50mm (D)
Housing material:	ABS (black)
Length of main cable:	2.5m
Norm conformity:	EN 61000-6-2; EN 61000-6-3; EN 50581

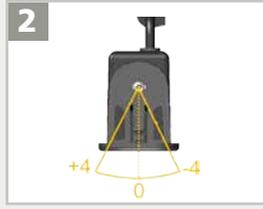
Specifications are subject to changes without prior notice.
Measured in specific conditions.

* Other use of the device outside of the permitted purpose can not be guaranteed by the manufacturer.

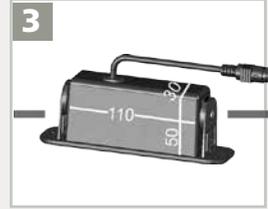
1 INSTALLATION



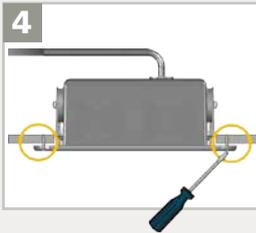
Use the mounting template to cut out the opening for the sensor.



Adapt the angle of the sensor.



Connect the cable and insert the sensor into the opening.

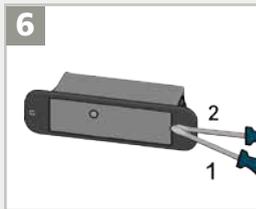


After inserting the sensor, fix the 2 screws firmly.

5

- BROWN - POWER SUPPLY
- GREEN - 12-24V AC/DC
- YELLOW - COM
- WHITE - NF
- BLACK - NO
- RED - MONITORING
- BLUE - MONITORING

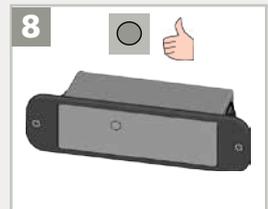
	NO - ACTIVE	NC - PASSIVE
	YELLOW-BLACK	YELLOW-WHITE
NO POWER		
NO DETECTION		
DETECTION		



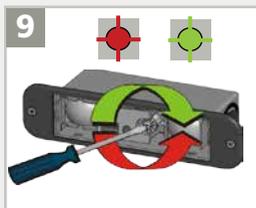
Unclips the front face by inserting a screwdriver as shown.



Push the push button shortly to launch an automatic setup. The LED will flash RED-GREEN.



When the LED turns OFF the sensor is correctly installed. Fasten the front face and test the good functioning of the sensor.

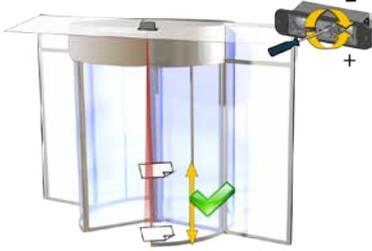


If the LED continues flashing, you have to adjust the sensor further (see SETUP next page).



The sensor can also be installed on the surface by using the surface mount accessory (sold separately).

2 ADDITIONAL ADJUSTMENTS (DIP-SWITCH)

	OFF (Factory values)	ON
SETUP	<p>1  AUTOMATIC MODE</p> <p>Do not touch the screw. It should be positioned as shown.</p>  <p>Push the push button shortly to launch an automatic setup.</p>  <p>LED flashes RED-GREEN.</p>  <p>OK</p>  <p>.....</p>    <p>.....</p> <p>Switch to manual mode.</p> 	<p>1  MANUAL MODE</p> <p>When?</p> <ul style="list-style-type: none"> - low reflectivity of background - no background or mounting height > 3m - mounting height < 1.6m - uncovered zone > 40cm <p>How?</p> <p>Decrease (-) or increase (+) the uncovered zone and check it by moving a white paper up and down under the sensor.</p>  <p>Do not move the white paper horizontally!</p> 
	UNCOVERED ZONE	<p>2  SMALL (25CM AT 2.2M)</p> <p>When?</p> <p>When increased door safety is required. Relaunch a setup after changing dip switch 2.</p>
FREQUENCY		<p>3  FREQUENCY 1</p> <p>When?</p> <p>When 2 or more sensors are installed in proximity to each other, it is recommended to choose different frequencies to avoid crosstalk.</p>  
	MONITORING	<p>4  MONITORING ACTIVE HIGH</p> <p>When?</p> <p>When the monitoring input mode is active high or when no monitoring is required.</p>

INSTALLATION TIPS



Avoid reflective background or objects in the detection field of the sensor.



Avoid high intensity lighting in the detection field.



Do not cover the sensor.



Do not touch the optical parts.

TROUBLESHOOTING

	The RED LED is ON sporadically or permanently.	Bad calibration.	1	Launch a calibration.
		Bad adjustment of the uncovered zone.	1	Check if the DIP-switch 4 is in correct position.
			2	Launch a calibration.
	The sensor does not react, but a calibration can be launched.	The sensor is disturbed by lamps or another sensor.	1	Select a different frequency for each module (DIP 2).
			2	Launch a calibration.
	The sensor does not react, but a calibration can be launched.	The monitoring is activated, but the test input is not powered.	1	Check wiring. - Door control with test: Connect RED and BLUE wires to test output. - Door control without test: Connect BLUE to 0 V and RED to +12 V - 30 V DC.
		The monitoring mode is wrong.	2	Change position of Dip-Switch.
	The ORANGE LED is on permanently.	The sensor encounters a memory problem.	1	Send the sensor back for a technical check-up.
	The ORANGE LED flashes quickly.	DIP-switch setting awaiting confirmation.	1	Confirm the DIP-switch setting: long push on the push button.
	The ORANGE LED flashes 1 x every 3 seconds.	The sensor signals an internal fault.	1	Cut and restore power supply.
			2	If orange LED flashes again, replace sensor.
	The ORANGE LED flashes 2 x every 3 seconds.	Power supply is out of limit.	1	Check power supply (tension, capacity).
			2	Reduce the cable length or change cable.
	The ORANGE LED flashes 4 x every 3 seconds.	The sensor does not receive enough IR-energy.	1	Launch a new calibration.
			2	Step out of the detection field.
			3	Change angle of spots.
			4	Switch off background (DIP 3: OFF).
	The ORANGE LED flashes 5 x every 3 seconds.	Calibration error.	1	Check mounting height.
			2	Change position of calibration screw.
			3	Launch a new calibration.
			4	Switch off background (DIP3: OFF)

- 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.
- Only trained and qualified personnel may install and setup the sensor.
- The warranty is invalid if unauthorized repairs are made or attempted by unauthorized personnel.

BEA SA | LIEGE Science Park | ALLÉE DES NOISETIERS 5 - 4031 ANGLEUR (BELGIUM) | T +32 4 361 65 65 | F +32 4 361 28 58 | INFO@BEA.BE | WWW.BEA-SENSORS.COM



BEA hereby declares that the 1SAFE is in conformity with the basic requirements and the other relevant provisions of the directives EMC 2014/30/EU and the RoHS 2 2011/65/EU.

The complete declaration of conformity is available on our website.



Only for EC countries: According to the European Guideline 2012/19/EU for Waste Electrical and Electronic Equipment (WEEE)

