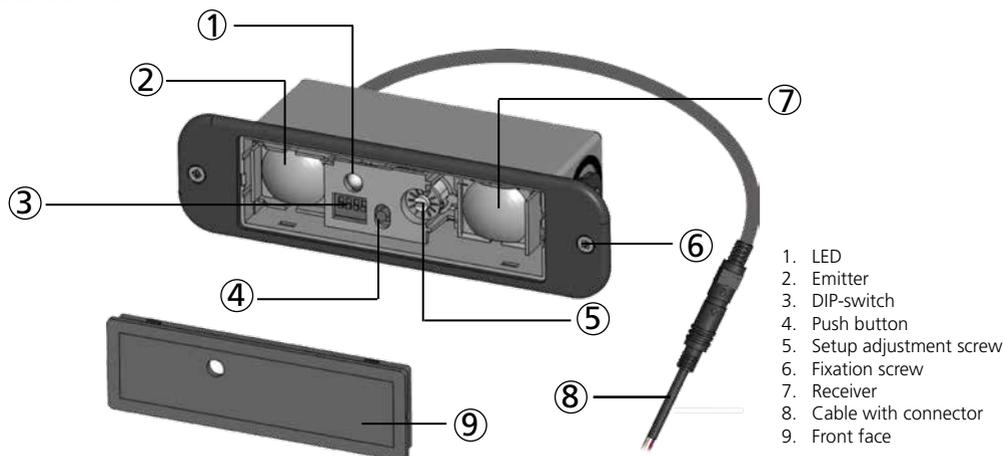


ISAFE

User's Guide for product version 0601 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

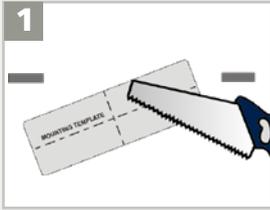
TECHNICAL SPECIFICATIONS

Technology:	active infrared
Detection mode:	presence detection by distance measurement
Detection field:	35 mm x 70 mm (at 2.2 m mounting height)
Light indicator:	red LED: is ON during detection - orange LED flashes 1x after power on
Response time:	64 ms
Mounting height:	0.6 m - 3 m
Supply voltage:	12 V - 24 V AC/DC -5 % / +10 %
Mains frequency:	50 - 60 Hz
Max. current consumption:	120 mA @ 24 V AC / 80 mA @ 24 V DC
Standard output:	relay (free of potential contact)
Max. contact voltage:	42 V AC/DC
Max. contact current:	1A (resistive)
Max. switching power:	30 W (DC) / 42 VA (AC)
Monitoring input:	1 optocoupler (free of potential contact)
Max. contact voltage:	30 V
Voltage threshold:	High state: >10 V - Low state: <1 V
Hold time:	0.5 s
Reflectivity:	min. 10 % at IR-wavelength of 850 nm
Temperature range:	-25 °C - +55 °C; 0-95 % rel. humidity, non condensing
Degree of protection:	IP53
Dimensions:	145 mm (L) x 40 mm (H) x 50 mm (D)
Housing material:	ABS (black)
Length of main cable:	2.5 m
Norm conformity:	EN 61000-6-2; EN 61000-6-3; EN 50581; EN ISO 13849-1 Performance Level «C» CAT. 2 (under the condition that the door control system monitors the sensor at least once per door cycle)
Test body:	Test body CA in conformity with EN 16005

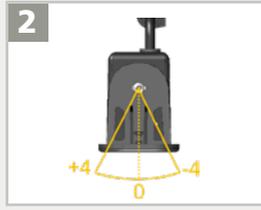
Specifications are subject to changes without prior notice.
Measured in specific conditions.

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

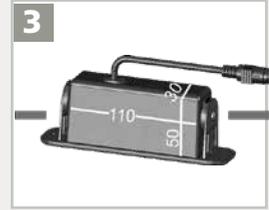
1 INSTALLATION



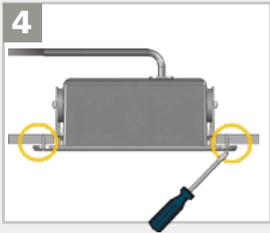
Use the mounting template to cut out the opening for the sensor.



Adapt the angle of the sensor.



Connect the cable and insert the sensor into the opening.

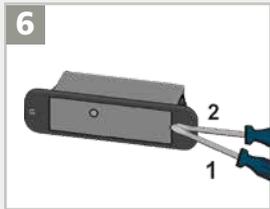


After inserting the sensor, fix the 2 screws firmly.

5

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

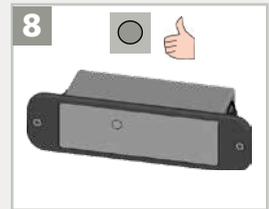
	NO - ACTIVE	NC - PASSIVE
	YELLOW-BLACK	YELLOW-WHITE
NO POWER		
NO DETECTION		
DETECTION		



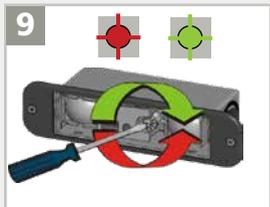
Unclips the front face by inserting a screwdriver as shown.



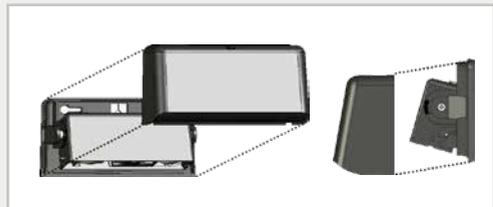
Push the push button shortly to launch an automatic setup. The LED will flash RED-GREEN.



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

1



AUTOMATIC MODE



MANUAL MODE

SETUP

Do not touch the screw.
It should be positioned as shown.



Push the push button shortly
to launch an automatic setup.



LED flashes RED-GREEN.



OK



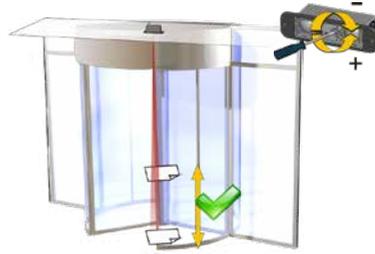
Switch to manual mode.



When?
- low reflectivity of background
- no background or mounting height > 3 m
- mounting height < 1.6 m
- uncovered zone > 40 cm

How?

Decrease (-) or increase (+) the uncovered zone and check it by moving a white paper up and down under the sensor.



Do not move the white paper horizontally!

2



SMALL (25 CM AT 2.2 M)



BIG (40CM AT 2.2 M)

UNCOVERED ZONE

When?
When increased door safety is required.
Relaunch a setup after changing DIP 2.

When?
When increased immunity to disturbances is required.
Relaunch a setup after changing DIP 2.

3



FREQUENCY 1



FREQUENCY 2

FREQUENCY

When?
When 2 or more sensors are installed in proximity to each other, it is recommended to choose different frequencies to avoid crosstalk.



When?
When 2 or more sensors are installed in proximity to each other, it is recommended to choose different frequencies to avoid crosstalk.



4



ACTIVE HIGH



ACTIVE LOW

MONITORING

When?
When the monitoring input mode is active high or when no monitoring is required.

When?
When the monitoring input mode is active low.



After changing a DIP-switch, the orange LED flashes. A LONG push on the push button confirms the settings.

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 2 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 3).
			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 4.
	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.
	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.

- 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.

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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.
Notified Body for EC-type inspection: 0044 - TÜV NORD CERT GmbH, Langemarckstr. 20, D-45141 Essen
EC-type examination certificate number: 44 205 13089615

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)

