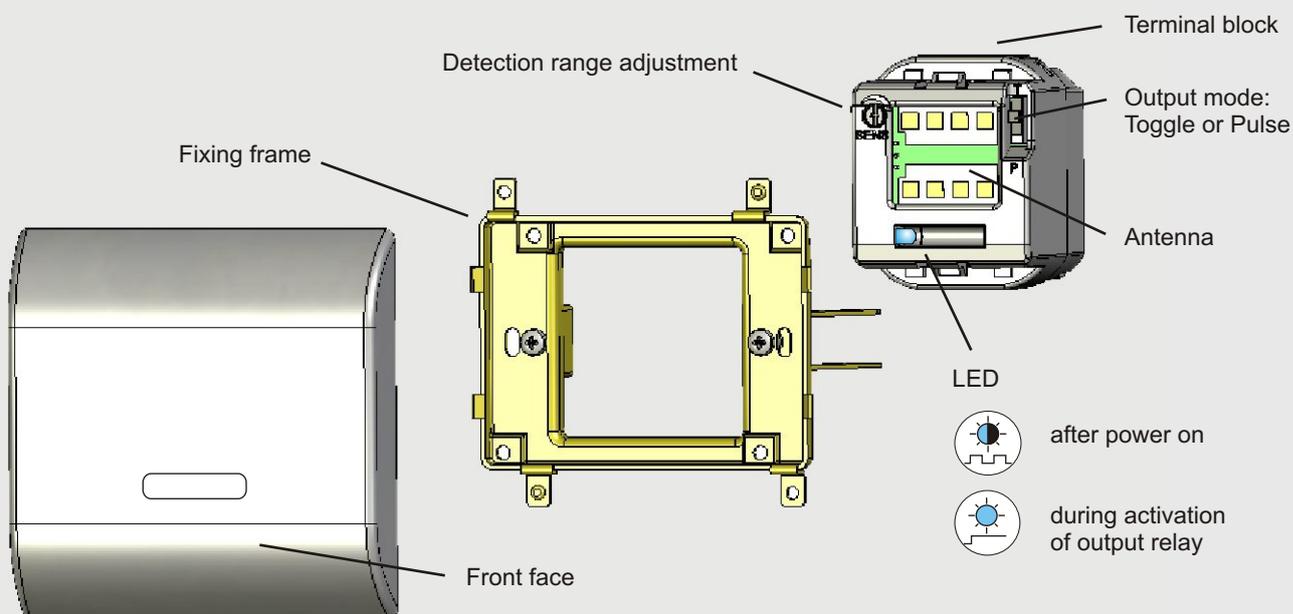
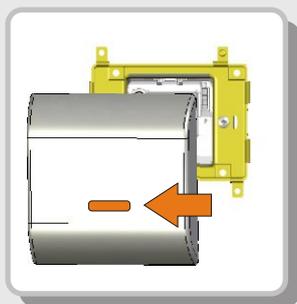


MICROWAVE CONTACTLESS SWITCH

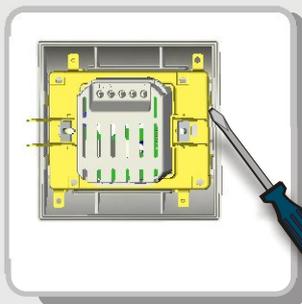
**DESCRIPTION**



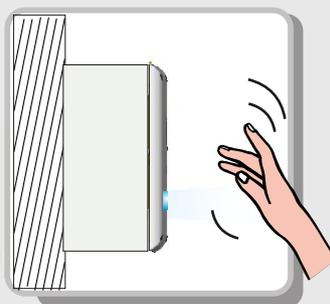
**INSTALLATION TIPS**



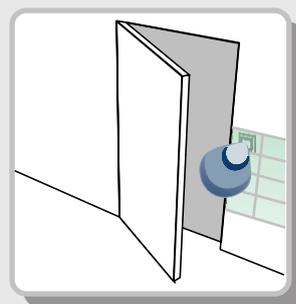
When clipping the front face, make sure the zone for the LED is at the bottom.



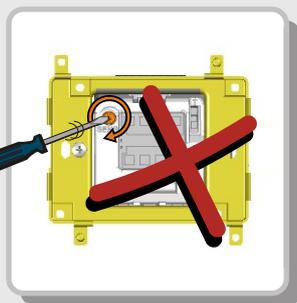
Use the screwdriver to remove the front face.



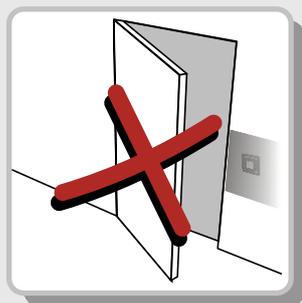
The sensor can be installed on the surface by using the surface mount box.



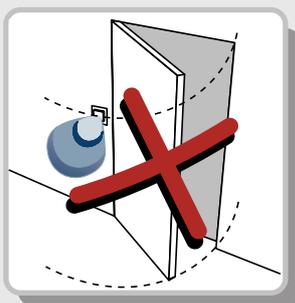
The sensor can be placed behind tiles, wood, plaster, plastic and glass.



Do not force when turning the adjustment screw.



Do not place the sensor behind metallic plates.

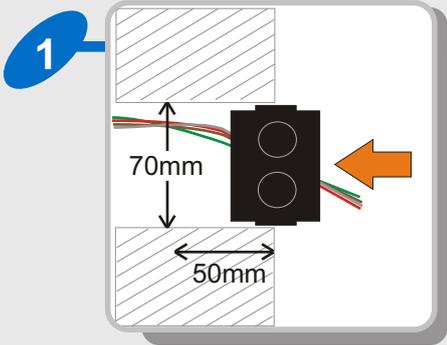


Do not place the sensor in the opening range of the door.

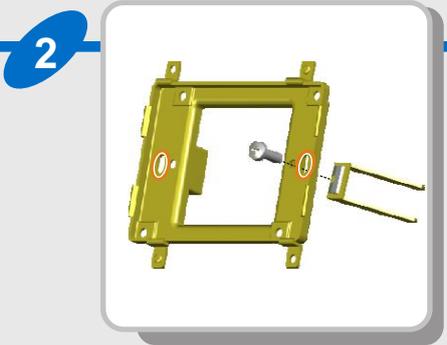


Avoid moving objects in front of the sensor

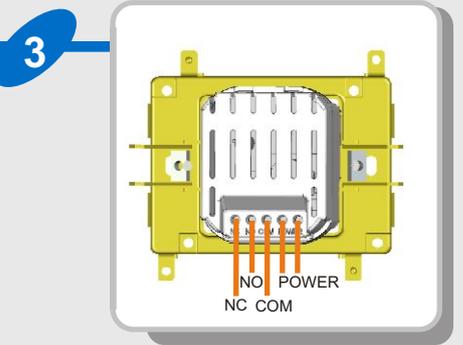
# INSTALLATION



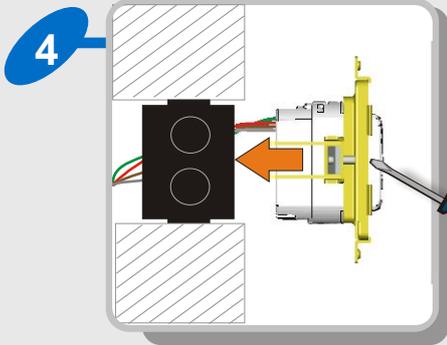
Make a hole and insert the recessed box into the opening. Pull the wires through the box.



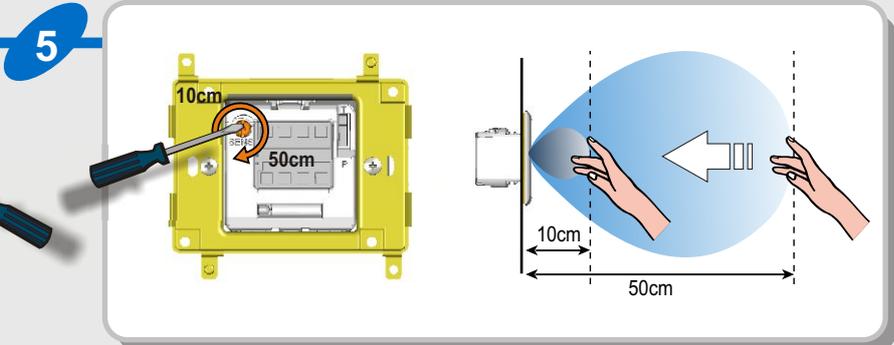
If you do not use the fixation brackets, unscrew them. Fix the screws of the recessed housing in the oval holes.



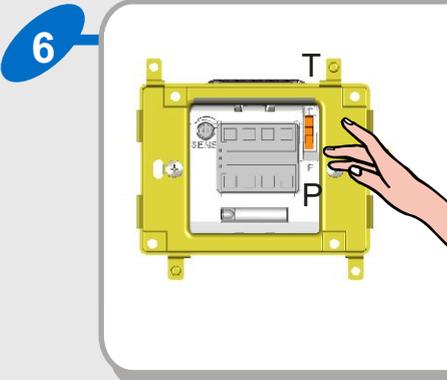
Connect the wires to the terminal block. After connection, the LED flashes.



Insert the housing into the recessed box and tighten the screws firmly.

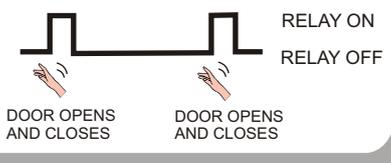
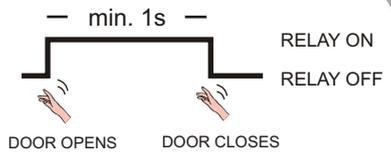


Adjust the detection range according to the application. Note that the detection range depends on the trajectory, size and nature/material of the detected object.

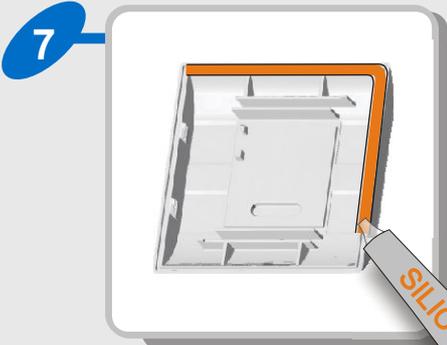


**TOGGLE MODE:** Recommended for switch applications. In toggle mode, a detection activates the relay and a second detection deactivates it again. In door applications, the door stays open after the first activation.

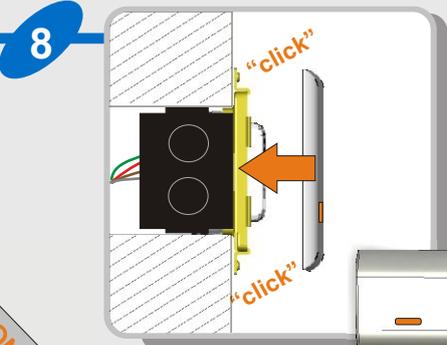
**PULSE MODE:** Recommended for automatic door applications. In pulse mode, a detection activates the relay for a short period of time (depending on the duration of the movement in front of the sensor).



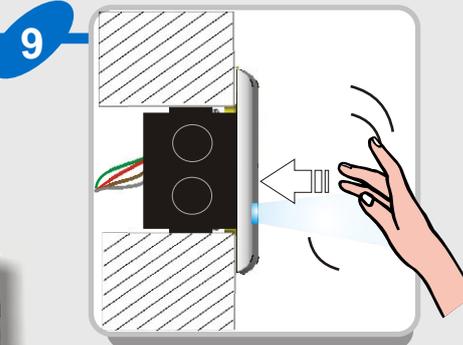
Make sure the output mode is set to PULSE-mode (P) for standard door applications.



In order to increase water resistance, place a silicone seal on the front cover.



Clips the front cover on the fixation bracket. Make sure the zone for the LED is at the bottom, otherwise you risk damaging the front face when trying to clips it.



Make sure the LED-signal is visible and test the good functioning of the sensor by moving the hand towards the sensor.

## TROUBLESHOOTING

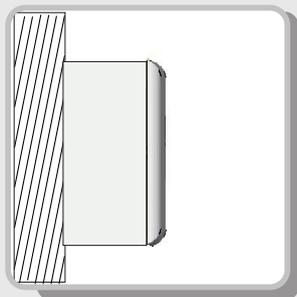
SYMPTOM	LED	POSSIBLE CAUSES	CORRECTIVE ACTION
The door does not open even when moving hand towards the sensor.	 OFF	Bad or no power supply	Check power supply. <i>If LED switches on or flashes, power connection is OK.</i>
	 OFF	Detection range is too small.	Adjust the detection range. Remove any metal plates in front of the sensor.
	 ON	Wrong connection	Check wiring and relay connection.
The door remains permanently open.	 ON	The environment influences the good functioning of the sensor.	Remove any moving objects close to the sensor.
	 OFF	Wrong connection	Check wiring and relay connection.
The door remains open after detection/activation.	 ON	Wrong output mode	Switch the output mode to PULSE mode.
	 OFF	Wrong connection	Check wiring and relay connection.

## TECHNICAL SPECIFICATIONS

<b>Technology:</b>	Microwave motion sensor
<b>Radiated frequency:</b>	24.150 GHz
<b>Radiated power density:</b>	$\ll 5\text{mW}/\text{cm}^2$
<b>Detection range (hand):</b>	+/- 10 to 50 cm if movement towards sensor at 90° (adjustable)*
<b>Detection mode:</b>	Motion (bidirectional)
<b>Speed of target to create detection:</b>	Min. 5Hz or +/- 3cm/s, Max. 200Hz or +/- 1.2m/s
<b>Supply voltage:</b>	12 - 24V AC +/- 10% 12 - 24V DC +30% / - 10%
<b>Mains frequency:</b>	50 - 60 Hz
<b>Power consumption:</b>	< 1.2W
<b>Output:</b>	Relay with switch-over contact (free of potential)
Max. voltage:	48V AC - 60V DC
Max. current:	1A (resistive)
Max. switching power:	30W (DC) / 48VA (AC)
<b>Output hold time:</b>	0.5s (in PULSE mode)
<b>Temperature range:</b>	-20°C - +55°C
<b>Degree of protection:</b>	IP30 with cable connected IP40 flush-mounted without front face IP52 flush-mounted with front face and silicone seal mounted in surface mount box
<b>Norm conformity:</b>	R&TTE: 1999/5/EC; EMC: 2004/108/EEC
<b>Material:</b>	ABS / PC
<b>Colour:</b>	White
<b>Recommended wiring cable:</b>	Stranded cable up to 16 AWG - 1.5mm <sup>2</sup>

Specifications are subject to changes without prior notice  
\* The adjustment of the detection field below 10cm is possible, but the detection capability of the sensor can not be guaranteed!

## ACCESSORIES AND OPTIONS



Surface mount box



Magic Switch logo  
in laser engraving



Your company logo  
in laser engraving

## LED SIGNAL



LED flashes



LED switches ON



LED is OFF



### EU declaration of conformity

BEA hereby declares that the product MAGIC SWITCH is in conformity with the basic requirements and the other relevant provisions of the standards 1999/5/EC and 2004/108/EEC.

The complete declaration of conformity is available on our website: [www.bea.be](http://www.bea.be)

The colour version of this user's guide and other technical documentation are available on our website ([www.bea.be](http://www.bea.be)) or can be requested by phone (+32 4 361 65 65) or mail ([info@bea.be](mailto:info@bea.be)).