

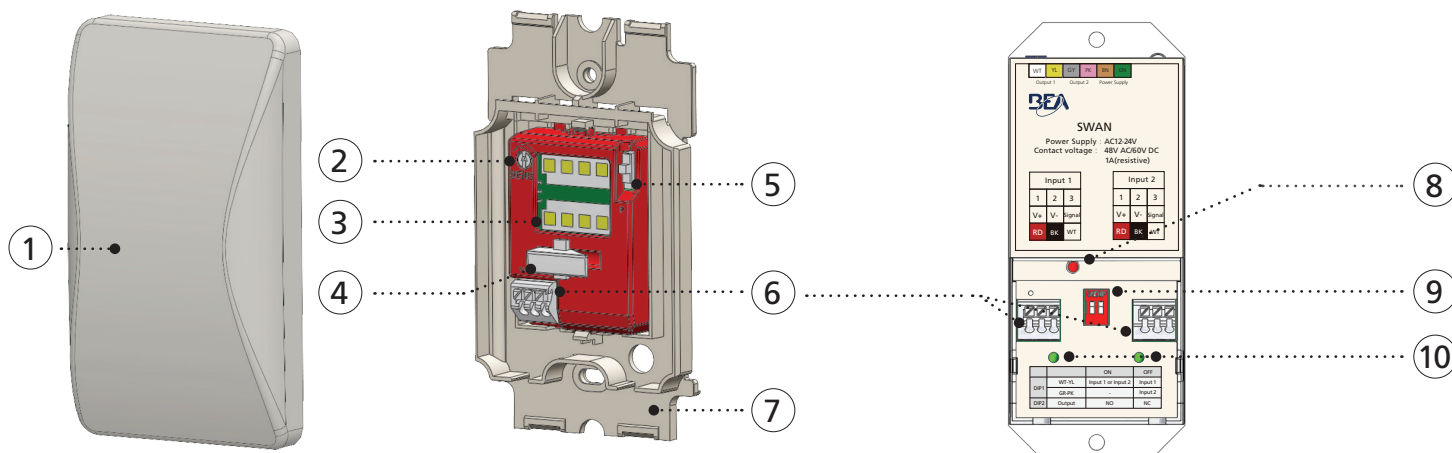
# SWAN 12-24V

Microwave Opening Sensor  
for automatic doors

## DESCRIPTION

### SWAN SENSOR

### SWAN HUB







1. Front cover
2. Detection range adjustment
3. Antenna
4. LED detection (Blue)

5. Output mode: Toggle or pulse
6. Connector
7. Base
8. LED power on

9. DIP switch
10. LED detection (Green)

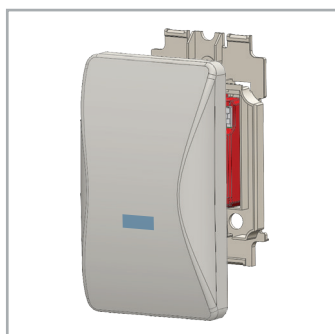
## LED SIGNALS

- |   |                            |   |            |
|---|----------------------------|---|------------|
|  | Detection<br>(SWAN SENSOR) |  | LED is OFF |
|  | Detection<br>(SWAN HUB)    |  | Power On   |

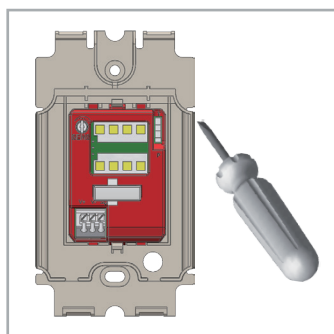
## TOOLS



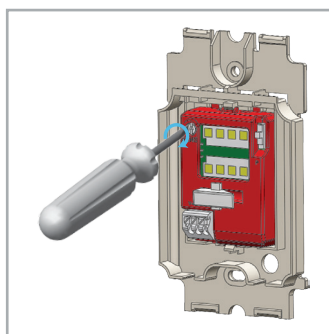
## INSTALLATION TIPS



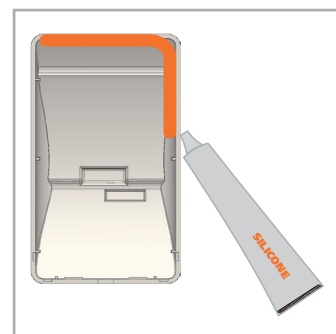
When clipping the front cover, make sure the LED detection zone is at the bottom.



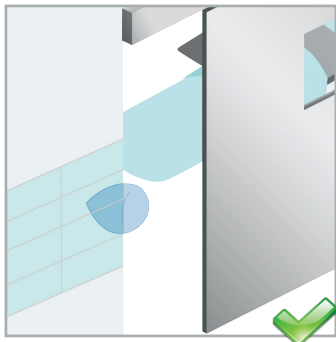
Use the screwdriver to remove the front cover.



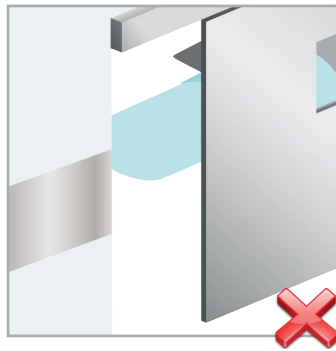
Do not force when turning the detection range adjustment screw.



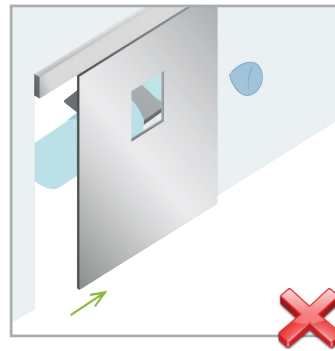
In order to increase water resistance, place a silicone seal on the front cover.



The sensor can be placed behind tiles, wood, plaster, plastic, glass or other surfaces.



Do not place the sensor behind metallic surfaces.

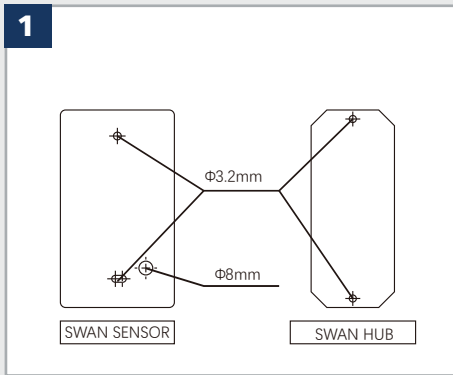


Do not place the sensor in the opening range of the door.

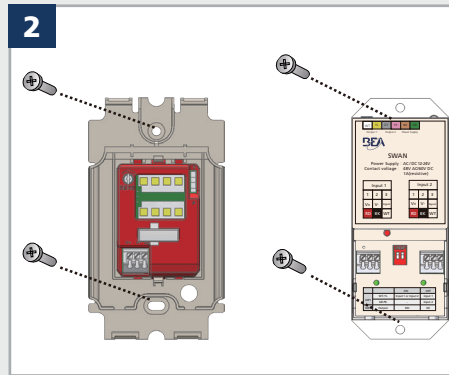


Avoid moving objects in front of the sensor.

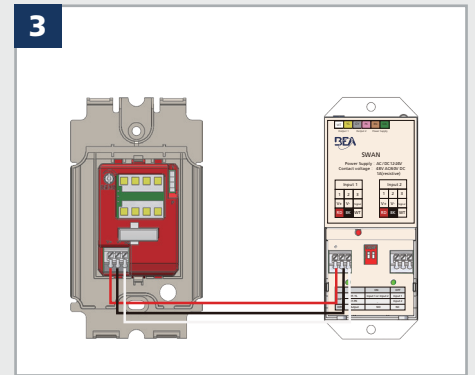
## INSTALLATION



Place the template onto the wall or other installation location. Drill holes on the wall along the drawing mark point.



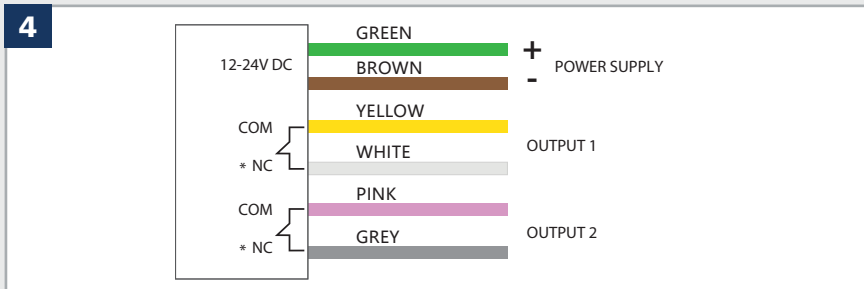
Install the *SWAN SENSOR* and *SWAN HUB* along the template, fasten the screws with screwdriver firmly.



Connect the wires between *SWAN SENSOR* and *SWAN HUB*.

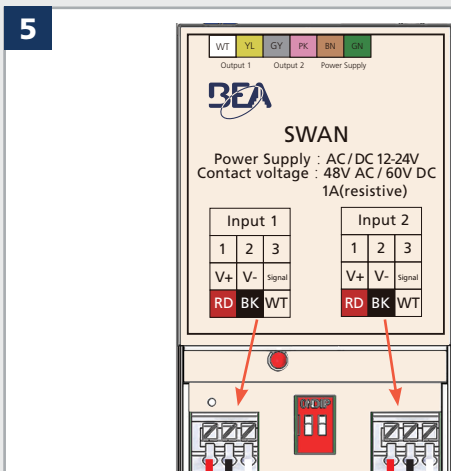


Please connect wires only when the power is off.  
1pc *SWAN HUB* can connect up to 2pcs *SWAN SENSOR*, please install according to the site conditions.



Connect the wires between *SWAN HUB* and *Door Controller*.

\* Output status when sensor is operational. ( Factory default connection )



### DIP 1 Output Redirection

	Output 1	Output 2
ON DIP 1	Input 1 or Input 2	*
ON DIP 1	Input 1	Input 2

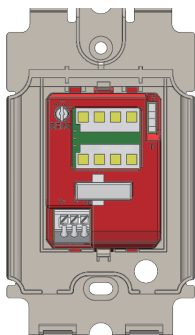
\* When DIP 1 is ON, Output 2 is unavailable.

### DIP 2 Output Configuration

	Output 1	Output 2
ON DIP 2	NO	NO
ON DIP 2	NC	NC

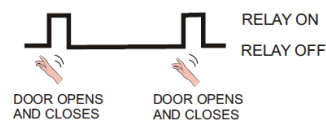
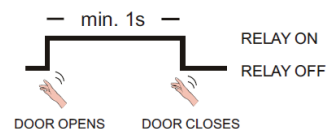
NO = normally open  
NC = normally closed

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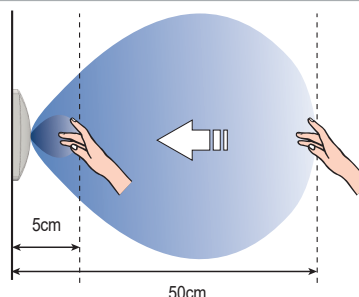
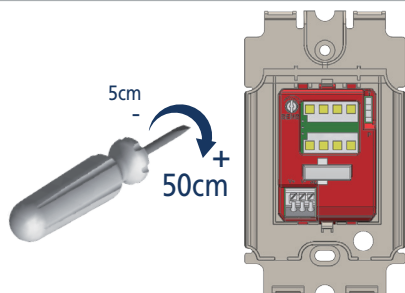
**TOGGLE MODE ( T ):** Recommended for switch applications. The first detection activates the relay output and the second detection deactivates it. In door applications the door remains open after the first activation.

**PULSE MODE ( P ):** Recommended for automatic doors applications. The first detection activates the relay output 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.

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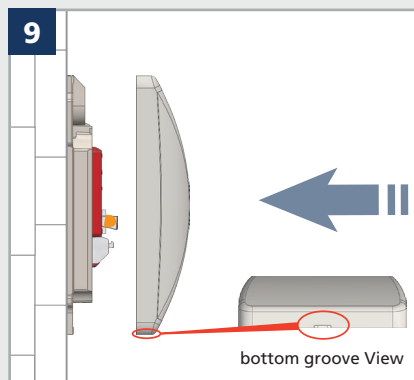
Adjust the detection range according to the future application. The detection range depends on the trajectory of movement, size and type (material) of the detected object.

8



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

9



Clips the front cover on the base. Make sure the groove is at the bottom, otherwise you risk damaging the component or front cover when trying to clips it.

10



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

## TROUBLESHOOTING

The door does not open even when moving the hand towards the sensor.	● Bad or no power supply.	1	Check <i>wiring among SWAN HUB, Door Controller and SWAN SENSOR.</i>
	● Detection range is too small.	1	Adjust the detection range.
		2	Remove any metal plates in front of the sensor.
The door remains permanently open.	● Wrong output or connection on <i>SWAN HUB.</i>	1	Check the output configuration on <i>SWAN HUB.</i>
		2	Check <i>wiring between SWAN HUB and Door Controller.</i>
	● The environment influences the good functioning of the sensor.	1	Remove any moving object close to the sensor.
The door remains open after detection/activation.	● Wrong output or connection on <i>SWAN HUB.</i>	1	Check the output configuration on <i>SWAN HUB.</i>
		2	Check <i>wiring between SWAN HUB and Door Controller.</i>
	● Wrong output mode.	1	Switch the output mode to <i>PULSE</i> mode.

## TECHNICAL SPECIFICATIONS

<b>Technology</b>	Microwave motion sensor
<b>Radiated frequency</b>	24.150 GHz
<b>Radiated power density</b>	≤ 5mW/cm <sup>2</sup>
<b>Detection range (hand)</b>	0 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 to 24V AC +/- 10% 12 to 24V DC - 10% / + 30%
<b>Mains frequency</b>	50 to 60 Hz
<b>Power consumption</b>	< 2W ( 1pc SWAN HUB + 2pcs SWAN SENSOR)
<b>Output</b> Max. voltage Max. current Max. switching power	Relay with switch-over contact (free of potential) 48V AC - 60V DC 1A (resistive) 30W (DC) / 48VA (AC)
<b>Output hold time</b>	0.5s (in PULSE mode)
<b>Temperature range</b>	-20°C to +55°C
<b>Degree of protection</b>	SWAN SENSOR - IP54 surface-mounted with front cover and silicone seal
<b>Numbers of Connected Sensor</b>	Max. 2 sets
<b>Material</b>	SWAN HUB - ABS SWAN SENSOR - Antibacterial PC
<b>Colour</b>	White

\* An adjustment of the detection field below 10 cm is possible but the detection capability of the sensor can not be guaranteed.

*Specifications are subject to change without prior notice. All values are measured in specific conditions.*

