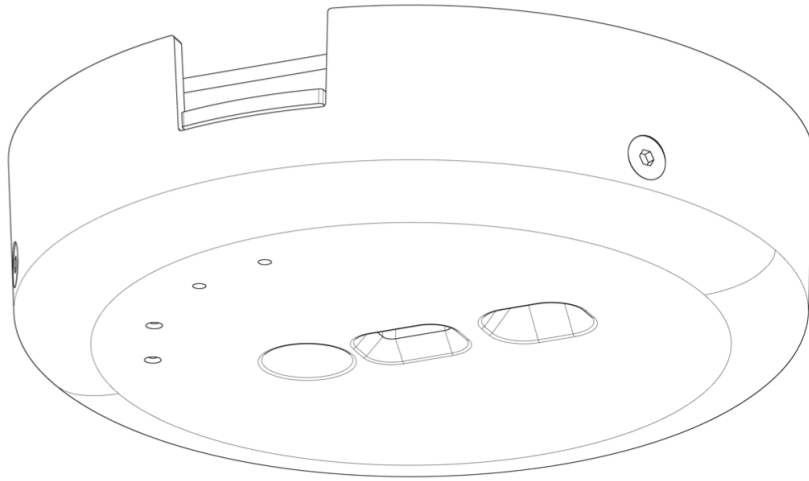# SMART & CONNECTIVE

USER MANUAL

OMNIS

PRESENTATION

OMNIS is an occupancy sensor that uses a groundbreaking technology able to count precisely and in real-time how many people are in a room, thanks to powerful algorithms.
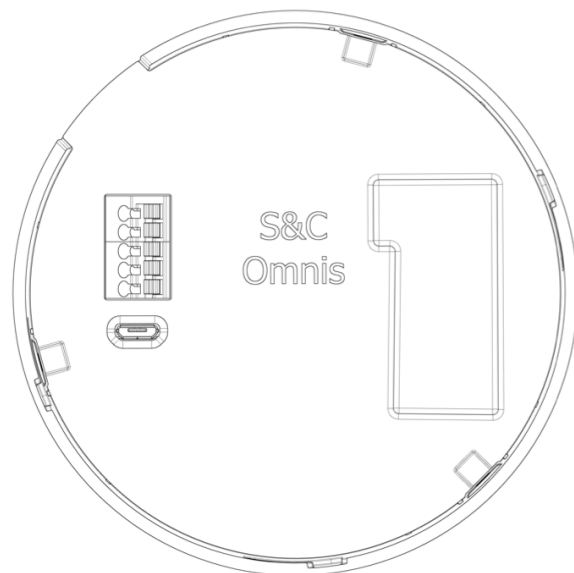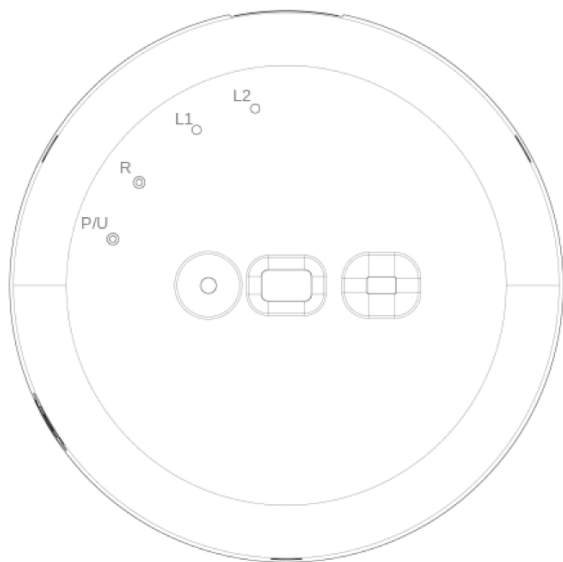
OMNIS is a sensor developed by Smart & Connective for a better global efficiency. Indeed, 99% of the energy saving scenarios are based on room occupancy.
With OMNIS, no need to see to know your occupancy.
This is an unobtrusive device, without camera, that uses heat sensor and motion detector to monitor occupancy.

This product can work as a standalone sensor or be integrated in the complete S&C solution by being paired to an automation.

Several OMNIS sensors can work simultaneously in the same room and aggregate their data to monitor multiple access.

SMART &
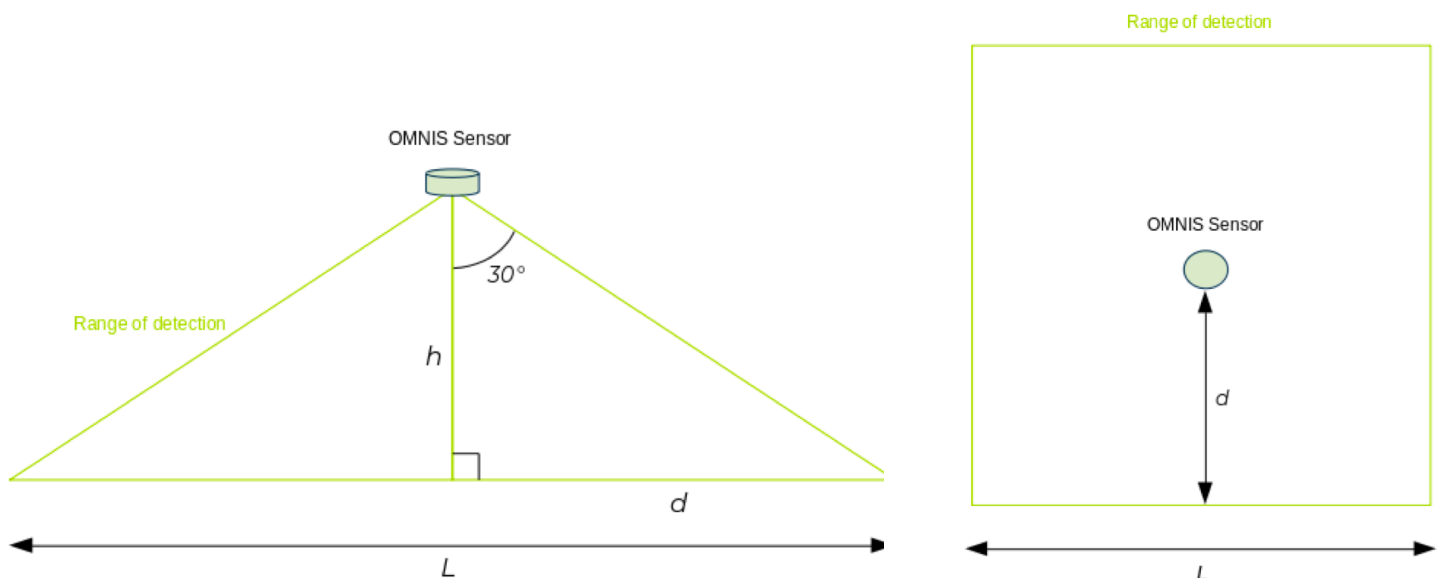CONNECTIVE

SPECIFICATIONS

Dimensions (mm)	105mm Diameter – 25mm
Housing	ABS Plastic
Installation	Ceiling mounted with 3 screws
Power	5V Micro USB power cable
Radio protocol	Z wave (700) – BLE
Communications	Bluetooth BLE, Zwave, Modbus
Interfaces	RS485
Range of detection	Pyramid of 8,3 to 33,4 square meter at the base
Warranty	2-year standard
Regulatory compliance	Safety : UL EMC : CE RoHS

PHYSICAL INSTALLATION

To maximize the efficiency of your OMNIS to detect occupancy and optimize its range of detection, it has to be positioned accurately on the ceiling, depending on the dimensions of your room.

1

First step to do so, is to have a precise measurement of the ceiling height ("h" on the blueprint). This will give you an idea of the minimum distance your sensor needs to be positioned away from the entrance you want to monitor ("d" on the blueprint) and thus the length of the square defined on the ground by the range of detection of your OMNIS sensor ("L" on the blueprint) and the surface of it ("S" in the chart):

OMNIS Sensor

30°

Range of detection

h

d

L

Range of detection

OMNIS Sensor

d

L

2

The following chart gives you some height to distance ratios for the most common ceiling heights we can encounter for a room.

h (cm)	d (cm)	L (cm)	S (m2)
250	144	288	8.3
260	150	300	9
270	156	312	9.7
280	162	324	10.5
290	167	334	11.2
300	173	346	12
350	202	404	16.3
400	231	462	21.3
450	260	520	27
500	289	578	33.4

3

Depending on the measures you have for your room height, if you can't find the corresponding values in this chart, you can calculate them with the following trigonometric formulas:
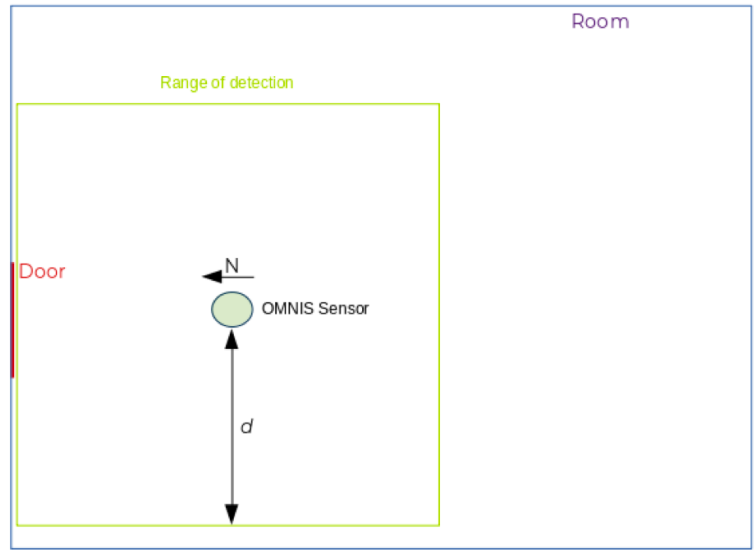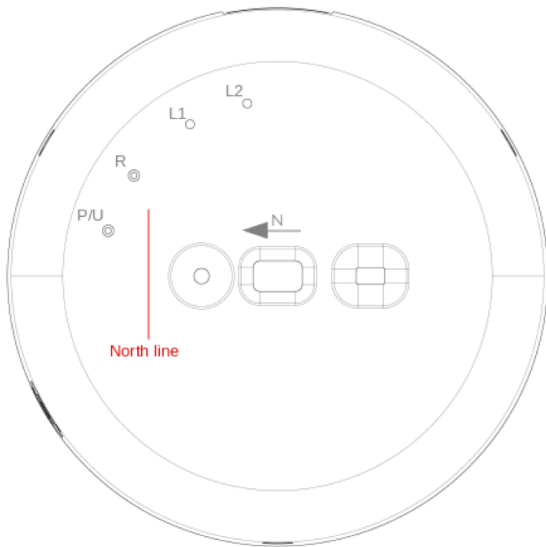
$$\cdot \, d = tan(30°) * h$$

$$\cdot \, L = d * 2$$

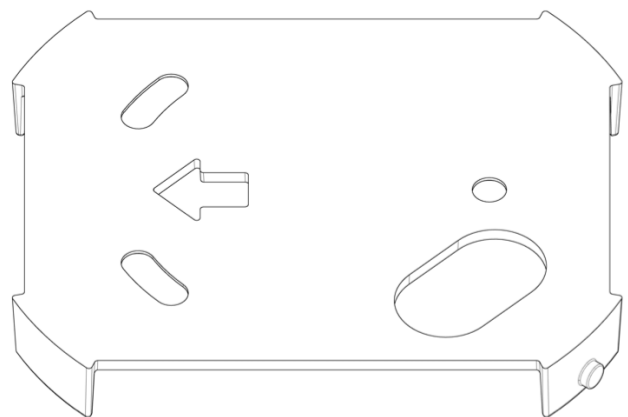$$\cdot \, S = L * L$$

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4

In order to have a proper monitoring of the occupancy of your room, the direction of your sensor is also important. Your OMNIS has to be orientated so that the "North" arrow is pointing at the entrance you want to monitor (the red line indicates the counting line that should be aligned with the door).
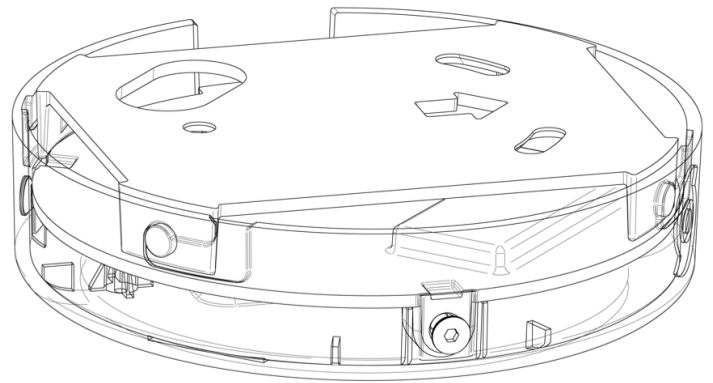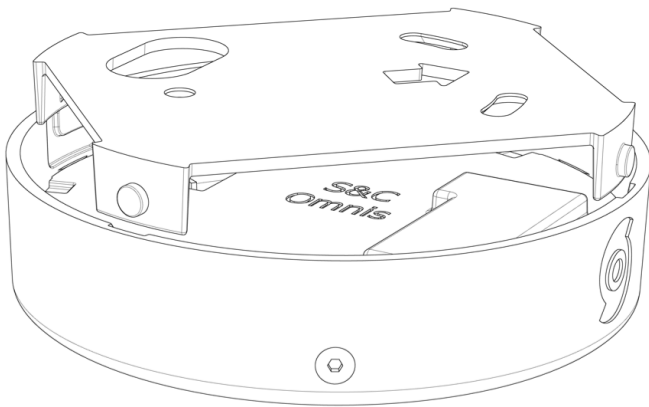

5

To make the manipulation easier, the back plate of your sensor, that is going to be fixed on the ceiling, has an arrow on it. Remove this back plate from your sensor (left 1/4 turn). Place it on the ceiling and mark the position of the 3 screw holes. Drill the holes and screw the plate to the ceiling.

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6

To install your OMNIS sensor, start by plugging the micro USB power cable on it (the cable can go either by the top hole, or the side one, depending on your installation), then put the sensor back with a right 1/4 turn.

7

After your sensor is correctly positioned, we recommend to reset the counter, as the sensor is already powered it could have counted the persons that set it in the room.

8

To do so click 1 time on the "R" button, the "L1" light will turn red for 10 seconds, giving you time to leave the room. When the light turns off, the counters are reset.
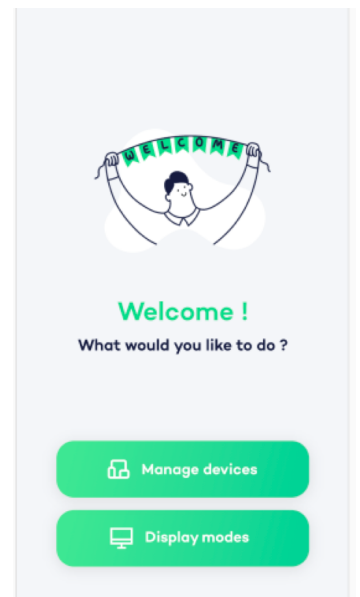
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OMNIS LIGHT MANAGER

GET STARTED
Once your sensor is properly installed and powered you can take control over it using the OMNIS Light Manager mobile application (works with Android mobile phones or tablets). It connects to it using Bluetooth communication.
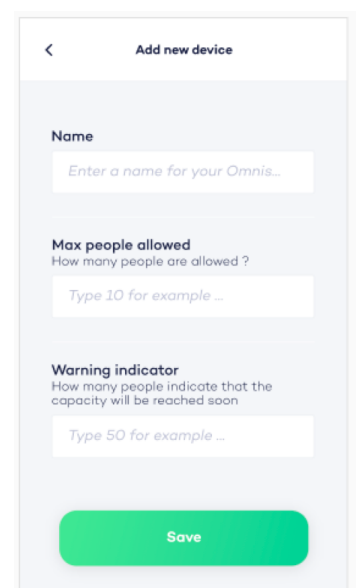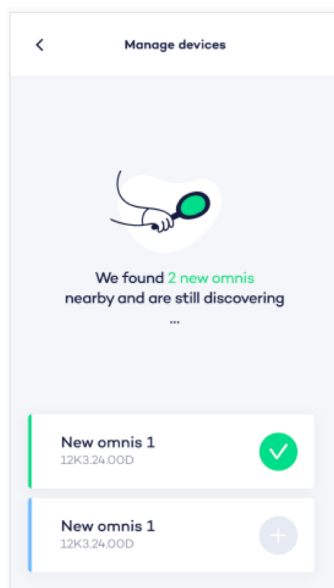
1

To get started, open your OMNIS Light Manager application and click on "Manage devices" (Bluetooth must be turned on on your phone or tablet):
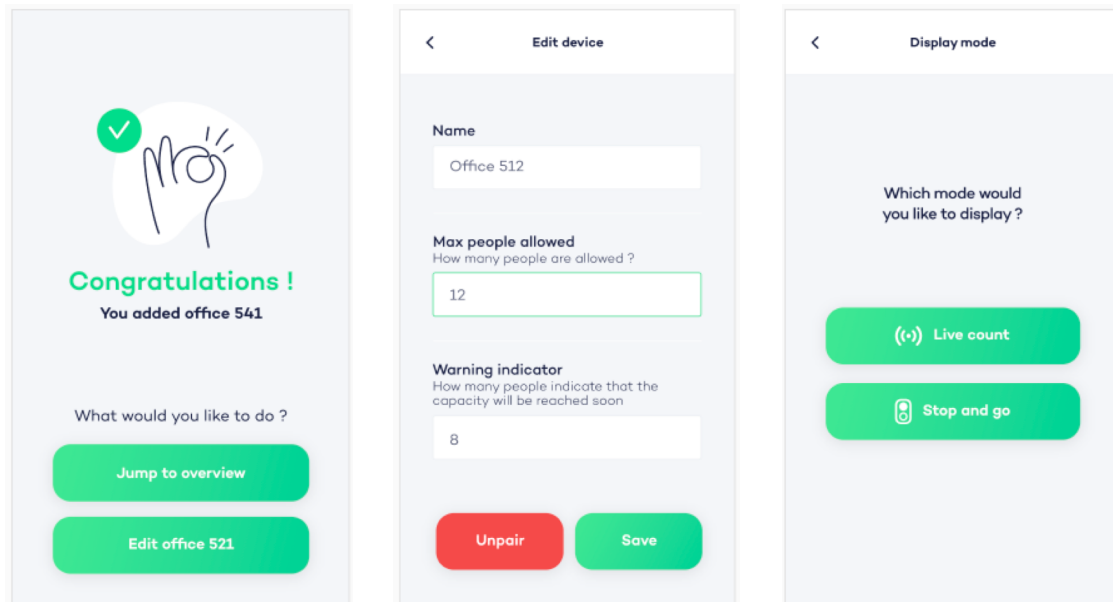

2

The application will scan the OMNIS sensor within the Bluetooth range of detection, click on the one you want to connect to, you will be asked to pick a name for your sensor, to set the maximum number of people allowed in your room, and a warning indicator:
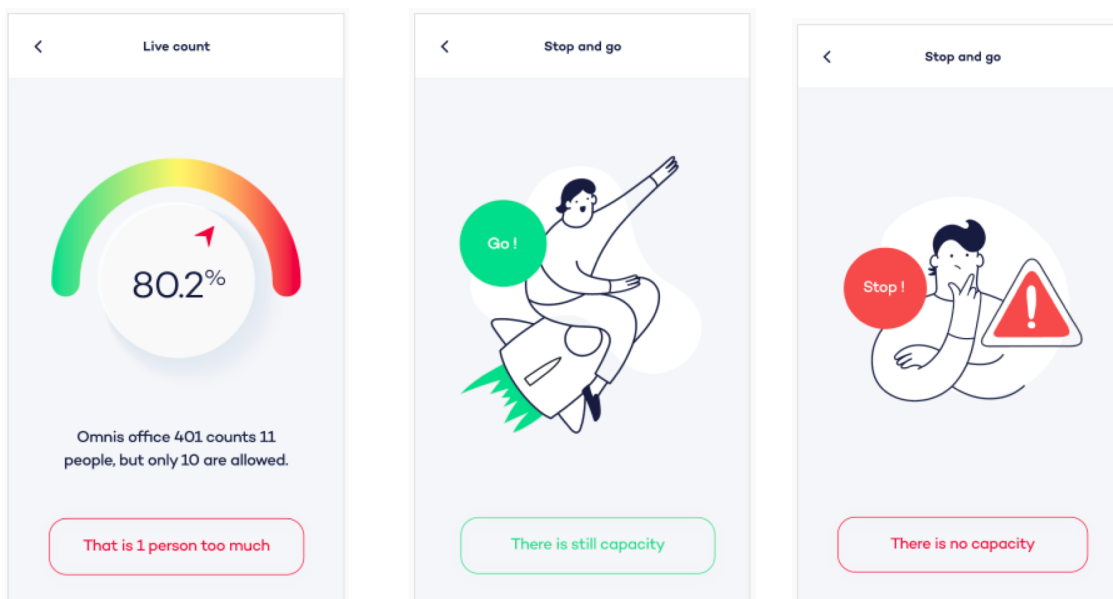
3

Click on "Save" at the bottom of the screen once all information has been filled up. You will be asked if you want to edit your sensor (you can modify information previously filled), or jump to the overview.

4

The overview lets you see a live counter of the people in your room, alerting you if you reach the warning indicator. You also have the possibility to display the Stop&Go screen. The purpose of this is to place a tablet at the entrance of your room, to let people know if they are allowed in, or if they need to wait for people to go out of the room:

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OMNIS LIGHT MANAGER

GO FURTHER

PAIR OMNIS TO AUTOMATION

Your OMNIS sensor can be paired to a S&C automation (either Ceos Box or Ceos TouchPanel) to benefit from the full power of S&C intelligence in energy saving. The OMNIS sensor will be used to determine occupancy in a room with high accuracy, letting the automation and paired actuator fine tune your energy consumption.

- To Pair it, activate Zwave inclusion on your automation (add new device via CQC application, or via OZW-CP), and click 2 times on the "P/U" button of your OMNIS, a green led will blink twice while pairing and configuring the sensor. We recommend to be out of the range of the sensor during this time.

- Once pairing is finished, you will see live counting data on your CQC application and on the Touch Panel screen if it has been paired to this type of automation.

- To unpair it, activate Zwave exclusion on your automation (unpair device via CQC application, or via OZW-CP), and click 2 times on the "P/U" button of your OMNIS, a green led will blink twice while unpairing.

If you only want to reset the counters, click 1 time on the "R" button, a red light will turn on for 10 seconds, giving you time to leave the room. When the light turns off, the counters are reset.

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ACTIONS SUMMARY

Function	Action	Indication
Pair	Activate Zwave inclusion mode on your automation, Click 2x on "P/U" button on your OMNIS sensor	Led L1 will blink 2 times in green
Unpair	Activate Zwave exclusion mode on your automation, Click 2x on "P/U" button on your OMNIS sensor	Led L1 will blink 2 times in green
Reset counter	Click 1x on "R" button and leave the room	Led L2 will turn red for 10s leaving you time to leave the room. When light turn off, counter a reset
Factory reset	Click 5x on "R" button	

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