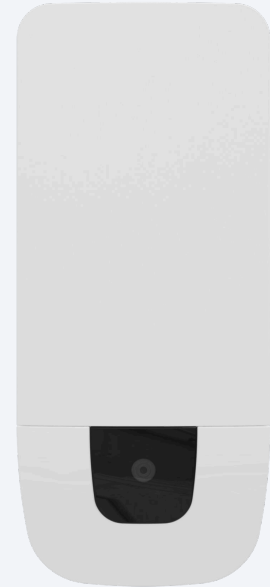


# FOOTFALL SENSOR

The Footfall Sensor (FS) of iotspot is a dedicated sensor for counting footfall traffic (i.e. passing an entry-exit line). The data is transmitted to the platform's database using a WiFi network. The sensor is equipped with an optical sensor and embedded intelligence, allowing for accurate and precise data collection, whilst having the smallest and most discreet design. Data processing takes place inside each sensor in real time and only the footfall count is transmitted via WiFi to the cloud platform.



## Technical specifications of UC2 (N Version)

### Mechanics & design

**Housing material:** Plastic

**Color:** White

**Optical field of view (N):** 600 × 350 @ 10m.

**Light level required:** 20 – 10.000 lux

**Detection speed:** 1-10 fps

The sensor is designed for indoor use only

**Operating temperature range:** 0°C to 40°C

### Size & weight

**Sensor:** 120 × 52 × 22,5 mm, 72g.

**Steel ceiling/wall mounting bracket:** 76 × 43 × 21 mm., 13g

**Steel L-Shape mounting bracket (L-shape):** 60 × 36 × 28mm., 13g

### Band and mode / Output power

**Bluetooth 2.4 GHz:** 34 dBm

WiFi 2.4/5 GHz WLAN (802.11b/g/n/ac) for connectivity

### Power

**Power input:** 5V/2A USB-C

**Power consumption:** 2W(peak)

**Power adapter (main supply):** AC 100-240V, US/UK/EU plug

**Alternative power source:** PoE+ (802.3at) through USB-C (adapter not included)

### Scalability

**Room measurement:** 1 PCS per 30 sqm meeting room

**Area measurement:** 1 PCS per 30 sqm

The PCS requires a iotspot device in a 1:1 relationship to transmit its measurements

1 sensor per footfall line

### Package content

1 Footfall Sensor

2 Wall mounts

2 4mm x 30mm screws

2 4mm wall plugs

1 USB type A to USB type C cable (3m)

1 USB power adapter with US/UK/EU plug

### Certification

**HS-Code:** 9031 80 00 00

**HST:** 8517 69 90 00

**ECCN:** 3A001.a.3

### Certifications

**Type approved:** CE and FCC

### Proprietary rights

UbiqiSense Aps, Denmark

Copyright © by UbiqiSense Aps, Denmark



# Installation

## 1 Preparations

Before using the Footfall Sensor (FS), read the safety, installation and operation instructions to ensure proper use. You can view these instructions on our website [www.iotspot.co](http://www.iotspot.co) and in case of questions, contact us at [support@iotspot.co](mailto:support@iotspot.co).

Please note, that iotspot cannot guarantee proper functioning of the device nor provide support and/or warranty in case this product is used or installed differently than indicated in our documentation

## 2 Intended use

The Footfall Sensor (FS) intended use is to register how many people pass through an entry/exit point as related to an office building, like a door, speed gates or a corridor. The sensor extracts meta information about the number of 'silhouettes' that pass the footfall, i.e. a virtual line at a virtual height of ca 1,5 m. denoting the entry/exit of a designated location.

The FS is equipped with intelligent motion sensing and artificial intelligence to process the registered 'silhouettes', extract the count data and transmit these meta data. The silhouettes are not stored or transmitted by the sensor.

## 3 Footfall Sensor, i.e. the product

The product's function is four-fold:

1. Executing the sensor assessment, i.e. registering and extracting the number of silhouettes that pass the designated footfall line;
2. Sending the 'sensor payload' over WiFi to the cloud platform;
3. Receiving a 'configuration payload' over the optical sensor during installation; and
4. Updating its firmware over the internet through the connected WiFi network

## 4 Mounting and commissioning

The sensor should be installed vertically and centered above the physical entry/exit, using one of the brackets that is mounted on a vertical, non-slanting wall. Depending on the situation, choose one of the two mounting options, as described below.

Select an appropriate mounting location on either the ceiling or a wall, considering a non-occluded sensor field-of-view and preferable mounting height.

Make sure the sensor has adequate visual range to cover the desired footfall and to have an available 100-240V power socket within 2,5 m of the mounting location of the sensor.

Please note that the sensor performance may be limited by either poor lighting conditions or too bright lighting conditions

**1. Towards door/corridor** - no occlusion (the sensor is facing a door/corridor, where the door opens away from the sensor). Use a ceiling mount for this configuration.

**2. Towards door/corridor** - with occlusion (the sensor is facing a door/corridor where the door opens towards the sensor, or there are other small objects occluding the sensors line of sight to the persons passing through the door/corridor). Use a ceiling mount for this configuration.

**3. Over door/corridor** (the sensor is placed directly over a door/corridor, using either a ceiling mount or a wall mount).

## 5 Activation

The product is configured, using a smartphone app ('iotspot setup-app' in Google's PlayStore or Apple's Appstore). In essence this setup app allows you to synchronize the sensor to a iotspot device, so that the sensory data is transmitted to the smart workspace platform. Once the configuration of the product is finalized the sensor data can be displayed in dashboards or accessed via OpenAPI. Please refer to our help topics for the most recent description of this activation process.

## 6 Footfall Dashboard

The footfall data as registered by the sensor are shown in iotspot's dashboard, that can be accessed in the iotspot Web Portal under the menu item 'Dashboards / Footfall dashboard'.

## 7 Maintenance & Care

The device housing can be wiped for dust or cleaned with a damp cloth if needed. Do not use cleaning agents.

## 8 Disposal

Electrical and electronic equipment, accessories and packaging must be recycled in an environmentally compatible manner. Do not dispose of electrical and electronic equipment as domestic waste. Valued customer, iotspot has designed their hardware with an eye to recyclability and is willing to contribute their effort to sustainability.

Therefore, feel free to inform with iotspot, how we are willing to support you in disposing of our hardware.

**EU countries only:** under the current European Directive on Waste Electrical and Electronic Equipment and its implementation in national law, electrical and electronic equipment no longer suitable for use must be collected separately and recycled in an environmentally compatible manner.

## Warranty

A warranty period of 12 months applies to the product, commencing on the first day of use of the product. The warranty solely covers inadequacies caused by material defect or manufacturing defect.

The warranty does not cover any unauthorized use or tampering with the product, such as product overloading, use of violence or force, damage as a result of any unauthorized interference or caused by foreign items.

Failing to follow the safe conditions or safe installation condition instructions and common wear are also not included in the guarantee. Visit <https://www.iotspot.co/terms-and-conditions> to view more about the terms, conditions and guarantee of this product

# Mounting

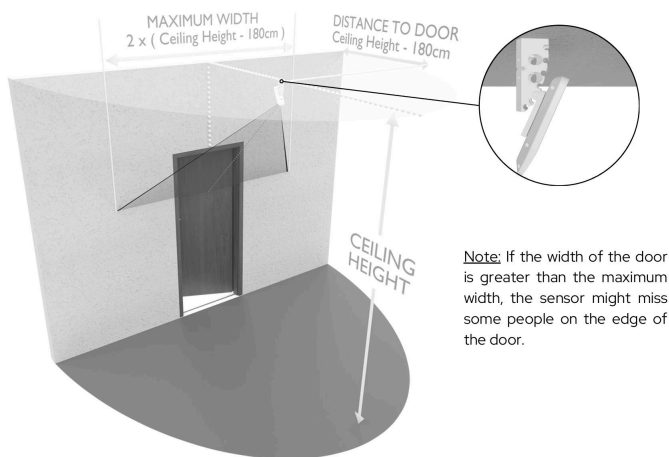
## 1 Option 1

### How to find towards door installation position:

- Use 45° bracket
- Measure ceiling height [cm]
- Distance to door = ceiling height - 170 [cm]
- Install sensor at the middle of the door.

The maximum door width the sensors can cover depends on the installation height calculated as below: maximum width = ceiling height - 150 [cm]

If the width of the door is greater than the maximum width, the sensor might miss some people on the edge of the door.



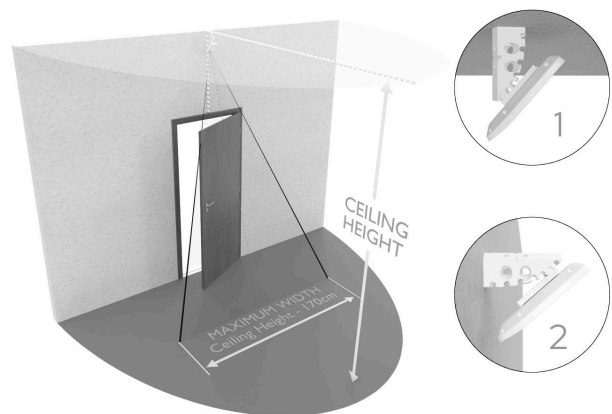
## 3 Option 3

### How to find "over door" installation position:

- Use 20° bracket
- Place the sensor in the ceiling or on the wall, right above the door, in the middle of the door

The maximum door/entrance width the sensor can cover depends on the installation height, which can be calculated as below: maximum width = ceiling height - 170 [cm]

If the width of the door is greater than the maximum width, the sensor might miss some people on the edge of the door.



## 2 Option 2

### How to find Towards door/corridor - with occlusion position:

- Use a 50° bracket
- Measure ceiling height [cm]
- Distance to door = (ceiling height - 110) \* 1.2 [cm] (example calculation)
- Displacement = (door width)/2
- Rotate the sensor, so it's looking towards the center of the door opening

The maximum door width the sensor can cover depends on the ceiling height, calculated as below: Maximum width = ceiling height - 170 [cm]

