

((SENSONEO))

Single sensor 3.0

Datasheet 2020

OVERVIEW

Sensoneo **Single Sensor 3.0** is an enterprise class device monitoring fill-level of various types of containers. It uses single ultrasonic beam with **measurement up to the depth of 255 cm**.

The sensor provides configurable accelerometer for tilt recognition which sends notification immediately. Sensor is configurable via Bluetooth Configuration application. You can configure fire alarm, measurement frequency, actual time and more. The sensor is powered by replaceable batteries which frequently inform the operator about their capacity.

Single sensor is available in three versions:

- **Single sensor LoRaWAN**
- **Single sensor LoRaWAN and NB-IoT***
- **Single sensor LoRaWAN and Sigfox***

**has both modules, you can choose the preferred one via Configurator app*

The Smart Sensors use ultrasound technology to measure the fill levels in bins and containers and send the data to the Smart Waste Management System, a powerful cloud-based platform, via the Internet of Things (Sigfox, NB-IoT, LoRaWAN) providing cities and businesses with data-driven decision making, and optimization of waste collection routes, frequencies and vehicle loads.

The received data are analysed and displayed through an excellent Dashboard which includes maps, tables, graphs, data exports and fully automated planning of the collection routes. The gathered data from sensors are presented also via Smart Analytics which provides complex analytical views needed for decision making in terms of planning and managing the capacity of the containers.



| | |
|--|--|
| Type | Single Sensor 3.0 |
| Networks supported | HW option A: LoRaWAN HW option B: LoRaWAN and NB-IoT* HW option C: LoRaWAN and Sigfox* <i>*has both modules, you can choose the preferred one by Configurator App</i> |
| LoRaWAN frequencies supported | 868 mhz, 915 mhz |
| LoRaWAN authorization method | OTAA, ABP |
| NB-IoT bands supported | B1/B2/B3/54/B5/B8/B12/B13/B17/B18/B19/ B20/B25/B26/B28/B66/B70/B71 |
| BLE | YES |
| Configuration | YES. Configurator App. |
| Downlink configuration | YES |
| Distance measurement | YES. Single ultrasonic beam, 30° angle |
| Minimum distance | 3 cm |
| Maximum distance | 255 cm |
| Measurement times | 24 times a day OR frequency of measurements can be set from 1 minute up to 999 minutes. Can be set via downlink. |
| Measurement calculation | Multi measurement with weight approximation. |
| Temperature measurement | YES. Microcontroller thermostat. |
| Overturn measurement | YES. Accelerometer. Advanced tilt recognition algorithm. |
| Fire alarm | YES |
| Weight batteries included | 215 g |
| Weight battery excluded | 165 g |
| Size (h/w/d) | 50 mm/120 mm/54 mm |
| Mounting options | Screws/Clench/Rails |
| Power supply | up to 7 years* |
| Batteries voltage and capacity | 3,6V, 2600 mAh |
| Batteries type | Lithium-thionyl chloride – Li-SOCI2 |
| Battery replaceable | Yes, 2 batteries type LS14500 (2 x 20 grams) |
| Operating temperature range | -30°C to + 80°C |
| Device class | Class A |
| Adaptive Data Rate | YES |
| Counter up start number | 1 (resetable) |
| Bins supported | All bin types with the depth up to 255 cm. |
| Turn on mechanism | Magnetic |
| Cover | Recyclable, polyamide with optical fibers. |
| Casing | IP69 |
| Humidity level | 0 - 100 |
| * battery duration depends on local temperature, type and position of the bin, master/slave role and frequency of measurement | |

**Sensoneo enables
a world that is
green, clean and
free of litter**

Sensoneo

www.sensoneo.com

info@sensoneo.com

HQ - SLOVAKIA

Stare Grunty 12

Bratislava, Slovakia