

((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-SOCl ₂
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

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