Smart fill-level sensor for dumpsters & containers

Get control of waste fill levels in your bins, dumpsters, and containers



Versatility

Monitoring any type of waste in any type of bins

Build quality and durability

Robust, water- and shock-resistant, fully functional within a wide temperature range

Network connectivity

Sensors can be connected to a variety of IoT networks and GPRS

11,100
sensors

Largest global smart waste installation in Madrid




GARBAGE
ONLY
NO RECYCLABLES
REPUBLIC
SERVICES
510-657-3500
republicservices.com



Problems we solve

- Inefficient collection of empty or half-empty bins
- Delayed collection and overflowing bins
- Absence of real-time data, making waste collection scheduling a challenge
- Poor service quality and no opportunity for verification or supervision
- Rising operating costs
- Outdated route planning
- Difficulty compiling accurate reports and meeting sustainability goals
- Critical situations involving bin infrastructure, such as fire, vandalism, theft, and break-ins



Available ultrasonic sensor types

Need help?



Single sensor 5.0



Single sensor 3.0



Quatro Sensor

Single Sensor 5.0

The latest generation of Sensoneo smart waste ultrasonic sensors offers advanced features such as FOTA and GPS.

- Robustness and resistance
- Data transmission via a variety of networks
- Easy to use and deploy
- Large-scale deployment capability
- Versatility of use
- Sophisticated quality assurance
- Designed and developed in-house
- Globally manufactured to ISO standards
- Citizen engagement

Specs

Measurement	Single ultrasonic beam
Measuring range standard (cm)	3 – 255
Measuring range long-range (cm)	3 – 1200
Connectivity	LoRaWAN / Sigfox / NB-IoT / CAT-M1
Measurement frequency	From once a day to every 2 minutes
Configuration	Mobile app via BLE or downlink
FOTA (Firmware Over-the-Air)	Yes
Emptying recognition	Accelerometer. Advanced tilt recognition algorithm.
GPS functionality	Yes, powered by GNSS
Support for connection to external GPS	Yes
Support for connection to an external antenna for NB-IoT and Cat-M1 networks	Yes
RORO (roll-on/roll-off)	Yes
Replaceable batteries	Yes
Temperature measurement	Microcontroller thermostat
Dimensions in in (H/W/D)	2.0 × 4.7 × 2.1
Weight (incl. batteries)	7.6 oz
Casing	IP69
Protection against external mechanical impacts	IK10 rating
Material	Recyclable glass fiber-reinforced polyamide

Mounting options	Screws / clamp / rails

Available networks

We do not limit customers to a specific network. Our customers have sensors connected to several networks — it all depends on the connectivity available at a given location. Single Sensor 5.0 from Sensoneo can be connected to either NB-IoT or the Cat-M1 network. Data is sent in real time to our Smart Waste Management System, one of the best waste management software solutions on the market.

Payload and network communication are encrypted on two levels, preventing misuse of Sensoneo Sensors for DDoS attacks.

Service verification
Pickup detection

Sensoneo Smart Sensors can provide service verification for your pickup. The sensor has a built-in accelerometer that recognizes both horizontal and vertical movement. With careful configuration for your bin design, vehicle pickup system, and emptying movement, the Smart Sensor can detect a pickup and send a notification to the dashboard.

Installation

Installing Sensoneo Smart Sensors is quick and straightforward, with no technical expertise required. Many customers choose to handle the configuration themselves, thanks to the solution's intuitive and user-friendly design. To guide you through setup and installation, we provide clear instructions, detailed user guides, and step-by-step video manuals. Be sure to review all materials carefully to ensure a smooth and successful deployment.



How it works

Step 1

Select the right sensor and place an order

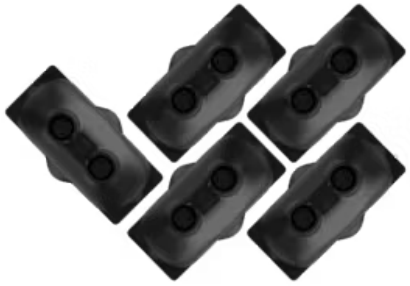
Step 2

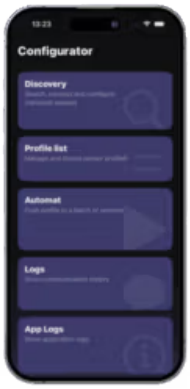
Receive the delivery from Sensoneo

Step 3

Activate and configure devices







Competitive advantage

- Dynamic waste collection with no unnecessary routing
- Collection of only full dumpsters and containers, saving resources for bins in remote locations
- Clean streets, with no overflowing dumpsters or mess
- Best possible service for the money invested in waste pickup
- A real overview of waste generation thanks to comprehensive data
- Rightsizing of pickup frequencies, capacities, or locations
- Supervision of hauler efficiency
- Reducing CO2 emissions, easing traffic congestion, and engaging residents

