



Remote Fill-level Monitoring Ultrasonic Sensor

smartbin

Key Features



Fill-level Monitoring

Using the most advanced ultrasonic sensor technology and digital signaling processes, the SmartBin UBi measures the fill-level of almost any liquid or material in multiple container types.



GPS

The GPS option enables precise identification of the positioning of your container to as little as 10 meters, adding even greater asset management and security to operations.



Robust & Reliable

Although small in size and light in weight, the UBi is rugged and proven in the harshest of environments. Stringent testing and IP66 packaging ensures a reliable and long lasting performance form each sensor.



Wireless GSM/GPRS

Communicating to SmartBin Live through GPRS over GSM, the UBi has an internal antenna and sim card which report at configured intervals over both 2g and 3g networks globally.



10 Year Battery Life

The UBi's reliable and changeable battery offers up to 10 years of reporting depending on the number of reports required per day.



Proven Worldwide

SmartBin UBi's are deployed and operational in over 25 countries, with over 100 clients and monitoring up to a dozen material and liquid types.



Easy Install & Retrofit

Hand held and weighing just .25 kg, the UBi is easily installed to containers with as few as one bolt, saving on deployment time and adding monitoring to your operation instantly.



2 Year Warranty

Although designed to operate without maintenance for many years, all UBi sensors are under warranty and guaranteed for 2 years.



Applications

SmartBin's UBi sensor has been developed especially for monitoring the fill-levels (and more) of a vast range of waste and recycling containers including:

- ✓ **General Waste**
- ✓ **Clothing, Textiles & Books**
- ✓ **Waste Oil & Yellow Grease**
- ✓ **Glass**
- ✓ **Fuel**
- ✓ **Organic Waste**
- ✓ **Biomass**
- ✓ **Underground and Vertical Containers**
- ✓ **Asset Tracking**

SmartBin Intelligent Monitoring

The SmartBin UBi sensor is the hardware element of our Intelligent Waste Monitoring solution that is revolutionizing how the Waste & Recycling Industry collects. Using the UBi's fill-level data (and other reporting features) SmartBin Live creates cost efficient collection routes, detailed performance reports, geopositioning detail and a full container portfolio monitoring function to truly optimize even the most complex of collection operations.



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Specifications of Wireless Sensor

Sensor Part Numbers

Family Code Sensor Module numbers in Ports A, C & D respectively.

UB - 08 00 09 12 - AA

GB - 08 00 09 12 - AA

EB - 08 00 09 12 - AA

For U.S. 3G requirements

For European 3G requirements

- Port A - Ultrasonic Fill-level Sensor
- Port C - Tilt or other options
- Port B - Reserved
- Port D - GPS Location Sensor



Sensor Modules

Module	Type	Port	Details
08	Ultrasonic Fill Sensor	A	Measures General Waste, Textiles, Recyclables, Waste Oil and Yellow Grease containers up to 3m deep.
09	Tilt Sensor	C	Measures Sensor Tilt angle (Degrees from Upwards Vertical). Resolution +/-20 degrees. (Minimum Order Quantities and lead times apply)
or			
10	Temperature Alert	C	Immediate Alert sent if internal temperature exceeds 85 C. For Fire Detection. (Minimum Order Quantities and lead times apply)
11	Long Range	A	Measures vertical and horizontal liquid storage tanks up to 7.5m deep.
12	GPS Location Sensor	D	Identifies latitude and longitude coordinates of container.

Accessories

Part No.	Type	Details
ACC-01	Activation Magnet	Magnet for activating Sensor and for recording Service Events
ACC-02	Mounting Bracket (Internal Roof)	For mounting Sensor to the underside of an internal roof. Single 8mm mounting hole.
ACC-03	Mounting Bracket (Internal Side Wall)	For mounting Sensor against internal side wall. Single 8mm hole. Observe precautions!
ACC-06	Narrow Cone adaptor	For use with Ultrasonic Modules in narrow containers. Contact SmartBin for assistance.
ACC-07	1" NPT to 2" NPT Adaptor	For use with Containers fitted with 2" NPT mounting threads.
ACC-08	1" NPT to 1.5" NPT Adaptor	For use with Containers fitted with 1.5" NPT mounting threads.
ACC-09	External Antenna Kit	For use in locations where GSM signal is weak.

Technical Specifications (see UBi User Guide)

Battery Type	One 3.6V C Cell Lithium Thionyl Chloride (6.5 Ahr capacity)
Battery Life	5 years. Up to 10 years, depending on local cellular coverage. Note 1
Operating Temperature	-30°C to +70°C
Dimensions	82 x 65 mm 3.2 x 2.6 inches
Weight	0.25kg
Enclosure	IP66 Weather proof, non-corrosive PA66
Standard Thread Mount	1 inch NPT (see accessories for use with other threads)
Communication	GPRS over GSM (Quad band – 850/900/1800/1900 MHz). Internal SIM card. No user accounts required. UMTS/HSPA 850/1900MHz for U.S. 3G.
Antenna	Internal or external as required.
Shocks	100g each Axis (EN 60068-2-27/F4)
Impact	IK10 (EN 50102/F4)
CE Certification	CE 0980 Articles 3.1(a)(b), 3.2 (inside) (EN 60950-1: 2006, EN 301 489-1/-7, EN 301 511)
FCC Compliance	FCC ID: UDV-0912142009007 (inside)
Reporting Schedule	Configurable via SmartBin Live web portal. Note 2

- Note 1:** Assuming One message per day and acceptable GSM local network quality (typ. 2 bars minimum)
- Note 2:** Contact SmartBin for assistance