

BinConnect BC-300 Intelligent Solid Waste Management



Product Description:

BinConnect is an intelligent product from Vignaharta which perfectly suits the requirements of a Smart City Solid Waste Management. It is a garbage bin fill level sensor integrated with GSM and GPS connectivity with a host of other useful features. It consists of three sensors that can be used to determine the fill levels of a three garbage bins at a time. It is configurable to use with single or dual bins as per user requirement.

Another unique feature of BinConnect is that it connects to the cloud based application over GPRS connectivity. The BinConnect has an inbuilt GPS module that can be used to track the position of mobile bins. Additionally, it has an in-built temperature sensor and an optional RS-485 port that can be used for integrating weighing scale data. All these parameters are made available on the cloud.

BinConnect is a battery operated device. Frequency of data transmission to cloud is user configurable. Whenever the bin is 100% full, data is transmitted immediately. BinConnect comes with IP65 grade enclosure making its operation waterproof.



Product Features:

1. Level Sensor

- Three fill level sensors using ultrasonic technology with 1cm resolution
- Range: 30cm - 400cm
- 5 levels of fill percentage reporting (20%/40%/60%/80%/100%)

2. Temperature Sensor

- Range: -10°C to +70°C
- Accuracy: $\pm 1^\circ\text{C}$

3. Communication

- GPRS over GSM: 850/900/1800/1990 MHz
- Network: Internal SIM card
- Built-in GPS

4. Interface

- Optional RS-485 interface (for integration with weighing scale output)

5. Data Management

- Accessibility: 24x7 access through BinConnect web portal
- Data Type: Container fill level, GPS coordinates, Temperature & weight (optional)

6. Power

- Battery: 3.6V high performance primary Lithium battery
- Battery Life:
 - 8 years with 1 transmission per day
 - 2 years with 4 transmissions per day
- Rechargeable battery (optional)
- Solar charger interface for rechargeable battery (optional)

7. Environmental Specifications

- Enclosure Rating: IP65
- Operating Temperature: -10°C to +70°C
- Storage Temperature: -20°C to +80°C