

Sigfox Ultrasonic Level Sensor for Trash bin ULA



Smart Agriculture, Smart Building, Smart City, Smart Facility, Smart Farm, Smart Factory,
Smart Transportation

SKU: WSSFC-ULA

SIGFOX ULTRASONIC LEVEL SENSOR FOR TRASH BIN WSSFC-ULA



WSSFC-ULA-H1.PNG

Sigfox-Ready
Support all RC zones

5-Year battery
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can operated up to 5 years with 02 x AA batteries

High Accuracy & Stable
Advanced ultrasonic sensor with digital signal processing to deliver high accuracy and stable measurement of level or distance for solid surface of waste

IP68 Outdoor
IP68 design for both Indoor and Outdoor applications and easy cleaning

Safe Zone

Hazardous Zones

WSSFC-ULA is a Sigfox-ready ultrasonic level sensor to measure the solid surface level in the trash bin for waste management systems. This level sensor uses ultrasonic technology to measure the solid surface of waste, the principle is to measure the time of flight of the ultrasound pulse in the air environment. The ultrasound pulse will be ejected from the ultrasonic transducer, go thru the air and reach the solid surface of the waste, then be reflected back to the ultrasonic transducer, the measuring circuit will measure the flight time of the pulse then calculate the distance from the transducer to the surface. Ultra-low power design and smart firmware allow the complete Wireless and Sensor package to run on 2 x AA battery 1.5V for 5 years (depending on configuration). It can support all RC zones. Typical Applications: Monitoring the waste level in the trash bin, solid waste & recycling facility,...

Applications

Waste Management, Process Monitoring, Safety Monitoring, Infrastructure Monitoring

Notes For Applications

- Material and density: Identify the material and know the bulk density.
- Stickiness and buildup: consider stickiness and buildup.
- Corrosiveness: Assess material corrosiveness.
- Moisture: Note moisture presence.
- Temperature and pressure: Consider conditions.
- Vibration: Be aware of vibration.

LEVEL SENSOR INSTALLED IN THE TRASH BIN



WSSFC-ULA-H2.PNG

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Created date: Dec-21-2022

Updated date: Aug-28-2024

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Specification

Sensor	Ultrasonic sensor 40kHz
Measurement range	3~450cm
Accuracy	±(1cm + 0.5% reading)
Resolutions	1mm
Alarm setting	setting the alarm threshold for calculated value
Working temperature/humidity	-15~60°C/ 0~99% RH (non-condensing)
Storage temperature/humidity	-25~80°C/ 0~99% RH (non-condensing)
Transducer material	Ceramic
COMMUNICATION	
Sigfox zones	RC1~RC7
Antenna	Internal Antenna 2.0 dbi
Configuration	via Downlink or offline USB cable (PC software is supplied at free)
Battery	02 x AA Type 1.5VDC
RF Module complies to	CE, FCC, ARIB
Working temperature	-40~60°C (using Energizer® Lithium Ultimate AA battery)
Dimensions	H154xW68xD43
Net-weight	250g
Housing	Polycarbonate, IP68

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LEVEL SENSOR INSTALLED IN THE TRASH BIN



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MOUNTING ULA SENSOR ON LARGE TRASH BIN



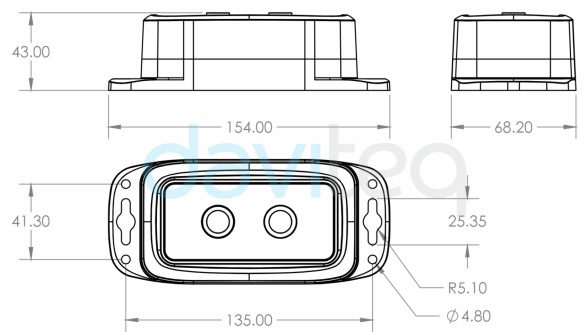
WSSFC-ULA-H4.PNG

SYSTEM ARCHITECTURE



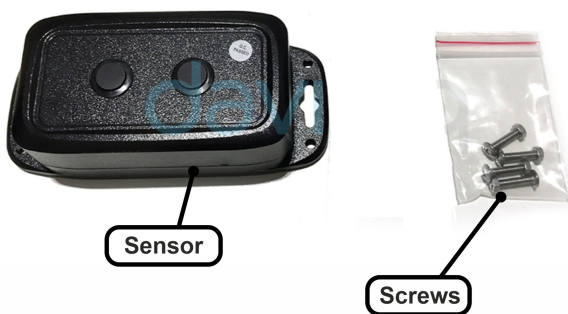
WSSFC-ULA-H5.PNG

DIMENSION DRAWINGS OF WIRELESS SENSOR
(Unit: mm)



WSSFC-ULA-H6.PNG

WHAT'S IN THE PACKAGE?



WSSFC-ULA-H7.PNG

RECOMMENDED BATTERIES FOR SIGFOX SENSOR

L91 AA Lithium battery



- 40 .. + 60 oC working temperature
- 20-year shelf life
- 3500 mAh Capacity
- Price: 3.5X


WSSFC-ULA-H8.PNG


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Ordering Information

ITEM CODE	DESCRIPTIONS
WSSFC-ULA-01	Wireless Sigfox-ready Ultrasonic Level Sensor for Trash bin, Internal antenna, 3-450cm range, Type AA battery 1.5VDC, IP68, for all RC zones

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