

Wireless Ultrasonic Level Sensor for Trash Bin



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

SKU: WS433-ULA

WIRELESS ULTRASONIC LEVEL SENSOR FOR TRASH BIN WS433-ULA



WS433-ULA-H1.JPG



Safe Zone



Hazardous Zones

The WS433-ULA is a Sub-GHz wireless sensor that uses ultrasonic technology to measure trash bin levels. With advanced digital signal processing technology, the sensor can eliminate unwanted reflected ultrasonic waves. The sensor can be used for trash cans with openable lids where the measured value is not affected during the opening and closing. The sensor is designed for IP68 Standard, which can be used both indoors and outdoors. With a smart design, the sensor can work for more than 5 years with only 2 AA batteries. The sensor will connect to the Sub-GHz receiver at a distance of up to 400-500m in an obstacle-free environment.

The WS433-ULA sensor is used to monitor the level of garbage in the trash cans in Office buildings, Hospitals, Schools, Factories... and also for public trash cans of Smart City.

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. Dust, foam, steam, or vapor: Account for these factors. Trash bin size and shape: Understand bin geometry. Mounting limitations: Know mounting requirements.

High Accuracy & Stable

Advanced digital signal processing technique to provide high accuracy and reliable signal

Reliable & Secured Wireless Connection

Sub-GHz technology from Texas Instruments allows reliable wireless connection in industrial applications

Ultra-low power with 5 years battery

Ultra-low-power sensing technology from Daviteq allows the sensor can last up to 5 years

For both indoor and outdoor applications

With IP68 design and Poly-carbonate material, the sensor can be used for outdoor

LEVEL SENSOR INSTALLED IN THE TRASH BIN



WS433-ULA-H2.JPG

DAVITEQ TECHNOLOGIES INC

Ho Chi Minh City, VN | Koblenz, DE | Melbourne, AU | Zurich, CH

+84.28.6268.2523 / 6268.2524

info@daviteq.com

www.iot.daviteq.com

Created date: Dec-21-2022

Updated date: Nov-08-2025

Specification

SENSOR SPECIFICATION	undefined
Measurement technology	Dual ultrasonic sensor
Measuring range	30~4500 mm
Resolution & Accuracy	1.0mm, ±10mm
Sampling and transmission rates	Configurable from 30 seconds to 3600 seconds
Working temperature	-15~60°C
Working humidity	0~95% RH, non condensing
WIRELESS SPECIFICATION	
Data speed	Up to 50kbps
Transmission distance, LOS	LOS 500m
Antenna	Internal Antenna
Battery	02 x AA 1.5VDC, up to 5 years operation, depends on the configuration
Frequency Band	ISM 433MHz, Sub-GHz technology from Texas Instrument, USA
International Compliance	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval Certification	QCVN 73:2013/BTTTT, QCVN 96:2015/BTTTT (DAVITEQ B00122019)
Security Standard	AES-128
Operating temperature of PCB	-40~60°C (with AA L91 Energizer®)
Housing/Protection	Poly-carbonate, IP68
Mounting method	Mounting directly on flat surface
Dimension	154x68x43mm
Net weight	< 200g (batteries are not included)

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LEVEL SENSOR INSTALLED IN THE TRASH BIN



WS433-ULA-H3.JPG

CONNECT WIRELESS SENSORS TO any PLC or HMI



WS433-ULA-H4.JPG

CONNECT WIRELESS SENSORS TO any SCADA or IoT Platform



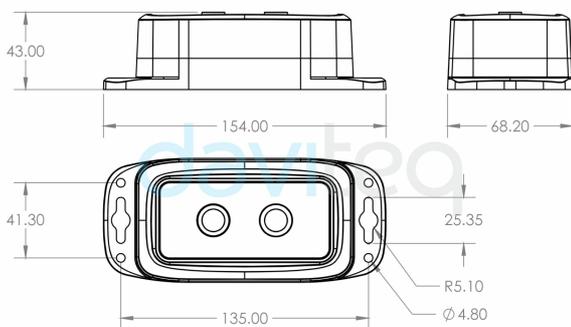
WS433-ULA-H5.JPG

CONNECT WIRELESS SENSORS TO GLOBIOTS Platform



WS433-ULA-H6.JPG

DIMENSION DRAWINGS OF WIRELESS SENSOR (Unit: mm)



WS433-ULA-H7.JPG

RECOMMENDED BATTERIES FOR WIRELESS SENSOR WS433

E91 AA Alkaline battery

L91 AA Lithium battery



-18 .. + 60 oC working temperature

-40 .. + 60 oC working temperature

10-year shelf life

20-year shelf life

3000 mAH Capacity

3500 mAH Capacity

Price: 1X

Price: 3.5X

WS433-ULA-H8.JPG

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Ordering Information

ITEM CODE	DESCRIPTIONS
WS433-ULA-01	Wireless ultrasonic level sensor for trash bin, measuring range 30-4500mm, AA batteries, IP68

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