

LORAWAN ULTRASONIC LEVEL SENSOR FOR TRASH BIN



SKU: WSLRW-ULB

LoRaWAN ULTRASONIC LEVEL SENSOR FOR TRASH BIN WSLRW-ULB



WSLRW-ULB-H1.PNG

WSLRW-ULB is a LoRaWAN ultrasonic level sensor to measure solid surface level in 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 ultrasonic transducer, go thru the air and reach the solid surface of the waste, then reflected back to the ultrasonic transducer, the measuring circuit will measure the flight time of the pulse then calculated distance from the transducer to the surface. The ultra-low power design and smart firmware allow the sensor to last for up to 10 years with just 2 x AA batteries (depending on configuration). The sensor will transmit data over kilo-meters away to the LoRaWAN gateway, any brand on the market.



LORAWAN COMMUNICATION

LoRaWAN communication standard to allow sensor connect to any LoRaWAN Gateway on the market



10 YEAR BATTERY

Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the sensor can last up to 10 years with 2 x AA batteries 1.5VDC



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



OUTDOOR & EASY CLEANING

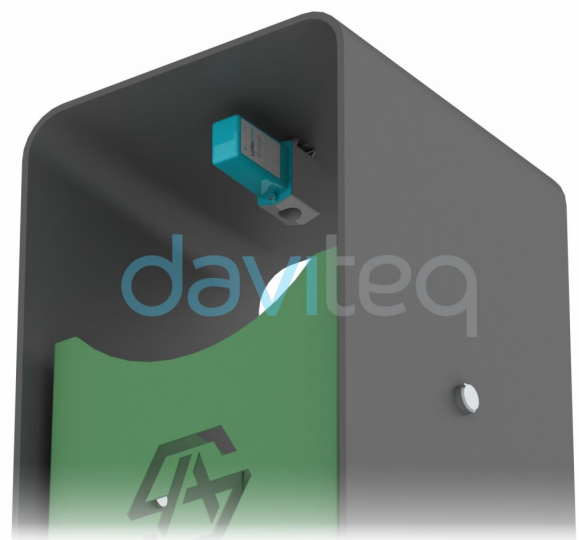
IP67 design for both Indoor and Outdoor applications and easy cleaning



SUPPORT MULTIPLE TYPE OF INSTALLATION

Sensor comes with mounting accessories to allow installation inside or outside of bin, in horizontal or vertical direction

LEVEL SENSOR INSTALLED IN THE TRASH BIN



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DAVITEQ TECHNOLOGIES INC

No.11 Street 2G, Nam Hung Vuong Res., An Lac Ward, Binh Tan Dist., Ho Chi Minh City, Vietnam

+84.28.6268.2523 / 6268.2524

info@daviteq.com

www.daviteq.com

SEP-2021 | Doc No: WSLRW-ULB-DS-EN-10

SPECIFICATION

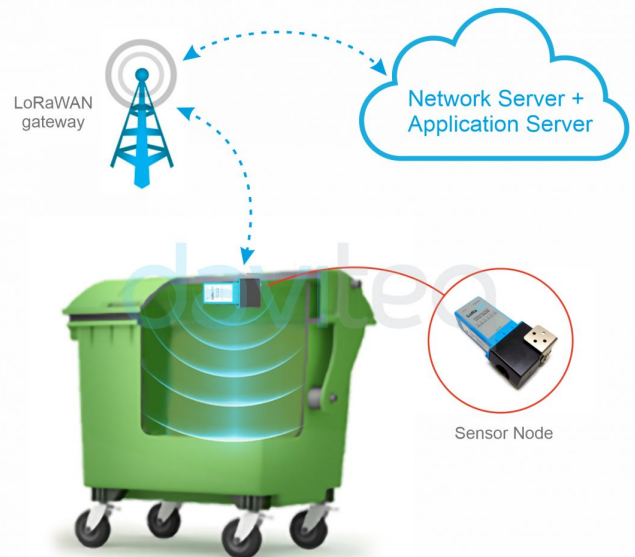
SENSORS SPECIFICATION:	
Sensor	Ultrasonic sensor
Measurement range	300 .. 4500 mm
Resolution & accuracy	1.0mm, +/- 10 mm
Sensor sampling rate	configurable from 10s up to 3600s
Alarm setting	setting the alarm threshold for calculated value
LoRaWAN SPECIFICATION:	
Data rate	250bps .. 5470bps
Antenna	Internal Antenna 2.67 dBi
Battery	02 x AA size 1.5, battery not included
RF Frequency and Power	860..930Mhz, +14 .. +20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN, class A
Data sending modes	Interval time and when alarm occurred
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval	
Working temperature	-15oC..+60oC (using L91 Energizer battery)
Dimensions	H180xW50xD40
Net-weight	250 grams
Housing	Polycarbonate & POM plastic, IP67

LEVEL SENSOR INSTALLED IN THE TRASH BIN



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SYSTEM ARCHITECTURE



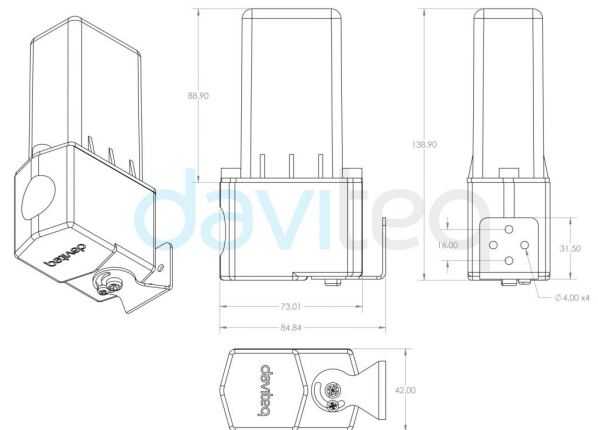
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LoRaWAN NETWORK



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DIMENSION DRAWING OF WIRELESS SENSOR (Unit: mm)



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RECOMMENDED BATTERIES

E91 AA Alkaline battery



-18 .. + 60 oC working temperature
10-year shelf life
3000 mAH Capacity
Price: 1X

L91 AA Lithium battery



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

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ORDERING INFORMATION

ITEM CODE	DESCRIPTIONS
WSLRW-ULB-9-01	Wireless LoRaWAN Ultrasonic Level Sensor for Trash bin, Internal antenna, 4500mm range, Type AA battery 1.5VDC, IP67, 900-930 Mhz for KR920, AS923, AU915, US915
WSLRW-ULB-8-01	Wireless LoRaWAN Ultrasonic Level Sensor for Trash bin, Internal antenna, 4500mm range, Type AA battery 1.5 VDC, IP67, 860-870 Mhz for EU868, IN865, RU864

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