

# Ultrasonic Distance Sensor

Featuring LoRaWAN®

## EM310-UDL

# Milesight



Milesight EM310-UDL is a LoRa ultrasonic distance sensor mainly for the detection of waste bin and other container's fill level. With a compact size and wide measure range, EM310-UDL can be installed to any types of waste bins or containers to monitor solid or liquid level. Besides, EM310-UDL equips with 3-axis accelerometer to detect the status of container cover. Compliant with Milesight LoRaWAN® gateway and Milesight IoT Cloud solution, users can know the container status and fill-in level in real-time via browser or mobile App remotely.

EM310-UDL can be widely used in waste management, water tank monitoring, manhole cover monitoring, etc.

## ◆ Features

- 3-450 cm wide measuring range with short blind zone
- Easy to install, suitable for various types of waste bins or containers
- Built-in 3-axis accelerometer sensor to monitor device tilt status
- IP67 waterproof and salt pray resistant enclosure for outdoor applications and easy to clean
- Ultra-wide-distance wireless transmission up to line of sight of 15 km
- Equipped with NFC for one touch configuration, support card emulation mode
- Function well with standard LoRaWAN® gateways and network servers
- Compliant with Milesight IoT Cloud

## ◆ Specifications

### Wireless Transmission

Technology	LoRaWAN®
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923
Tx Power	16 dBm (868 MHz)/22 dBm (915 MHz)/19 dBm (470 MHz)
Sensitivity	-137 dBm @300bps
Mode	OTAA/ABP Class A

### Measurement

#### Distance

Detection Range	3 - 450 cm
Detection Accuracy	$\pm (1+0.3\%*S)$ cm, S=distance
Distance Resolution	1 mm

#### Device Position

Status	Normal/Tilt
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### Operation

Configuration	NFC Configuration via Mobile App
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### Physical Characteristics

Power Supply	2 × 3500 mAh ER17505 Li-SOCl <sub>2</sub> battery
Battery Life*	≥10 years (10 min interval + 20 triggers per day)
Operating Temperature	-15°C to +60°C
Relative Humidity	≤90% (non-condensing)
Ingress Protection	IP67
Dimension	111 × 62 × 40 mm (4.37 × 2.44 × 1.57 in)
Weight	168g
Material & Color	ABS, Black
Installation	On the flat surfaces with screws

\* Tested under laboratory conditions and for guideline purposes only.



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