Ultrasonic Distance Sensor

Featuring LoRaWAN®

EM310-UDL



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	± (1+0.3%*S) cm, S=distance
Distance Resolution	1 mm
Device Position	
Status	Normal/Tilt
Operation	
Configuration	NFC Configuration via Mobile App
Physical Characteristics	
Power Supply	2 × 3500 mAh ER17505 Li-SOCl$_2$ 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.