

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 | ± (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.