

# Ultrasonic Distance Sensor

Featuring LoRaWAN®

## EM500-UDL

*Milesight*



EM500-UDL is designed for objects distance or level detection in harsh environments and transmitting data using LoRaWAN® technology. With this low power consumption technology, EM500-UDL can work up to 10 years with 19000 mAh battery. Combining with Milesight LoRaWAN® gateway and Milesight IoT Cloud solution, users can manage all sensor data remotely and visually.

EM500-UDL is widely used for outdoor applications like flood monitoring, granary level monitoring, etc.

### ◆ Features

- Object distance or level detection without touch
- Ultra-wide-distance transmission up to line of sight of 10km
- IP67 waterproof enclosure for harsh environment applications
- Built-in 19000 mAh replaceable battery and work for 10 years without replacement
- Equipped with NFC for easy configuration
- Compliant with standard LoRaWAN® gateways and network servers
- Quick and easy management with Milesight IoT Cloud solution

### ◆ Applications

- Water level monitoring
- Flood monitoring
- Level/depth monitoring in tanks
- Snow level monitoring
- Smart agriculture: fill level monitoring in grain, fertilizer or pellets silos

## ◆ Specifications

### Wireless Transmission

|             |   |
|-------------|---|
| Technology  | LoRaWAN®  |
| Frequency   | CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4 |
| Tx Power    | 16dBm(868)/20dBm(915)/19dBm(470)                        |
| Sensitivity | -137dBm @300bps   |
| Mode        | OTAA/ABP Class A  |

### Measurement

|                  |   |
|------------------|---|
| Range & Accuracy | W050: 0.3 - 5 m, ±1% FS                       |
|                  | W100: 0.5 - 10 m, ±1% FS                      |
|                  | S050: 0.3 - 5 m (Snow Version), ±1% FS        |
|                  | C050: 0.25 - 5 m, ± (1+0.3%*S) cm, S=distance |
|                  | C100: 0.25 - 8 m, ± (1+0.3%*S) cm, S=distance |
| Resolution       | 1 mm  |

### Operation

|                |  |
|----------------|--|
| Power On & Off | NFC, Power Button (Internal)                       |
| Configuration  | Mobile App(via NFC) or PC software(via USB Type-C) |

### Physical Characteristics

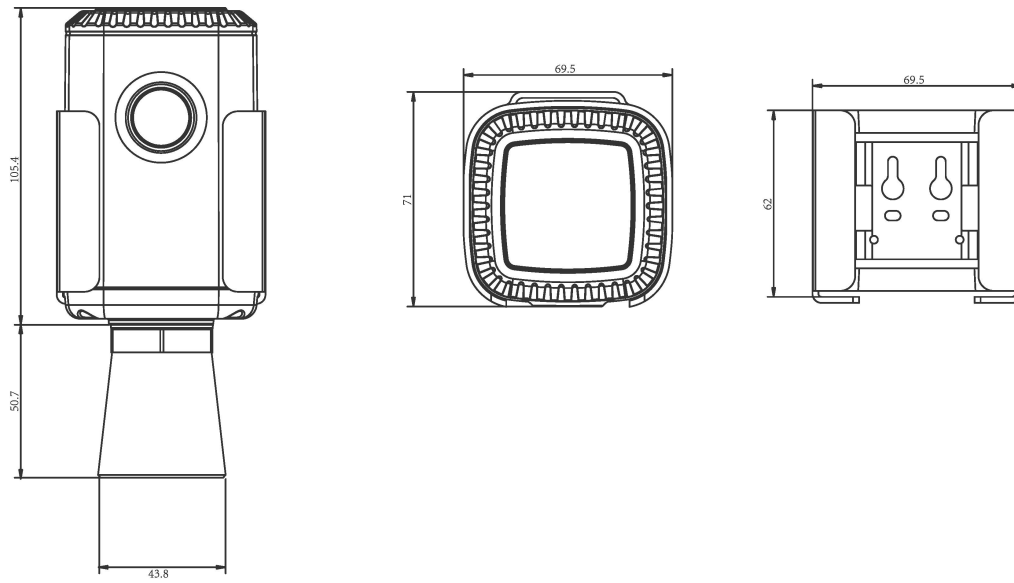
|                       |  |
|-----------------------|--|
| Power Supply          | 19000 mAh Li-SOCL <sub>2</sub> battery (ER34615) |
| Battery Life*         | 10 years (10 min interval)                       |
| Operating Temperature | W050/W100/S050: -30°C to +65°C                   |
|                       | C050/C100: -15°C to +60°C                        |
| Relative Humidity     | 0% to 80% (non-condensing)                       |
| Ingress Protection    | IP67   |
| Dimension             | 156.1 × 71 × 69.5 mm (6.1 × 2.8 × 2.7 in)        |
| Installation          | Pole, wall or DIN Rail Mounting                  |

### Approvals

|                 |  |
|-----------------|--|
| Regulatory      | CE, FCC, RoHS, LoRaWAN® Certified  |
| EMC             | EN 55032, EN 55035   |
| EMS             | IEC 61000-4-2 Level 3, IEC 61000-4-3 Level 2, IEC 61000-4-8 Level 4          |
| Radio Frequency | FCC Part 15B, FCC Part 15.247, EN 300 330, EN 301 489-1/3,<br>EN 300 220-1/2 |
| Safety          | EN62368-1  |

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

## ◆ Dimensions(mm)





# Delmation

products



## Delmation Products

Blauw-roodlaan 300  
2718 SK Zoetermeer  
079 - 342 20 41

[www.delmation.nl](http://www.delmation.nl) | [info@delmation.nl](mailto:info@delmation.nl)