# Temperature&Humidity Sensor

## Featuring LoRaWAN®

# EM300-TH

**Milesight**

EM300-TH is a compact environment monitoring sensor for measurement of temperature and humidity and transmitting data using LoRaWAN® technology. In addition to LoRaWAN® technology with low power consumption, it has a built-in high-capacity battery available for several years without replacement. Combining with Milesight LoRaWAN® gateway and Milesight Development Platform solution, users can manage all sensor data remotely.

EM300-TH is widely used for both indoor and outdoor applications such as offices, hospitals, factories, greenhouses, etc.

## ◆ Features

➢ Embedded with Sensirion high-precision sensor chip

➢ Ultra-wide-distance transmission up to line of sight of 10km

➢ IP67 UV-resistant and waterproof enclosure for harsh environment applications

➢ Built-in 4000 mAh replaceable battery and works for several years without replacement

➢ Store locally historical records and support retransmission to prevent data loss

➢ Support Milesight D2D protocol to enable ultra-low latency and direct control without gateways

➢ Equipped with NFC for easily configuration

➢ Compliant with standard LoRaWAN® gateways and network servers

➢ Quick and easy management with Milesight IoT Cloud and Milesight Development Platform
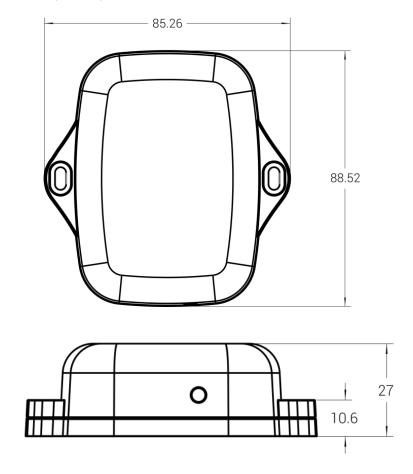
## ◆ Specifications

### Wireless Transmission

| | |
|---|---|
| Technology | LoRaWAN®, Milesight D2D |
| Antenna | Internal Antenna |
| Frequency | CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4 |
| Tx Power | 16dBm(868 MHz)/20dBm(915 MHz)/19dBm(470 MHz) |
| Sensitivity | -137dBm @300bps |
| Mode | OTAA/ABP Class A |

### Measurement

#### Temperature

| | |
|---|---|
| Range | -30°C to + 70°C |
| Accuracy | 0°C to + 70°C (+/- 0.3°C), -30°C to 0°C (+/- 0.6°C) |
| Resolution | 0.1°C |

#### Humidity

| | |
|---|---|
| Range | 0% to 100% RH |
| Accuracy | 10% to 90% RH (+/- 3%), below 10% and above 90% RH (+/- 5%) |
| Resolution | 0.5% RH |

### Others

| | |
|---|---|
| LED | 1 × LED Indicator (Internal) |
| Button | 1 × Power/Reset Button (Internal) |

### Software

| | |
|---|---|
| Power On & Off | NFC, Power Button (Internal) |
| Configuration | NFC via Mobile App, Downlink |
| Advanced Feature | Threshold Alarm, Milesight D2D Controller, Data Storage (2, 800 entries), Data Retransmission, Data Retrievability |

### Physical Characteristics

| | |
|---|---|
| Power Supply | 1 × 4000 mAh ER18505 Li-SOCL$_2$ Battery (8000 mAh Version Optional) |
| Battery Life* (10 min interval, 25°C) | Over 10 Years (SF7, EU868 & US915) Around 5.8 Years (SF10, EU868) Around 4.2 Years (SF10, US915) |
| Operating Temperature | -30°C to +70°C |
| Relative Humidity | 0% to 100% (non-condensing) |
| Ingress Protection | IP67 |

| Housing&Color | ABS + PC(Flame Retardant), White |
|---|---|
| Weight | 95.6g (with 1 battery) |
| Dimension | 88.5 × 85.3 × 27 mm (3.48 × 3.36 × 1.06 in) |
| Installation | Wall Screw Mounting, 3M Tape Mounting, Cable-Tie Mounting |
| **Approvals** | |
| Regulatory | CE, FCC, ISED, RCM, Telec, ICASA, EN12830 |
| Environmental | RoHS |

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

## ◆ Dimensions (mm)

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