Temperature&Humidity Sensor

Featuring LoRaWAN®

EM300-TH



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

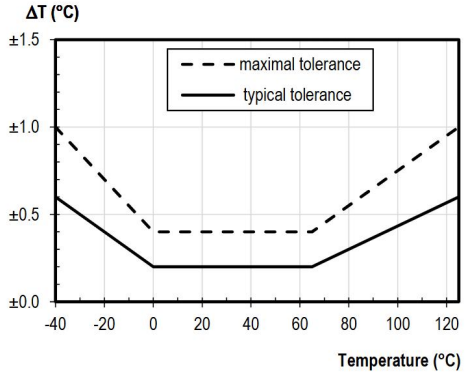
◆ Specifications

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[1]	Typ.: ±0.6°C (-30°C ~ 0°C) ±0.3°C (0°C ~ 70°C)
Resolution	0.1°C
Humidity	
Range	0% to 100% RH
Accuracy[2][3]	Typ.: ±3% (10% ~ 90% RH @25°C) ±5% (0% ~ 10% RH @25°C, 90% ~ 100% RH @25°C)
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[4] (10 min interval, 25°C)	Over 10 Years (SF7, EU868 & US915) Around 5.8 Years (SF10, EU868)

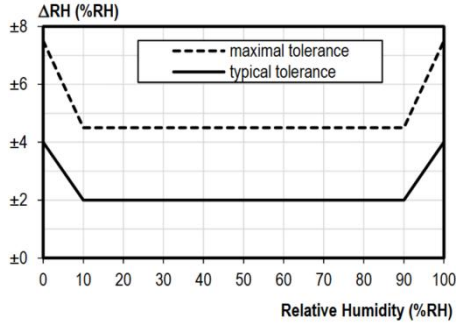
	Around 4.2 Years (SF10, US915)
Operating Temperature	-30°C to +70°C
Relative Humidity	0% to 100% (non-condensing)
Ingress Protection	IP67
Housing&Color	ABS + PC(Flame Retardant), White
Weight	95.6g (with 1 battery)
Dimension	88.5 × 85.3 × 27 mm (3.48 × 3.36 × 1.06 in)
Installation	Wall Screw Mounting, 3M Tape Mounting, Cable-Tie Mounting
Approvals	
Regulatory	CE, FCC, ISED, RCM, Telec, ICASA, EN12830
Environmental	RoHS

Note:

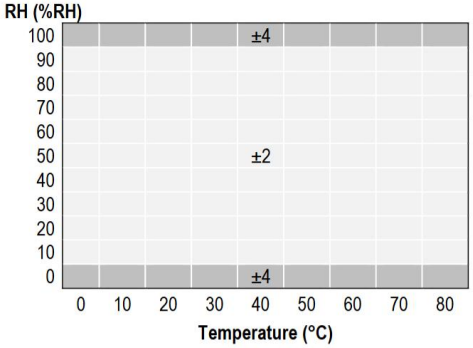
1. Accuracy corresponding to the temperature:



2. Accuracy corresponding to the relative humidity:



3. Typical RH accuracy corresponding to the temperature:



4. The battery life is tested under laboratory conditions and for guideline purposes only.

◆ Dimensions (mm)

