Indoor Ambience Monitoring Sensor AM100 Series (AM102 & AM102L)



AM102(L) is a compact indoor ambience monitoring sensor for measurement of temperature and humidity. These data will be shown on the E-ink screen in real-time, which allow to quantify the indoor environment and comfort.

Apart from screen display, sensor data can also be transmitted using LoRaWAN®. With this low-power technology, AM102(L) can work for more than 7 years with 2 replaceable batteries. Combining with Milesight LoRaWAN® gateway and Milesight Development Platform solution, users can manage all sensor data remotely.

AM102(L) can be used in office, store, classroom, hospital, etc.

◆ Features

- Uses Sensirion high-precision sensor, capable of sensing subtle changes in temperature and humidity
- Visual data to understand the environment easily via E-ink screen
- Smart hibernate mode schedulely to save battery power
- More than 7 years work without replacing batteries
- Store locally historical records and support retransmission to prevent data loss
- Built-in NFC for easy configuration
- Compliant with standard LoRaWAN® gateways and network servers
- Quick and easy management with Milesight IoT Cloud and Milesight Development Platform

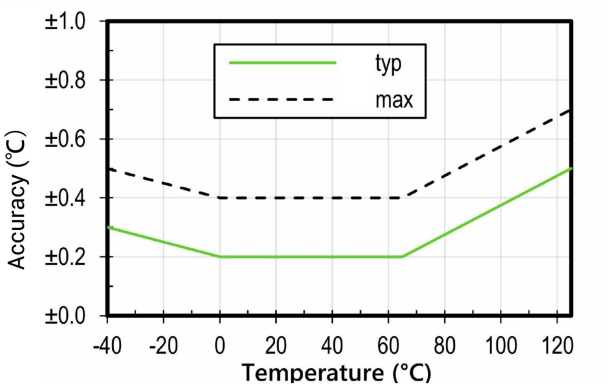
◆ Specifications

Wireless Transmission	
Technology	LoRaWAN®
Antenna	Internal Antenna
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923-1&2&3&4
Tx Power	16 dBm (868 MHz)/22 dBm (915 MHz)/19 dBm (470 MHz)
Sensitivity	-137dBm @300bps
Mode	OTAA/ABP Class A
Sensors	
Temperature	
Operating Principle	Digital CMOSens® technology (MEMS)
Range	-20°C ~ 60°C
Accuracy[1]	Typ. ±0.3°C (-20°C ~ 0°C), ± 0.2°C (0°C ~ 60°C)
Resolution	0.1°C
Humidity	
Operating Principle	Digital CMOSens® technology (MEMS)
Range	0% RH~ 100% RH
Accuracy[2][3]	Typ. ± 2% RH (25°C)
Resolution	0.5% RH
Others	
Display	AM102: 2.13-inch Black & White E-Ink Screen AM102L: Not Support
Button	1 × Power/Reset Button
LED	1 × Status Indicator
Software	
Power On/Off	Mobile App via NFC or Power Button
Configuration	Mobile App via NFC, Downlink
Advanced Features	Threshold Alarm, Data Storage (1,280 entries), Data Retrievability, Data Retransmission, Screen Hibernate Mode, Smart Screen Mode
Physical Characteristics	
Power Supply	2 × 2700 mAh ER14505 Li-$SOCl_2$ Replaceable Batteries
Battery Life[4] (10 min interval, 25°C)	AM102: Over 7 Years (SF7, EU868 & US915)

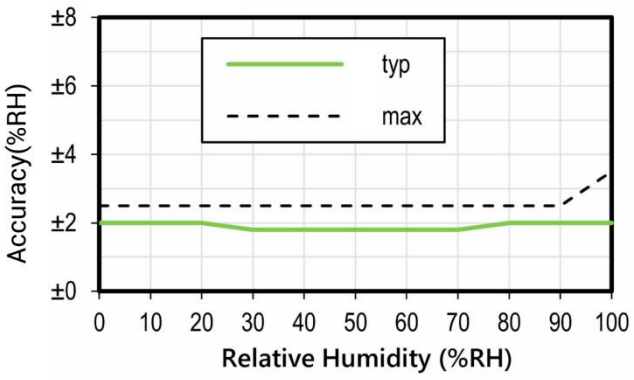
	Around 4.2 Years (SF10, EU868) Around 2.2 Years (SF10, US915) AM102L: Over 9 Years (SF7, EU868 & US915) Around 5.2 Years (SF10, EU868) Around 2.4 Years (SF10, US915)
Operating Temperature	-20°C ~ 60°C (E-Ink Screen: 0°C ~ 40°C)
Relative Humidity	0% ~ 95% (non-condensing)
Ingress Protection	IP30
Housing&Color	PC + ABS, White
Dimension	68 × 65 × 20.5 mm (2.68 × 2.56 × 0.81 in)
Installation	Wall Mounting via 3M Tape or Screws
Approvals	
Regulatory	CE, CE(RED), FCC, ISED

Note:

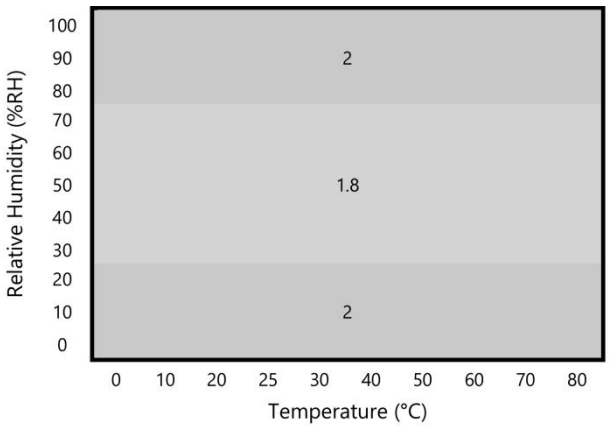
1. Accuracy corresponding to the temperature:



2. Accuracy corresponding to the relative humidity at 25°C:



3. Typical RH accuracy corresponding to the temperature:



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

◆ Dimensions(mm)

