Indoor Ambience Monitoring Sensor

Featuring LoRaWAN®

AM30x

◆ Introduction

AM30x is a compact indoor ambience monitoring sensor for measurement of temperature, humidity, light, CO_2 concentration, TVOC, barometric pressure, PM2.5, PM10 and motion. The data will be shown on the E-ink screen in real-time, which helps to measure the indoor environment and comfort. AM30x is widely used for offices, stores, classrooms, hospitals, etc.

Sensor data is transmitted using LoRaWAN® technology. Combining Milesight LoRaWAN® gateway and Milesight IoT Cloud, users can manage all sensor data remotely and visually.

◆ Features

➢ Integrated with multiple sensors like humidity, temperature, CO_2, light, barometric pressure, PM2.5, PM10, etc.

➢ Multiple display modes and clear emoticon to easily understand the comfort levels via screen

➢ Support batteries or DC power supply

➢ Equipped with traffic light indicator and buzzer to indicate device status and threshold alarms

➢ Store locally 18, 000 historical records and support retransmission to prevent data loss

➢ Compliant with standard LoRaWAN® gateways and network servers

➢ Quick and easy management with Milesight IoT Cloud

◆ Specifications

Model	AM307(L)	AM308(L)
Wireless Transmission		
Technology	LoRaWAN®	
Frequency	CN470/RU864/IN865/EU868/US915/AU915/KR920/AS923-1&2&3&4	
Tx Power	16dBm(868MHz)/22dBm(915MHz)/19dBm(470MHz)	
Sensitivity	-137dBm @300bps	
Work Mode	OTAA/ABP Class A	
Sensors		
Temperature		
Operating Principle	Digital CMOSens® technology (MEMS)	
Range	-20°C~60°C	
Accuracy	± 0.2°C	
Resolution	0.1°C	
Humidity		
Operating Principle	Digital CMOSens® technology (MEMS)	
Range	0% ~ 100% RH	
Accuracy	± 2% RH	
Resolution	0.5% RH	
Motion		
Operating Principle	Passive infrared (PIR)	
Detection Range	80 ° Horizontal, 55 ° Vertical, 5m	
Status	Vacant/Occupied	
Light		
Operating Principle	Photodiode	
Range	0-60000 Lux (Determine as 6 levels, 0-5)	
TVOC		
Operating Principle	MOX (MEMS)	
Range[1]	1.00 ~ 5.00 (IAQ Rating)	
Accuracy	±1	
Resolution	0.01	
Barometric Pressure		
Operating Principle	Piezoresistive absolute pressure sensor (MEMS)	
Range	260 - 1260 hPa	

Accuracy	±0.5 hPa	
Resolution	0.1 hPa	

Carbon Dioxide (CO_2)

Operating Principle	Nondispersive Infrared (NDIR)	
Range	400 ~ 5000 ppm	
Accuracy	± (30 ppm + 3 % of reading) (0°C~ 50°C, 0% to 85%RH)	
Resolution	1 ppm	

PM2.5 & PM10

Operating Principle	—	Laser Scattering
Range	—	0 ~ 1000 µg/m^3
Accuracy	—	0~100(±10µg/m^3), 100~1000(±10 %) (-10°C~ 60°C)
Resolution	—	1 µg/m^3

Display & Configuration

Display	AM307 & AM308: 4.2-inch Black & White E-Ink Screen AM307L & AM308L: Not Support	
Button	1 × Power Button + 1 × Reset Button	
LED & Buzzer	1 × Traffic Light Status Indicator + 1 × Buzzer	
Configuration	1. Mobile App via NFC 2. PC software via NFC or USB Type-C port	

Physical Characteristics

Power Supply	1. 4 × 2700 mAh ER14505 Li-SOCl$_2$ Replaceable Batteries 5V/1A by Type-C Port	
Battery Life[4] (10 min interval, 25°C)	AM307: Around 3 Years AM307L: Around 4 Years	AM308: Over 1 Year AM308L: Around 1.5 Year
Operating Temperature	-20°C - 60°C (E-Ink Screen: 0°C - 40°C)	
Relative Humidity	10% - 90% (non-condensing)	
Ingress Protection	IP30	
Dimension	100.8 × 114 × 22 mm (3.97 × 4.49 × 0.87 in)	
Installation	Wall Mounting via 3M Tape or Screws	

Approvals

Regulatory	CE, FCC, ISED	
Environmental	RoHS	

Note:

1. Reference to IAQ rating guideline (conversion from mg/m3 to ppm by the factor is about 0.5):

IAQ Rating	Air Quality
≤1.99	Very Good
2.00 to 2.99	Good
3.00 to 3.99	Medium (not recommended for exposure > 12 months)
4.00 to 4.99	Poor (not recommended for exposure > 1 months)
≥5.00	Bad (not recommended)

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

Milesight | www.milesight.com

Tel: 86-592-5085280
Sales email: iot.sales@milesight.com
Address: Building C09, Software Park Phase III, Xiamen 361024, Fujian, China
Support email: iot.support@milesight.com
Website: www.milesight.com