Indoor Ambience Monitoring Sensor
AM100 Series (AM104 & AM107)
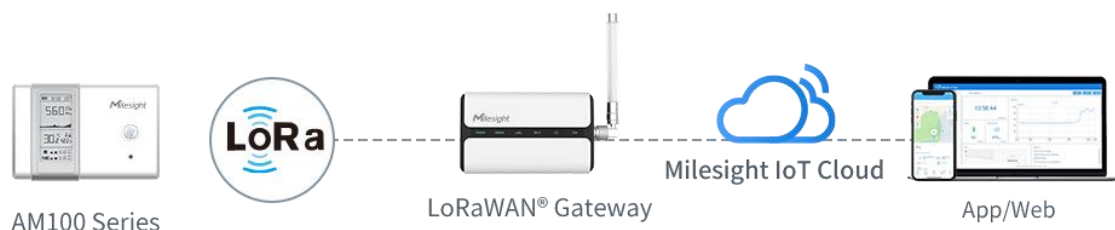
Milesight

◆ Introduction

AM104/AM107 is a compact indoor ambience monitoring sensor for measurement of temperature, humidity, light, CO_2 concentration, TVOC, barometric pressure and motion. These data will be shown on the E-ink screen in real-time, which allow to quantify the indoor environment and comfort. AM104/AM107 is widely used for offices, stores, classrooms, hospitals, etc.

Apart from screen display, sensor data is also transmitted using LoRaWAN® technology. With this low power consumption technology, AM104/AM107 can work for one year with 2 replaceable AA batteries. Combining with Milesight LoRaWAN® gateway and Milesight IoT Cloud solution, users can manage all sensor data remotely and visually.

◆ Features

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

➢ Visual display via E-ink screen

➢ Standard AA batteries

➢ One year work without replacing batteries

➢ Equipped with NFC and type-C port for easy configuration

➢ Compliant with standard LoRaWAN® gateways and network servers

➢ Quick and easy management with Milesight IoT Cloud solution
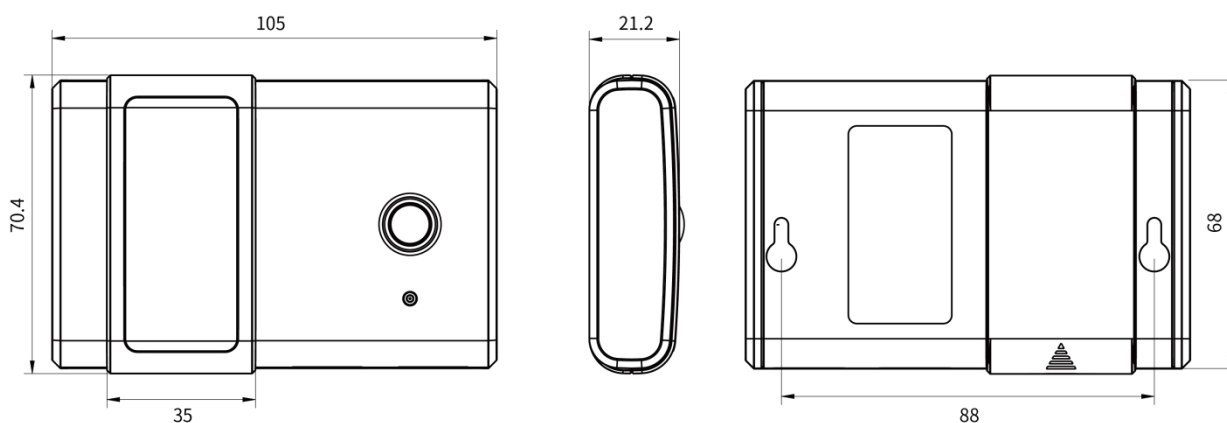
◆ Application Example

AM100 Series   LoRaWAN® Gateway   Milesight IoT Cloud   App/Web

◆ Specifications

Model	AM104	AM107
Wireless Transmission		
Technology	LoRaWAN®	
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	
Sensors		
Temperature		
Sensor Type	MEMS	
Range	-20°C to + 70°C	
Accuracy	0°C to + 70°C (+/- 0.3°C), -20°C to 0°C (+/- 0.6°C)	
Resolution	0.1°C	
Humidity		
Sensor Type	MEMS	
Range	0% to 100% RH	
Accuracy	10% to 90% RH (+/- 3%), below 10% and above 90% RH (+/- 5%)	
Resolution	0.5% RH	
PIR		
Detection Area	94 ° Horizontal, 82 ° Vertical	
Detection Distance	5 m	
Output Range	0-65535	
Light		
Range	60000 lux (Visible + IR, IR)	
Accuracy	±30%	
Carbon Dioxide (CO$_2$)		

Sensor Type	—	Nondispersive Infrared (NDIR)
Range	—	400 - 5000 ppm
Accuracy (0°C to +50°C)	—	± (30 ppm + 3 % of reading)
Resolution	—	1 ppm

TVOC

Sensor Type	—	MEMS
Range	—	0 - 60000 ppb
Accuracy	—	±15 %
Resolution	—	1 ppb
Long-term Stability	—	1.3 % accuracy drift per year

Barometric Pressure

Sensor Type	—	MEMS
Range	—	300 - 1100 hPa (-40°C - 85°C)
Accuracy	—	±1 hPa
Resolution	—	0.1 hPa

Display & Configuration

Display	2.13-inch Black & White E-Ink Screen
Configuration	1. Mobile App via NFC 2. PC software via NFC or USB Type-C port

Physical Characteristics

Power Supply	2 × 1.5V AA Alkaline Batteries or Type-C Port	
Battery Life[1]	Around 1.5 Years	Around 1 Year
Operating Temperature	0°C to +45°C	
Relative Humidity	0% to 100% (non-condensing)	
Ingress Protection	IP30	
Dimension	105 × 70.4 × 21.2 mm (4.1 × 2.8 × 0.8 in)	
Installation	Wall 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 61000-4-4 Level 4

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[1] Test under laboratory conditions and for guideline purposes only.

	IEC 61000-4-5 Level 3
	IEC 61000-4-6 Level 3
	IEC 61000-4-8 Level 4
Radio Frequency	FCC Part 15B, FCC Part 15.247, EN 300 330,EN 301 489-1/3, EN 300 220-1/2
Safety	EN62368-1

◆ Dimensions(mm)

◆ PIR Area