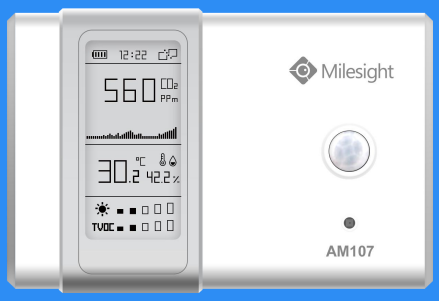
AM100 Series

Ambience Monitoring Sensors



◆ Introduction

AM100 series 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. AM100 series 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, AM100 series can work for one year with 2 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

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◆ Specifications

Model	AM104	AM107
Wireless Transmission		
Technology	LoRaWAN®	
Frequency	CN470/IN865/RU864/EU868/US915/AU915/KR920/AS923	
Tx Power	16dBm(868)/20dBm(915)/19dBm(470)	
Sensitivity	-137dBm @300bps	
Mode	OTAA/ABP Class A	
Sensors		
Temperature		
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		
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)		
Range	—	400 - 5000 ppm
Accuracy	—	±30 ppm or ±3 % of reading

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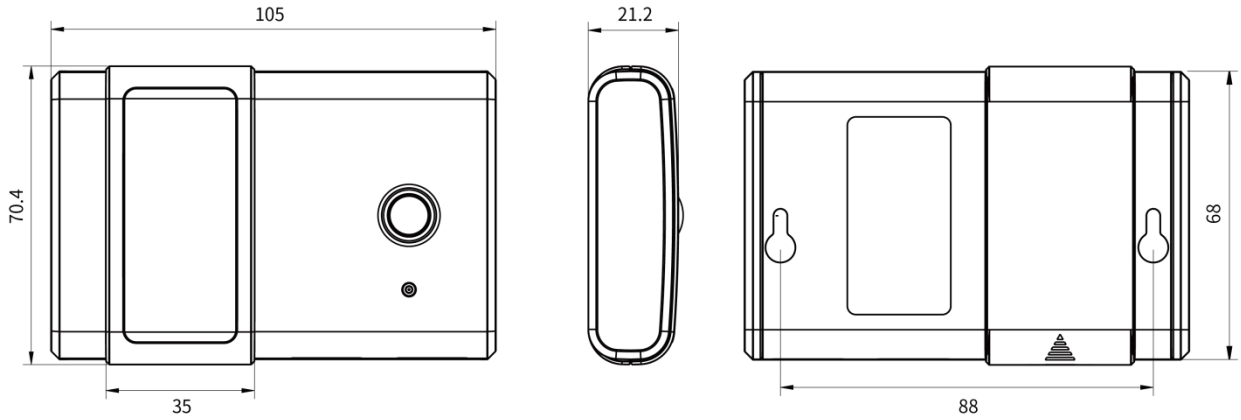
Resolution	—	1 ppm
TVOC		
Range	—	0 - 60000 ppb
Accuracy	—	±15 %
Resolution	—	1 ppb
Long-term Stability	—	1.3 % accuracy drift per year
Barometric Pressure		
Range	—	300 - 1100 hPa (-40°C - 85°C)
Accuracy	—	±1 hPa
Resolution	—	0.1 hPa
Display & Configuration		
Display	2.13-inch Black & White E-Ink Screen	
Configuration	1. Mobile APP via NFC 2. PC software via NFC or USB Type-C port	
Physical Characteristics		
Power Supply	2 × AA Alkaline batteries or type-C port power supply	
Battery Life* (10 min interval)	1.5 years (SF7) 1.2 years (SF10)	0.9 years (SF7) 0.7 years (SF10) 1.1 years（VOC disabled，SF7） 0.9 years（VOC disabled，SF10）
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, 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 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,	

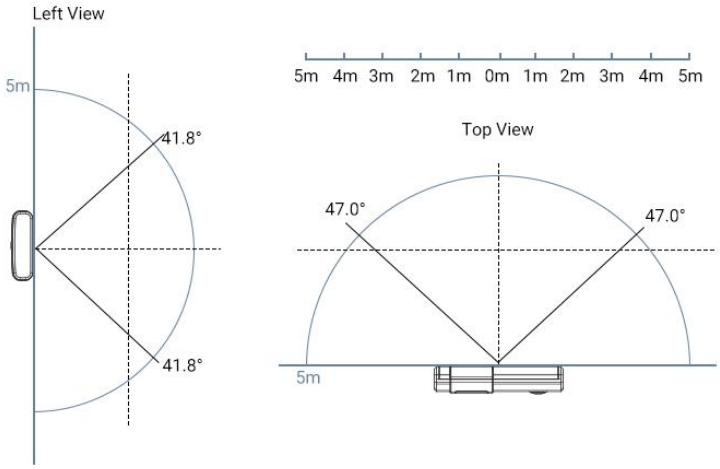
	EN 300 220-1/2
Safety	EN62368-1

* Tested under laboratory conditions and for guideline purposes only.

◆ Dimensions(mm)



◆ PIR Area



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