

MONITOR AIR QUALITY 24/7

LRS10701 LoRaWAN IAQ Sensor



Product Features

- SEN8 LRS10701 IAQ Sensor provides a simple and cost-effective wireless solution for monitoring Ambient Temperature & Humidity, PM2.5, Carbon Dioxide, TVOC, Formaldehyde, Ammonia...
- Battery or DC Power Supply.
- Compliant with LoRaWAN® standard.
- Color LED bar for Air Quality Index (AQI) indication.
- Configurable measurement interval and alert settings.
- Applications: Indoor Air Quality Monitoring for Office, Shop, Mall, School, etc.

Performance Specifications

Input Power	2 x 3.6V C Size ER26500 Lithium Battery or 8.5-15V DC, Max 1A Power Adaptor
Battery Life ⁽¹⁾	Up to 3.5 years ⁽²⁾
Measuring Period	Battery: Every 1 min DC Power: Every 1 min
Data Upload Interval (heartbeat)	Battery: Every 10 mins DC Power: Every 10 mins
Alert Notification	Yes, message to server
Temperature	Measurement range: -20°C to 60°C, Resolution: 0.1°C Accuracy: ±0.6°C (-20°C to -10°C), ±0.4°C (-10°C to 5°C) and ±0.2°C (5°C to 60°C)
Humidity	Measurement range: 0 to 100% RH, Resolution: 0.5% Accuracy: ±3%RH (5-20% RH), ±2%RH (20-80%RH) and ±3%RH (80-95%RH)
PM1.0, PM2.5, PM10.0	Indicatable range: 0µg/m ³ – 2,000µg/m ³ Resolution: 1µg/m ³ , Accuracy: ±10%
Carbon Dioxide (CO ₂)	Measurement range: 400ppm-5,000ppm Resolution: 1ppm, Accuracy: ±30ppm ± 3% reading
TVOC	Measurement range: 0 – 10,000ppb, 1 - 2,000µg/m ³ ⁽³⁾ Resolution: 1µg/m ³ , Accuracy: (±20µg/m ³ +15%) at 1 to 1000µg/m ³
Formaldehyde (HCHO) ⁽⁴⁾	Measurement range: 0 – 10ppm Resolution: 0.01ppm, Accuracy: ±10%
Ammonia (NH ₃) ⁽⁴⁾	Measurement range: 0 - 20ppm Resolution: 0.1ppm, Accuracy: ±10%
Hydrogen Sulfide (H ₂ S) ⁽⁴⁾	Measurement range: 0 - 50ppm Resolution: 0.08ppm, Accuracy: ±10%
Carbon Monoxide (CO) ⁽⁴⁾	Measurement range: 0 - 50ppm Resolution: 0.5ppm, Accuracy: ±10%

Nitrogen Dioxide (NO₂) ⁽⁴⁾

Measurement range: 0 - 5ppm
Resolution: 0.05ppm, Accuracy: ±10%

(1) Does not apply to models with PM2.5. Please contact Arwin sales representative for the battery life information for the models with PM2.5.

(2) Based on 10 mins heartbeat interval, LED color bar light off.

(3) Compatible with WELL standard, at DC supply mode.

(4) One SENSO8 IAQ unit can be equipped with up to two EC type sensors.

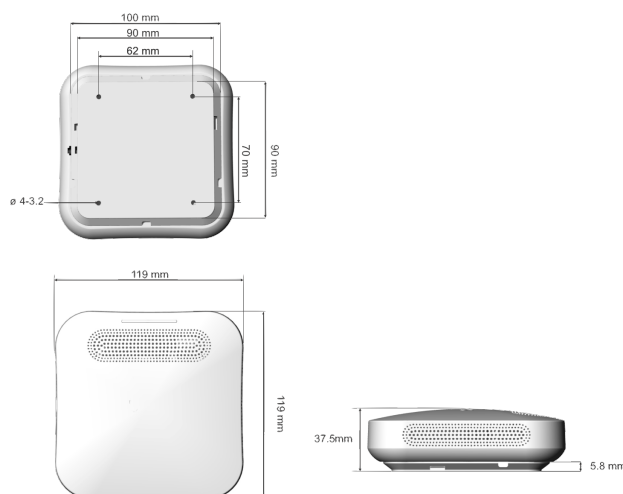
Wireless Characteristics

Wireless Connectivity	LoRaWAN® 1.0.3 EU863-870, US902-928, AU915-928, AS923
Transmit Power	EU868, AS923: Max. +16dBm US915, AU915: Max. +20dBm
Sensitivity	Max. -137 dBm
LoRaWAN Features	ABP/OTAA, ADR, Class A End-device
Antenna Type	Built-in Antenna

Physical Characteristics

Dimensions	H 119 mm x W 119 mm x H 37.5 mm
Weight	approx. 175g
Operating Temperature	0 to 50°C
Storage Temperature	-20 to 70°C
Storage Humidity	10% - 95% RH
Warranty Period	1 Year

Mechanical Dimensions



Ordering Information

Part number	Sensor features
LRS10701-C000-xxxx	Temperature, Humidity, CO ₂
LRS10701-CPV0-xxxx	Temperature, Humidity, CO ₂ , PM1.0/2.5/10, TVOC
LRS10701-CPVF-xxxx	Temperature, Humidity, CO ₂ , PM1.0/2.5/10, TVOC, HCHO
LRS10701-AH00-xxxx	Temperature, Humidity, NH ₃ , H ₂ S
LRS10701-MN00-xxxx	Temperature, Humidity, CO, NO ₂

Nomenclature for the suffix, e.g. LRS10701-CPVF-xxab:

- a: 0 – AS923, 1 – EU868, 2 – AU915, 3 – US915
- b: 0 – Battery (not for PM2.5) or DC power, B – PM2.5 operated by battery, W – compatible with Works with WELL
- xx: 00 – default, xx – reserved for customization