BATTERY POWERED WIRELESS IoT SOLUTIONS

MONITOR PREMISES AND ASSETS 24/7

LRS30100 LoRaWAN Indoor Environmental Sensor

Product Features

- LRS30100 LoRaWAN® indoor environmental sensor provides a simple and efficient solution for monitoring Ambient Temperature & Humidity, Carbon Dioxide, TVOC, Ambient Light and Motion.
- Long battery life.
- Compliant with LoRaWAN® standard.
- Configurable data upload interval and alert settings.
- Applications: Indoor Air Quality Monitoring for Office, Shop, Mall, School, etc.

Performance Characteristics

Input Power	3 x 3.6V AA Size ER14505 Lithium Battery
Battery Life	Up to 3 years [(1)] Up to 5 years [(1)] (model with temperature and humidity only)
Measurement Period	1 min
Data Upload Interval (heartbeat)	Configurable (default: 10 mins)
On-device Alert Detection	Yes, exceeds alert thresholds (temperature/humidity/CO_2/TVOC)
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)
TVOC	Measurement range: 0 – 10,000ppb, 1 - 2,000µg/m^3 Resolution: 1µg/m^3, Accuracy: (±20µg/m^3+15%) at 1 to 1000µg/m^3
Carbon Dioxide (CO_2)	Measurement range: 400ppm-5,000ppm Resolution: 1ppm, Accuracy: ±50ppm ± 3% reading
Motion	Detection Angle: ⇐ 100 deg Detection Range: 3m
Ambient Light	Measurement range: 4 - 2000 Lux Resolution: 1 Lux Accuracy: +/- 15 %

(1) Based on 10 mins heartbeat interval.

Arwin Technology Ltd. reserves the rights
to make changes without notice
sales@senso8.com

Wireless Characteristics

Wireless Connectivity	LoRaWAN® 1.0.3 EU863-870, US902-928, AU915-928, AS923
Transmit Power	EU868, AS923: +16dBm US915, AU915: +20dBm
Sensitivity	Max. -137dBm
Data Transfer Rate	0.3kbps – 50kbps
LoRaWAN Features	ABP/OTAA, Class A End-device
Antenna Type	Built-in Antenna
Security	AES-CTR (LoRaWAN End-to-End Encryption) AES-CMAC (Data Integrity Protection)

Physical Characteristics

Dimensions	L 89mm x W 89mm x H 32mm (TBC)
Weight	Approx. 165g (TBC)
Operating Temperature	0°C to 50°C
Operating Relative Humidity	0% to 100% RH (non-condensing)
Storage Temperature	-10°C to 60°C
Storage Humidity	0% to 100% RH (non-condensing)
Warranty Period	1 Year

Ordering Information

Part number	**Sensor features**
LRS30100-0000-000a	Temperature, Humidity
LRS30100-0000-110a	Temperature, Humidity, Light, Motion
LRS30100-C000-110a	Temperature, Humidity, CO_2, Light, Motion
LRS30100-CV00-000a	Temperature, Humidity, CO_2, TVOC
LRS30100-CV00-110a	Temperature, Humidity, CO_2, TVOC, Light, Motion

Nomenclature for the suffix, e.g. LRS30100-CV00-110a: a = 0 – AS923, 1 – EU868, 2 – US915, 3 – AU915

Arwin Technology Ltd. reserves the rights
to make changes without notice
sales@senso8.com