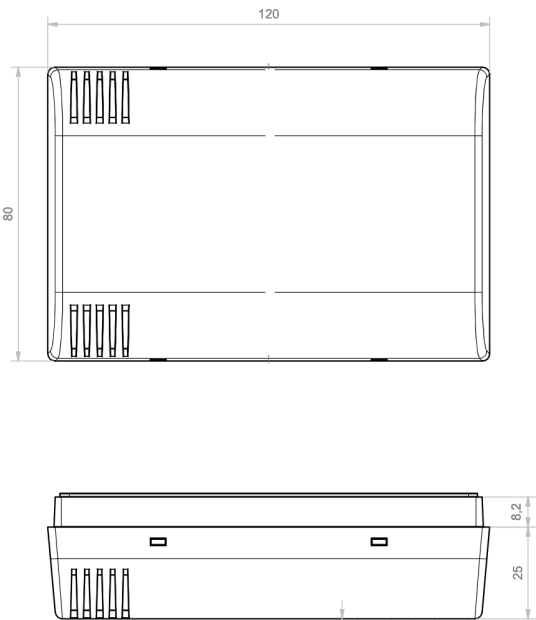# LoRaWAN Indoor Air Quality Sensor WSLRW-IAQ

SKU: WSLRW-IAQ

Introduction

WSLRW-IAQ sensor utilizes CMOSens® Technology for IR detection enables carbon dioxide measurements of the highest accuracy at a competitive price. Along with the NDIR measurement technology for detecting CO2 comes a best-in-class humidity and temperature sensor integrated on the same sensor module. Ambient humidity and temperature can be measured by special algorithm expertise through modeling and compensating external heat sources without the need for any additional components. Besides that, the sensor can be equipped with optional sensors like TVOC, Barometric pressure... The wireless portion is LoRaWAN technology allows long-range transmission at ultra-low power consumption. It will connect 2-way wirelessly to any LoRaWAN gateways on the market. It can be configured the operation parameters like data sending interval, health check cycle... The sensor can last up to 3-10 years with 2 x AA batteries.

- NDIR CO2 sensor technology for accurate measurement
- Integrated TVOC, temperature and humidity sensor;
- Optional Barometric pressure;
- LoRaWAN Class A protocol;
- **Ultra-low-power Technology** with 3-10 years battery;
- Plug & Play.

Typical Applications

Carbon Dioxide is a key indicator for indoor air quality. Thanks to new energy standards and better insulation, houses have become increasingly energy-efficient, but the air quality can deteriorate rapidly. Active ventilation is needed to maintain a comfortable and healthy indoor environment and improve the well-being and productivity of the inhabitants. Daviteq sensor solutions offer accurate and stable monitoring of CO2 in the air, as well as temperature and humidity. This enables our customers to develop new solutions that increase energy efficiency and simultaneously support the well-being of everyone.

- Indoor Air Quality monitoring;
- HVAC Control;
- Green house;
- Smart Agriculture.

Specification

SENSOR SPECIFICATION	
CO2 Sensor technology	NDIR sensor

CO2 range/resolution/accuracy	0-5.000 ppm / 1ppm / (+/- 30ppm + 3% reading)
Repeatability	+/- 10ppm
Temperature Stability	+/- 2.5ppm / oC in range 0-50 oC
Temperature range/resolution/accuracy	-40..+70oC / 0.1oC / ± 0.5 °C in range 0-50 oC
Humidity range/resolution/accuracy	0-100%RH / 0.1%RH /+/- 3.0%RH in range 25-100% RH
TVOC range/resolution/accuracy	0-60.000 ppb / 10 ppb / +/- 15% of Reading
Optional Barometric Pressure range/resolution/accuracy	10-1200 mbar/0.1 mbar/+/- 1.5 mbar
LORAWAN SPECIFICATION	
Data rate	250bps .. 5470bps
Antenna	Antenna 2.67 dbi
Battery	2 x AA size 1.5VDC, battery not included
RF Frequency and Power	860..930 MHz, +14 .. +20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN Class A
Data sending modes	interval time, alarm occurred and manually triggering by magnetic key. Recommend max 24 messages per day.
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Vietnam Type Approval	TBA
Ambient temperature	-40oC..+60oC (with AA L91 Energizer)
Dimensions	120x80x40
Net-weight	< 300 grams
Housing	Self-extinguishing ABS

Ordering Code

Item code	Descriptions
WSLRW-IAQ-01	LORAWAN INDOOR AIR QUALITY MONITOR, CO2-HUMIDITY-TEMPERATURE-TVOC, INTERNAL ANTENNA, TYPE AA BATTERY 1.5VDC, 860-930 MHZ FOR EU868, IN865, RU864, KR920, AS923, AU915, US915
WSLRW-IAQ-11	LORAWAN INDOOR AIR QUALITY MONITOR, CO2-HUMIDITY-TEMPERATURE-TVOC-BAROMETRIC PRESSURE, INTERNAL ANTENNA, TYPE AA BATTERY 1.5VDC, 860-930 MHZ FOR EU868, IN865, RU864, KR920, AS923, AU915, US915

⚠ Link for full datasheet:

⚠ Link for manual: