

# ERS CO2



## Indoor Air Quality

Sleek, Minimalistic, Compact White Labeled Design

ERS CO2 is ideal for Indoor Air Quality applications, measuring

- Temperature
- Humidity
- Co2
- Light (Illumination)
- Motion (PIR)

ERS CO2 comes with a configurable LED traffic light feature to let occupants know when CO2 levels, or any other value, has been reached.

ERS CO2 is widely used in offices, stores, classrooms, hospitals, kindergartens, etc.

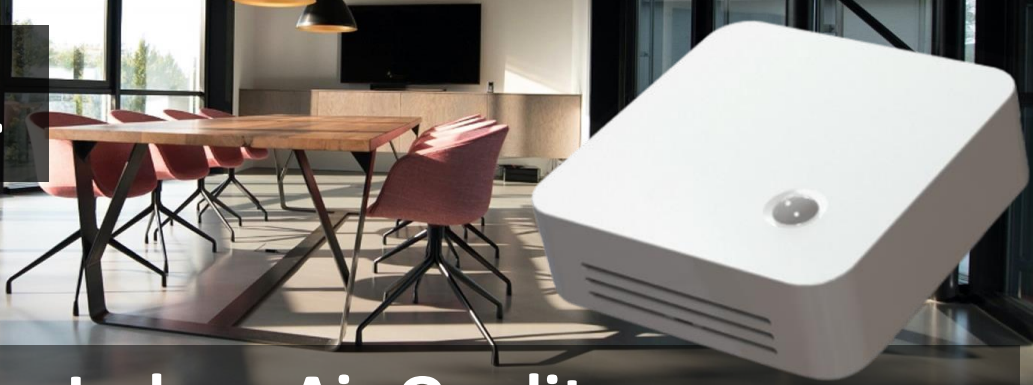
ERS CO2 applies two 3.6V AA lithium batteries, providing up to 10 years battery life.

ERS CO2 is equipped with NFC for Android mobile app configuration.

ERS CO2 is compliant with standard LoRaWAN<sup>®</sup> gateways and network servers



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### Wireless transmission

Technology	LoRaWAN® 1.0.3
Regional frequency support	US902 – 928, EU863 – 870, AS923, AU915 – 928, KR920 – 923, RU864, IN865
Supported features	OTAA, ABP, ADR, Adaptive channel setup
Security	LoRaWAN® End-to-End encryption (AES-CTR), Data integrity protection (AES-CMAC)
LoRaWAN device type	End-device Class A/C (Configurable)
RF transmit power	14 dB / 20 dB (Specific to regions)
Link Budget	137 dB (SF7) to 151 dB (SF12)

### Temperature

Range	0 to 50 °C
Accuracy	±0.2 °C (See details below)
Resolution	0.1°C

### Humidity

Range	0 to 85% RH (non-condensing)
Accuracy	± 2 % RH at 25 °C (See details below)
Resolution	0.1% RH

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### Co2

**Range, calibrated** 0 – 2000 ppm (See details below)

**Accuracy, calibrated**  $\pm 50$  ppm /  $\pm 3\%$  of reading

**Resolution** 1 ppm

### Motion (Passive infrared)

**Detection area** 94 ° Horizontal, 82 ° Vertical (See details below)

**Detection distance** 5 m

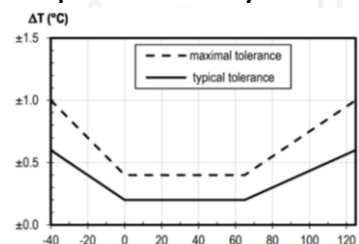
### Light (Illumination)

**Range** 4 - 2000 lux

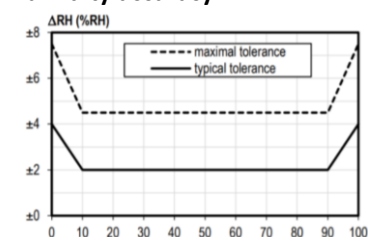
**Accuracy**  $\pm 10\%$

**Resolution** 1 Lux

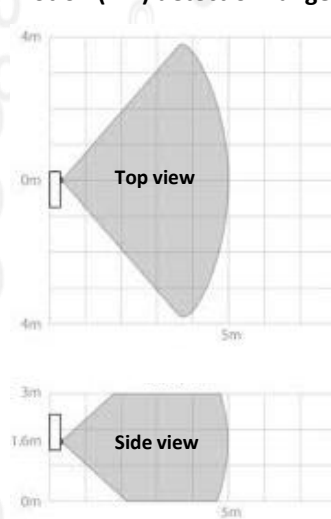
### Temperature accuracy



### Humidity accuracy



### Motion (PIR) detection range



### Co2 sensor calibration

The CO<sub>2</sub> sensor has an internal calibration routine that automatically calibrates the sensor to 400 ppm at the lowest value that has been read in the last 8 days.

This means that during an 8-day period, the sensor must be exposed to fresh (well ventilated) air at least once for the automated calibration to work.

The sensor can also be manually calibrated.

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### Physical characteristics

Power supply	2 x 3.6V AA Lithium Batteries
Battery life	Up to 10 years, but depends on sample interval, transmit interval, data rate, and environmental factors.
Weight	80 g excluding batteries / 120 g including batteries
Dimensions	86 x 86 x 27 mm
Enclosure	Plastic, PC/ABS
NFC	Supporting configuration via mobile Android app e.g., setting of Sampling Interval, Data upload interval, etc.
Installation	Wall mounting
LED indicator	ERS CO2 has a LED traffic light feature to inform occupants when a certain threshold e.g., CO2 levels, or any other value, has been reached. LED color, frequency, and light intensity are configurable.

