

# CO<sub>2</sub> + TRH Sensor

## Wireless CO<sub>2</sub> Temperature and Humidity Sensor

Monitor indoor air quality, review data on interfacing devices, and control fresh air inside customizable zones.



### Product at a glance

Comfort is more than just a serene, pleasant ambiance. It's also about clean, fresh air, and ensuring a healthy environment inside a building.

Whether you're in a school, restaurant, office or other small building, the CO<sub>2</sub> + TRH Sensor will help ensure the well-being of your customers, students, or personnel.

Putting you on the fast track to Building LEED, BREEAM and Green Star Certification, the CO<sub>2</sub> +TRH Sensor delivers:

- **Performance:** maintains high performance in varying air type environments
- **Reliability:** provides accurate and reliable carbon dioxide, temperature and humidity measurement
- **Conformity:** conforms to ASHRAE specifications for Green Building Standards
- **Improved air quality:** achieves optimal ventilation and reduces stagnant air
- **Durability:** adapts to a multitude of environments
- **Affordable:** easily convince customers to invest in improved Indoor Air Quality (IAQ)
- **Features:** choose between the TRH and CO<sub>2</sub> + TRH model to fit your needs

### Benefits

All CO<sub>2</sub> sensors are maintenance-free in normal environments thanks to the built-in Automatic Baseline Correction (ABCLogic™) algorithm function.

The sensors have a life expectancy of 10 years.

- Miniature size
- Requires no calibration
- Maintenance free
- Long term stability
- Low power consumption



The convenience of an out-of-the-box module allows full implementation in minutes.

# Specifications

## Main Specifications

Function	Description
Operating Principle	Non-dispersive infrared (NDIR)
Dimensions	3.26in x 2.85in x 0.72in 82.9 mm x 72.4 mm x 18.4 mm
Operating temperature	0°C to 50°C (32°F to 122°F)
Temperature accuracy	±0.3°C (0.54 °F) typical within operating range
Humidity range	0% to 100%
Humidity accuracy	± 3% RH (typical within 0% to 80% RH)
Measurement range	0 to 5000 ppm
Measurement/ Transmission intervals	2.5 minutes (day), 10 minutes (evening) Note: Battery life will be reduced should interval be shortened (i.e. using remote temperature/humidity functions)
CO <sub>2</sub> accuracy at NTP	±60ppm +3% of reading (400 - 2,000ppm range)
CO <sub>2</sub> calibration	Automatic calibration
CO <sub>2</sub> measurement pressure dependency	0.13% of reading per mm Hg (normal atmospheric conditions of ~100Kpa)
CO <sub>2</sub> resolution at NTP	+/- 20ppm at 800ppm
Transmission protocol	Zigbee 3.0 Green Power (encrypted, bi-directional)
Transmission range	Up to 100m (328 ft) free field 20 to 30m (66 - 98ft) indoor
Battery lifetime	10+ years (non-replaceable) Note: Battery life can be reduced when sensor is operated at temperatures approaching the operating limits.
HMI	Push button & LED (for commissioning)
Power supply / Battery cell	3.6 V AA Lithium ion
Enclosure	Polycarbonate, white (front) and black (back)
Protection	IP 20
Environment & health	Halogen free, RoHS, WEEE
Storage temperature	-30°C to 70°C

## Ordering Information

### Part number

SED-CO2-G-5045	Wireless CO <sub>2</sub> Sensor with Room Temperature and Humidity
SED-TRH-G-5045	Wireless Sensor with Room Temperature and Humidity

### Firmware Version

The VT8000 Series Room Controller must be running Firmware version 1.7 or greater to integrate with the wireless CO<sub>2</sub> and TRH sensors. The sensors will not function with any Firmware version below 1.7. Make sure to download the latest Firmware before attempting to integrate the sensors with any VT8000 Series Room Controller. Also, version 10 or greater of the wireless communication module is required to bind the sensors to the Room Controller.

**Note:** Only one sensor can be commissioned per VT8000 Room Controller.

**Note:** Contact technical support for MPM compatibility using LUA.