

VT8000 Room Controllers

CO₂ + TRH Sensor Specification Sheet Wireless CO₂, 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 CO₂ + 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 CO₂ +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 CO₂ + TRH model to fit your needs

Benefits

All CO₂ sensors are maintenance-free in normal environments thanks to the built-in Automatic Baseline Correction (ABCLoLogic™) 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	3.26 in x 2.85 in x 0.72 in 82.9 mm x 72.4 mm x 18.4 mm
Operating temperature	5°C - 45°C (41°F - 113°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 95% 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)
CO2 accuracy at NTP	±50 ppm ±3% of reading (400 - 2,000ppm range)
CO2 calibration	Automatic calibration
CO2 measurement pressure dependency	0.13% of reading per mm Hg (normal atmospheric conditions of ~100Kpa)
Transmission protocol	Zigbee 3.0 Green Power (encrypted, bi-directional)
Transmission range	Up to 100 m (328 ft) free field 20 to 30 m (66 - 98 ft) 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 ₂ Sensor with Room Temperature and Humidity
SED-TRH-G-5045	Wireless Sensor with Room Temperature and Humidity

Firmware Version

When used with a Schneider Electric VT8000 Room Controller, it requires at least:

- Firmware version: 1.7
- Zigbee VCM version: 10

The maximum number of sensors supported by the VT8000 Room Controller is:

- Zigbee VCM versions 10 to 24: 1
- Zigbee VCM versions 30 and higher: 20