

CO₂ + TRH Sensor

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:

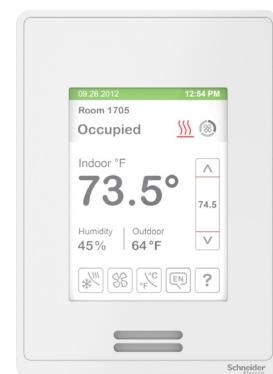
- **Performance:** maintains high performance in varying air type environments
- **Reliability:** provides accurate and reliable carbon dioxide, temperature and humidity measurement
- **Conformity:** conforms to ASHRAE specifications for Green Building Standards
- **Improved air quality:** easily convince customers to invest in improved Indoor Air Quality (IAQ)
- **Durability:** adapts to a multitude of environments
- **Protocols:** wireless ZigBee Green Power
- **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 device 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 - 50°C (32°F - 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 ₂ accuracy at NTP	±60ppm +3% of reading (400 - 2,000ppm range)
CO ₂ calibration	Automatic calibration
CO ₂ measurement pressure dependency	0.13% of reading per mm Hg (normal atmospheric conditions of ~100Kpa)
CO ₂ 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 ₂ Sensor with Room Temperature and Humidity
SED-TRH-G-5045	Wireless Sensor with Room Temperature and Humidity

SE8000 Series Room Controller

- The SE8600 Room Controller must also be running Firmware version 1.7 or later to enable the ZigBee Green Power protocol to integrate with the wireless CO₂ and TRH sensors.
- Version 10 of the ZigBee Pro communication module is required to enable features for Firmware version 1.7.

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