

CO₂ Sensor Module

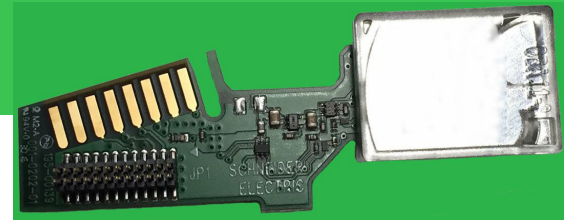
CO₂ sensor module for SE8000 Room Controllers

Out-of-the-box CO₂ sensor module to improve fresh air quality in schools, restaurants, offices and other small buildings.

Product at a glance

Commercial spaces or small office buildings require a constant flow of fresh and conditioned air to create a healthy environment for people inside the building. The CO₂ sensor provides accurate air quality reading and can influence the amount of fresh air flow brought into the monitored zone. Use of CO₂ sensors with an energy efficiency program is one enabler for Building LEED, BREEAM and Green Star Certification.

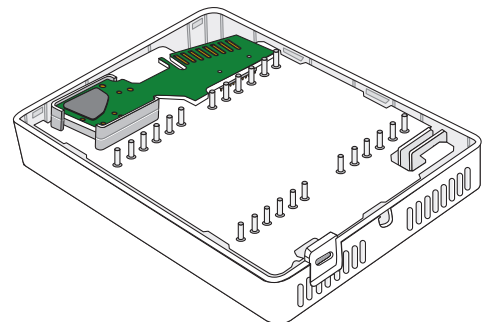
- **Finish:** platinum EQC coating improves optic performance
- **Performance:** maintains high performance in varying air type environments
- **Reliability:** provides accurate and reliable carbon dioxide measurement
- **Conformity:** conforms to ASHRAE specifications for Green Building Standards.
- **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)
- **Convenience:** Install to any SE8000 Series Room Controller in minutes



Benefits

All CO₂ sensors are maintenance-free in normal environments thanks to the built-in self-correcting Automatic Baseline Correction (ABC) algorithm function. The sensors have a life expectancy of 15 years and do not require any calibration.

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



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

CO₂ Sensor Module Overview

Overview

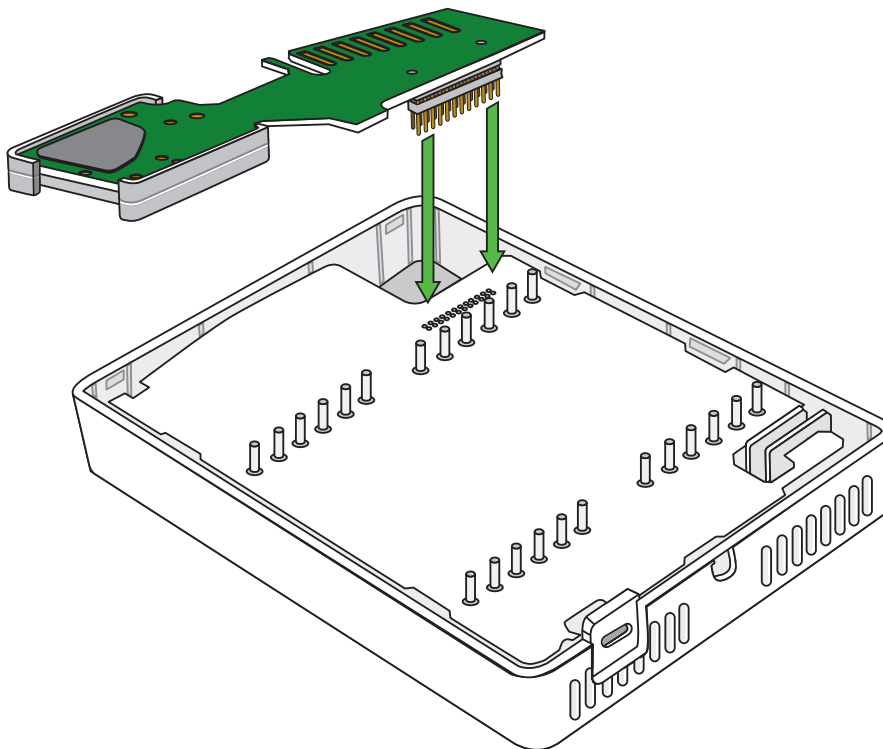
The CO₂ sensor is an optional built-in easy-to-install module for the SE8000 Series Room Controllers. For HVAC applications, the CO₂ sensor can be used to monitor the indoor air quality, and control the fresh air mixture when used with the Room Controller. Typical site installations can include indoor zones with constant or periodic high concentrations of people, or in close proximity to commercial equipment generating high levels of CO₂ gas.

Since CO₂ gas is odorless and colorless making leakages difficult to detect, the CO₂ sensor ensures the wellbeing of personnel located in industrial zones where CO₂ generating equipment is installed.

Carbon dioxide measurement is required in many applications from building automation and greenhouses to life sciences and safety.

Easy and worry free

The CO₂ sensor module is easy to install on any SE8000 Series Room Controller. The module is designed to fit snugly on the Room Controller PC board and requires no after service maintenance.

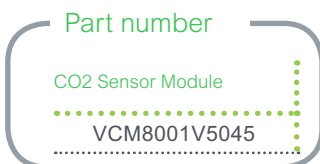


Specifications

Main Specifications for CO₂ Sensor

Item	Description
Target gas	CO ₂
Operating Principle	Non-dispersive infrared (NDIR)
Measurement range	400 - 10,000 ppm
Measurement interval	2 - 7 seconds
Accuracy	±30ppm +3% of reading (400 - 2,000 ppm range)
Pressure dependence	+ 1.6% reading per kPa deviation from normal pressure
Response time	Approximately 2 minutes
Operating temperature	23°F to 131°F (-5°C to 55°C) with excursions
Operating humidity	0 to 95% RH non condensed
Storage temperature	-40°F to +158°F (-40°C to +70°C)
Dimensions	2.8in x 0.99in x 0.32in (71mm x 25.1mm x 8.2mm)
Weight	0.3oz (8g)
Power supply	3.4V to 4.5V
Power consumption	300 mA peak (28 mA average)
Life expectancy	15+ years
Compliance	Emission: EN 55022:2010 Class A Immunity: EN 55024:2010 RoHS directive 2011/65/EU
Serial communication	UART, Modbus protocol
Maintenance	Maintenance-free

Ordering Information



Firmware Version

The Room Controller must be running Firmware version 1.5.1 or greater to activate the functionality of the CO₂ sensor module. The CO₂ sensor module will not function with any Firmware version below 1.5.1. Make sure to download the latest Firmware version from The Exchange before installing the CO₂ sensor module.