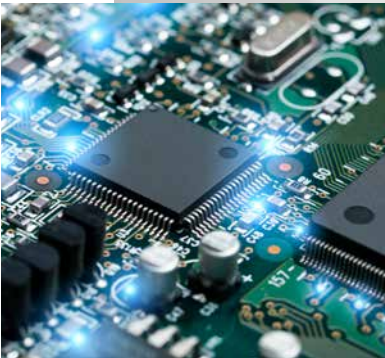


S-C02/T Modbus

CO₂ and temperature sensor for modbus communication





S-CO2/T Modbus

CO₂ and temperature sensor for modbus communication



Accurate device to measure reliably the concentration of Carbon dioxide

Outstanding long-term stability and dependability

Non-dispersive infrared (NDIR)

Dual-wavelength Measurement

Autocalibration



2 in 1 measuring device (CO2/T)

Modbus communication



Networkability up to 15 sensors



Energy saving



Compact design, simple to install, ready to use

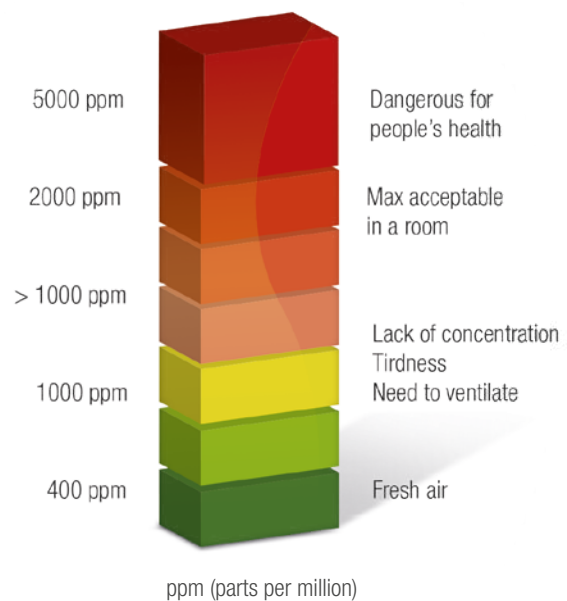


No maintenance

A reliable solution engineered to measure accurately indoor air quality

Nowadays, the buildings are nearly air-tight, entailing a risk of poor indoor air quality if there is a lack of ventilation. **Indoor air quality** can generally be assessed by **measuring the concentration of carbon dioxide**, known to be representative of indoor air conditions. Aereco introduces the new **S-CO2/T Modbus**, an effective CO₂ sensor specially designed to accurately assess indoor CO₂ concentrations, in order to help systems optimize indoor air quality.

Measure indoor air quality for the wellbeing of the occupants and manage energy efficiently



Application areas

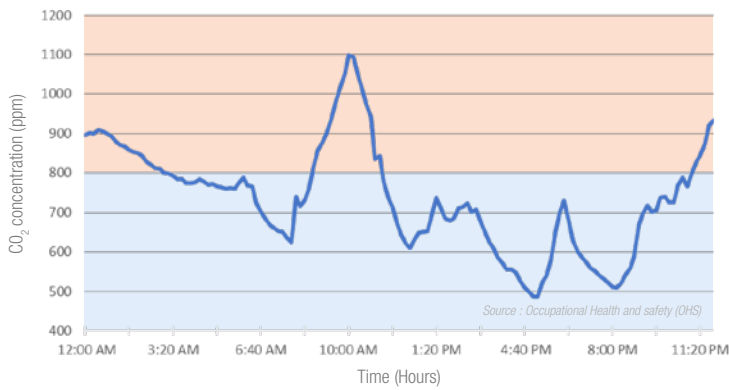
HVAC Systems

Demand Controlled Ventilation for energy saving

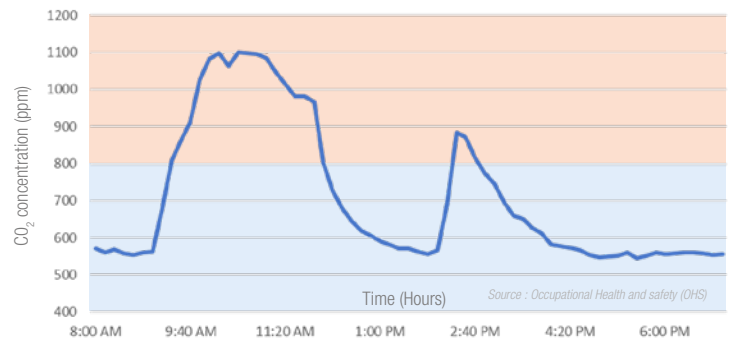
Indoor Air quality Measurement in Schools, Offices, hotels, cinemas, Conference room, hospitals and residential areas ...

INDOOR AIR QUALITY IN DIFFERENT PLACES

Example of the CO₂ concentration in a living room

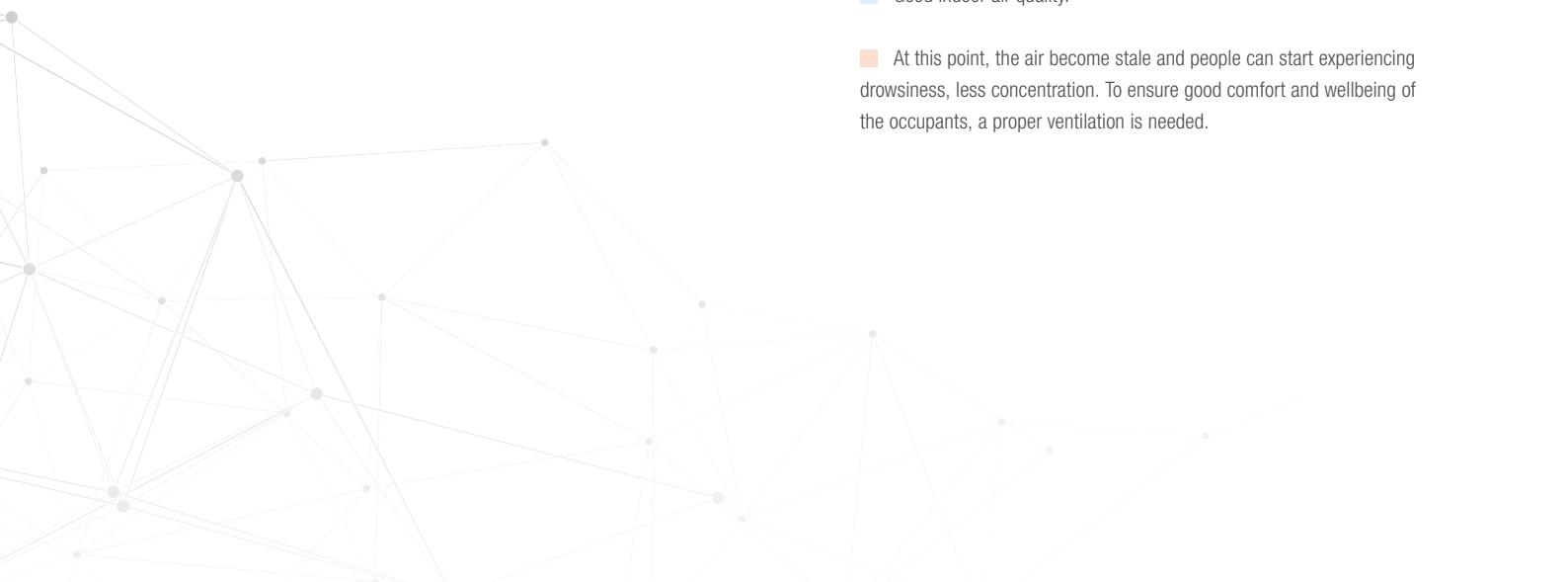


Example of the CO₂ concentration in a meeting room



■ Good indoor air quality.

■ At this point, the air become stale and people can start experiencing drowsiness, less concentration. To ensure good comfort and wellbeing of the occupants, a proper ventilation is needed.

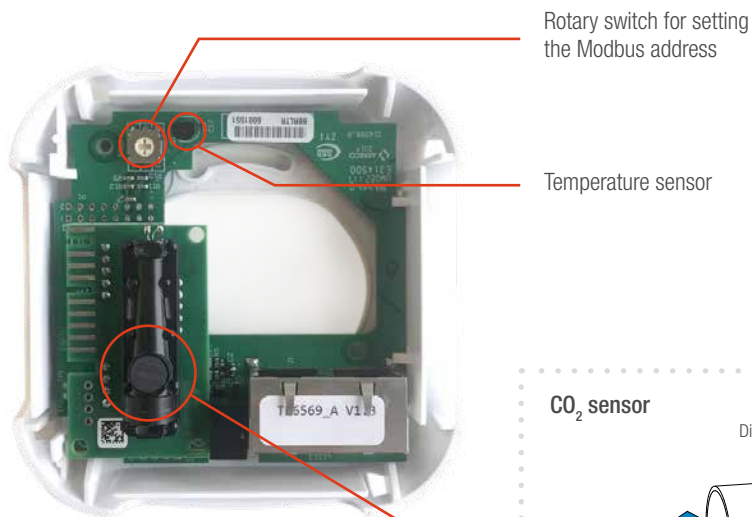


A smart, versatile device that ensures an accurate monitoring of indoor air quality

Its technologies ensure **long-term stability** and **performance**: The S-CO2/T Modbus is **pre-calibrated to measure**, in real time, indoor CO₂ concentrations from **0 to 2 000 ppm**. Thanks to its **dual wavelength measurement technology**, the S-CO2/T Modbus is an intelligent device which ensures optimum performance and reliability. It can be placed anywhere where there is occupancy. Moreover its compact design allows easy installation.

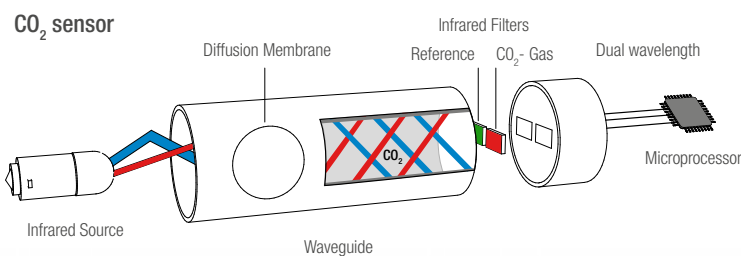
The S-CO2/T Modbus device, is equipped with a built-in temperature sensor, which can provide an **additional information** on indoor air temperature to control any systems like air conditioning etc...

The S-CO2/T Modbus is tested, validated, and documented. It is **compatible with all types of installation** and will last as long as the installation. The Aereco CO₂ sensor uses the **NDIR technology**, a selective CO₂ technology that ensures good indoor air quality assessment with auto-calibration.



Rotary switch for setting the Modbus address

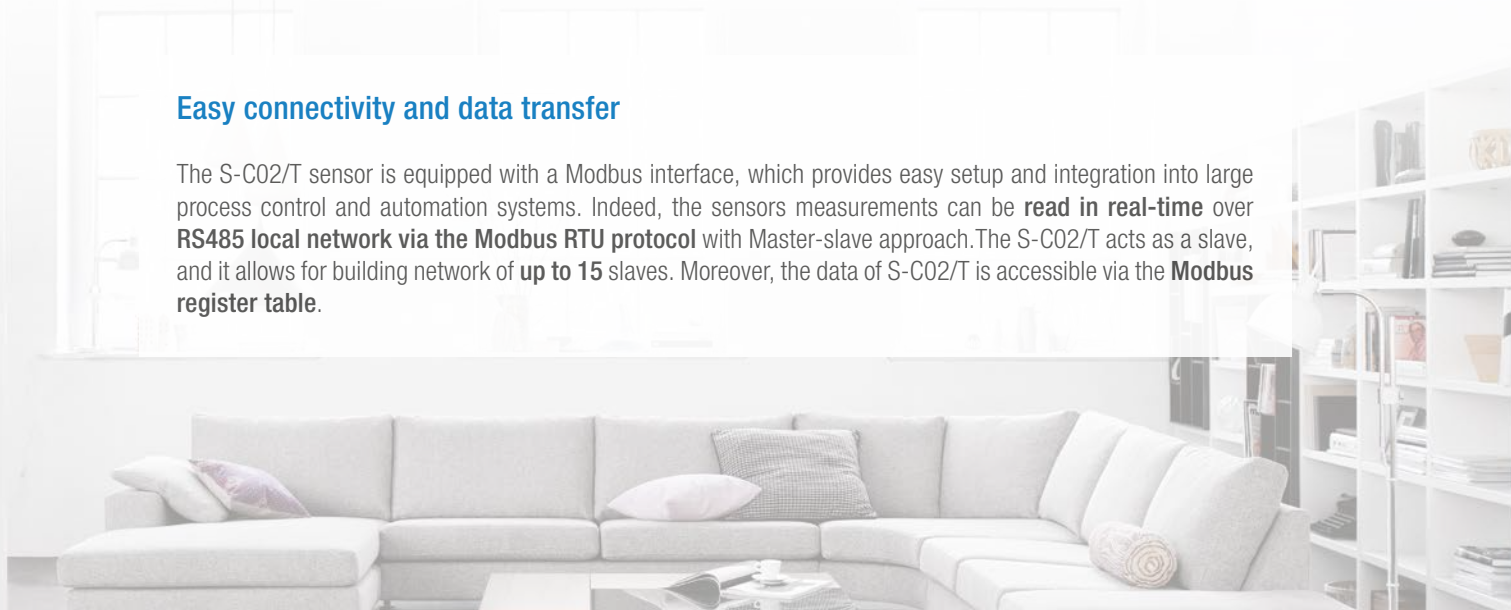
Temperature sensor



Scheme of the NDIR Technology embedded in S-CO2/T sensor

Easy connectivity and data transfer

The S-CO2/T sensor is equipped with a Modbus interface, which provides easy setup and integration into large process control and automation systems. Indeed, the sensors measurements can be **read in real-time** over **RS485 local network via the Modbus RTU protocol** with Master-slave approach. The S-CO2/T acts as a slave, and it allows for building network of **up to 15 slaves**. Moreover, the data of S-CO2/T is accessible via the **Modbus register table**.





S-CO2/T Modbus CO2 and temperature sensor for modbus communication

Standard code

Data points

CO₂ specifications

Measurement principle

Sensor Type

Working range

Accuracy at 25 °C and 1013 mbar

Response Time

Temperature dependency

Measuring time interval

Calibration interval

Built-in temperature sensor

Temperature working range

Accuracy

Conversion Gain

Electrical specifications

Power supply

Power consumption (standby mode)

Power consumption (measuring mode)

Connection type

Communication

Protocol type

Baud rate

Data length

Housing

Material

Color

Protection

Weight

Installation type

S-CO2/T Modbus sensor

CAP1668

CO₂ and temperature

NDIR (non-dispersive infrared technology)

Dual wavelength

0...2000 ppm CO₂

< ± (50 ppm +2 % of measuring value)

105s with measured data averaging 60s without measured data averaging

typ. 2ppm CO₂/°C (0...50°C / 32...122°F)

1h (default), use Synch operation (Modbus register table) for immediate measurement

>5 years

2°C to 50°C

0.5°C ensured at 25°C

10mV/°C

12 VDC

10mA

135mA Max

2xRJ45 shielded

Modbus RTU, RS485 physical layer

9600bps

16bits

ABS

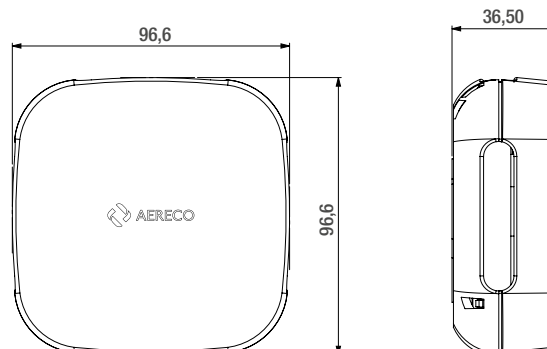
white

IP 20

80.5g

Ceiling and Wall-mounted, indoor

Dimensions in mm







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