



Measuring the quality of air is essential

AirQualy is a family of sensors designed to measure the quality of air in buildings. The product is available in different models which include a combination of Temperature, Humidity, CO₂, Volatile Organic Compound (VOC) and Particulate Matter (PM) sensors and is available in two formats: One with LED indicators in different colours that switch on in accordance with the value measured by each sensor; and the other without LED indicators, for cases in which the purpose is to send the information to a controller or building management system (BMS).

The front panel of the unit includes an interchangeable label (E-Controls patent) with icons and texts that can be designed in accordance with the needs of each project by means of the *e-Touch Creator* web application. The product is configured by means of the EConfigurator APP with a smartphone and the information is wirelessly transferred to the unit via NFC.

The unit is made up of two elements that provide a large number of combinations and are purchased separately: The AirQualy front panel, which includes the sensors, the LEDs, the frame and a sample label; and the "e-Bus Coupling Surface" mechanism, which provides the power supply and the type of control output and is available in three models: an stand-alone model without outputs, a model with a relay output and 0-10 V / 4-20 mA outputs, and a model with Modbus communication.



Temperature, Humidity CO₂, VOC and PM sensors

Option with LEDs to indicate the measurement of the sensor

Configuration via app with NFC

Unit for surface mounting

Three coupling unit models: Stand-Alone / Relay, 0-10V and 4-20mA outputs / Modbus RTU

Front image of the unit

The unit is supplied with a label with icons to indicate the values of each sensor. Other designs can be ordered through the *e-Touch Creator* website.

Indication LEDs

The front can optionally be ordered with LEDs to indicate the measured value. The CO₂, VOC and PM sensors have 5 LEDs: Blue (optimal level), Green, Yellow, Orange and Red (critical level). The temperature and humidity sensors have 3 LEDs: Green (optimal), Red (higher) and Blue (lower). All the levels can be configured with the APP.

Technical specifications

- Temperature sensor (digital)
Measurement range: - 10 °C to 60 °C
Accuracy: ± 0,2 °C
- Humidity sensor (digital)
Measurement range: 0 to 100 % HR
Accuracy: ± 1,8 % HR
- CO₂ sensor
NDIR measurement technology
Measurement range: 0 to 5000 ppm
Accuracy: ± 30 ppm + 3%
Stability between 0 and 50 °C: ± 2.5 ppm

- COV sensor
MOx measurement technology
Measurement of ethanol and toluene
Measurement range: 0 to 1000 ppm of ethanol equivalent
Value provided: 0 to 500 VOC points
- PM sensor
Configurable particle measurement size: 0.3 to 1.0 µm / 2.5 µm / 4.0 µm / 10 µm
Measurement range: 0 to 1000 µg/m³
Resolution: 1 µg/m³
Accuracy for PM1 and PM2.5:
From 0 to 100 µg/m³: ± 10 µg/m³
From 100 to 1000 µg/m³: ± 10% MV (*)
Accuracy for PM4.0 and PM10:
From 0 to 100 µg/m³: ± 25 µg/m³
From 100 to 1000 µg/m³: ± 25% MV (*)
MCERTS certificate (*) MV: measured value

Ordering numbers

AQ.00YY00-000 (see table)
AirQualy sensor without LEDs
Sensor without LEDs, frame, front label

AQ.01YY00-000 (see table)
AirQualy sensor with LEDs
Sensor with LEDs, frame, front label

e-Bus Coupling Surface
See purchase references on the product's datasheet

Accessories

AC.000040-000
Enclosure for desktop mounting



AirQualy sensor models table

Front panels without LEDs	Front panels with LEDs	Description	T	RH	CO ₂	COV	PM
AQ.001200-000	AQ.011200-000	AirQualy CO ₂			●		
AQ.001400-000	AQ.011400-000	AirQualy PM					●
AQ.002100-000	AQ.012100-000	AirQualy Temp + HR	●	●			
AQ.002400-000	AQ.012400-000	AirQualy CO ₂ + PM			●		●
AQ.003100-000	AQ.013100-000	AirQualy Temp + HR + CO ₂	●	●	●		
AQ.003200-000	AQ.013200-000	AirQualy Temp + HR + COV	●	●		●	
AQ.003400-000	AQ.013400-000	AirQualy Temp + HR + PM	●	●			●
AQ.004100-000	AQ.014100-000	AirQualy Temp + HR + CO ₂ + COV	●	●	●	●	
AQ.004400-000	AQ.014400-000	AirQualy Temp + HR + CO ₂ + PM	●	●	●		●

Examples of possible combinations

Example for schools

CO₂ sensor model with LEDs
Stand-Alone coupling unit
Jack power supply



AQ.011200-000
BC.400000-031
FAP-12W-12V

Example for offices

T + RH + CO₂ sensor model with LEDs
Coupling unit with relay, 0-10V / 4-20mA
DIN rail power supply



AQ.013100-000
BC.400201-031
FA-15W-24V

Example for BMS

T + RH + CO₂ + PM model without LEDs
Modbus RTU coupling unit
DIN rail power supply



AQ.004400-000
BC.470002-031
FA-15W-24V

DDS0121502000-0, AQ.0XYY00-000 - AirQualy Sensor DDESEN

(*) The purchase order must include the ordering number of the AirQualy sensor, the ordering number of the e-Bus Coupling Surface mechanism and the ordering number of the power supply (optional).