



DATA SHEET

AQ 110

Air quality



Easy to use



Hold-min-max functions

Features

- Selection of temperature units
- Hold function
- Backlight
- Configurable auto shut-off
- Display of minimum and maximum values

Technical specifications

| Parameters | Measuring units | Accuracy** | Measuring range | Resolution |
|-----------------|-----------------|-----------------------------|--------------------|------------|
| CO ₂ | ppm | ±3% of reading ±50 ppm | From 0 to 5000 ppm | 1 ppm |
| Temperature | °C, °F | ±0.4% of reading ±0.3 °C | From -20 to 80 °C | 0.1 °C |

*Except class 110 S which is supplied with adjustment certificate.

**All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

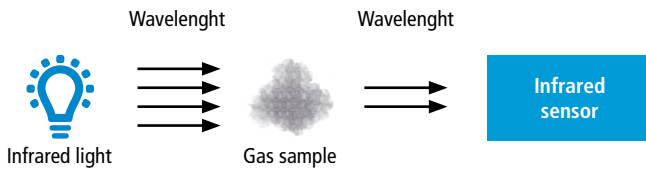
General features

| | |
|-----------------------------------|---|
| Measuring elements | CO ₂ ; infrared sensor Temperature: NTC |
| Connector | Retractable, 0.45 m length, extension: 2.4 m |
| Display | 4 lines, LCD technology. Dimensions 50 x 36 mm. 2 lines of 5 digits with 7 segments (value) 2 lines of 5 digits with 16 segments (unit) |
| Housing | ABS, protection IP54 |
| Keypad | 5 keys |
| European directives | 2014/30/EU EMC; 2014/35/EU Low Voltage; 2011/65/EU RoHS II; 2012/19/EU WEEE |
| Power supply | 4 batteries AAA LR03 1.5 V |
| Battery life | 20 hours |
| Ambience | Neutral gas |
| Conditions of use (°C, %RH, m) | From 0 to +50 °C. In non condensing conditions. From 0 to 2000 m. |
| Storage temperature | From -20 to +80 °C |
| Auto shut-off | Adjustable from 0 to 120 minutes |
| Weight | 340 g |

Operating principle

Non dispersive infrared absorbance

All the gases absorbs the light at a specific wavelength, a part of the light emitted by the infra-red source is absorbed by the gas sample. The quantity of light read by the infrared sensor is inversely proportional to the CO₂ concentration.



Thermometer: NTC probe

Negative temperature coefficient probes are thermistors with a resistance that decreases with temperature according to the equation below.

$$R_{(T)} = R_{(T_0)} e^{\left(\frac{\alpha}{100} \times (T_0 + 273.15)^2 \times \left(\frac{1}{T + 273.5} - \frac{1}{T_0 + 273.5} \right) \right)}$$

$R_{(T)}$ = resistance sensor value at temperature T

$R_{(T_0)}$ = resistance sensor value at reference temperature T_0

T and T_0 in °C

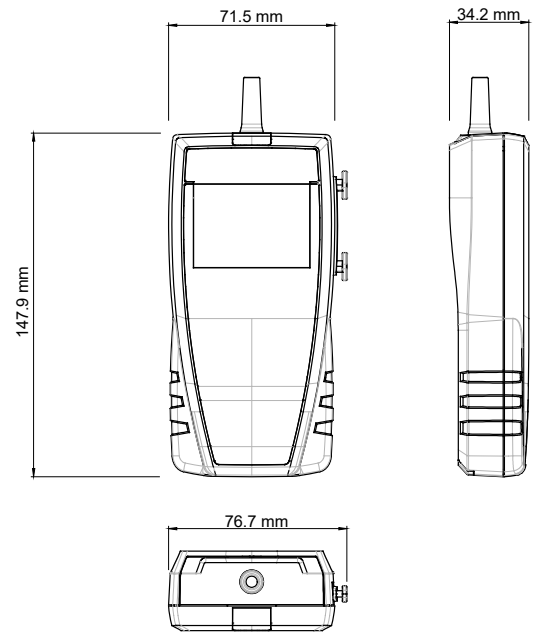
α and T_0 sensor specific constants

Maintenance

We carry out calibration, adjustment and maintenance of your instruments to guarantee a constant level of quality of your measurements.

As part of Quality Assurance Standards, we recommend you to carry out a yearly checking.

Dimensions (in mm)



Kit content

| Designation | Sales reference | Description |
|-------------|-----------------|---|
| AQ 110 | 24628 | Air quality instrument with calibration certificate and soft transport case |
| AQ 110 S | 24727 | Air quality instrument with adjustment certificate and soft transport case |

Certificates

Calibration certificate: A calibration is a comparison of the values of the instrument with those of a standard to determine a measurement error with an associated calibration uncertainty. A calibration certificate guarantees the traceability of measurements to national standards.

Adjustment certificate: An adjustment certificate is a document that ensures the conformity of the device with the tolerances of the data sheet. It ensures that the device has followed the manufacturing process.

Accessories

| Designation | Sales reference | Description |
|-------------|-----------------|--|
| CQ 15 | 24633 | Magnetic protective housing |
| RTE | 24632 | Telescopic extension, 1 m length, with index at ±90° |
| MT 51 | 24636 | ABS transport case |
| ST 110 | 24635 | Soft transport case |