sauermann®

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

*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.

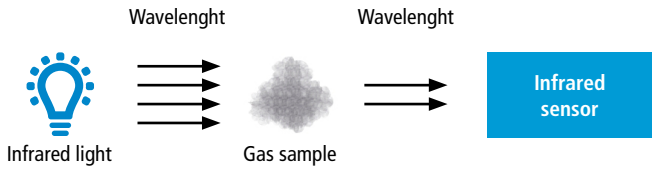
General features

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 CO_2 concentration.



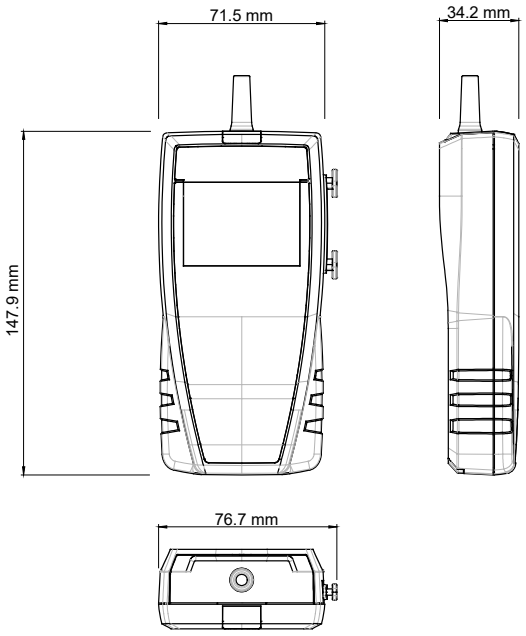
Thermometer: NTC probe

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

$$R_{(T)}=R_{(T0)}e^{\left(\frac{\alpha}{100} \times (T_0 + 273.15)^2 \times \left(\frac{1}{T + 273.5} - \frac{1}{T_0 + 273.5}\right)\right)}$$

RT = 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

Dimensions (in mm)



Kit content

- Calibration certificate
- Transport case (ref.: ST 110)

Accessories

Name	Reference
Magnetic protective housing	CQ 15
Telescopic extension, 1 m length, with index at ±90°	RTE
ABS transport case	MT 51

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.

Warranty

Instruments have 1-year guarantee for any manufacturing defect (return to our After-Sales Service required for appraisal).