

Air quality  
**AQ 110**



KEY POINTS

- Easy to use
- Hold-min-max functions
- Selection of units
- Adjustable backlight

TECHNICAL FEATURES

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

SPECIFICATIONS

Measuring units	Measuring range	Accuracy**	Resolution
<b>CO<sub>2</sub></b>			
ppm	From 0 to 5000 ppm	±3% of reading ±50 ppm	1 ppm
<b>Temperature</b>			
°C, °F	From -20 to +80°C	±0.4% of reading ±0.3°C	0.1°C

\* Except class 110 S

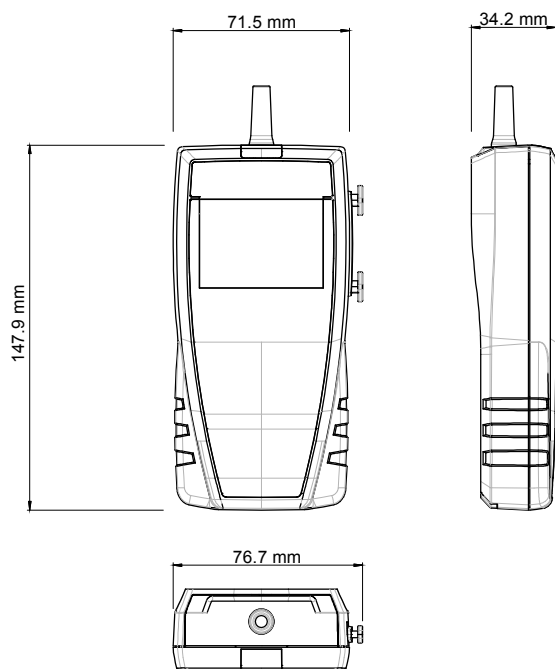
\*\* All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation



FUNCTIONS

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

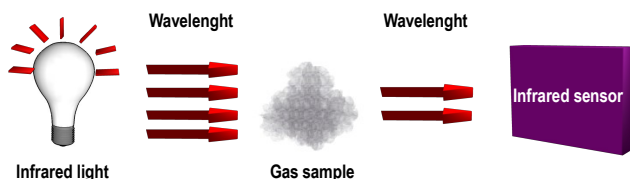
## DIMENSIONS



## OPERATING PRINCIPLES

### 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<sub>2</sub> 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

$\alpha$  and  $T_0$  sensor specific constants

## SUPPLIED WITH

Instruments are supplied with:

- Calibration certificate\*
- Transport case



\*Except class 110 S

## ACCESSORIES

**CQ 15:** Magnetic protective housing



**RTE:** Telescopic extension, length 1m, with index at ±90°

**MT 51:** ABS Transport case



## 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 a yearly checking.

## WARRANTY

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

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**EXPORT DEPARTMENT**

Tel : + 33. 1. 60. 06. 69. 25 - Fax : + 33. 1. 60. 06. 69. 29

e-mail : [export@kimo.fr](mailto:export@kimo.fr)

**techniCAL**  
Expanding possibilities  
866-327-8731  
[www.techniCAL-sys.com](http://www.techniCAL-sys.com)

