

Supplied with  
CALIBRATION  
certificate\*



DATA SHEET

# CO 110

## CO meter



Easy to use



Adjustable backlight



CO max display



2 configurable alarm thresholds

### Features

- CO maximum
- 2 configurable alarms
- 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	ppm	±3 ppm ±3% of reading	From 0 to 100 ppm From 100 to 500 ppm	0.1 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.

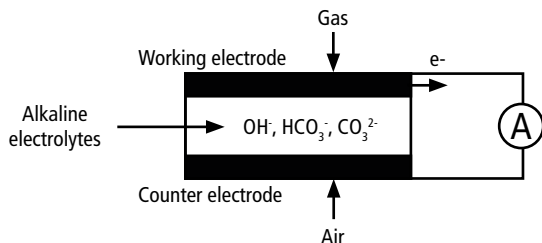
## General features

Measuring element	CO: electrochemical sensor Temperature: NTC
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)
Connector	Retractable, 0.45 m length, extension: 2.4 m
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	200 hours
Ambience	Neutral Gas
Conditions of use (°C, %HR, 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 min
Weight	310 g

## Operating principle

### Electrochemical sensor

When CO goes through an electrolyte solution, it intercedes in the reactions of electrolyse and produces an increase of the quantity of produced electrons. The source electrons of a current which is around microampere are directly proportional to CO 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  $T_0$

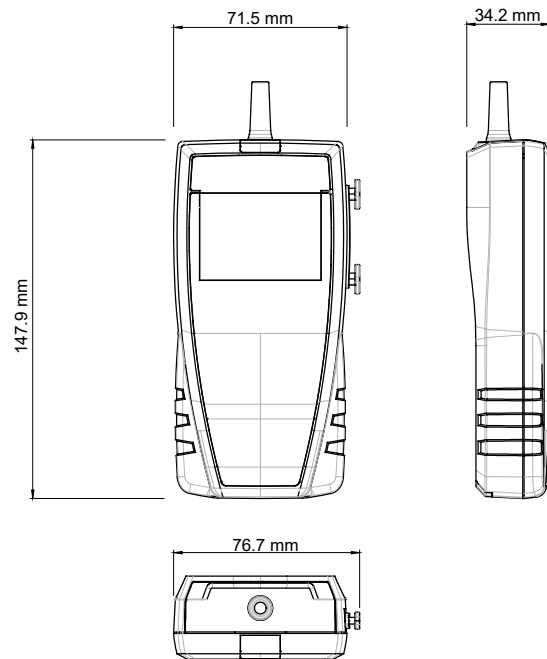
T and  $T_0$  in °C

$\alpha$  and  $T_0$  sensor specific constants

## 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
CO 110	24627	CO meter with calibration certificate and soft transport case
CO 110 S	24719	CO meter 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 $\pm 90^\circ$
MT 51	24636	ABS transport case
ST 110	24635	Soft transport case