

APMA-360CE

Ambient **CO** Monitor



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Features

- The cross flow modulation type, infrared-absorption technology eliminates the need for troublesome optical adjustments. For the user, this means very stable and sensitive (5 ppm F.S.) measurements.

- The APMA-360CE uses an AS-type interference-compensating detector, and a flowing reference gas. The reference gas is generated by purging sample through an oxidation process, where an oxidizing catalyst burns the CO to CO₂. These features eliminate the interference effect of other elements, resulting in extremely high accurate measurements.

- The APMA-360CE does not use components, such as reflecting mirrors, that attract foreign matter. This means the optical bench stays clean assuring you of stable results over long periods of time.

Principle

Cross flow modulation, infrared-absorption technology (NDIR)

Conventional technology uses an optical chopper to obtain modulation signals. Instead of this, the APMA-360CE uses a solenoid valve modulation. Fixed amounts of the sample gas and the reference gas are injected alternately into the measurement cell. With the cross flow-modulation method, if the same gas is used for both the sample gas and the reference gas (e. g., zero gas could be used for both), no modulation signal will be generated. This has the great advantage that, in principle, when analyzing minute amounts of gas there is no generation of zero-drift. An additional advantage is that the elimination of rotary sectors precludes the need for optical adjustment. These features assure greatly improved stability over long periods of measurement. A further improvement is that in the front chamber of the detector, the measurable components, including interference components, are detected; in the rear chamber, interference components only are detected. By means of subtraction processing, the actual signal obtained is one that has only very little interference influence.

Specifications

Principle: Cross flow modulation, non-dispersive infrared absorption technology (NDIR)

Application: CO in ambient air

Range:

Standard ranges: 0-10/20/50/100 ppm; 0-5/10/20/50 ppm; auto range • manual range selectable; can be operated by remote switching.

Optional (measurable) ranges: 4 ranges selectable from 0-100 ppm, within 10 times range ratio; auto range • manual range selectable; can be operated by remote switching.

Lower detectable limit: 0.02 ppm (3 sigma)

Repeatability: • ±1.0 • % of F.S.

Linearity: • ±1.0 • % of F.S.

Zero drift:

<LDL/day at lowest range

<0.2ppm/week at lowest range

Span drift:

<LDL/day at lowest range

• ±1.0% F.S./week

Response time (T₉₀):

Within 50 sec at lowest range

Sample gas flow rate: Approx. 1.5L/min

Indication: Measured value, range, alarm, maintenance screen

Alarms: During AIC, zero calibration error, span calibration error, temperature error in catalyzer, etc.

On-screen messages are available in four languages: English, German, French, and Japanese.

Input/output:

- 0-1V/0-10V/4-20 mA, to be specified (2 systems: either (1) momentary value and integrated or (2) moving average value)

- Contact input/output

- RS-232C

Ambient temperature: 5-40 • •

Power: 100/110/115/120/220/230/240

VAC, 50/60 Hz (to be specified)

Dimensions: 430(W) • 550(D) • 221(H)mm

Mass: Approx. 20 kg,

