



CO2 Room Sensor

CO2 Duct

# CO2

## Carbon Dioxide Sensor

The CO2 Series monitors carbon dioxide from 0 to 2000 ppm for wall and duct mount applications. They feature analog outputs (see order grid for output options) with a patented ABC Logic™ self-calibration system. The concentration of carbon dioxide is measured using a Single Beam, Non-Dispersive Infrared (NDIR) Absorption sensing method. Room units feature the option of multi-colored LEDs. They will indicate one of five approximate ppm levels. These units should not be used in environments such as greenhouses, wineries, breweries. They should also be avoided in areas where industrial sources of carbon dioxide are present or in applications where the space is left unoccupied for less than 4 hours a day.

The CO2 Series is covered by ACI's Two (2) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, [www.workaci.com](http://www.workaci.com).



## Specifications

Supply Voltage	18 to 30 VAC RMS, 50/60 Hz or 18 to 42 VDC
Power Consumption (Duct)	Typical, 1.65Ω Peak, 0.65Ω Average @ 42 VDC
Power Consumption (Room)	Typical 0.7Ω at nominal voltage of 24V AC RMS
Measurement Range	0 to 2000 ppm
CO <sub>2</sub> Output Signal (Duct)	0 to 10 VDC (100Ω output impedance)
CO <sub>2</sub> Output Signal (Room)	0 to 5 VDC    0 to 10 VDC    4 to 20 mA
Accuracy (Duct)	+/- 40 ppm +3% of Reading @ 72°F (22°C)
Accuracy (Room)	+/- 30 ppm or 3% of the reading shown, whichever is higher
Non-Linearity	< 1% of FS @ 72°F (22°C)
Stability	< 2% FS over life of sensor (15 Years Typical)
Temperature Dependence	0.2% of Full Scale per °C
Pressure Dependence	0.135% of reading per mm Hg
Response Time (Duct)	3 minutes typical for 90% Step change
Response Time (Room)	3 minutes typical for 90% Step change
Operating Temp/ RH Range	32 to 122°F (0 to 50°C)/0 to 95%, non-condensing
Sensor Coverage Area	7,500 sq. ft. maximum
Sensing Technology	Single beam infrared sensing technology (NDIR)
Product Dimensions (Room)	(L) 3.20" (W) 1.01" (H) 4.58"
Product Dimensions (Duct)	(L) 3.05" (W) 3.05" (H) 5.70"

## Ordering

Select one Gas Type (A).

### A Gas Type

- CO<sub>2</sub>-VDC-R (Room) (Default: 0 to 10 VDC) (Jumper Selectable: 0 to 5 VDC)
- CO<sub>2</sub>-20MA-R (Room) (4 to 20 mA)
- CO<sub>2</sub>-R-LED (Room) (0 to 10 VDC, 0 to 5 VDC, and 4 to 20 mA) (with LED Option)
- CO<sub>2</sub>-010-D (Duct) (0 to 10 VDC)

## Build your part number

After completing (A) from the above table, fill in the Part Number Table below. An example part number is offered.

A

EXAMPLE: CO<sub>2</sub>-VDC-R