



CO₂-DC

CO₂ Dual Channel

The CO₂-DC series monitors carbon dioxide (CO₂) levels in industrial and living environments from 0 to 2,000 ppm. It has a dual-channel optical system which allows it to be used in applications where there is full-time occupation 24 hours a day. The dual channel sensor performs periodic self-calibrations using the reference channel. The self-calibrations occur approximately once every 24 hours and will take approximately two minutes. To maintain the highest application accuracy, it is recommended to periodically field calibrate using nitrogen gas, or an alternatively ambient calibration. This series offers the flexibility of adding analog relative humidity and temperature sensor outputs in a single wall-mounted enclosure. It also offers multiple analog outputs of 4 to 20 mA, 0 to 5 VDC, and 0 to 10 VDC. The LCD is available for certain models. (See ordering information)

The CO₂-DC Series is covered by ACI's Two (2) Year Limited Warranty, which is located in the front of ACI's Sensors & Transmitters catalog or can be found on ACI's web site, which is: www.workaci.com.



SPECIFICATIONS

Supply Voltage	18 to 30 VAC, 50/60 Hz Half-Wave Rectified, +18 to 42 VDC, Polarity Protected
Power Consumption	0.7 W at nominal voltage of 24V AC RMS typical
CO₂ Analog Output Signals	4 to 20 mA (RL max = 500 Ohms) 0 to 5 or 0 to 10 VDC (100 Ohms output impedance)
CO₂ Measurement Range	0 to 2000 ppm
CO₂ Accuracy	75 ppm or 10% of reading (whichever is greater)
CO₂ Stability	<5% of FS or <10% reading annually over life of sensor
CO₂ Warm-up Time	< 2 minutes (operational), 10 minutes (max. accuracy)
RH Measurement Range	0 to 99% RH (non-condensing)
RH Accuracy @ 77°F (25°C)	+/- 2.5% RH (20 to 80%) ; +/- 3.5% RH <20 & >80%
Temperature Outputs	10K type II therm., 4 to 20 mA, 0 to 5 or 0 to 10 VDC
Analog Temperature Range	32 to 122°F (0 to 50°C)
Analog Temperature Accuracy	+/- 1.44°F @ 71.6°F (+/- 0.8°C @ 22°C)
Thermistor Accuracy	+/- 1.8°F over 59 to 95°F (+/- 1°C over 15 to 35°C)
Operating Temperature Range	32 to 122°F (0 to 50°C)
Operating RH Range	0 to 95% RH, non-condensing
Sampling Method/Sample Rate	Dual Channel Infrared Diffusion/Every 5 seconds

ORDERING

Select one Sensor Series (A).

A Sensor Series

- CO₂-DC-R-W (Room Mount-White)
- CO₂-DC-R-LCD-W (Room Mount, Display-White)
- CO₂-DC-R-RHT-LCD-W (Room Mount, RH, Analog Temp. & Display-White)

BUILD PART NUMBER

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

A

EXAMPLE: CO₂-DC-R-W