A/CO2-R2

A/CO2-DUCT

A/CO2 SERIES

ACI Carbon Dioxide Sensor

The A/CO2 room and duct transmitters monitor the carbon dioxide (CO2) levels in industrial, school, and office-type environments. The concentration of CO2 is a strong indication of the overall indoor air quality. The A/CO2 Series is based on a single beam, non-dispersive infrared technology and is a cost-efficient solution for measuring CO2 levels for building climate control. In addition, ABC software eliminates the need for manual calibration. Carbon Dioxide concentration is measured up to 2,000 ppm and is converted into proportional analog outputs. The factory default output is 4-20 mA, whereas 0-5 VDC and 0-10 VDC outputs are able to be field selected via integral dip switches. Thermistor temperature outputs, along with setpoint and override, are available as options for room configurations. The A/CO2 Series provides data which can be used in conjunction with a Building Automation System or Demand Control Ventilation to decrease energy consumption while creating a healthier indoor climate.

GAS

SPECIFICATIONS

Supply Voltage	24 VAC +/-20%, 50/60 Hz (half-wave rectifier); 16.5-40 VDC Max.
Power Consumption	3VA for 24VAC, 3W for 24VDC (peak); <0.9W (average)
Sensing Technology/Sensing Method	Single beam infrared sensing technology (NDIR); Diffusion
Measurement Range Default	0 to 2,000 ppm
CO2 Output Signal	Out 1: 0-5 VDC or 0-10 VDC (Default) | Out 2: 4-20 mA (500 Ohm Load Max.)
Fail Safe	Polarity protected
CO2 Accuracy	+/- 40 ppm +/- 3% of reading (@ 15-35°C; 20-70% RH and 101.3 kPa)
Pressure Dependence	+ 1.6% reading per kPa (deviation from standard pressure 101.3 kPa)
Response Time	≤ 2 minutes, diffusion
Warm Up Time	< 1 minute (@ full specs < 15 minutes)
Temperature Output	Various (see order grid)
Temperature Accuracy	+/- 1°F (+/- 0.6°C)
Operating Temperature/Relative Humidity Range	32 to 122ºF (0 to 50ºC)/0 to 95%, non-condensing
Sensor Coverage Area	7,500 sq. ft. maximum
Life Expectancy	> 15 years (typical)
Product Dimesions (Room Mount)	(H) 4.5" (W) 2.75" (D) 1.12"
Product Dimesions (Duct Mount)	(H) 5.98" (W) 3.33" (D) 1.85"

ORDERING

Select one Configuration (A). If a Room Configuration is selected, please follow direction to choose either (B), (C), (D) or (E). Pot Value & Setpoint Offset are only applicable when a setpoint is specified and the values listed represent ohms. If a Duct configuration is selected, your part number is complete. Duct models are not available in conjunction with Thermistors. **NOTE:** Selections (C) through (E) are for internal references and will not be displayed in your final part number.

A Configuration	**B** Thermistor	**C** Pot Value	**D** Setpoint Offset	**E** Pot Action
○ **R2** (Room) (Only Complete B)	○ **----** (None)	○ **None** ○ **8.5K**	○ **None** ○ **2K**	○ **None**
○ **R2S** (Room, Setpoint) (Complete B, C, D & E)	○ **CP** (Type II)	○ **400** ○ **10K**	○ **0** (Default) ○ **4.99K**	○ **DA** (Direct)
○ **R2O** (Room, Override) (Only Complete B)	○ **AN** (Type III)	○ **1K** ○ **20K**	○ **51.1** ○ **6.19K**	○ **RA** (Reverse)
○ **R2SO** (Room, Setpt & Override) (Complete B, C, D & E)	○ **20K**	○ **2K** ○ **100K**	○ **499** ○ **7.32K**	
○ **DUCT** (Duct) (Part Number is finished)	○ **3K**	○ **5K**	○ **806** ○ **8.25K**	
○ **DUCT-C** (Duct with Conduit) (Part Number is finished)	○ **1.8K**		○ **910** ○ **10K**	
	○ **10K-E**		○ **1K** ○ **20K**	
	○ **100KS**			
	○ **CSI** (Dale)			

BUILD PART NUMBER

After completing (A), (B), (C), (D) & (E) from the above table, fill in the Part Number Table below. The "Sensor Series" is a factory default.

A/CO2 — ___ — ___ — ___ — ___ — ___

SENSOR SERIES	(A)	(B)	(C)	(D)	(E)

EXAMPLE: A/CO2-R2SO-CP-100K-0-DA