

CO2 DUCT

Sensor with Conduit Option

The ACI Carbon Dioxide Duct Series (A/CO2-D) monitors the carbon dioxide (CO2) levels in industrial, commercial, 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 carbon dioxide 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 outputs are 0-10 VDC (Output 1) and 4-20 mA (Output 2), whereas 0-5 VDC is field selectable via integral dip switches. The A/CO2-D 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.

Applications: Schools, Office Buildings, Auditoriums, Gymnasiums, Shopping Malls, Theatres, Demand Control Ventilation & Economizers

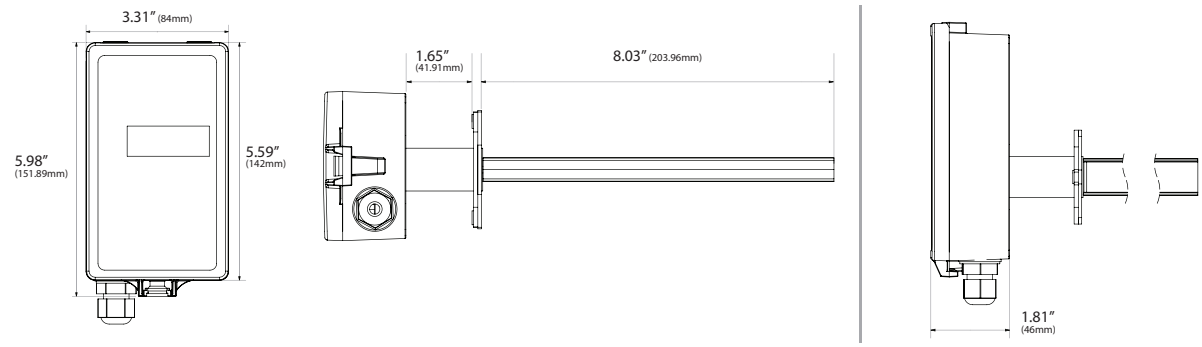
The CO2 Duct Series are covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site.

PRODUCT SPECIFICATIONS

Supply Voltage:	24 VAC +/-20%, 50/60 Hz (half-wave rectifier) | 16.5-40 VDC maximum
Power Consumption:	3 VA for 24 VAC, 3W for 24 VDC (peak); <0.9W (average)
Sensing Technology:	Single beam infrared sensing technology (NDIR)
Sensing Method:	Diffusion
Measurement Range Default:	0 to 2,000 ppm
Extended CO2 Ranges:	Up to 10,000 ppm (factory set)
CO2 Accuracy[1]:	+/- 40 ppm and +/- 3% of reading (@ 15-35°C; 20-70% RH and 101.3 kPa)
Extended Range Accuracy>2000 ppm:	+/- 30 ppm and +/- 5% of reading
CO2 Output Signal:	**Output 1:** 0-5 VDC or 0-10 VDC (Default) **Output 2:** 4-20 mA (500Ohm load maximum)
Fail Safe:	Polarity protected
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)
Operating Temperature Range:	32 to 122°F (0 to 50°C)
Operating Humidity Range:	0 to 95%, non-condensing
Connections | Wire Size:	Screw Terminal Blocks | 16 (1.31 mm^2) to 26 (0.129 mm^2) AWG
Terminal Block Torque Rating:	0.5 Nm (minimum); 0.6 Nm (maximum)
Enclosure:	**Duct Box:** IP65 rated, PC & ABS blend, Flammability Rating UL94V-0 **Cover:** Makrolon® 6555 plastic, Flammability Rating UL94V-0 **Pipe:** PC & ABS blend, Flammability Rating UL94V-0
Sensor Life[2]:	**>** 15 years (typical)
Calibration[3]:	ABC algorithm (Automatic Baseline Correction)
Product Dimensions:	(H) 5.59" (142 mm) x (W) 3.31" (84 mm) x (D) 1.81" (46 mm)
Product Weight:	0.79 lbs (0.36 kg)
Agency Approvals:	EMC Directive 2014/30/EC | RoHS Directive 2011/65/EU

Note 1: Accuracy is defined after minimum three (3) ABC periods (1 period = 8 days) of continous operations | Note 2: In normal indoor air quality (IAQ) applications | Corrosive environments are excluded | Note 3: Building CO2 levels must drop to 400 ppm same time during the week for ABC to work properly | If the building is occupied 24 hours / day, ABC must be turned off

DIMENSIONAL DRAWING



Front & Top ViewsR **ight View**

STANDARD ORDERING

Model #	Item #	Description
A/CO2-DUCT	150117	CO2 Duct (0-5 VDC, 0-10 VDC, 4-20 mA)
A/CO2-DUCT-C	137562	CO2 Duct with 1/2" Conduit Adapter (0-5 VDC, 0-10 VDC, 4-20 mA)

ACCESSORIES ORDERING

Model #	Item #	Description
A/CUSTOM CAL GAS*	140970	Custom Calibration

Note: Contact ACI's Technical Support for custom calibration ranges