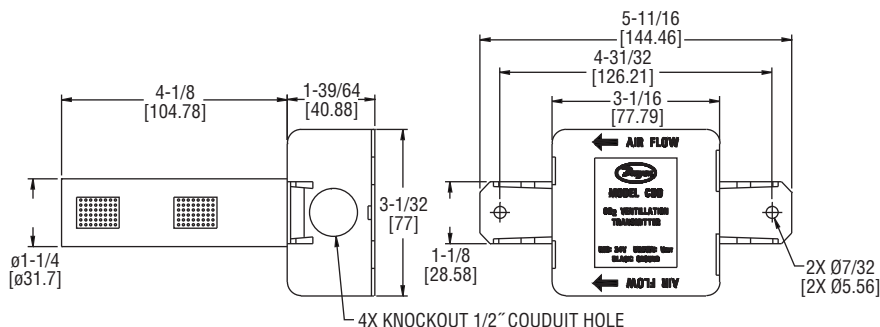




## Model CDD Duct Mount Carbon Dioxide Transmitter

### Specifications - Installation and Operating Instructions



The **Model CDD Duct Mount Carbon Dioxide Transmitter** monitors the occupancy in a room by detecting the concentration of carbon dioxide in the return air duct. The non-dispersive infrared sensing technology automatically updates the calibration of the transmitter using a proprietary logic feature which limits the amount of error due to drift. The Model CDD can measure up to 2000 PPM in duct air flows less than 1500 FPM.

#### INSTALLATION

**Warning:** Disconnect power supply before installation to prevent electrical shock and equipment damage.

Make sure all connections are in accordance with the job wiring diagram and in accordance with national and local electrical codes. Use copper conductors only.

**Caution:** Use electrostatic discharge precautions (e.g. use of wrist straps) during installation and wiring to prevent equipment damage.

Do not exceed the ratings of this device, permanent damage not covered by warranty may result.

#### SPECIFICATIONS

**Range:** 0 to 2000 PPM.

**Accuracy:**  $\pm 40$  PPM + 3% of reading @ 22°C.

**Temperature Dependence:** 0.2% FS per °C.

**Stability:** < 2% of FS over life of sensor.

**Non-Linearity:** < 1% of FS.

**Pressure Dependence:** 0.13% of reading per mm of Hg.

**Response Time:** 3 minutes typical for 90% step change.

**Duct Air Velocity Range:** 0 to 1500 FPM (7.63 m/s).

**Ambient Operating Temperature:** 32 to 122°F (0 to 50°C).

**Storage Temperature:** -4 to 158°F (-20 to 70°C).

**Power Requirements:** 18 to 30 VAC RMS 50/60 Hz or 18 to 42 VDC.

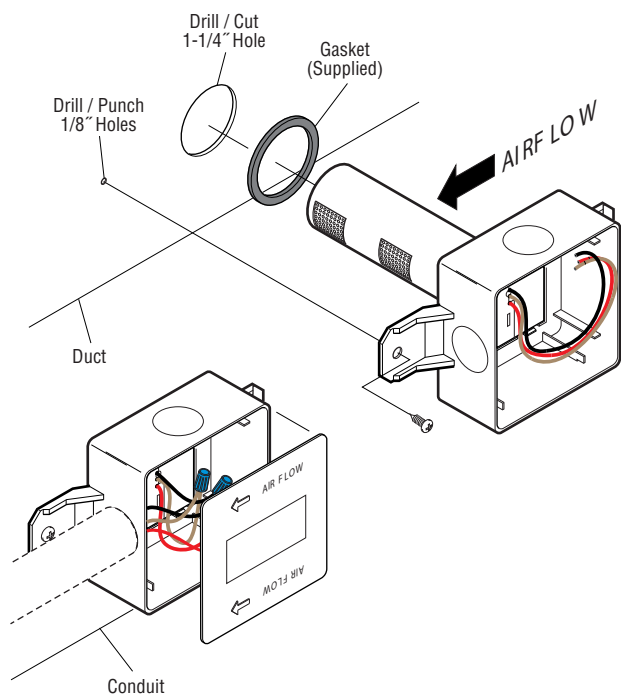
**Power Consumption:** 1.65 watts peak (0.65 watts average at 42 VDC).

**Outputs:** 0 to 10 VDC.

**Housing:** Flammability Classification UL rated 94V-5.

**Weight:** 8 oz (230 g).

### Mounting



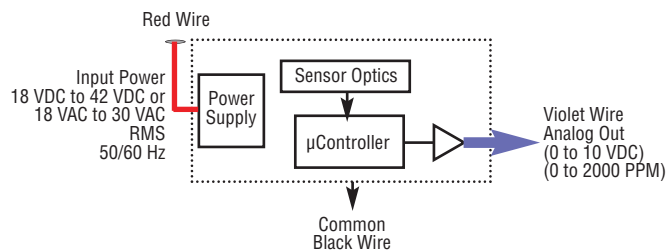
**Figure A**

1. Before installing sensor, note the direction of the airflow. Ensure all mounting holes are sealed tightly.
2. Drill/Cut one 1-1/2" hole / Punch/Drill one 1/8" hole.
3. Slide sensor into 1-1/2" hole and secure with screws.

### Wiring Information

Refer to Figure B for wiring information.

Red - Input Power  
 Brown - Vout  
 Black - Ground



**Figure B**

### CALIBRATION

The Series CDD is factory set with the proprietary logic function activated. The logic function allows the sensor to continuously re-calibrate itself when the indoor concentrations drop to levels similar to outside air conditions when the building is unoccupied. The building must be unoccupied for a minimum of 4 hours or more for this self-calibration to be effective. The logic allows the sensor to maintain its calibration over the life of the sensor. If a building is occupied 24 hours a day or there is significant sources of CO<sub>2</sub> while the building is unoccupied, the transmitter should be ordered with the logic function deactivated.

### MAINTENANCE

Upon final installation of the Series CDD Duct Mount Carbon Dioxide Transmitter, no routine maintenance is required. A periodic check of system calibration is recommended. The Series CDD is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return goods authorization number before shipping.