

## **TR9290 “No-Frills” - Self Calibrating - CO<sub>2</sub> Transmitter**



*Wall Mount  
TR9290-L*



*Wall Mount  
TR9290*



*In-Duct Mount  
TR9291*



*Aspiration Duct Probe  
TR9292-L*

### **The “No-Frills” CO<sub>2</sub> Transmitter Now With Temperature Option!**

The TR9290 is a valued engineered CO<sub>2</sub> transmitter targeted at applications where all that is needed is a dependable CO<sub>2</sub> sensor with a 0-10 volt output. A temperature thermistor options is also available. This sensor utilizes the identical and proven infrared CO<sub>2</sub> sensor technology used in AirTest’s popular TR-9220 CO<sub>2</sub> transmitter.

- ✓ Self-calibrating sensor eliminates calibration & maintenance requirements. No calibration required for life of the sensor (rated at 15 years).
- ✓ Attractive wall mount display with locking, snap-on cover.
- ✓ Inexpensive duct mount enclosure designed to mount directly in the duct. No tubes to clog, no filters to clean. In-duct mounting also means fast response. Aspiration probe also available.
- ✓ Gold plated optical sensor ensures long-term durability and stability.
- ✓ Purposefully built for quality – one of the few CO<sub>2</sub> sensors designed and built using Internationally Certified ISO 9001 processes to ensure consistent quality.

### **Why Active Ventilation Control With CO<sub>2</sub>?**

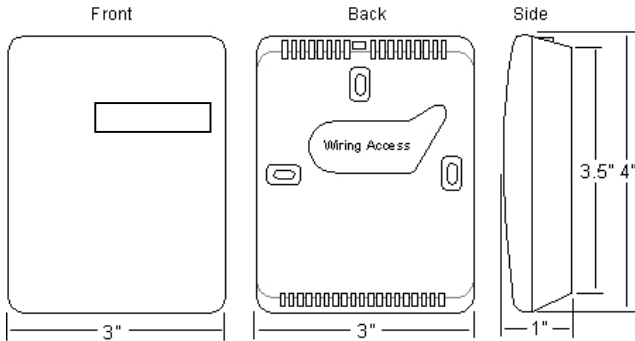
Ventilation control with CO<sub>2</sub> is a viable and energy efficient way of controlling ventilation to target cfm/person levels based on actual occupancy. This approach offers many advantages over the traditional approach of providing fixed ventilation based on maximum occupancy.

- ⇒ Reduce ventilation and energy costs in applications with variable occupancy.
- ⇒ In static occupancy applications, owner can continuously control ventilation rates to reflect current occupancy conditions.
- ⇒ Actively control ventilation to eliminate unintended over and under ventilation conditions resulting from post commissioning adjustment of outside air quantities.
- ⇒ Monitor and control zone ventilation efficiency and take advantage of using preconditioned transfer air from under occupied spaces for ventilation.
- ⇒ Documented CO<sub>2</sub> levels can provide ongoing verification that code-required ventilation rates are being maintained.

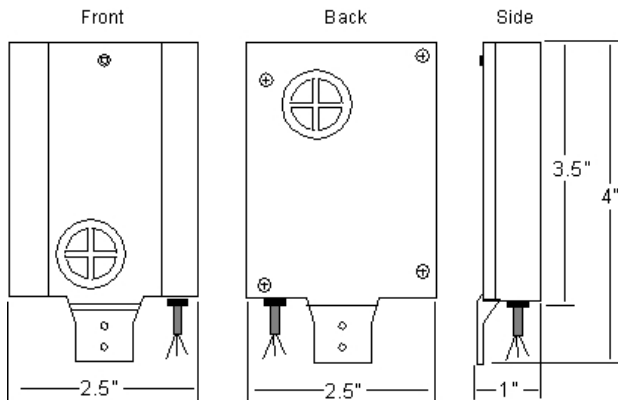
## Now With Thermistor/RTD Option

If you need to measure temperature and CO<sub>2</sub>, you can now get the TR9290 with a wide variety of temperature sensors (wall mount only). Just add the desired temperature sensor to the end of the product number when you order. Thermistor options include: 1.8K, 2.2K, 3K, 3.3K, 10K-2, 10K-3, 10K-3(11K), 20K, 47K, 50K, 100K. Other options possible.

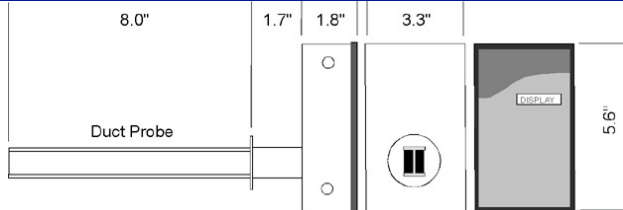
### Dimensions: TR-9290 (Wall)



### Dimensions: TR-9291 (In-Duct)



### Dimensions: TR9292 (Aspiration Duct Probe)



### Order Options

Type	Model No	With Temp
<b>Wall Mount</b>		
Without Display	TR9290	+ Add thermistor value to Model No
With CO <sub>2</sub> Display	TR9290-L	+ Add thermistor value to Model No
<b>In Duct</b>		
Without Display	TR9291	Not Available
<b>Aspiration Duct Probe</b>		
Without Display	TR9292	+ Add thermistor value to Model No
With CO <sub>2</sub> Display	TR9292-L	+ Add thermistor value to Model No

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## Specifications

### General

**CO<sub>2</sub> Detection Method:** Gold Plated Non-Dispersive Infrared Optical Sensor with Automatic Baseline Correction for Self-Calibration. Diffusion Sampling.

**Certification:** CE, EMC89/336/EEC, CA Energy Commission, ISO 9001 Manufactured for Quality & Consistency.

**Transmitter Rated Life:** 15 years

**Operating Conditions:** 32 to 122° F (0 to 50°C), 0 to 95% RH

**Storage Conditions:** -40 to 158° F (-40 to 70° C)

### Performance

**CO<sub>2</sub> Measurement Range:** 0-2000 ppm (factory set),

**CO<sub>2</sub> Accuracy:** +/- 1% of measurement range + 5% of measured value.

**Calibration:** Self Calibrating, Calibration Not Required

**Response Time:** T<sub>90</sub> = <2 minutes (diffusion)

### Power

**Input:** 18-30 VAC, 50-60 hz (half-wave rectified)

**Average Power Consumption:** ≤ 3 Watts average

**Ground:** Must share common ground with control system

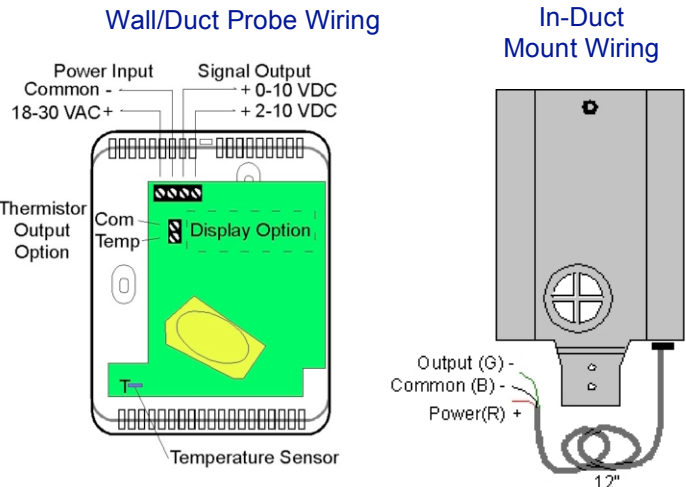
### Outputs

**Linear Analog Output:** 0 to 10, 2-10 VDC R<sub>OUT</sub> < 100 ohm  
 Note: 0-5V option available – contact factory.

**Thermistor Options:** 1.8K, 2.2K, 3K, 3.3K, 10K-2, 10K-3, 10K-3(11K), 20K, 47K, 50K, 100K

**Wiring Access:** Wall: remove front panel of transmitter to access wiring terminals and mounting plate.

Duct: 12" cable with 3-wire connection.



Note: Common ground allows for 3 or 4 wire connection (wall mount)

Covered By US Patents: 6194735, 6016203, other patents pending



**AirTest™ Technologies Inc.** specializes in the application of cost effective, state-of-the-art air monitoring technology to ensure the comfort, security, health and energy efficiency of buildings.

