AirTest™
Sensors That Make Buildings Smart!

LonMark® Partner

Self Calibrating - CO_2 Transmitters

With LonMark® Certified Communicating Option

Wall Mount TR9290

Wall Mount TR9294

In-Duct Mount TR9291

Splash Resistant Wall Mount TR9293

Aspiration Duct Probe TR9292

A No Calibration CO_2 Transmitter

The TR9290 family of sensors are quality-engineered CO_2 transmitter targeted at applications where a dependable CO_2 sensor is required that never needs calibration.

Key features of these CO_2 transmitters include:

- ❑ Internal self-calibration method based on background measurement that also eliminates need for outdoor CO_2 sensor.
- ❑ Choice of outputs: 0-10V, 0-5V or 4-20mA and LonWorks®.
- ❑ Built to ISO 9001 standards
- ❑ Mounting options include wall, duct and in-duct.
- ❑ Utilizes a proven infrared measurement technology with over 18 years of flawless operating history.
- ❑ Supported by a team of knowledgeable application specialists. We are just a phone call away if you have questions.
- ❑ LonMark® Certified output option.

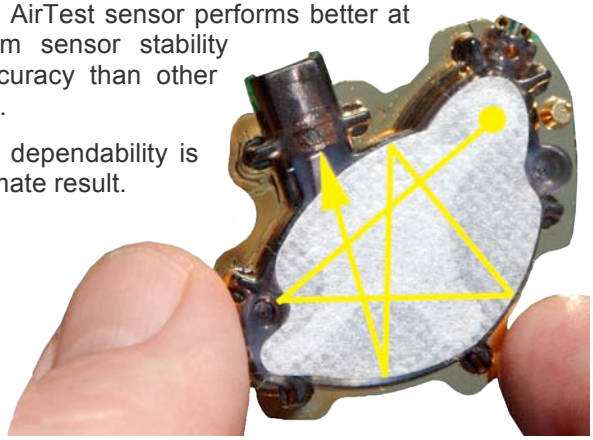
AirTest also offers CO_2 sensors that feature self-calibrating dual beam technology, and that integrate CO_2 temperature and humidity in one device. We also have a wide variety of other sensors to measure combustible and toxic gases, humidity, dew point and air velocity. Contact us for more information.

Length Does Matter…

The AirTest CO_2 transmitter has proven itself to be the most trouble free CO_2 product available today. A important reason for this is the unique, patented, oval design of the sensor. All competitive sensors use a straight path of infrared energy shining through an air sample to measure CO_2. The amount of gas that can be sampled, called the "path length" is limited by the size constraints of their wall-mounted and duct-mounted cases.

The AirTest design, using a similar sized case, provides over double the path length of any other CO_2 sensor (4.8") by bouncing the light around the small oval sensor element. Longer path length means that a larger sample of air is measured. In technical terms this results in an increased signal-to-noise ratio. This means that the AirTest sensor performs better at long-term sensor stability and accuracy than other devices.

Greater dependability is the ultimate result.



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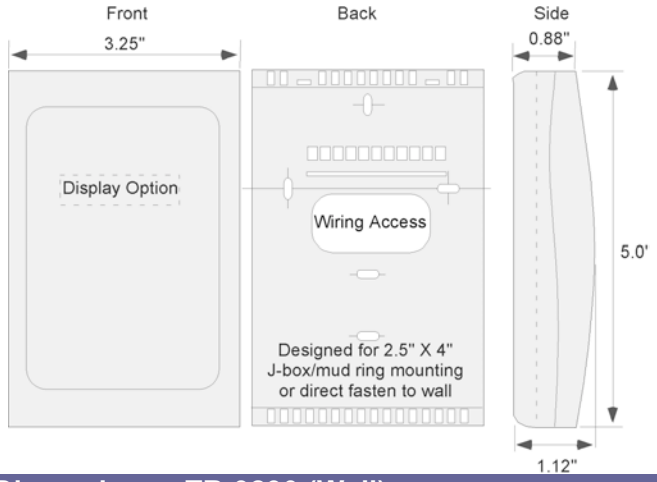
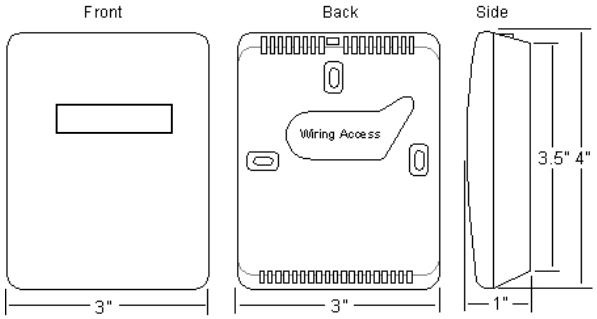
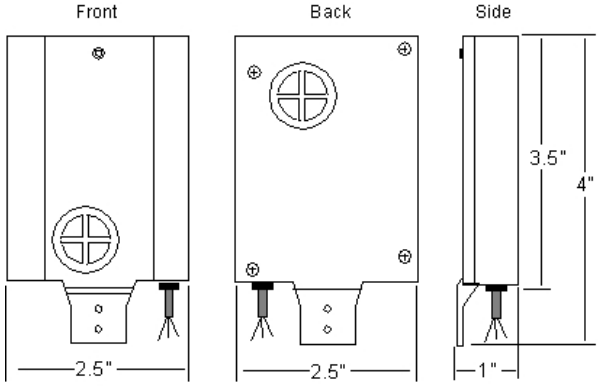
Dimensions TR9294 (New Wall Mount)



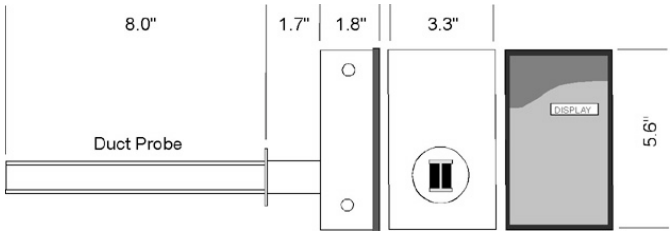
Dimensions: TR-9290 (Wall)



Dimensions: TR-9291 (In-Duct)



Dimesions: TR9292 (Aspiration Duct Probe)



Distributed By:

Specifications

General

CO_2 Detection Method: Gold Plated Non-Dispersive Infrared Optical Sensor with Automatic Baseline Correction for Self-Calibration, 4.8" optical path length, diffusion sampling.

Certification: CE, EMC89/336/EEC, CA Energy Commission, NYSERDA, LonMark® Certifed (V3.4).

Transmitter Rated Life: minimum 15 years

Operating Conditions: 32 to 122º F (0 to 50ºC), 0 to 95% RH

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

Performance

CO_2 Measurement Range: 0-2000 ppm (factory adjustable to 10,000 ppm upon request),

CO_2 Accuracy: +/- 1% of measurement range +/- 3% of measured value.

Calibration: Self Calibrating, Calibration Not Required

Response Time: T90 = <2 minutes (diffusion), < 15 seconds for flow through.

Power

Input: 24 VAC/VDC ±20%, 50-60 hz (half-wave rectified)

Average Power Consumption: ≤< 1 Watt average

Ground: Analog output transmitters must share common ground with control system.

Outputs

Linear Analog Output: Two simultaneous dual output options available: A) 0-5V & 4-20mA, B) 0-10V & 4-20mA.

LonWorks®: CO_2 ppm & % SNVT (See LonWorks® Specification on next page). LonMark® Certified.

Order Options

Model Number	Output	Display
TR9290[1] - Wall (3" x 5") **TR9291**[1] - In-duct **TR9292** - Duct Probe **TR9293** - Splash Resistant **TR9294** - Wall (3.25" x 5")	**A** - 0-5V, 4-20mA **B** - 0-10V, 4-20mA **Lon** - LonWorks®[2]	**_** - no display **L** - display

Notes:
[1] - LonWorks® version not available.
[2] - LonWorks® communicating and LonMark® Certified.

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.

AirTest™ Sensors That Make Buildings Smart!

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AirTest LonWorks® Specifications

Description:

Three versions of AirTest CO_2 sensors are offered with LonWorks® communication capability that is LonMark® Certified including:

1. TR9292-LON Duct Aspiration Probe for in duct measurements.
2. TR9293-LON Splash Resistant Enclosure for dirty and wet areas.
3. TR9294-LON Wall Mount for commercial, institutional and residential applications.

These sensors are all self-calibrating and will not require any maintenance for the life for the sensor (typically 15 years). These sensors provide a CO_2 ppm & % SNVT for 0-2000 ppm CO_2. Other ranges up to 0-10,000 can be factory set.

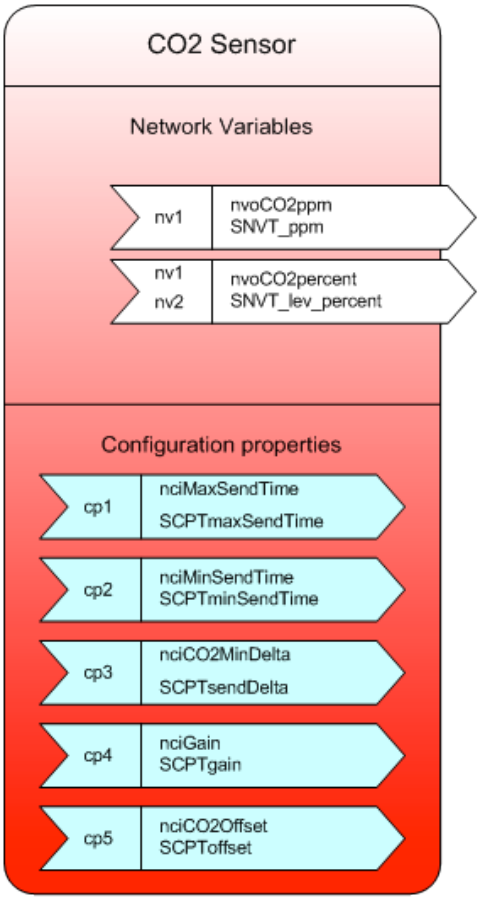
Product Models:

Duct Aspiration Probe ***Splash Resistant Enclosure Wall Mount*** ***Wall Mount***

TR9292-L-Lon *TR9292-Lon* *TR9293-L-Lon* *TR9293-Lon* *TR9294-L-Lon* *TR9294-Lon*

LonMark® Specification:

AirTest Models:	TR9292-L-Lon, TR9292-Lon, TR9293-L-Lon, TR9293-Lon, TR9294-L-Lon, TR9294-Lon,
Category:	Sensor
Measurement Range:	0-2000 ppm (factory adjustable to 10,000 ppm)
Standard Program ID:	80:00:E5:0A:46:06:04:01
LonMark® Version:	3.4
Manufacturer ID:	229
Device Class:	CO_2 Sensor (10.70)
Usage:	06 – Residential/Commercial
XIF/DRF Download:	www.airtest.ca/support/sw/AirTestLon.zip
Transceiver:	04-TPFT-10
Model:	1
XIF Available:	True
DRF available:	True
LonMark Objects:	0000 Node object (1), 1070 CO_2 Sensor (1)
Clock Rate:	10 MHz
Power Requirement:	18-30VAC/VDC (1/2 wave rectified) < 1 W average
Object Details:	See diagram



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