

**TR3210**  
**Electrochemical Gas Transmitter**



**Quality Built - Rugged - Accurate**

The TR3210 is a high accuracy, Electrochemical gas sensor that can be factory configured to measure a wide range of gases applicable to health and safety applications. This loop-powered sensor delivers a linear 4-20 ma output that is easily integrated into any building control, ventilation or alarm application. The low profile design can be attached to any single gang electrical box and features an economical and easily replaceable sensor element.

**Why The TR3210?**

- ✓ Two-wire, loop powered for easy integration with building control systems.
- ✓ Two year rated sensor life.
- ✓ Features an economical plug-in replacement sensor element that minimizes long term operating costs.
- ✓ Factory calibrated. Ready to be installed.
- ✓ High accuracy sensor, +/- 5% of measurement.
- ✓ Linear output over complete range. Custom ranges available.
- ✓ Provided with a rugged waterproof enclosure.
- ✓ CSA Listed (UL Equivalent)
- ✓ Now with Lonworks® Communication Option with % of range SNVT and discrete SNVT.

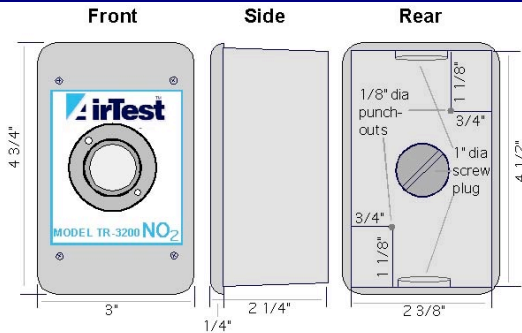
**Inside... LonWorks® or Current Output**



Current Output Version

LonWorks® Output Version (-LON)

## TR3210 Dimensions



## Specifications

### General

**Sensor Type:** Electrochemical  
**Approval:** CSA/NRTL (UL Equivalent)  
**Sensing Method:** Diffusion  
**Sensor Rated Life:** 2 years  
**Enclosure:** Impact Resistant, Waterproof  
**Temp Operating Conditions:** -4 to 122° F (-20 to 50°C),  
**Humidity Operating Conditions:** 0 to 90% RH  
**Storage Conditions:** -40 to 158°F (-40 to 70°C)

### Performance

**Repeatability:** +/- 5% of measured value  
**Linearity:** +/- 5% of measured value  
**Response Time:** T<sub>90</sub> = <1 minutes (diffusion)  
**Warm Up Time:** < 2 minutes

Predicted 2 yr Calibration Drift (% Of measured value)	
CL2	-20%
NO2	-20%
O2	-15%

### Power

**Input:** 12-30 VDC,  
**Power Consumption:** 20 mA

### Outputs

**Adjustment:** Span & Zero  
**Output Signal:** 4 - 20 mA or LonWorks® (specify “- LON”)  
**Terminal Wire Size:** 16 – 22 AGW

### LonWorks® Output Network Variables

**nvoAI** Sensor output. 0%=0 ppm, 100%=200 ppm. Values can be rescaled using nviCalibVal input network variables. Returns +163.83% on input fault condition.  
**nvoDI** Sensor output interpreted as a discrete. Return ST\_OFF if input is below nciDILow and ST\_ON if input is above nciDIHigh. ST\_Nul is input fault condition.

### LonWorks® Input Network Variables

**nviCalibrate** 00 – Zero Cmd. Current sensor output = 0%.  
 01 – Span Cmd. Current sensor output = 100%.  
 02 – Calibrate Value #1. Current sensor output corresponds to lower value which is nviCalibVal.  
 03 – Calibrate Value #2. Current sensor output corresponds to upper value which is nviCalibVal.  
 15 – Reset calibration to factory defaults.  
**nviCalibVal** See nviCalibrate for description. Use with command 02 and 03.

### Lonworks® Configuration Network Variables

**nciAOffset** Offset to be added to nvoAI before sent onto the network.  
**nciMinDelta** Minimum change required before a network update.  
**nciMinSendT** Minimum elapsed time before a network update is sent.  
**nciMaxSendT** Maximum elapsed time before a network update is sent.



## Easily Replicable Sensor



The sensor in the TR3210 features an economical plug-in design that allows for fast and simple sensor change out.

Visit AirTest's website to create an email reminder of when it is time to order replacement sensors.

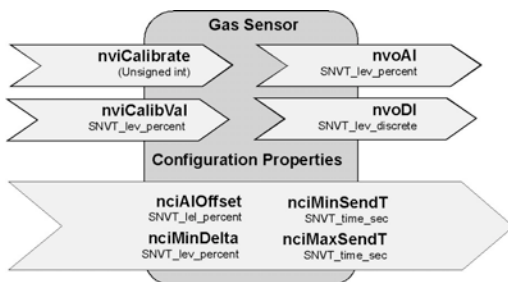
[www.AirTestTechnologies.com](http://www.AirTestTechnologies.com)

## Product Replacement Sensor Selection

Gas	Range (ppm)	Transmitter*	Replacement Sensor
Chlorine	0 - 5.0	TR3210-DC-CL2	RS3210-CL2
Nitrogen Dioxide	0 - 10.0	TR3210-NO2	RS3210-NO2
Oxygen	0 - 25%	TR3210-DC-O2	TR3210-O2

\* For LonWorks® communicating add suffix “-LON”

## LonWorks® Option Network Variables



## Distributed By:



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

Specifications Subject to Change Without Notice

9/26/13