| Chlorine |
| Hydrogen |
| Hydrogen Sulfide |
| Nitrogen Dioxide |
| Oxygen |
| Sulfur Dioxide |

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)

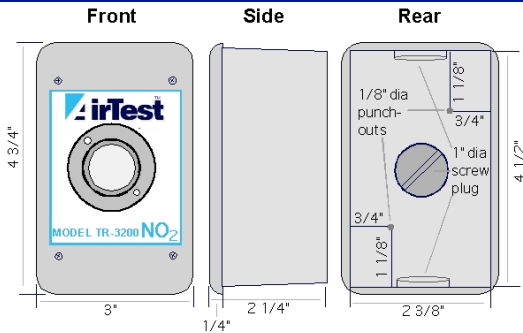✓ Now with Lonworks® Communication Option with % of range SNVT and discrete SNVT.

Inside… LonWorks® or Current Output

Current Output Version   *LonWorks® Output Version (-LON)*

AirTest Technologies Corp. • *1520 Cliveden Ave, Delta BC V3M 6J8* • *P: 604 517-3888* • *888 855-8880* • *F 604 517-3900*
www.AirTestTechnologies.com

TR3210 Dimensions

Front **Side** **Rear**

4 3/4"

3" 2 1/4" 2 3/8"

1/4"

1/8" dia punch-outs

1 1/8" 3/4"

1" dia screw plug

3/4" 1 1/8"

4 1/2"

MODEL TR-3200 NO$_2$

Easily Replicable Sensor

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

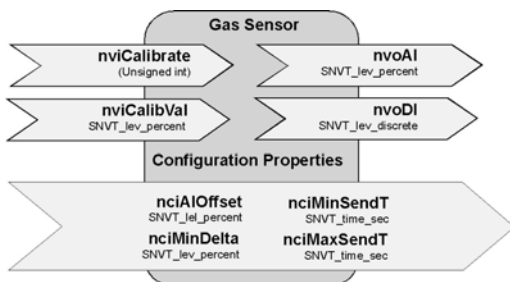Visit AirTest's website to create an email reminder of when it is time to order replacement sensors.

www.AirTestTechnologies.com

Product Replacement Sensor Selection

Gas	Range (ppm)	Transmitter*	Replacement Sensor
Chlorine	0 - 5.0	TR3210-CL2	RS3210-CL2
Hydrogen	0 - 2,000	TR3210-H2	RS3210-H2
Hydrogen Sulfide	0 - 200	TR3210-H2S	RS3210-H2S
Nitrogen Dioxide	0 - 10.0	TR3210-NO2	RS3210-NO2
Oxygen	0 - 25%	TR3210-O2	TR3210-O2
Sulfur Dioxide	0 - 20.0	TR3210-SO2	TR3210-SO2

* For LonWorks® comminucating add suffex"-LON"

LonWorks® Option Network Variables

Gas Sensor

nviCalibrate (Unsigned int)   nvoAI SNVT_lev_percent

nviCalibVal SNVT_lev_percent   nvoDI SNVT_lev_discrete

Configuration Properties

nciAIOffset SNVT_lel_percent   nciMinSendT SNVT_time_sec

nciMinDelta SNVT_lev_percent   nciMaxSendT SNVT_time_sec

Distributed By:

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 122º F (-20 to 50ºC),
Humidity Operating Conditions: 0 to 90% RH
Storage Conditions: -40 to 158ºF (-40 to 70ºC)

Performance
Repeatability: +/- 5% of measured value
Linearity: +/- 5% of measured value
Response Time: T_{90} = <1 minutes (diffusion)
Warm Up Time: < 2 minutes

Predicted 2 yr Calibration Drift (% Of measured value)			
CL2	-20%	**NO2**	-20%
H2	-20%	**O2**	-15%
HS	-20%	**SO2**	-20%

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

nciAIOffset — 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.

Sensors That Make Buildings Smart!

Specifications Subject to Change Without Notice *1/13/06*

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