AirTest™
Sensors That Make Buildings Smart!

**LonWorks®**
**Communicating Options**
**Now Available!**

- Propane/LPG
- Butane
- Natural Gas/LNG
- Methane
- Hydrogen

# TR5200 & TR5500
# Catalytic Bead Combustible Detector


## Quality Built - Rugged - Accurate

The TR3200 is a high accuracy catalytic bead gas sensor/transmitter that can be used to detect LEL (Lower Explosive Limit) concentrations of a wide range of combustible gases. Transmitters can be provided calibrated to the specific combustible gas of interest. The TR5500 provides similar detection capability in an explosion-proof enclosure for Class 1 Division 1 Groups A, B and C areas. Output options include a 4-20 mA analog or a LonWorks® compatible communication signal.

## Why The TR5200/TR5500?

- ✓ Available in a 3 wire analog output or LonWorks® (BACnet available soon).
- ✓ Three year rated life.
- ✓ Linear output over complete range. Custom ranges available.
- ✓ Provided with a rugged NEMA 4X enclosure.
- ✓ Features an economical replacement sensor element that minimizes long term operating costs.
- ✓ Easily field calibrated.
- ✓ Certifications: TR5200 - CSA/NRTL, TR5500 – CSA/UL CL.1, Div.1
- ✓ Now with LonWorks® Communication Option with % of range SNVT and discrete SNVT. Use existing LonWorks® network to reduce installation and control cost.

## AirTest Catalytic Bead vs MOS/Solid State

- ✓ Significantly higher accuracy that MOS type sensor ensures dependable alarm and control.
- ✓ No temperature or humidity interference eliminates seasonal drift of sensors.
- ✓ Much less sensitive to other gases and less likely to be poisoned.
- ✓ Significantly less long-term drift means less maintenance.
- ✓ Consistent linear output between sensors means specialized operational curves and control points are not necessary.

## Applications

Boiler Rooms, Battery Charging Rooms, Vehicle Maintenance Facilities, Transit Maintenance, Hydrogen or Natural Gas Fueling Facilities, Tunnels, Below Ground Facilities, Landfill Areas, Sewage Treatment Plants

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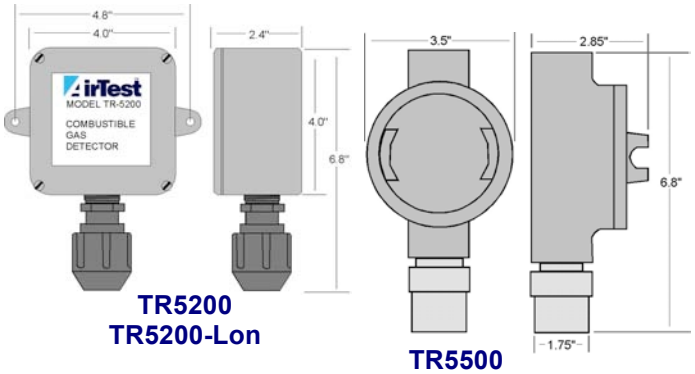
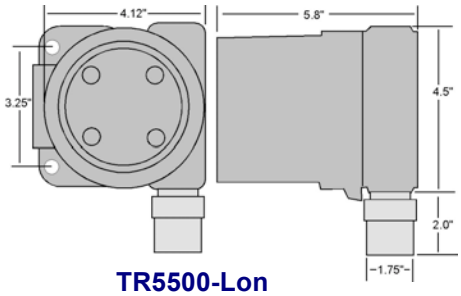
## TR5200 / TR5500 Dimensions




**TR5200**
**TR5200-Lon**

**TR5500**

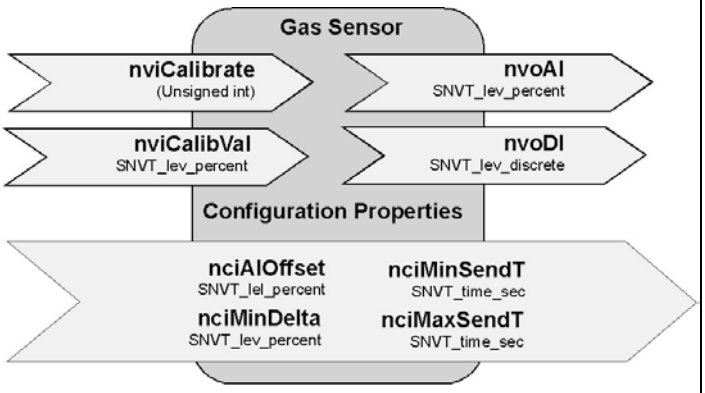



**TR5500-Lon**

## Models

***TR5200:*** NEMA-3R enclosure
***TR5200-Lon:*** NEMA-3R enclosure with LonWorks®
***TR5500:*** Explosion Proof enclosure
***TR5500-Lon:*** Explosion Proof Enclosure

## *LonWorks® Network Variables*




## *Distributed By:*

## Specifications

### *General*

***Sensor Type:*** Catalytic Bead With Temperature Compensation
***Gases Measured:*** All Combustibles (Specify Target Combustible When Ordering)
***Approval:*** TR5200-CSA/NRTL, TR5500-CSA/UL CL.1 Div.1
***Sensing Method:*** Diffusion
***Response:*** 0-5% Methane (0-100% LEL)
***Response Time:*** T50 = 10 seconds
***Minimum Detectable:*** 2% LEL
***Resolution:*** 1% LEL
***Sensor Type:*** Catalytic Bead
***Sensor Rated Life:*** 3 years
***Temp Operating Conditions:*** -13 to 140º F (-25 to 60ºC),
***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
***Recommended Calibration:*** 6 months
***Response Time:*** T90 = <1 minutes (diffusion)
***Warm Up Time:*** < 2 minutes

### *Power*

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

### *Outputs*

***Adjustment:*** Span & Zero
***Output Signal:*** 4 - 20 mA or Lonworks (Specify –lon option)

***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%.<br>01 – Span Cmd. Current sensor output = 100%.<br>02 – Calibrate Value #1. Current sensor output corresponds to lower value which is nviCalibVal.<br>03 – Calibrate Value #2. Current sensor output corresponds to upper value which is nviCalibVal.<br>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. |

***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.

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*Specifications Subject to Change Without Notice* *5/31/11*


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