

Propane/LPG
Butane
Natural Gas/LNG
Methane
Hydrogen

**TR5200 & TR5500**  
**Catalytic Bead Combustible Detector**



**Quality Built - Rugged - Accurate**

The TR5200 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?**

- ✓ Two-wire, loop powered for easy integration with building control systems.
- ✓ 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.

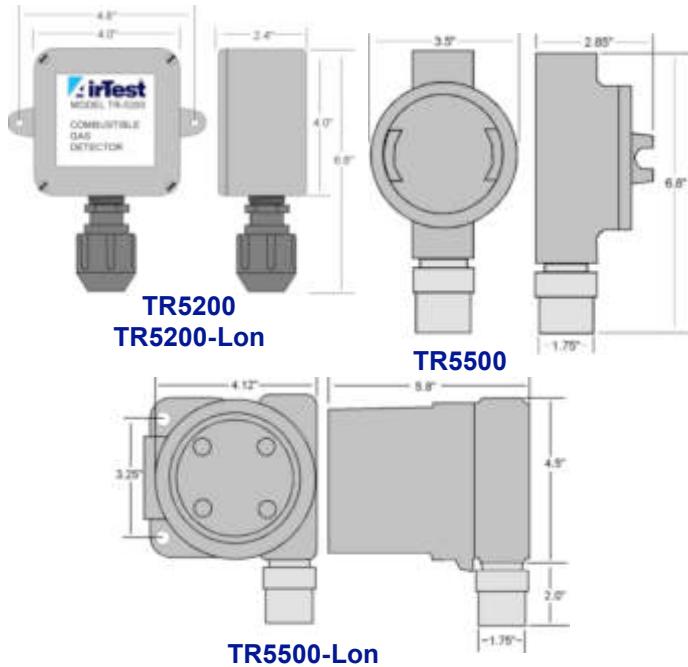
**AirTest Catalytic Bead**  
**vs MOS/Solid State**

- ✓ 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

## TR5200 / TR5500 Dimensions



## 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 140° F (-25 to 60°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

**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)

## Models

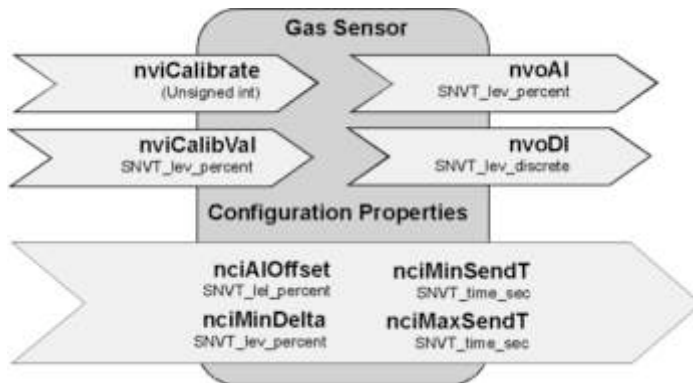
**TR5200:** NEMA-3R enclosure

**TR5200-Lon:** NEMA-3R enclosure with LonWorks®

**TR5500:** Explosion Proof enclosure

**TR5500-Lon:** Explosion Proof Enclosure

## LonWorks® Network Variables



### 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.

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