

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.

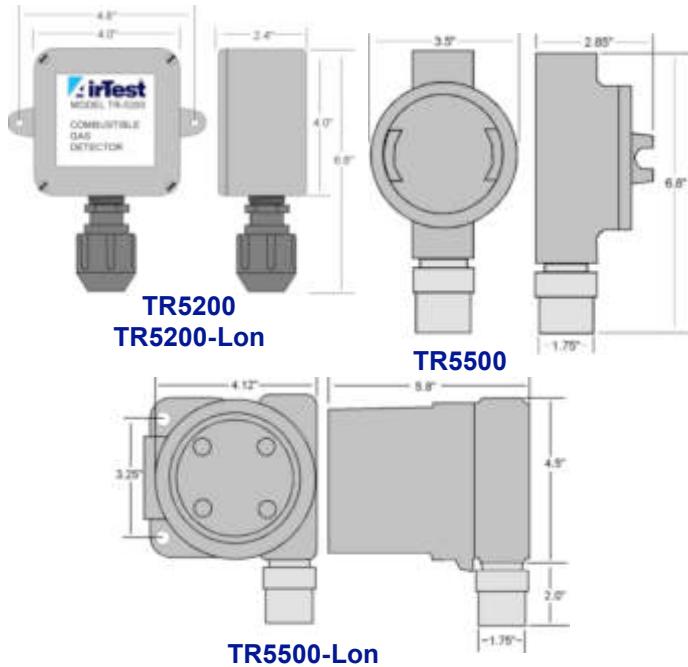
AirTest Catalytic Bead
vs MOS/Solid State

- ✓ 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

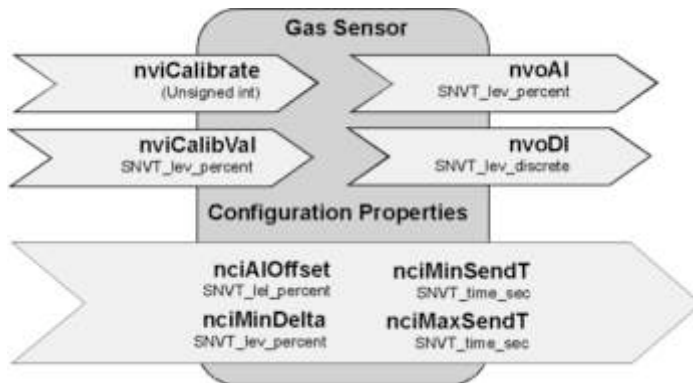
TR5200: NEMA-3R enclosure

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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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.

