



ISO9001:2000  
Certified

## Gas Detection Technology

### Model PT295-LEL Combustible Gas Sensor

#### Features

- Microprocessor based modular design
- Industry standard 4-20mA output
- Field adjustable Alarm level
- Single point Non-Intrusive calibration
- Bright 3 digit LED display
- Displays gas concentration in %LEL, calibration prompts and sensor fault codes
- Class I, Div 1, Suitable for use in Hazardous Location



#### Description

Model PT295-LEL is a microprocessor-based sensor is designed to detect combustible hydrocarbons in air over the range of 0-100%LEL (lower explosive limit). The unit features easy one-man calibration initiated by simply activating an internal magnetic switch and applying the gas. The complete sensor consists of a stainless steel sensor head assembly, a user connection board and a transmitter board assembly. All of the sensor electronics are enclosed in an explosion proof instrument box. The unit's modular design allows easy maintenance, troubleshooting and high reliability.

The sensor transmitter board provides a 4-20mA signal proportional to 0 to 100% of the detection range of the sensor and a fully programmable alarm relay.

The sensor transmitter board includes a three (3) digit LED display for continuous indication of the gas concentration. The calibration mode, alarm and fault status of the sensor are also indicated on the digital display. In the normal operating mode the digital display and 4-20mA reading is proportional to the gas concentration detected by the sensor. In the calibration mode the digital display indicates the calibration status, alarm relay output is inhibited and analog signal output is set to 2 mA to avoid any false alarm by the control monitor. In the sensor fault mode the transmitter drops the output signal to < 1 mA.



## Model PT295-LEL Sensor for Hydrocarbons

### Specifications

#### Sensor Type

Continuous diffusion Catalytic Bead

#### Measuring Range

0 to 100 % LEL

#### Repeatability

± 2 % Full scale

#### Zero Drift

< 5% per year

#### Response Time

T50 < 10 seconds

T90 < 30 seconds

with 100% LEL methane gas applied

#### Classification

Class I, division 1, Groups B,C & D

#### Operating Temperature

-40°F to +158°F (-40°C to +70°C)

#### Operating Humidity

10% to 90% RH, non-condensing

#### Mechanical Specifications

Length: 7 inches (178 mm)

Width: 5 inches (127 mm)

Height: 4.5 inches (114 mm)

#### Display

Bright 3 digit LED display  
for gas concentration, calibration  
mode and sensor fault.

#### Approvals

ABS Type approved

ATEX / CSA approved for use in  
hazardous locations.

CSA Performance test: ISA-S12.13-  
Part I-1995

#### Input Power

14-28 VDC. 24 VDC nominal

#### Power Consumption

150mA @ 24 VDC typical

#### Alarm Relays

Fully programmable. 0 to Full scale  
range of the sensor. Latching or Non-  
Latching.

#### Relay Ratings

SPDT Form "C" type Relay contacts  
5 Amps @ 250 VAC or 30 VDC

#### Analog Output

Linear 4-20mA (300 Ohms max. load)

2.0 mA - Calibration mode

< 1.0 mA - Sensor malfunction

#### Calibration

Non-Intrusive activated by internal  
magnetic switch

#### Cable Requirement

3 wire shielded cable.

#### Cable Entry Hub

3/4" NPT Female

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