



Gas Detection Technology

Model PT295 Oxygen Sensor

Features

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



Description

Model PT295-O2 is a microprocessor-based sensor designed to monitor ambient air for oxygen concentration. The monitoring range is 0 to 25% by volume oxygen. The unit features easy one-man calibration initiated by simply activating a 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 Oxygen Deficiency Sensor

Specifications

Sensor Type

Electrochemical Fuel Cell

Measuring Range

0 to 25% Oxygen

Repeatability

± 2 % Full scale

Zero Drift

< 5% per year

Response Time

T90 < 30 seconds

Classification

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

Operating Temperature

-4°F to +122°F (-20°C to +50°C)

Operating Humidity

15% 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

Status Indicators

Three-digit display for gas concentration, Alarm relay status, calibration mode and sensor fault status.

Approvals

CSA / ATEX for use in Hazardous Locations

Typical Sensor Life

1 year in Air (with 20.9% oxygen)

Field Replaceable sensor head assembly

Input Power

14-28 VDC. 24 VDC nominal

Power Consumption

55mA @ 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. Max loop resistance 20 Ohms

Cable Entry Hub

¾" NPT Female

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