



## Gas Detection Technology

### Model PT395 Series Gas Sensor Toxic & Oxygen Deficiency (3 Alarm Relay Contacts)

#### Features

- Microprocessor based modular design
- Electrochemical Sensor Technology
- Industry standard 4-20mA output
- Field adjustable Low & High Alarm levels
- Single point Non-Intrusive calibration
- Bright 3 digit LED display
- Displays gas concentration, calibration prompts and sensor fault codes
- Suitable for use in Hazardous Location



#### Description

Model PT395 Series is a microprocessor-based sensor for the detection of toxic gas in ambient air. 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 unit provides a fully programmable alarm relay and a linear 4-20mA signal proportional to 0 to 100% of the detection range of the sensor.

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 PT395 Stand Alone sensor for Toxic & Oxygen Deficiency

### Specifications

**Sensor Type:** Electrochemical

#### Measuring Ranges

Ammonia (NH <sub>3</sub> )	0-50 ppm
Carbon Monoxide (CO)	0-100, 0-1000 ppm
Chlorine (CL <sub>2</sub> )	0-10 ppm
Chlorine Dioxide (CLO <sub>2</sub> )	0-50 ppm
Ethylene (C <sub>2</sub> H <sub>4</sub> )	0-100 pm
Ethylene Oxide (C <sub>2</sub> H <sub>4</sub> O)	0-50 pm
Hydrogen Chloride (HCL)	0-20 ppm
Hydrogen Sulfide (H <sub>2</sub> S)	0-100, 0-500 ppm
Hydrogen (H <sub>2</sub> )	0-100, 0-1000 ppm
Methyl Mercaptan (CH <sub>3</sub> SH)	0-100 ppm
Nitrogen Dioxide (NO <sub>2</sub> )	0-20 ppm
Nitric Oxide (NO)	0-100 ppm
Oxygen Deficiency (O <sub>2</sub> )	0-25% by volume
Sulfur Dioxide (SO <sub>2</sub> )	0-50 ppm

#### Repeatability

± 2 % Full scale

#### Zero Drift

< 5% per year

#### Typical Response Time

T90 < 30 seconds with 100% FS gas applied

#### Classification

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

#### Operating Temperature

-4°F to +158°F (-20°C to +70°C)

#### Operating Humidity

15% to 90% RH, non-condensing

#### Display

Bright 3 digit LED display

#### Approvals

CSA / ATEX for use in Hazardous Locations. CSA Standard C22.2 No 30-M1985 & C22.2 No 142-M1987

#### Status Indicators

Three-digit display for gas concentration, calibration mode and sensor fault status. LED indicators for alarm status

#### Input Power

14-28 VDC. 24 VDC nominal

#### Power Consumption

< 2 Watt. Typical 65mA @ 24 VDC

#### Alarm Relays

3 Alarm Relays, Low, High and Fault Fully programmable. 0 to Full scale Range of the sensor, Latching or Non-Latching

#### Relay Ratings

SPDT Form "C" type Relay contacts  
0.5 Amp @ 125 VAC or  
2 Amps @ 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 Entry Hub

¾" NPT Female

### Pem-Tech, Inc.