



# 310 Series gas monitors

## Features

- ◆ Two adjustable alarms
- ◆ Digital display
- ◆ 4 to 20mA output
- ◆ Wall-mounting monitor
- ◆ IP65 rating



**310 Series gas monitors** are single-point systems for monitoring a variety of gases in ambient air. Each monitor provides two sets of fully adjustable volt-free alarm contacts and a 4 to 20mA output signal. The sensor and display/control unit are separate devices, enabling the readout and detection points to be separated by hundreds of metres, depending on the version. An optional adapter is available, enabling flowing samples to be monitored. Versions are available to monitor three categories of gas: oxygen, toxic gases (see specification) and flammable gases.

### Oxygen sensors

These are electrochemical cells and the sensor supplied with the basic oxygen instrument has a two-metre cable, which can be extended to ten metres by using an optional eight-metre extension pack. Where separation of readout and sensor beyond ten metres is required, the version with an active head (two-wire transmitter) oxygen sensor must be used. The active head allows the sensor and control/readout unit to be separated by several hundred metres. A version of the active head sensor is also available with an intrinsically safe transmitter, which can be used in a hazardous area when a suitable IS interface device is used between the sensor and the electronics.

### Toxic gas sensors

These are electrochemical sensors incorporating an active two-wire transmitter head, enabling the sensor and control/readout unit to be separated by several hundred metres. Intrinsically safe versions are not available.

### Flammable gas sensors

These sensors use a pellistor-type device mounted in a flameproof head equipped with a flameproof terminal box. With appropriate wiring this can be mounted within a hazardous area and separated from the readout/control unit by hundreds of metres. DC-powered display/control units are not available for use with these sensors.

## SPECIFICATION

### Ranges

1. Oxygen: 0 to 25%
2. Toxic gases (ppm)
 

|                    |                    |
|--------------------|--------------------|
| Carbon monoxide:   | 0 to 50, 0 to 2000 |
| Chlorine:          | 0 to 5, 0 to 200   |
| Hydrogen sulphide: | 0 to 5, 0 to 300   |
| Nitric oxide:      | 0 to 20, 0 to 300  |
| Nitrogen dioxide:  | 0 to 5, 0 to 300   |
| Sulphur dioxide:   | 0 to 5, 0 to 100   |
| Hydrogen chloride: | 0 to 10, 0 to 200  |

3. Flammable gases (non-specific) The standard calibration is to 0 to 100% LEL (lower explosive limit) of methane; this corresponds to 0 to 5% volume-for-volume of methane in air. Other calibrations are available to special order.

### Display

3½ -digit LCD

### Accuracy and resolution

±2% of span

### Output

4 to 20mA, equivalent to 0 to 100% of full scale

### Operating temperature range

-5 to +40°C

### Power supply

110/240Vac, 50/60Hz or 24Vdc  
(20 to 30V tolerance)  
24V dc option is not available for flammable gas monitors

### Power and signal connector

16-way terminal block

### Dimensions

170mm wide x 140mm high x 96mm deep  
Protection to IP65 when cables are suitably glanded.

20 Titan Court, Laporte Way, Luton, Bedfordshire, England LU4 8EF  
Tel: +44 (0)1582 456900 Fax: +44 (0)1582 400901  
Internet home page <http://www.mtl-inst.com>  
E-mail: [enq@hitech-inst.co.uk](mailto:enq@hitech-inst.co.uk)

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