Product Data Sheet – OXYSAFE Series

Oxygen Monitoring

Oxygen depletion monitors should be considered in areas where inert or other asphyxiating gases are present, in confined spaces or where appreciable amounts of carbon dioxide are in use. However, for carbon dioxide detection, CO2 toxicity normally overrides the O2 depletion hazard.

Figure 1-Multizone - Touch Screen & Sensing Unit

To determine if you need oxygen depletion monitoring, a risk assessment of the area and activities should be carried out. If the risk assessment identifies that in the event of a worst-case scenario oxygen levels would deplete to below 18% O2, you require an oxygen monitor. However, a required risk assessment often does not cover specific areas where a leak may occur (such as directly next to LN2 storage vessel) and even in situations in which oxygen depletion does not reach life-threatening levels, the effect of oxygen starvation on the health of working personnel is still a major health and safety concern.

Oxygen enrichment poses a severe fire hazard. An oxygen concentration of 23% or above is regarded as dangerously enriched, meaning materials catch fire more easily and burn more intensely. Therefore, oxygen monitors are recommended.

Series Overview

Britannia's solution for oxygen monitoring and alarming is the OXYSAFE Series. Whether it be a standalone single zone sensor, or up to a 32 multi-zone system a solution is available.

The range of OXYSAFE units allows a bespoke and cost-effective solution depending on your requirements.

OXYSAFE Standalone – Standalone, single sensor oxygen monitor with advanced options

OXYSAFE Multi-zone– Multi-zone touch screen system, up to 32 sensor oxygen monitors with advanced features

Figure 2 – OXYSAFE Standalone w/ Display option

Sensor Details

The O2 sensor used is an electrochemical cell that continuously operates and monitors by diffusion. The cell has an approx. life span of 1 year but require routine calibration to maintain accuracy.

OXYSAFE Series

Models	Sensors	Range/Accuracy	Features
Standalone	1 x built in Sensor	0-25% / ± (1.5 % of range + 2 % of reading) - Typical +/- 0.3%	• Power & Status Indicators • Internal Sounder • Supplied with 1 remote alarm (sounder & xenon) • LCD Display (*Optional*) • Analogue Output (*Optional*) • Additional Single Relay (*Optional*) • Wireless Transceiver (*Optional*)

Multi-Zone	Up to 32 sensing units	As Standalone	• + 7-inch coloured touch screen
			• + Dual Relay
			• + user interaction is very intuitive
			• + up to 32 remote zones
			• + Sensor measurement data is recorded
			• + Graphing of data is available
			• + User levels can be assigned that are password protected.
			• + Audit trail is recorded
			• + Up to 8 configurable relays typically used for.
			  ○ Supply Tank Shut Off feature
			  ○ Supply Tank Override
			  ○ Fan control
			  ○ Activate Klaxons/ additional remote alarms
			• Connect to Building Management Systems

Additional Hardware Options

Hardware Option	Usage
LCD Display	LCD Display installed on the sensing unit to show the gas concentration
Analogue Output	Output to monitor the gas concentration on third party equipment
Additional Single Relay	Additional Relay to control other items of equipment
Battery Back-up	Allows the unit to stay operational if the power supply is interrupted
Remote Alarms & Klaxons	Additional remote alarms to warn of any alarms *(all entrances should have a remote alarm)*
Remote alarms with Displays	Inclusion of a display to the remote alarm to indicate gas measurement
PIR	An infrared (IR) light sensor that once triggered by objects in its field of view can activate/ deactivate. • Fans (Ventilation & Extraction) • Remote Alarms & Klaxons • Door Locks
Emergency buttons/ key switches	An emergency button or key switch that once operated can activate/ deactivate. • Fans (Ventilation & Extraction) • Remote Alarms & Klaxons • Door Locks
Ventilation + Extraction	Wall mounted or Inline fans to provide ventilation to remove hazardous gases or deliver fresh air.
Wireless Hardware	Additional wireless hardware that allows the sensing zones and remote alarms to be installed without long cable runs.
Perspex stand	Stand to house portable units
Secondary Touch Screen	Touch screens with restricted functionality, that display the gas concentration
Britannia's Wireless Monitoring System	Wireless monitoring system to allow thorough logging and analysis for the gas measuring data.

For any site-specific requirements, please contact Britannia.

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Pricing on any accessories shown can be found by keying the part number into the search box on our website.

The specifications listed in this brochure are subject to change by the manufacturer and therefore cannot be guaranteed to be correct.
If there are aspects of the specification that must be guaranteed, please provide these to our sales team so that details can be confirmed.

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