

Status Scientific Controls

gas detection technology...



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FGD3 Series Intrinsically Safe Gas Detectors - For the Detection of Oxygen or Toxic Gases



Hazardous Area Certificate Number

BAS 01ATEX2300

II 2 G Ex ia IIC T4 Gb (-20°C<Ta<+60°C)

Zones 0, 1 and 2



Optional Weatherguard
(may not be suitable for use with absorbent gases)

Features

- ❖ Competitively priced
- ❖ Marine version available
- ❖ Optional weatherguard
- ❖ Single operator calibration
- ❖ Plug-in replaceable sensors
- ❖ Digital display of gas reading
- ❖ 2 wire connection, loop powered
- ❖ Industry standard 4 to 20 mA output

Description

The FGD 3 Oxygen or Toxic gas detectors use electrochemical sensor technology to detect for gases in the atmosphere in potentially explosive atmospheres in Zones 0, 1 and 2. The detectors use the industry standard 4-20mA current loop both to power the detector and to convey the gas levels detected to a control unit. This means that under zero gas conditions 4mA is drawn from the supply, and under full scale gas conditions 20mA is drawn from the supply. The current varies linearly for gas levels between zero and full scale. The detector head uses a two-wire connection.

A marine version of the FGD3 is also available. This version is housed in a cast aluminium enclosure to provide higher RFI immunity where high power portable radios are used in the close confines of a vessel. The enclosure is plated and painted in order to withstand the harsh salt spray environment of the marine industry. The digital display is fitted with a sliding stainless steel front cover which remains over the display window when not being viewed thereby maintaining the RFI shielding properties of the enclosure during normal operation.

An optional weather guard is available for installations exposed to the atmosphere or contaminants and is also suitable for use in other areas where hosing down takes place. The weather guard reduces the possibility of water or other contaminants entering into the gas sensor thereby improving the overall reliability of the gas detector in harsh environments. The weather guard is attached with tamperproof screws to ensure that it is not inadvertently removed.

Specification

Material	:	Plastic (ABS and Polycarbonate blending) Marine Version - Cast Aluminium Alloy
Cable entry	:	1 x M20 or ½" NPT
Dimensions	:	122 x 122 x 75 mm
Weights	:	Plastic Version (excluding weatheguard) - 660grams Marine Version (excluding weatheguard) - 1Kg Weatherguard - 225 grams
Display type	:	LCD
Gas Types	:	Oxygen Toxic
Supply voltage	:	7 to 30 volts dc (for 4 to 20 mA signal)
Output Signal	:	0mA - open circuit 2mA - fault 4mA - zero gas 20mA - full scale gas 22mA - over-range
Max. Cable Loop Resistance	:	Signal - 560 ohms at 24vdc
Sensor Type	:	Electrochemical
Measurement range	:	Dependant upon sensor type
Response time	:	Sensor response times vary according to the sensor type.
IP rating	:	Enclosure IP66, Sensor IP65
Operating Temperature	:	Varies with sensor type, typically - 20 to +40 °C
Storage temperature	:	- 20 to +50 °C
Humidity Range	:	Oxygen - 0 to 99% RH non-condensing Toxic - 15 to 95% RH non-condensing
Operating Pressure	:	Ambient + or - 10%

Hazardous Area Certification

Certificate Number	:	BAS 01ATEX2300, Code II 2G Ex ia IIC T4 Gb (-20°C<Ta<+60°C)
Standards	:	EN 60079-0:2009 EN 60079-1:2007 EN 60079-11:2007
Zones	:	0, 1 & 2