

Status Scientific Controls

Gas Detection Technology



FGD4 Safe Area Gas Detector For Detection of Oxygen, Toxic and Flammable (Hydrocarbon) Gases



Features

- Compact and lightweight
- Plug-in replaceable gas sensors
- Wide power supply range of 8 to 24 volts dc
- Industry standard 4 to 20 mA output
- Optional weatherguard

The FGD4 series gas detectors are powered from an 8 to 24 volts dc power supply using the industry standard 4 to 20mA two-wire current loop to transmit the gas level to a separate control panel such as the Status Scientific Controls LC Series. The Carbon Dioxide version uses infrared gas detection technology and requires a third connection to power the infrared sensor.

The unit may be optionally fitted with a protective weather guard.

Calibration of the FGD4 can be carried out simply by using ZERO and SPAN buttons inside the instrument provided that the concentration of the calibration gas is the same as that used for factory calibration of the detector (refer to the instrument calibration certificate for details).

Alternatively, the purpose designed plug-in handheld configuration unit may be used together with any appropriate test gas concentration.

Available gas types & sensor ranges

GAS TYPE	SENSOR TECH	RANGES AVAILABLE
Ammonia	Electrochemical	0-100ppm 0-1000ppm
Carbon Dioxide	Infrared	0-500ppm 0-1000ppm 0-2000ppm 0-5000ppm 0-10000ppm 0-2% 0-5% 0-100%
Carbon Monoxide	Electrochemical	0-50ppm 0-100ppm 0-1000ppm
Chlorine	Electrochemical	0-20ppm
Hydrogen Chloride	Electrochemical	0-30ppm
Hydrogen Cyanide	Electrochemical	0-30ppm
Hydrogen Sulphide	Electrochemical	0-50ppm 0-100ppm 0-200ppm
Nitrogen Dioxide	Electrochemical	0-20ppm
Oxygen	Electrochemical	0-21% 0-25%
Sulphur Dioxide	Electrochemical	0-20ppm
VOC	Electrochemical	0-20ppm

FGD4-Safe Area Gas Detector

For Detection of Oxygen, Toxic and Flammable (Hydrocarbon) Gases

Specification

Material	Bayblend (ABS and Polycarbonate blending)
Cable entries	1 x 20mm or ½" NPT or ¾" NPT
Dimensions	122 x 122 x 75 mm
Weights	FGD4 (excluding weatherguard) – 500grams Weatherguard – 225 grams
Gas types	Oxygen or toxic
Input voltage	8 to 24 volts dc
Input power	5 Watts maximum
Internal fuse	1 Amp antisurge 'Nanofuse'
Analogue output	4 to 20mA (10 bit resolution)
Sensor Type	Electrochemical or NDIR Infrared
Measurement range	Dependant upon sensor type
Response time	Toxic and oxygen sensor response times vary according to the sensor type.
Measurement resolution	Toxic gases – 0.1ppm for FSD < 50ppm, 1ppm for FSD > 50ppm
IP rating	Enclosure IP66, Sensor IP65
Operating temperature	Varies with sensor type, typically - 20 to +40 °C
Humidity range	0 to 95% RH non-condensing
Operating pressure	Atmospheric + or - 10%

Accessories

Optional Configuration Unit

The FGD4 can be calibrated via a purpose designed keypad. The keypad allows the user to view the current gas level, calibrate the sensor with the ability to change the span level and calibrate the 4 to 20 mA loop.



Weather Guard

An optional weather guard is available for installations exposed to the atmosphere or contaminants and 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



Warning

These gas detectors must only be used in applications where there is no risk of potentially explosive gases being present or of them being created through industrial processes or other activities within the area concerned.