

FGD10A Flameproof (Ex db) Gas Detector

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



- Available in pressure die cast aluminium or stainless steel grade 316
- LCD Display
- Relay outputs for 2 alarm levels and fault
- Non-intrusive calibration and configuration via a magnetic pen
- Optional weather guard
- Plug-in replaceable gas sensors
- Wide power supply range of 12 to 24 volts dc
- Industry standard 4 to 20 mA and RS232 outputs
- Non-display version available – FGD10B (see separate data sheet TD18/022)



Description

The FGD10A is an ATEX and IECEx certified explosion protected fixed gas detector for hazardous areas. It features magnetic switch calibration via the display window without the need to remove the cover from the unit, three control relays for alarms and faults, 4–20mA and RS232 outputs and an optional weather guard for added protection

Specifications

Material	Instrument Body – Aluminium Pressure Die Casting or Stainless Steel 316 Sensor Insert – Stainless Steel Grade 316 GSH4 Sensor Housing – Stainless Steel Grade 303 Magnetic Pen – Stainless Steel Grade 316 Optional Weatherguard – Stainless Steel Grade 304 & Nylon 66
Cable entries	2 x 20mm or ½" NPT or ¾" NPT
Weights	Oxygen, Toxic, Pellistor (excluding weatherguard) – 1.75Kg Infrared 2Kg Magnetic Pen – 60 grams Weatherguard – 225 grams
Gas types	Flammable, Oxygen or Toxic
Input voltage	12 to 24 volts dc
Input power	5 Watts maximum
Internal fuse	1 Amp antisurge 'Nanofuse'
Relay contact rating	3 amps, 250 volts ac

Analogue output	4 to 20mA (10 bit resolution)
RS232 output	Communications with PC at 19200 baud
Sensor types	NDIR Infrared, Electrochemical or Pellistor
Measurement range	Dependant upon sensor type
Response time	Sensor response times vary according to the sensor type
Measurement resolution	Flammable gases - 1% LEL or 1% volume. EC Toxic gases - 0.1ppm for FSD < 50ppm, 1-12ppm for FSD 50-1000ppm. CO2 - 10ppm for FSD < 10000ppm, 0.1% for FSD ≤ 5%, 1% for FSD > 5%. Oxygen - 0.1% volume
IP rating	Enclosure IP68, Sensor IP65
Display	4 Digit, 7 segment liquid crystal (FGD10A)
Keypad	4-Button magnetically operated
Software	Software configuration provided via display and multifunction keypad
Operating temperature	Varies with sensor type, typically - 20 to +50 °C
Humidity range	0 to 95% RH non-condensing
Dimensions	190mm x 145mm x 127mm

Available gas types & sensor ranges		
Gas Type	Sensor Tech	Ranges Available
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
Flammable	Infrared & Pellistor	0-100% LEL 0-100% Vol
Hydrogen Sulphide	Electrochemical	0-50ppm 0-100ppm
Oxygen	Electrochemical	0-21% 0-25%

Hazardous Area Certification	
Certificate numbers	CSAE 23UKEX1031X IECEX SIR 08.0009X Sira 08ATEX1031X
Standards	EN IEC 60079-0:2018 EN 60079-1:2014 IEC 60079-1:2014 Edition:7.0 IEC 60079-1:2007 Edition:6
Code	II 2 G Ex db IIC T6...T4 Gb
Temperature codes	T4 (Ta -20 °C to +60 °C) T5 (Ta -20 °C to +50 °C) - not applicable to GSH4 versions. T6 (Ta -20 °C to +35 °C) - not applicable to GSH4 versions
Zones	1 & 2

Accessories

Sampling Adaptors

Sampling adaptors are available for applying calibration gases to the detector and for permanent installations where the sample gas can flow over the sensor.



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.

