

### FGD10A Flameproof (Ex d) Gas Detector

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



#### Features

- 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, RS232 outputs
- Non-display version available – FGD10B (see separate data sheet TD18/022)

The FGD10A is an explosion protected ATEX and IECEx certified fixed gas detector for use in potentially explosive atmospheres.

Magnetically operated switches allow the unit to be calibrated through the display window using the magnetic pen without the need to remove the cover from the unit.

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

Three control relays are fitted to provide Alarm Level 1, Alarm Level 2 and Fault outputs via individual changeover contacts. In addition to the 4 to 20 mA analogue, an RS 232 communications output is also provided.

#### 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%
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
		0-200ppm
Oxygen	Electrochemical	0-21%

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### Specification

<b>Materials</b>	Instrument Body – Aluminium Pressure Die Casting or Stainless Steel 316 Sensor Insert – Stainless Steel Grade 316 IR Sensor Housing – Stainless Steel Grade 303 (Grade 316 available) Magnetic Pen – Stainless Steel Grade 316 Optional Weatherguard – Stainless Steel Grade 304 & Nylon 66
<b>Cable entries</b>	2 x 20mm or ½” NPT or ¾” NPT
<b>Weights</b>	Oxygen, Toxic, Pellistor (excluding weatherguard) – 1.75Kg Infrared 2Kg Magnetic Pen – 60 grams Weatherguard – 225 grams
<b>Gas types</b>	Flammable, Oxygen or Toxic
<b>Input voltage</b>	12 to 24 volts dc
<b>Input power</b>	5 Watts maximum
<b>Internal fuse</b>	1 Amp antisurge 'Nanofuse'
<b>Relay contact rating</b>	3 Amps, 300 Volts ac
<b>Analogue output</b>	4 to 20mA (10 bit resolution)
<b>RS232 output</b>	Communications with PC at 19200 baud
<b>Sensor types</b>	NDIR Infrared, Electrochemical or Pellistor
<b>Measurement range</b>	Dependant upon sensor type
<b>Response time</b>	Sensor response times vary according to the sensor type.
<b>Measurement resolution</b>	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.
<b>IP rating</b>	Enclosure IP68, Sensor IP65
<b>Display</b>	4 Digit, 7 segment liquid crystal (FGD10A)
<b>Keypad</b>	4-Button magnetically operated
<b>Software</b>	Software configuration provided via display and multifunction keypad
<b>Operating temperature</b>	Varies with sensor type, typically - 20 to +50 °C
<b>Humidity range</b>	0 to 95% RH non-condensing
<b>Dimensions</b>	190mm x 145mm x 127mm

### Hazardous Area Certification

<b>Certificate numbers</b>	IECEX SIR 08.0009X, Code Ex d IIC SIRA 08ATEX1031X, Code Ex d IIC
<b>Standards</b>	IEC 60079-0 : 2004 (Edition 4) IEC 60079-1 : 2007-04 (Edition 6) EN 60079-0:2018 EN 60079-1:2014 EN50270:2006
<b>Temperature codes</b>	T4 (Ta -20 °C to +60 °C) T5 (Ta -20 °C to +50 °C) - not applicable to infrared versions. T6 (Ta -20 °C to +35 °C) - not applicable to infrared versions.
<b>Zones</b>	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