

Status Scientific Controls

gas detection technology...

STATUS



SCIENTIFIC

FGD10A Series of Flameproof (Ex d) Gas Detectors



Certificate Numbers

IECEX SIR 08.0009X, Code Ex d IIC

SIRA 08ATEX1031X, Code Ex d IIC

T4 (Ta -20 to +60 deg C)

T5 (Ta -20 to +50 deg C)

T6 (Ta -20 to +35 deg C).

Versions available for the detection of:-

- ❖ Hydrocarbon Gases - using temperature-compensated infrared sensors.
- ❖ Carbon Dioxide - using temperature-compensated infrared sensors.
- ❖ Oxygen or Toxic Gases - using electrochemical sensors.
- ❖ Flammable gases - using 'Pellistor' technology.

Features

- ❖ Competitively priced
- ❖ Available in pressure die cast aluminium or stainless steel grade 316
- ❖ Display
- ❖ Relay outputs for 2 alarm levels and fault
- ❖ Non-intrusive calibration and configuration via a magnetic pen
- ❖ Compact and lightweight
- ❖ Optional weather guard
- ❖ Plug-in replaceable gas sensors
- ❖ Wide power supply range of 8 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 explosion protected ATEX and IECEx certified fixed gas detector for use in potentially explosive atmospheres.

It comprises an instrument housing with two cable gland entries. The housing contains the connection terminals, electronics, display window and gas sensor, which is screwed into the bottom of the unit. The unit may be optionally fitted with a protective weather guard as shown in the photograph opposite.

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.

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.



Refer to our website for details of order codes and gas sensor ranges.

Specification

Materials	:	Instrument Body - Aluminium Pressure Die Casting or Stainless Steel 316 Sensor Insert - Stainless Steel Grade 316 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	:	FGD10A (excluding weatherguard) - 1.75Kg Magnetic Pen - 60 grams Weatherguard - 225 grams
Gas types	:	Flammable, Oxygen or Toxic,
Input voltage	:	8 to 24 volts dc
Input power	:	5 Watts maximum
Internal fuse	:	1 Amp antisurge 'Nanofuse'
Relay contact rating	:	3 Amps, 300 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	:	Flammable Gases - typically T ₉₀ < 15 sec (CH ₄) Toxic and Oxygen sensor response times vary according to the sensor type.
Measurement resolution	:	Flammable gases - 1% LEL or 1% volume. Toxic gases - 0.1ppm for FSD < 50ppm, 1ppm for FSD > 50ppm. Oxygen - 0.1% volume.
IP rating	:	Enclosure IP68, Sensor IP65
Display	:	4 Digit, 7 segment liquid crystal
Keypad	:	4-Button magnetically operated
Software	:	Software configuration provided via LCD display and multifunction keypad
Operating temperature	:	- 20 to +60 °C
Humidity range	:	0 to 95% RH non-condensing
Operating pressure	:	Atmospheric + or - 10%
Performance standards	:	EN 61779-1:2000, EN 61779-4:2000, EN 61779-5:2000

Hazardous Area Certification

Certificate numbers	:	IECEX SIR 08.0009X, Code Ex d IIC SIRA 08ATEX1031X, Code Ex d IIC
Standards	:	IEC 60079-0 : 2004 (Edition 4) IEC 60079-1 : 2007-04 (Edition 6) EN 60079-0 : 2006 EN60079-1 : 2007
Temperature Codes	:	T4 (Ta -20 to +60 deg C) T5 (Ta -20 to +50 deg C) T6 (Ta -20 to +35 deg C)
Zones	:	1 & 2

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