Status Scientific Controls

gas detection technology…

FGD10B Series of Explosion Protected 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).

Optional Configuration Unit – see text

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
- Compact and lightweight
- Optional weather guard
- Plug-in replaceable gas sensors
- Wide power supply range of 8 to 24 volts dc
- 4 to 20 mA output
- Display version with control relays available – FGD10A (see separate data sheet)

Description

The FGD10B 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 and gas sensor which is screwed into the bottom of the housing. The unit may be optionally fitted with a protective weather guard as shown in the photograph opposite.

Calibration of the FGD10B 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 hand held configuration unit shown above may be used together with any appropriate test gas concentration.

Calibration of the unit requires the removal of the front cover of the flameproof enclosure and therefore must only be carried out under either of the following conditions:-

1. In a safe area where there is no risk of the presence of an explosive gas.
2. Within the hazardous area by authorised personnel under controlled conditions after it has been established that no flammable gases are present in the area. Note that a management or health and safety department permit may be required for this to be carried out.

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

Specification

Materials	:	Instrument Body – Aluminium Pressure Die Casting Sensor Insert – Stainless Steel Grade 316 Optional Weatherguard – Stainless Steel Grade 304 & Nylon 66
Cable entries	:	2 x 20mm or ½" NPT or ¾" NPT
Weights	:	FGD10B (excluding weatherguard) – 1 Kg 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'
Analogue output	:	4 to 20mA (10 bit resolution)
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
Operating temperature	:	- 20 to +60 ^{O} 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

Designed and Manufactured in the UK

Status Scientific Controls Ltd
Hermitage Lane Industrial Estate
Kings Mill Way, Mansfield
Nottinghamshire NG18 5ER
Tel: (44) 01623 651381 Fax: (44) 01623 427816
email: sales@status-scientific.com
www.status-scientific.com