

MODEL MGT10B



Neutronics
Gas Analysis Solutions

Explosion Proof Fixed Gas Detector without Display For continuous monitoring of flammables, toxics, and O2 deficiency



Small. Robust. Reliable.

- ATEX and IECEx certified for use in hazardous areas
- Pressure die cast aluminum or 316 Stainless Steel enclosure
- 4 to 20mA output
- Plug-in replaceable gas sensors
- Cost effective solution where a local display is not required

Description

The Model MGT10B explosion proof (flameproof) gas detectors are designed for use in hazardous areas and the detection of flammable, toxic, and asphyxiant gas hazards using temperature compensated infrared, electrochemical, and pellistor sensor technologies. The instrument enclosure, available in aluminum or 316 Stainless Steel, includes two gland entries and contains the connection terminals and electronics. The gas sensor is located in the base of the enclosure. A Stainless Steel weather guard can be fitted over the sensor head to protect it from ingress of water or contaminants.

Calibration of the MGT10B detector can be performed by using the ZERO and SPAN buttons inside the instrument if the concentration of the calibration gas matches the gas used for the factory calibration. An optional plug-in handheld configuration unit may also be used along with the appropriate test gas concentration.



Hazardous Area Certification

Certificate number:	IECEx SIR 08.0009X Code Ex d IIC SIRA 08ATEX1031X Code Ex d IIC Zones 1, 2
Standard:	EN 60079-0: 2004 (Edition 4) EN 60079-0: 2006 EN 60079-1: 2007-04 (Edition 6) EN 60079-11: 2007
Temperature Codes:	T4 (Ta -20°C to +60°C) T5 (Ta -20°C to +50°C) T6 (Ta -20°C to +35°C)
Zones:	0, 1, & 2

Calibration requires the removal of the front cover of the enclosure, so it must be done under the following conditions: in a safe area where there is no risk of the presence of an explosive gas or within the hazardous area by authorized personnel under controlled conditions after verification that no flammable gases are present in the area.

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Specifications

Material	Enclosure: aluminum pressure die casting or 316 Stainless Steel Sensor insert: 316 Stainless Steel
	IR sensor housing: 303 Stainless Steel (316 SS available upon request) Optional weather guard: 304 Stainless Steel and Nylon 66
Cable entries	2 x 20mm or 1/2" NPT or 3/4" NPT
Weights	MGT10B oxygen, toxic, pellistor (excluding weather guard) – 1 kg (2.2 lbs.) MGT10B infrared – 1.25 kg (2.75 lbs.) Weather guard – 225 grams (0.5 lbs.)
Gas types	Flammable, oxygen, or toxic
Input voltage	8 to 24VDC
Input power	5 watts maximum
Internal fuse	340mA surface mount 'Multifuse', Bourns, MF-MSMF014-2
Analog output	4 to 20mA (10 bit resolution)
Sensor types	NDIR infrared, electrochemical, or pellistor
Measurement range	Dependent upon sensor type
Response time	Flammable gases – typically $T_{90} < 15$ seconds (Methane) 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°C to +60°C (-4°F to +140°F)
Humidity range	0 to 95% RH non-condensing
Operating pressure	Atmospheric ($\pm 10\%$)
Performance standard	EN 60079-29-1: 2007

Specifications are subject to change without notice.

Versions available for the detection of:

Hydrocarbon gases using temperature compensated infrared sensors
Carbon dioxide using temperature compensated infrared sensors
Oxygen deficiency or toxic gases using electrochemical sensors
Flammable gases using Pellistor sensors



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Order Information

Description	Range	Sensor Type	Stock No.
Methane detector without display, 4-20mA output	100% volume	infrared	SS730-1
Methane detector without display, 4-20mA output	100% LEL	infrared	SS731-1
Ethane detector without display, 4-20mA output	3% volume	infrared	SS731-2
Propane detector without display, 4-20mA output	2% volume	infrared	SS731-3
Butane detector without display, 4-20mA output	2% volume	infrared	SS731-4
Pentane detector without display, 4-20mA output	2% volume	infrared	SS731-5
Carbon dioxide detector without display, 4-20mA output	500ppm	infrared	SS732-500
Carbon dioxide detector without display, 4-20mA output	1000ppm	infrared	SS732-1000
Carbon dioxide detector without display, 4-20mA output	2000ppm	infrared	SS732-2000
Carbon dioxide detector without display, 4-20mA output	5000ppm	infrared	SS732-5000
Carbon dioxide detector without display, 4-20mA output	10,000ppm	infrared	SS732-10000
Carbon dioxide detector without display, 4-20mA output	2% volume	infrared	SS732-2%
Carbon dioxide detector without display, 4-20mA output	5% volume	infrared	SS732-5%
Carbon dioxide detector without display, 4-20mA output	100% volume	infrared	SS732-100%
Hydrogen detector without display, 4-20mA output	100% LEL	pellistor	SS729-0
Methane detector without display, 4-20mA output	100% LEL	pellistor	SS729-1
Ethane detector without display, 4-20mA output	100% LEL	pellistor	SS729-2
Propane detector without display, 4-20mA output	100% LEL	pellistor	SS729-3
Butane detector without display, 4-20mA output	100% LEL	pellistor	SS729-4
Pentane detector without display, 4-20mA output	100% LEL	pellistor	SS729-5
Carbon monoxide detector without display, 4-20mA output	50ppm	electrochemical	SS736-50
Carbon monoxide detector without display, 4-20mA output	100ppm	electrochemical	SS736-100
Carbon monoxide detector without display, 4-20mA output	1000ppm	electrochemical	SS736-1000
Hydrogen sulfide detector without display, 4-20mA output	50ppm	electrochemical	SS735-50
Hydrogen sulfide detector without display, 4-20mA output	100ppm	electrochemical	SS735-100
Hydrogen sulfide detector without display, 4-20mA output	200ppm	electrochemical	SS735-200
Ammonia detector without display, 4-20mA output	1000ppm	electrochemical	SS737-1000
Oxygen deficiency detector without display, 4-20mA output	25% O ₂	electrochemical	SS734
Flow-through sampling adaptor	—	—	SS746
Calibration adaptor with 1m tubing	—	—	SS747
Configuration unit with USB cable	—	—	SS748
Protective weather guard	—	—	SS749



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