MODEL MGT3-Toxic

Neutronics
Gas Analysis Solutions

Intrinsically Safe Fixed Gas Detector
For continuous monitoring of toxic gases

Small. Durable. Reliable.

- Suitable for use in Zones 1 and 2 hazardous areas
- Industry standard 4-20mA output
- Plug-in replaceable electrochemical sensors
- Local LCD display
- Two wire connection, loop powered

Description

The Model MGT3 toxic gas detectors provide reliable performance for workplace safety applications. Using electrochemical sensor technology to detect the levels of toxic gases in the atmosphere, these intrinsically safe detectors are designed to be incapable of producing heat or spark sufficient to ignite an explosive atmosphere.

The industry standard 4-20mA current loop is used to power the detector and to convey the detected gas levels to a controller. This means that under zero gas conditions 4mA is drawn from the supply, and under full scale gas conditions 20mA is drawn from the supply. The current varies linearly for gas levels between zero and full scale.

Safety barriers must be used to connect the power and signals between the gas detector and the safe area. This is required to preserve the safety integrity of the installation by limiting the power entering the potentially explosive area to a safe level.

A marine version of the MGT3 is available. This version is housed in a cast aluminum enclosure to provide higher RFI immunity where high power portable radios are used in the close confines of a vessel. The enclosure is plated and painted to withstand the harsh salt spray environment of the marine industry. The digital display is fitted with a sliding stainless steel front cover designed to remain closed over the display window when not being viewed. This maintains the RFI shielding properties of the enclosure during normal operation.

Hazardous Area Certification

Certificate number:	BAS 01ATEX2300 Code II 2G Ex ia IIC T4 Gb (-20°C < Ta < +60°C)
Standard:	EN 60079-0: 2009 EN 60079-1: 2007 EN 60079-11: 2007
Zones:	0, 1, & 2

An optional weather guard is available for installations exposed to the atmosphere or contaminants and for use in wash down areas. The weather guard improves the reliability of the gas detector in harsh environments by reducing the possibility that water or other contaminants will enter the sensor. The weather guard is attached with tamperproof screws.

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Specifications

Material	Standard housing: composite (ABS and polycarbonate)
	Marine version: cast aluminum alloy
Cable entry	1 x M20 or ½" NPT
Dimensions	122 x 122 x 75mm (4.8 x 4.8 x 3.0in)
Weights	Standard housing (excluding weatherguard) – 660 grams (1.5 lbs.)
	Marine version (excluding weatherguard) – 1 kg (2.2 lbs.)
	Weatherguard – 225 grams (0.5 lbs.)
Display	LCD
Gas types	Oxygen and toxic gases
Supply voltage	7 to 30VDC (for 4 to 20mA signal)
Output signal	0mA – open circuit
	2mA – fault
	4mA – zero gas
	20mA – full scale gas
	22mA – over-range
Max. cable loop resistance	Signal – 560 ohms at 24VDC
Sensor type	Electrochemical
Measurement range	Dependent upon the sensor type
Response time	Sensor response times vary according to the sensor type
IP rating	Enclosure: IP66
	Sensor: IP65
Operating temperature	Varies with the sensor type, typically -20 to +40°C (-4°F to +104°F)
Storage temperature	-20 to +50°C (-4°F to +122°F)
Humidity range, oxygen	0 to 99% RH non-condensing
Humidity range, toxic	15 to 95% RH non-condensing
Operating pressure	Atmospheric (± 10%)

Specifications are subject to change without notice.

Order Information

Part No.	Description	Stock No.
Hydrogen sulfide	0-50ppm, other ranges up to 0-200ppm	SS402
Carbon monoxide	0-500ppm, other ranges up to 0-1000ppm	SS403
Chlorine	0-20ppm	SS404
Nitrogen dioxide	0-20ppm	SS405
Ammonia	0-100ppm or 0-1000ppm	SS406
Sulfur dioxide	0-20ppm	SS409
Nitric oxide	0-100ppm	SS410
Hydrogen	0-100% LEL (over the range of 0-4% volume)	SS411
Hydrogen	ppm	SS421
Hydrogen chloride	0-30ppm	SS414
Hydrogen cyanide	0-30ppm	SS419

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