

# GMT Toxic Gas Detection Head

## Ethylene Oxide (EtO)



**UTILISES WELL PROVEN AND RELIABLE SENSOR TECHNOLOGY**



**SUITABLE FOR HAZARDOUS AREA USE ( WITH SUITABLE ZENER BARRIER )**  **II 1 G EEx ia IIC T4**



**INDUSTRY STANDARD ANALOGUE 4 ~ 20 mA O/P**



**SIMPLE CONSTRUCTION ALLOWS EASY SENSOR REPLACEMENT**



**VERY ROBUST STAINLESS STEEL CONSTRUCTION**



### GMT Detection Head

The GMT range of detection heads provides a comprehensive range of toxic gas detectors for connection to our gas detection control panels. They are designed to provide a rugged, reliable, easy to maintain solution to your fixed gas detection needs. They can be used in safe area locations or when used with a suitable zener barrier device in all flammable hazardous areas as they are also designed to be intrinsically safe (ia).

### Gas Information Ethylene Oxide (EtO)

Ethylene oxide has the chemical formula  $C_2H_4O$

Ethylene oxide (EtO) is a flammable, colourless gas at temperatures above 51.3 °F ( 10.7 °C ) that smells like ether at toxic levels. EtO is found in the production of solvents, antifreeze, textiles, detergents, adhesives, polyurethane foam, and pharmaceuticals. Smaller amounts are present in fumigants, sterilants for spices and cosmetics, as well as during hospital sterilization of surgical equipment.

How can ethylene oxide harm workers?

In addition to eye pain and sore throat, exposure to EtO can cause difficult breathing and blurred vision. Exposure can also cause dizziness, nausea, headache, convulsions, blisters and can result in vomiting and coughing. Both human and animal studies show that EtO is a carcinogen that may cause leukemia and other cancers. EtO is also linked to spontaneous abortion, genetic damage, nerve damage, peripheral paralysis, muscle weakness, as well as impaired thinking and memory. In liquid form, EtO can cause severe skin irritation upon prolonged or confined contact.

EtO Relative Density ( Air =1 ) = 1.49 Typical EtO Detection head location would be at the lowest level available.


EH40 workplace exposure recommended exposure limits :-

Long term exposure limit ( 8hour TWA reference period ) 5 ppm

( short term exposure limit not stated )



## General Details

Type:	GMT—Ethylene Oxide
Part number	59565—0-20 parts per million ( PPM )
Certification	 II 1 G EEx ia IIC T4 Certificate BAS00ATEX1042X
Ingress Protection	IP 54 ( sensor electronics )
Sensor Type	Electrochemical
Mounting Thread	20mm. 1.5mm Pitch
Supply Voltage	24 Vdc $\pm 10\%$
Connections	Red – N.C. Yellow – Signal/supply. Blue – 0v. Green – Screen
Output	4~20 mA Linear 2/3 wire
Material	Stainless Steel EN316
Weight	166gms.
Dimensions:	Body 48mm. long x 42mm. dia.
EMC Regulations	EC Directive 89/336/EEC
Low voltage	EC Directive 73/23/EEC

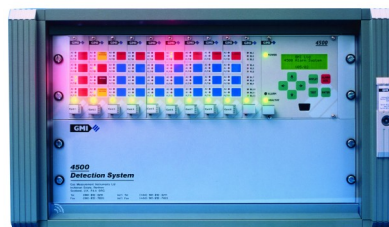
## Compatible GMI control panels



SPGA



ACTIVE-8



4500 GAS ALARM



ACTIVE-80

Replacement Sensor  
Calibration Cap Assembly

GMI Part number 59589  
GMI Part number 59614

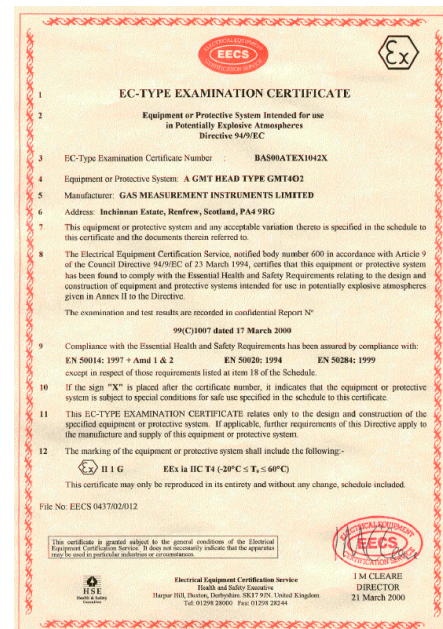


## Sensor Specification

Nominal Range	0-20 ppm
Maximum Overload	100 ppm
Expected Operating Life	24 Months in Air at STP
Temperature Range	+10°C. to +30°C.
Pressure Range	Atmospheric $\pm 10\%$
Response Time	Typically 25 seconds to T50
Relative Humidity Range	15 to 90% non-condensing
Repeatability	$\pm 5\%$ of reading
Zero stability	$\pm 1\%$ F.S.D.
Output Linearity	Linear
Warranty Life	12 Months from date of despatch
Calibration frequency	6 months recommended



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Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.