

FM Approvals  
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# CERTIFICATE OF COMPLIANCE

## HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

### LOW CONCENTRATION (PPM) GAS DETECTORS, Fixed and Portable

Stationary Single Channel 4-20mA Toxics Gas Detector. Stand-alone Sensor/Transmitter 5100-05-IT Electrochemical Gas Detector and Remote Display option are explosionproof for installation in Class I, Division 1, Groups B, C and D, T6 and flameproof for installation in Class I, Zone 1, AEx d IIB+H<sub>2</sub>, T6 Hazardous (Classified) Locations. Model 5100-05-IT Sensor/Transmitter monitors 0-100 PPM hydrogen sulfide gas-in-air atmospheres. The instrument provides an eight character measurement display with magnetically coupled control functions, a 4-20mA measurement signal or RS-485 Modbus RTU communication, relay contacts, and low and high alarms. The optional Remote Display allows for locating the sensor up to 25 feet from the transmitter. The transmitter is Approved to interface to the Sierra Monitor Model 5000 Gas detection control unit. The transmitter and sensor assemblies are constructed of aluminum or stainless steel. The operating temperature range of the apparatus is -20°C to +50°C and operating voltage is 24 Vdc (nominal), 2 watts nominal power. In addition, the apparatus complies with ANSI/ISA-92.00.01-2010 Performance Requirements for Toxic Gas Detectors. The following accessories are Approved for use with the 5100-05-IT Sensor/Transmitter:

<u>Model</u>	<u>Description</u>
1250-01	Gas Sensor Calibrator Kit, Type A (w/o gas cylinders)
1256-01	Regulator Type A Calibrator
5358-01	Calibration Adapter - Direct, Standard
5358-50	Calibration/Configuration Magnetic Tool

### 5100-a-IT-b-c

- a = Gas Type: 05
- b = Enclosure: Al or SS
- c = I/O: 01 or 02

Specifications – The manufacturer’s specifications are as follows:

Range	0 – 100 PPM
Operating Temperature	-20°C to +50°C
Relative Humidity	5 to 99% RH
Supply Voltage	10 – 30 Vdc
Step Response	Rise to 90% of Full Scale within 30 seconds
Measurement Signal	4-20 mA
Calibration	Magnetic switch

FM Approved for:

Sierra Monitor Corporation  
1991 Tarob Court  
Milpitas, CA 95035

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	2011
Class 3615	2006
Class 3810	2005
ANSI/ISA-92.00.01	2010
ANSI/ISA 60079-0	2005
ANSI/ISA 60079-1	2005

Original Project ID: 3034435

Approval Granted: May 29, 2009

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
3033266	February 7, 2011		
3047239	March 20, 2015		

FM Approvals LLC



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J. E. Marquedant  
Manager, Electrical Systems

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20 March 2015  
Date