

FM Approvals
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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

COMBUSTIBLE GAS DETECTORS, Fixed

Stationary Single Channel 4-20 mA Combustible Gas Detector. Stand Alone Sensor/Transmitter. Intelligent Sensor Combustible Gas Detector Models S4000C Series and S4000CH Series (see below for model codes)] are explosionproof for installation in Class I, Division 1, Groups B, C and D; Class I, Zone 1, IIB + H2; T6 Ta = +75°C Hazardous (Classified) Locations. Models S4000C and S4000CH Series Sensor/Transmitter monitors 0-100% LFL combustible gas-in-air atmospheres. The instrument provides a three-digit measurement display with Warning, Alarm and Fault LED indicators, a 4-20mA measurement signal and optional 3-alarm SPDT relay contacts dual MODBUS ports, as well as HART communication capabilities for the S4000CH only. The operating temperature range of the apparatus is -40°C to +75°C and operating voltage is 24 Vdc (nominal), 7W maximum power, the relay contact ratings are 8A, 250 Vac or 30 Vdc. Model S4000C and S4000CH Series transmitter assemblies are suitable for outdoor (Type 4X) installation when the sensor is installed remotely from the transmitter with Universal Housing P/N 10252. In addition, the apparatus complies with ANSI/ISA-12.13.01-2000 Performance Requirements for Combustible Gas Detectors. The following Sensor/Transmitter models are included in the Approval:

S4000C. Intelligent Sensor Combustible Gas Detector.
31140-a

a: 1, 2, 9, 10

Special Conditions of Use:

1. Approval covers use of the S4000C Series combustible gas detector when calibration is performed using the gas to be monitored and the highest alarm set points are preset within 10% of the calibration gas concentration.
2. The following auxiliary apparatus is Approved for use with S4000C Series Sensor/Transmitter: Portable Purge Calibrators P/N 1400150-X, Duct Mounting Plate P/N 10041-1, Universal Housing P/N 10252 and Combustible Sensor: Part No. 1001-1 (std. industrial AL) or 10058-1 (std. Industrial SS).
3. The S4000C Transmitter assembly is rated for outdoor (Type 4X) locations only. The sensor is required to be remotely located in an indoor location.

S4000CH. Intelligent Sensor Combustible Gas Detector.
32425-a

a: 1, 2, 9, 10, 13, 14, 17, 18, 21 through 28, 37 through 44

Special Conditions of use:

1. Approval covers use of the S4000CH Series combustible gas detector when calibration is performed using the gas to be monitored and the highest alarm set points are preset within 10% of the calibration gas concentration.
2. The following auxiliary apparatus is Approved for use with S4000CH Series Sensor/Transmitter: Automatic Remote Gas Calibrator (ARGC) P/N 80155, Portable Purge Calibrators P/N 1400150-X, Duct Mounting Plate P/N 10041-1, Universal Housing P/N 10252 and Combustible Sensor: Part No. 1001-1 (std. industrial AL) or 10058-1 (std. Industrial SS).

3. The S4000CH Transmitter assembly is rated for outdoor (Type 4X) locations only. The sensor is required to be remotely located in an indoor location.

Low Concentration (PPM) Gas Detectors, Fixed and Portable

Stationary Single Channel 4-20mA Hydrogen Sulfide Gas Detector. Stand Alone Sensor/Transmitter. Intelligent Sensor Hydrogen Sulfide Gas Detector Model S4000T Series and S4000TH series (see below for model codes)] are explosionproof for installation in Class I, Division 1, Groups B, C and D; Class I, Zone 1, IIB + H₂; T6 Ta = +60°C Hazardous (Classified) Locations. Model S4000T and S4000TH Series Sensor/Transmitter monitors 0-20 ppm, 0-50 ppm, or 0-100 ppm hydrogen sulfide gas-in-air. The instrument provides a three-digit measurement display with Warning, Alarm and Fault LED indicators, a 4-20mA measurement signal and optional 3 alarm SPTD relay contacts with dual MODBUS ports, as well as HART communication capabilities for the S4000TH only. The operating temperature range of the apparatus is -40°C to +60°C and operating voltage is 24 Vdc (nominal), 7W maximum power, the relay contact ratings are 8A, 250Vac or 30Vdc. Model S4000T and S4000TH Series transmitter assembly is suitable for outdoor (Type 4X) installation when the sensor is installed remotely from the transmitter with Universal Housing P/N 10252. In addition, the apparatus complies with ISA-92.0.01, Part I-1998 Performance Requirements for Toxic Gas-Detection Instruments: Hydrogen Sulfide. The following Sensor/Transmitter models are included in the Approval:

S4000T. Intelligent Sensor Hydrogen Sulfide Gas Detector.
31180-a

a: 1, 2, 9, 10

Special Conditions of use:

1. The following auxiliary apparatus is Approved for use with S4000T Series Sensor/Transmitter: Portable Purge Calibrators P/N 1400250-X, Breaker Bottle-single P/N 5000, Individual or 12 Ampoule H₂S test gas P/N 5000-X, Duct Mounting Plate P/N 10041-1, Sensor Universal Housing P/N 10252 and H₂S Sensor: Part No. 50445-1 (0-100ppm, AL), 50445-5 (0-50ppm, AL), 50445-9 (0-20ppm, AL), 50448-1 (0-100ppm, SS), 50448-5 (0-50ppm, SS) or 50448-9 (0-20ppm, SS).
2. The S4000T Transmitter assembly is rated for outdoor (Type 4X) locations only. The sensor is required to be remotely located in an indoor location

S4000TH. Intelligent Sensor Hydrogen Sulfide Gas Detector.
32426-a

a: 1, 2, 9,10,13,14,17,18, 29 through 36, 53 through 60, 69 through 72

Special Conditions of use:

1. The following auxiliary apparatus is Approved for use with S4000TH Series Sensor/Transmitter: Portable Purge Calibrators P/N 1400250-X, Breaker Bottle-single P/N 5000, Individual or 12 Ampoule H₂S test gas P/N 5000-X, Duct Mounting Plate P/N 10041-1, Sensor Universal Housing P/N 10252 and H₂S Sensor: Part No. 50445-1 (0-100ppm, AL), 50445-5 (0-50ppm, AL), 50445-9 (0-20ppm, AL), 50448-1 (0-100ppm, SS), 50448-5 (0-50ppm, SS) or 50448-9 (0-20ppm, SS).
2. The S4000TH Transmitter assembly is rated for outdoor (Type 4X) locations only. The sensor is required to be remotely located in an indoor location

FM Approved for:

General Monitors
26776 Simpatica Circle
Lake Forest, CA 92630

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
Class 6310/6320	2001
6341 (Draft)	2002
ANSI/ISA 12.13.01	2000
ISA-92.0.01	1998
ANSI/NEMA	1991


Original Project ID: 3009974

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Subsequent Revision Reports / Date Approval Amended

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071215	March 17, 2008		
08222	August 21, 2008		
090217	April 24, 2009		
101111	February 4, 2011		
3050801	March 11, 2014		

FM Approvals LLC



J. E. Marquedant
Manager, Electrical Systems

11 March 2014
Date