



NYC Department of Buildings  
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## Report of Materials and Equipment Acceptance Division

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use subject to the terms and conditions contained herein.

### MEA 383-05-E

**Manufacturer:** Sierra Monitor Corp., 1991 Tarob Ct., Milpitas, CA 95035

**Trade Name(s):** Field Server Technologies and Sierra Monitor Gas Detection

**Product:** Gas Detection Systems and Controls.

**Pertinent Code Section(s):** Reference Standard RS 17-3

**Prescribed Test(s):** FMRC Class No. 3600, 3610, 3620, 3615, 3810, 6310, 6320 and ANSI 12.13.01.

**Laboratories:** Factory Mutual and Underwriters Laboratories Inc.

**Test Report(s):** Factory Mutual Project J.I. 1B4A22AX, issued January 3, 1997. Factory Mutual Project 3023992, issued August 25, 2005. Underwriters Laboratory Project NWGQ.E201222, dated August 11, 2002.

**Description** – Stationary Gas Detection System. SENTRY System consists of 2, 4 and 8 channel controller, Models 5000-02, 5000-04 and 5000-08 for connection to remote digital combustible gas sensor/transmitter Model 5100-02. The system monitors 0-99% LFL of combustible gas-in-air atmospheres. The controller is for use in indoor or optional outdoor (NEMA 4X) non-hazardous locations, the combustible gas sensor/transmitter is for use in Class I, Division I, Groups C and D hazardous (classified) indoor locations. The controller is panel mounted and can be operated from 120 Vrms, 220 Vrms 50/60 Hz or 12 Vdc. The controller provides the following standard functions; 2, 4 or 8 channel measurement, displays, keypad and common High/Low/Trouble alarm contacts. The following are Approved controller options; Model 5380-00 Controller 19" rack mounting accessory, Model 5383-00 Controller NEMA 4X enclosure, Model 5392-00 Individuals channel high and low alarm contacts, and Model 53 87-00 Serial RS-232 printer port software. Included in the Approval are: conventional and multiplexed sensor/transmitter installation configurations, normal and global calibration modes, user editable channel tag function, combustible gas calibration delivery system Model 1200-26 with methane gas cylinder Model 1290-02 and delivery fitting Model 5360-00, calibration adaptors Models 5358-00 and 5358-01.

Operating temperatures are 0°C to +50°C (32°F to +122°F) for the controller, -40°C to +80°C (-40°F to +176°F) for the combustible gas sensor/transmitter. Approval covers use of the instrument when the instrument calibration is performed using the gas to be monitored and when the higher of the two alarm set points is preset within 10% LFL of the monitored calibration gas concentration.

Stationary Combustible Gas 4-20 mA Sensor/Transmitter Model 4101-02 stand alone sensor/transmitter monitors 0-99% LFL of combustible gas-in-air atmospheres. The Approved apparatus is explosion-proof for use in Class I, Division 1, Groups C and D hazardous (classified) indoor locations. Included in the Approval are combustible gas calibration delivery system Model 1200-26 with methane gas cylinder Model 1290-02 and delivery fitting Model 5360-00, calibration adaptors Models 5358-00 and 5358-01. Operating temperatures for the sensor/transmitter are -40°C to +80°C (-40°F to +176°F). Approval covers use of the instrument when the instrument calibration is performed using the gas to be monitored.

Stationary Single Channel 4-20mA Combustible Gas Detector. Stand Alone Sensor/Transmitter 5100-28 Infrared Combustible Gas Detector and Remote Display option are explosion-proof for installation in Class I, Division 1, Groups C and D, T6 Ta = +60°C hazardous (classified) indoor locations. Model 5100-28 Sensor/Transmitter monitors 0-100% LEL methane gas-in-air atmospheres. The instrument provides an eight-digit measurement display with magnetically coupled control functions, a 4-20mA measurement signal, and relay contacts; Trouble, Low and High Alarms. The optional Remote Display provides an eight-digit measurement display with magnetically coupled control functions, a 4-20mA measurement signal, and relay contacts; Trouble, Low and High Alarms. The transmitter is Approved to interface to the Sierra Monitor Model 5000 Gas detection control unit. The transmitter assembly is constructed of aluminum and includes IR processor module. The sensor assembly is constructed of aluminum and consists of the IR sensor. The sensor mounts integrally to the transmitter housing. The sensor is protected with flame arrester shield. The optional Remote Display is constructed of aluminum and includes fit processor module. The operating temperature range of the apparatus is -20°C to +60°C and operating voltage is 24 Vdc (nominal), 3 watts nominal 5 watts maximum power, relay contact ratings are 0.25A at 110Vdc/ac. In addition, the apparatus complies with ANSI/ISA-I2.13.01-2000 Performance Requirements for Combustible Gas Detectors. The following accessories are Approved for use with the 5100-28 Sensor/Transmitter: combustible gas calibration delivery system Model 1200-26 with methane gas cylinder Model 1290-02 and delivery fitting Model 5360-00, calibration adaptors Models 5358-00 and 5358-01; The calibrator 1250-01 with regulator 1256-01 and cylinder 1260-02.

Pursuant to "Promulgation of the Rules relating to Materials and Equipment Application Procedures" dated November 5, 1992, the Bureau of Fire Prevention has no objections letter dated January 11, 2006, FP Index No. 0511007A.

**Terms and Conditions:** That the above units be accepted on condition that:

1. All uses, arrangements and functions, application and installations shall comply with all applicable New York City Codes, rules and regulations, especially New York City Electrical Code, Chapter 5.
2. The above referenced controller shall be installed only in nonhazardous locations.
3. The installation and use of Model 5100-02 combustible gas detector shall be limited to Class I, Division I, Groups C and D classified hazardous indoor locations.
4. Wiring from all sensor/transmitter to controller shall be in rigid conduits.
5. Model FS-X40 Communication Bridge shall be used only for communication with devices that are installed as part of the combustible gas detection system such as a remote annunciator or controller.
6. Periodic inspections and calibration of the sensors shall be conducted as per requirement of manufacturer's installation/operation manual.
7. FM, UL and Manufacturer's installation, maintenance procedures and limitations shall be complied with.

All shipments and deliveries of such equipment shall be provided with a metal tag, suitably placed, certifying that the equipment shipped or delivered is equivalent to those tested and accepted for use, as provided for in Section 27-131 of the Building Code.

Final Acceptance April 25, 2006  
Examined By Donald J. J.