GAS SENSOR MODULES

MODELS 201-00
MODELS 203-00
MODELS 206-00

MODELS 2001-00
MODELS 2003-00
MODELS 2006-00

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GAS SENSOR MODULES

MODELS 201-00
MODELS 203-00
MODELS 204-00

MODELS 2001-00
MODELS 2003-00
MODELS 2006-00

Products are TUV approved to EN61010-1:2001 and have only been evaluated for safety for ordianry locations and not evaluated for performance.

APPLICABILITY & EFFECTIVITY

This manual provides instructions for the following Sierra Monitor products:

Model	Description
201-00	Combustible Gas Monitor - Outdoor
203-00	Hydrogen Sulfide Monitor - Outdoor
206-00	Carbon Monoxide Monitor - Outdoor
2001-00	Combustible Gas Monitors - Indoor
2003-00	Hydrogen Sulfide Monitors - Indoor
2006-00	Carbon Monoxide Monitor - Indoor

The instructions are effective for the above models as of November 2002

Instruction Manual Part Number: T10002
Rev E4

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1.0 PRODUCT DESCRIPTION

1.1 Introduction

The Sierra Monitor Gas Sensor Modules consist of two series of fixed-installation, single-alarm products, the 20X Series is an explosion proof outdoor model, and the 200X Series is in a general purpose indoor enclosure. Both series include monitors for Combustible Gas, Hydrogen Sulfide, and Carbon Monoxide. Both series also include a dry contact relay. See Table 1.1 for a full list of available configurations.
This manual provides instructions for both 20X and 200X series Gas Sensor Modules.

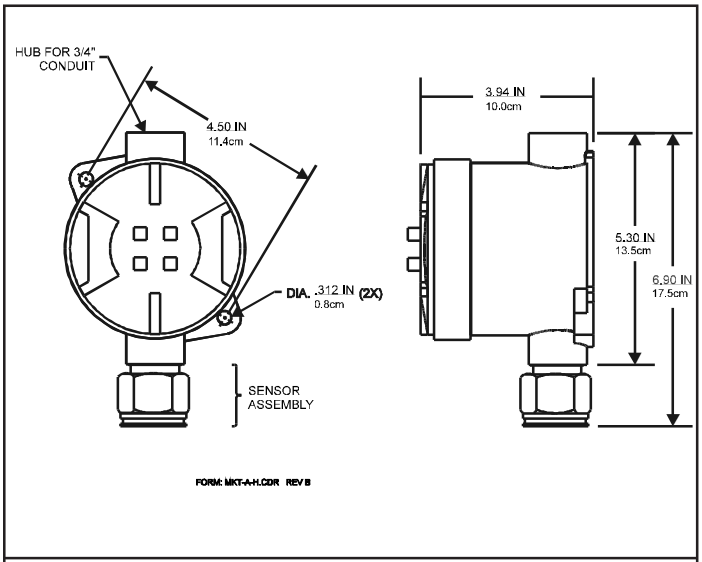


Figure 1.1 Outline View - 20X Series

1.2 Application

The Gas Sensor Modules are designed for qualitative continuous area monitoring of Combustible Gas, Hydrogen Sulfide or Carbon Monoxide where the gas being monitored is not normally present.

If the equipment is used in a manner not specified by Sierra Monitor Corporation, the protection provided by the unit is impaired.

1.3 Configuration

1. Model 20X Series

The Model 20X series consists of three separate gas modules, Model 201 for Combustibles, Model 203 for Hydrogen Sulfide and Model 206 for Carbon Monoxide. An alarm signal is activated when the concentration of gas exceeds the factory-set (and user-adjustable) level. The signal may be used to activate a remote alarm, fan or process controller.

Contact Sierra Monitor for specifics on the devices that can be interfaced with these gas sensor modules. In addition, all versions include, as standard, a 0.5 amp, dry contact relay, which can be configured as normal operating open or fail safe, normally operating closed.

A durable, cast aluminum explosion-proof enclosure houses the sensor electronics. The enclosure provides sealing for hazardous areas - Class I, Division 1, Groups C, D. The sensor with a porous metal cover is assembled in an aluminum housing that screws directly into the electronics enclosure. The cover protects the sensor and acts as a flame-arrestor. The monitor can be installed up to 500 feet from the remote power source.

Model	Gas	Outdoor	Indoor	TTL	Relay	Buzzer
201-00	Combustibles	X		X	X	
203-00	H_2S	X		X	X	
206-00	CO	X		X	X	
2001-00	Combustibles		X	X	X	X
2003-00	H_2S		X	X	X	X
2006-00	CO		X	X	X	X

Table 1.1 Gas Module Configurations

2. Model 200X Series

The Model 200X Series consists of three separate gas monitors, Model 2001 for Combustibles, Model 2003 for Hydrogen Sulfide and Model 2006 for Carbon Monoxide. A red LED (light-emitting diode) and audible 70 dB alarm activate when the concentration of gas exceeds the factory-set (and user-adjustable) level. A green LED indicator on the monitor shows that power is connected and it is a safe condition.

The standard configuration has a buzzer and normally operating open relay. This configuration can be changed by the user. (See table 2.1)

The 200X-00 series module includes a AC-to-DC power supply that may be plugged into a standard AC source. The device may also accept 9 - 24 VDC.

End user must use a Listed/Certified Class 2 output power source. For indoor applications, where the 200X is used, a Class 2 power supply is provided.

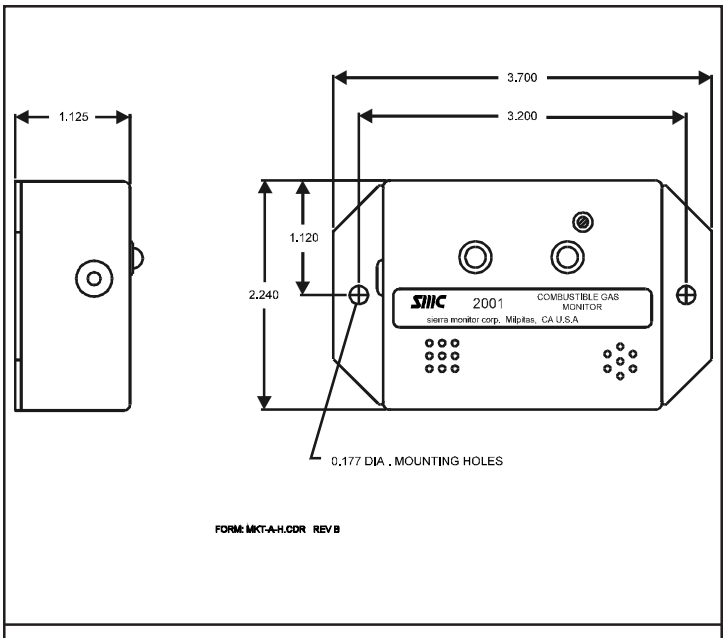


Figure 1.2
Outline View - 200X Series

3. Semiconductor-Type Sensor

A solid-state semiconductor-type sensor and associated electronic circuitry ensure trouble-free, long-term operation. All the electronic circuitry needed to operate the monitor, except the DC input power, is contained in a compact unit. There are no pumps, filters, or chemical cells to replace or maintain. Except for periodic calibration to verify the alarm setting, no attention is required after installation. The user may adjust the alarm level by applying a different calibration gas concentration.

A sensor self-check feature will flash the alarms on and off alternatively should the sensor fail (open circuit). The alarm flash includes LEDs, audible alarm, relay and alarm signal as applicable. On both the 20X and 200X series, the alarm output oscillates to indicate sensor failure.

4. Remote Alarm Available

If a remote alarm is desired, Sierra Monitor's Alarm Panel, Model 2102 Dual Channel can be connected up to 500 feet away from the monitors.

2.0 QUICK START

2.1 Overview

The Gas Sensor Module has been supplied factory calibrated and ready for immediate installation and operation. An installer familiar with installation and operation of gas detection products can use this section to begin immediate use of the monitor.

2.2 Wiring

Each module requires four-conductor wiring (two wires for power and two wires for the signal). See section 6.3 and Table 2.1 for wiring instructions.

2.3 Module Installation

1. Model 20X Series

The module can either be installed on the end of a 3/4" conduit, or attached to a vertical surface using the mounting flange on the enclosure. Two important warnings:

- **The installation must meet any hazardous environmental codes for AC/DC Electrical instrumentation.**
- **The sensor module enclosure mounting must be far enough away from any vertical surface to allow removal and replacement of the sensor assembly which is threaded into the second 3/4" conduit hub.**

2. Model 200X Series

The Model 200X series are designed to mount on any indoor vertical surface. Mount the monitor in the desired location using the adhesive backing provided with the module or with screws through the mounting flange. All units are shipped with the plug-in AC/DC power supply connected to the monitor so the operator simply plugs the power supply into a nearby AC outlet.

- **Installation must be in accordance with all local codes, and/or NEC.**

2.4 Wiring Connection

Terminal positions on the electronics board are as follows:

Terminal	Function
TB1-1	+ VDC (9 – 24)
TB1-2	GND (0VDC)
TB2-1	Relay NC (Normally Closed) or Output to Model 2102 Safe
TB2-2	Relay Common
TB2-3	Relay NO (Normally Open) or Output to Model 2102 Alarm

Table 2.1

Refer to section 6.3 for details on wiring the gas sensor module to a power supply or alarm panel.

2.5 Start-up & Operation

To begin operation of the Gas Sensor Module plug in the AC/DC power supply module (for the Model 200X Series) or provide 9 - 24 VDC from a regulated power supply such as one of the Sierra Monitor Alarm Panels, 2102-XX. Use any Listed/Certified Class 2 output power source each time the sensor module is powered up it will perform a warm-up for 2 - 60 minutes.

During warm-up the monitor will, first, cycle through safe/alarm/safe condition at one hertz. This will be followed by a short period of continuous alarm before warm-up is completed.

(NOTE: For Models 206 and 2006 that have been off power for extended periods, the warm-up alarm may sound for several hours.)

2.6 Configuration

The default configuration for each module is to operate with a buzzer and a normally operating open (NOO) relay. The user can change this configuration using the jumpers provided. Refer to table 6.2.

3.0 OPERATION

3.1 Introduction

Under normal conditions the gas sensor module does not require operator or technician intervention. The following are conditions under which the module requires attention:

- **Routine periodic calibration**
- **Sensor replacement on a planned schedule or when a sensor failure occurs.**
- **Periodic cleaning as necessary.**

3.2 Alarms

Three alarm conditions are possible. These can be detected visually at the optional Sierra Monitor controller and at the module (externally on the 200X Series or internally on the electronics board of the 20X Series).

Warm-Up Alarm

Oscillating (On/Off) contact closure and "red/green" visual indication when power is first connected to the module, followed by a continuous closure of approximately 2-60 minutes indicating warm-up.

Buzzer	Relay	Relay Fail Safe
On/Off	Oscilating	Oscilating

Gas Alarm

Sustained contact closure and solid red light (once the warm-up time is completed) indicating the presence of gas at, or above, the pre-set alarm limit.

Table 2.1

Buzzer	Relay	Relay Fail Safe
On	Closed	Open

Trouble Alarm

Interrupted contact closure and "red/green" visual indication (once the warm-up time is completed) after unit has been in operation, indicating either a failed sensor or calibration problems.

Buzzer	Relay	Relay Fail Safe
On/Off	Oscilating	Oscilating

4.0 CALIBRATION

4.1 Factory Calibration

The module has been factory calibrated to alarm as indicated in Table 4.1 or as marked on the calibration tag shipped with the module.

Calibration			
Model	**Time**	**Gas**	**cc/min**
201/2001	30 sec.	1000 ppm CH4	50
203/2003	1 min.	50 ppm H2S	50
206/2006	1 min.	100 ppm CO	50

Table 4.1

4.2 Frequency of Calibration

The manufacturer recommends that the calibration of each gas sensor module be verified monthly during the first three months of operation and then quarterly. More frequent checks are necessary during periods of extreme humidity and temperature changes. The monitor should have operated continuously (uninterrupted) for at least 24 hours prior to calibration adjustment.

4.3 Calibration Process

The output signal of the gas sensor module is calibrated using a calibration gas mixture containing a known concentration of the gas of interest and a balance of air. The concentration of the span gas must be within the full scale of the sensor module and must be equal to the alarm point desired.

Calibration requires application of the span gas to the sensor and adjustment of the sensitivity adjustment potentiometer.

Warning: During calibration the alarm will turn on and remote alarms connected to the alarm relays will be activated. Disable the remote alarm if necessary.

4.4 Equipment Required

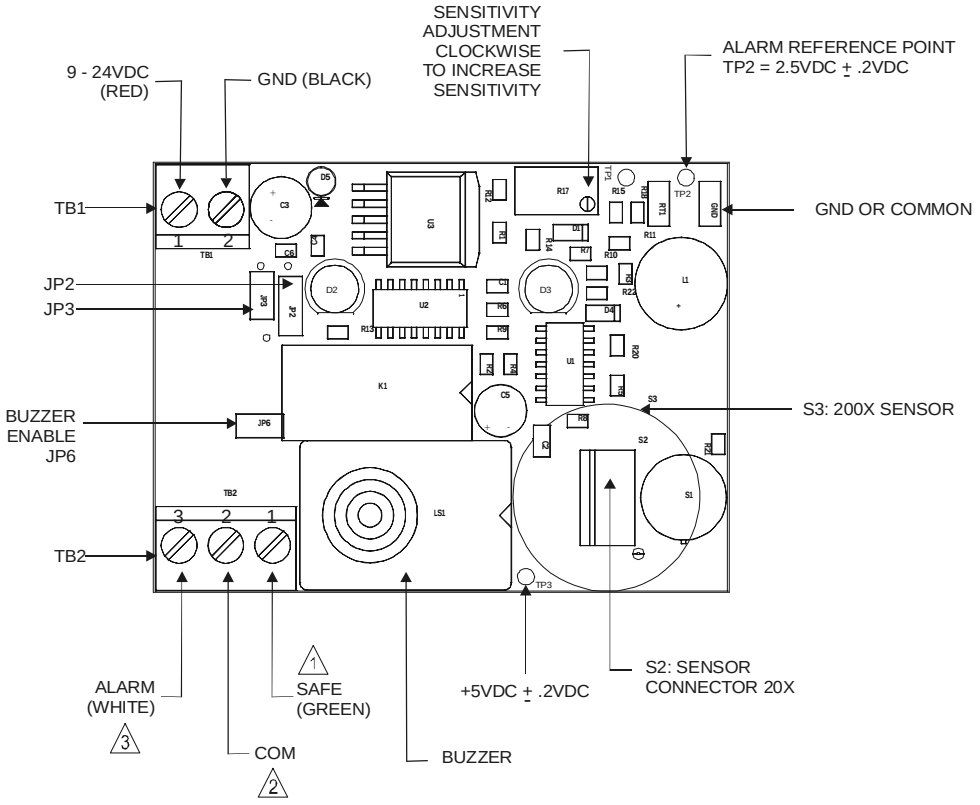
The following tools and equipment will be required for calibration:

- Jewelers Screwdriver
- Calibration Gas
- Calibration gas delivery system

For accurate calibration use a gas mixture at the required concentration mixed in an air balance, rather than with an inert gas like nitrogen. This gas and the required delivery equipment such as the Model 1200-26 Calibrator is available from Sierra Monitor Corporation.

4.5 Calibration Procedure

1. The monitor should be in the safe condition prior to calibration (green LED “ON”).
   - **Be sure that the area is non-hazardous before proceeding.**
   - **Disable alarm devices**
2. On the 20X, remove the cover prior to exposing the sensor with gas. On the 200X series (see Figure 1.1 or 1.2) the sensor is in the lower right hand corner of the electronics board and the cover does not need to be removed.
3. Apply calibration gas directly to the sensor.
4. If the monitor alarms (red LED “ON”) within one minute and stops within one minute of the removal of the calibration gas, the monitor is in calibration and requires no adjustment.
5. If the monitor fails to alarm within one minute of the application of the gas, use a jeweler’s screwdriver to adjust the sensitivity adjustment potentiometer (R4, Fig. 4.1) clockwise until the alarm turns “ON”.
6. If the monitor fails to stop alarming within one minute of removal of the gas, adjust the potentiometer counterclockwise until the alarm stops.
7. After adjustment, repeat the application and removal of gas to verify calibration.
8. When the calibration is complete, reconnect any alarm equipment as necessary.



1 WHEN IN SAFE CONDITION, VOLTAGE DC = 4.0 ± .5V

2 COMMON RELAY CONTACT

3 WHEN IN ALARM CONDITION, VOLTAGE DC = 4.0 ± .5V

Figure 4.1
Electronics Board

5.0 SERVICE

5.1 Enclosure Replacement

The Model 20X enclosure should be replaced if the lid threads or conduit threads have been damaged, or if the enclosure has corroded sufficiently that it no longer meets the required NEMA classification.

To replace the enclosure follow the electronics board and sensor removal instructions, remove the damaged enclosure from its conduit or wall mounting, install a new enclosure and continue the electronics board and sensor assembly replacement instructions.

5.2 Electronics Board Replacement

The electronics assembly should be replaced when it is determined that it is unreliable, noisy or cannot be adjusted for calibration. This may occur due to age, corrosion or failed components.

To replace the electronics assembly in the Model 20X Series:

1. Confirm that the system power has been removed.
2. Remove the lid of the main enclosure.
3. Disconnect the sensor from the plug on the lower right hand corner of the board.
4. Disconnect power and signal wires from terminal strip TB1 and the wires at TB2.
5. Press closed the two plastic holders retaining the electronics board and remove the board.
6. Reverse the preceding steps to install the new electronics board.
7. Restore power and allow a minimum of 30-60 minutes for stabilization before recalibration if the unit was off power for less than 60 minutes.

To replace the electronics assembly in the Model 200X Series:

1. Confirm that the system power has been removed.
2. Remove unit from mounting surface.
3. Remove the cover of the main enclosure by removing the two small screws on the top and bottom of the enclosure.
4. Disconnect power and signal wires from terminal strip TB1 and the wires from TB2.
5. Remove the two screws retaining the electronics board from the back of the enclosure.
6. If you are not replacing the sensor, unplug it from the electronics board.
7. Reverse the preceding steps to install the new electronics board.
8. Restore power and allow a minimum of 30-60 minutes for stabilization before recalibration if the unit was off power for less than 60 minutes.

5.3 Sensor Replacement

The gas sensor needs replacement when:

- It is no longer possible to obtain correct calibration
- The failed sensor alarm (oscillating red/green LED) is on
- The sensor output signal is noisy, causing incorrect gas alarms.

To replace the sensor on the Model 20X series:

1. Confirm that the system power has been removed.
2. Remove the cover from the main enclosure.
3. Unplug the sensor connector on the lower right hand corner of the electronics board.
4. Unscrew the sensor assembly from the end of the enclosure.
5. Reverse the preceding steps to install the new sensor assembly.
6. Restore power and allow a minimum of 24 hours for stabilization before recalibration. The calibration should be re-verified after 6 days of continuous operation.

To replace the sensor on the Model 200X series:

1. Confirm that the system power has been removed.

2. Remove the cover from the main enclosure.

3. Unplug the sensor from the lower right hand corner of the electronics board.

4. Reverse the preceding steps to install the new sensor assembly.

5. Restore power and allow a minimum of 24 hours for stabilization before recalibration. The calibration should be re-verified after 6 days of continuous operation.

6.0 INSTALLATION

6.1 Gas Sensor Module Locations

The gas sensor module is a diffusion type sensor that should be located close to the anticipated source or destination of the gas hazard. For heavy gases such as H_2S install the module within 24 inches of the ground. For lighter gases such as CO and combustible gases use a higher elevation.

After optimum locations are determined based on the above recommendations, consideration should be given to placing the sensors in locations that are accessible for calibration service. Slight adjustments to the location of the sensor may have little impact on effectivity but major effect on accessibility.

6.2 Mounting

1. Model 20X Series

Where possible sensor modules should be installed with the sensor facing vertically down. The lid of the sensor module should face out for easy access.

Sensors may be mounted directly onto the end of a vertical conduit, or bracketed to a vertical surface using the two mounting flanges. Insure that the body of the enclosure is at least 1" from the wall so that the sensor assembly can be rotated for removal and replacement.

2. Model 200X Series

Where possible sensor modules should be installed on a vertical surface. The module can be mounted either using screws through the mounting flanges or using an adhesive tape provided with the unit.

These modules are intended for use with the plug-in AC/DC power supply shipped connected to the unit. The module should be mounted in an area convenient for the plug-in power supply. The power supply is removed if connecting the module to a Sierra Monitor Alarm Panel. If the power supply provided by Sierra Monitor is not used, user must employ any wiring methods according to the US NEC and the Canadian CEC and Class 2 power source requirements.

6.3 Wiring

Interconnect wiring from the controller to the module is by 4 conductor 22 AWG (or lower AWG) cable, conduit as necessary. Shielding is not required. For installations where the distance from the controller to the sensor is greater than 500 feet, 18 AWG cable is recommended.

The terminal strip on the electronics board in the module. The wiring must be connected as indicated in Figure 6.1 depending upon the controller or relay configuration being used.

6.4 Power Supply

The power supplied by the controlling device or an external power supply must meet the following specifications:

Voltage:	9 - 24 VDC (It must be a Listed/Certified Class 2 output power source.
Current:	250 mA

The Model 200X Series includes a plug-in AC/DC power supply.

Terminal	Function
TB1-1	+ VDC (9 – 24)
TB1-2	GND (0VDC)
TB2-1	Relay NC (Normally Closed) or Output to Model 2102 Safe
TB2-2	Relay Common
TB2-3	Relay NO (Normally Open) or Output to Model 2102 Alarm

Table 6.1

6.5 Alarm Configuration

The Model 20X/200X allows the user to select the alarm/output configuration using jumpers. Please refer to table 6.2 to determine how to configure the monitor for your required condition.

Model 20X or 200X Configured with Alarm Relay Output				
Configuration Jumpers				
Buzzer Active		Relay Operation		
Yes	No	Normally Not Energized		Normally Energized
Default		Default		
Install Jumper JP6	Remove Jumper JP6 (Best for 20X)	Install Jumper JP2 pins 1-2		Install Jumper JP2 pins 2-3
Wiring Terminations				
Power Supply		Output Terminals		
TB1-1	TB1-2	TB2-1	TB2-2	TB2-3
+ DCV (9-24 VDC)	0 DC Common	NC	Common	NO
Model 20X or 200X Configured for Interface to Model 2102 Alarm Panel				
Configuration Jumpers				
Buzzer Active		Relay Operation		Interface Selection
Yes	No	Normally Not Energized	Normally Energized	Model 2102
Default		Default		
Install Jumper JP6	Remove Jumper JP6 (Best for 20X)	N/A	N/A	Install Jumpers JP3 pins 1-2 JP2 pins 1-2
Wiring Terminations				
Power Supply		Output Terminals		
TB1-1	TB1-2	TB2-1	TB2-3	TB2-2
+ DCV To Model 2102 Terminal J5 -2 or J6-2	0 DC To Model 2102 Terminal J5 -3 or J6-3	Safe To Model 2102 Terminal J5 -1 or J6-1	Alarm To Model 2102 Terminal J5 -4 or J6-4	Not Used

Table 6.2
Jumper Configuration and Wiring Terminations

In addition, the TB2 contacts need to be properly selected to ensure that the Model 2102 receives the correct alarm signal from the Model 20X/200X. (See Table 6.3)

Relay Operation			
Normally Not Energized			
	TB2-1 NC	TB2-2 Common	TB2-3 NO
No Power	Connected		Open
Sensor Fail	Oscillating		
Safe	Connected		Open
Alarm	Open	Connected	
Normally Energized - Fail Safe			
	TB2-1 NC	TB2-2 Common	TB2-3 NO
No Power	Connected		Open
Sensor Fail	Oscillating		
Safe	Open	Connected	
Alarm	Connected		Open

Table 6.3
Relay Operating States

6.6 Explosion Proof Installation

Where area classification requires explosion proof (NEMA-7) installation, a sealing fitting will be required immediately above the gas sensor module enclosure.

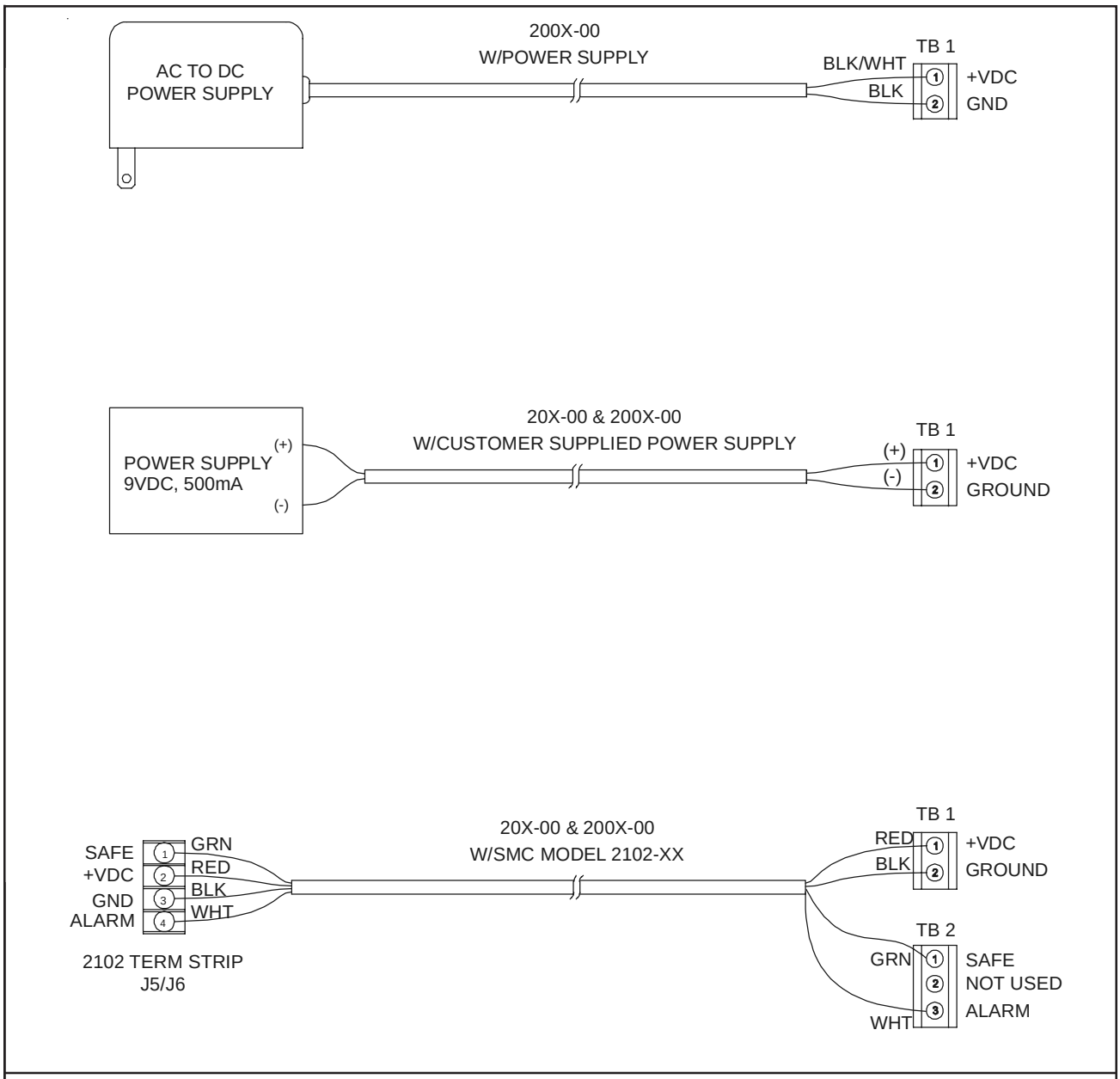


Figure 6.1
Interconnect Wiring Table

7.0 SPECIFICATIONS

Sensor Type:	Solid-State Metal Oxide Semiconductor
Visual Indicators:	Green LED for Monitor “ON/Safe”, Red LED for Alarm LEDs oscillate ON/OFF for sensor failure (LEDs are external on the 200X Series, and internal for calibration on 20X Series)
Input:	9 - 24 VDC (±1V), 250 mA 200X Series includes a Class 2 plug-in 120 VAC AC/DC Power Supply. Wiring methods should follow US NEC and the Canadian CEC and Class 2 power source requirements. Alternative power supplies should be Listed/Certified Class 2 output power source.
Range:	(at 50% relative humidity)
Model 201/2001	300-2,000 ppm Hydrogen, 500-10,000 ppm Methane
Model 203/2003	10-50 ppm Hydrogen Sulfide (H_2S)
Model 206/2006	50-500 ppm Carbon Monoxide (CO)
Factory Alarm Setpoint:	
Model 201/2001	1000 ppm Methane
Model 203/2003	50 ppm H_2S
Model 206/2006	100 ppm CO
Output:	
20X/200X-00 Series	0.5 amp dry contact, normally open, 100 VDC, 130 VAC and audible buzzer Nominal 5 volts DC, source 25 mA, SAFE and ALARM signals are user configurable
Response Time:	
Model 201/2001	Less than 30 seconds
Model 203/2003	For 50 ppm alarm, if 50 ppm H2S is present: 1-4 minutes, if >250ppm H2S is present: 30-90 seconds
Model 206/2006	Less than 30 seconds
Periodic Maintenance:	None, other than routine calibration
Operating Temperature Range:	-4°F to 158°F (-20°C to 70°C)
Enclosure Material:	
Model 20X Series	Cast aluminum for protection against galvanic corrosion
Model 200X Series	Stamped aluminum sheet metal
Size:	
Model 20X Series	6.75 x 4.0 x 3.5 in. (17.1 x 10.2 x 6.0 cm)
Model 200X Series	2.7 x 2.2 x 1.0 in. (7.0 x 5.7 x 2.5 cm)
Weight:	
Model 20X Series	24 oz (678 g)
Model 200X Series	3.8 oz (108 g)

8.0 LIMITED WARRANTY

SIERRA MONITOR CORPORATION warrants its products to be free from defects in workmanship or material under normal use and service for two years after date of shipment. SMC will repair or replace without charge any equipment found to be defective during the warranty period. Final determination of the nature and responsibility for defective or damaged equipment will be made by SMC personnel.

All warranties hereunder are contingent upon proper use in the application for which the product was intended and do not cover products which have been modified or repaired without SMC approval or which have been subjected to accident, improper maintenance, installation or application, or on which original identification marks have been removed or altered. This Limited Warranty also will not apply to interconnecting cables or wires, consumables (ie. calibration gases, batteries, sensors), nor to any damage resulting from battery leakage.

In all cases SMC's responsibility and liability under this warranty shall be limited to the cost of the equipment. The purchaser must obtain shipping instructions for the prepaid return of any item under this warranty provision and compliance with such instruction shall be a condition of this warranty.

Except for the express warranty stated above, SMC disclaims all warranties with regard to the products sold hereunder including all implied warranties of merchantability and fitness and the express warranties stated herein are in lieu of all obligations or liabilities on the part of SMC for damages including, but not limited to, consequential damages arising out of/or in connection with the use or performance of the product.

9.0 INDEX

Appendix A

Cross Sensitivity Reference Chart for Combustible Gas Sensor Modules (201 & 2001)

Combustible Gas Modules will alarm in the presence of each of the listed gases at the concentration listed.

Gas	Concentration (PPM)
Methane	1000
Acetone	350
Acetonitrile	1000
Acrylonitrile	1000
Acetylene	4000
Acetic Acid	700
n-Butane	800
I-Butane	800
I-Butanol	700
2-Butanol	1000
1-Butanol	1000
t-Butanol	2000
Butanoic Acid	500
n-Butylamine	1500
Butylene	2000
Chloroform	160
Chlorobenzene	150
Chlorocyclohexane	100
Cyclohexane	1200
Cyclopentane	700
Diethylamine	800
Diethylketone	700
Dipropylether	400
Ethane	300
Ethanol	300
Ethylene	600
Ethyl Chloride	70
Ethylnitrile	1500
Formic Acid	2000
Freon 113	55

Gas	Concentration (PPM)
n-Heptane	1500
n-Hexane	1100
1-Hexanol	1500
Hydrogen	400
Methanol	500
Methylene Chloride	90
Methyl Bromide	150
Methyl Chloride	150
Methyl Ethyl Ketone	500
Methyl Propyl Ketone	500
Nitroethane	1000
Nitromethane	2000
1-Pentanol	1200
Pentanoic Acid	500
Propanal	500
Propane	900
n-Propanol	300
i-Propanol	800
Propanoic Acid	200
n-Propylamine	1500
i-Propylamine	1000
Propyl Chloride	100
Propylene	2000
Pyridine	1000
Tetrachloroethylene	150
Trichlorethylene	70
Triethylamine	800

Appendix B

Accessories and replacement parts

Alarm Panels

Model 2102-00	Alarm Panel - 2 channel
Model 2102-01	Alarm Panel - 2 channel with audible

Calibration Accessories

1200-26	Gas Sensor Calibrator w/2 gas cylinders (specify gas type/conc)
1290-03	Gas Cylinder - Methane 5000 PPM
1290-04	Gas Cylinder - Methane 1000 PPM
1290-05	Gas Cylinder - Carbon Monoxide 100 ppm
1290-07	Gas Cylinder - Hydrogen 500 PPM

Replacement parts

SPD21513	Sensor for 203-00
SPD22034	Sensor for 201-00
SPD22035	Sensor for 206-00
SPD22107-201	Electronics Assembly for 201-00
SPD22107-206	Electronics Assembly for 206-00
SPF22107-2001	Electronics Assembly for 2001-00
SPF22107-2003	Electronics Assembly for 2003-00
SPF22107-2006	Electronics Assembly for 2006-00
SPD32057-1	Enclosure for 20X
SPF33003	Sensor for 2001-00
SPF33007	Sensor for 2006-00
SPF33008	Sensor for 2003-00
SPF69020	Power Supply 9 VDC for 200X

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Appendix C

Reference Model

The list provides a reference to the older 20X/200X part numbers.

Model #	Gas	Outdoor	Indoor	Jumpers Are Set For
201-00	Combustibles	X		2102 Configuration, without Buzzer, without Relay
201-10	Combustibles	X		Normally Open; without Buzzer
201-11	Combustibles	X		Normally Closed; without Buzzer
203-00	H2S	X		2102 Configuration, without Buzzer, without Relay
203-10	H2S	X		Normally Open; without Buzzer
203-11	H2S	X		Normally Closed; without Buzzer
206-00	CO	X		2102 Configuration, without Buzzer, without Relay
206-10	CO	X		Normally Open; without Buzzer
206-11	CO	X		Normally Closed; without Buzzer
2001-00	Combustibles		X	2102 Configuration with Buzzer, without Relay
2001-10	Combustibles		X	Normally Open; without Buzzer
2001-11	Combustibles		X	Normally Closed; without Buzzer
2003-00	H2S		X	2102 Configuration with Buzzer, without Relay
2003-10	H2S		X	Normally Open; without Buzzer
2003-11	H2S		X	Normally Closed; without Buzzer
2006-00	CO		X	2102 Configuration with Buzzer, without Relay
2006-10	CO		X	Normally Open; without Buzzer
2006-11	CO		X	Normally Closed; without Buzzer