



## User Notice SMC 4501 and SMC 5100 Series Gas Detectors

November 28, 2022

**MSA Corporate Center**  
1000 Cranberry Woods Drive  
Cranberry Township, PA 16066  
800.MSA.2222  
www.MSAafety.com

### **Dear SMC Gas Detection Customer,**

MSA is issuing this User Notice to inform you that MSA has identified a hazardous location labeling error on SMC 4501 and SMC 5100 series gas detectors.

The part numbers listed in Appendix 1 have markings for Class 1 Division 1 hazardous location use without independent third-party testing to validate the marking.

MSA has determined that these part numbers would not be expected to pass the testing necessary for use in Class 1 Division 1 or Class 1 Division 2.

MSA has not received any reports of injuries or incidents associated with this condition. However, we are requesting that you perform the actions outlined in this notice.

MSA has developed solutions based on the specific gas detector and installation location. The solutions are detailed in the "Addressing Affected Gas Detectors" section. Please read this section and click the link to fill out the webform to provide the details of your installation.

Due to the number of unlikely circumstances involving your detector that would be necessary to create a potential hazard, MSA has deemed it appropriate to continue usage of your existing detector(s) until delivery and commissioning of your replacement equipment.

We recognize that this is an inconvenience and, in an effort, to minimize any disruption, we pledge to take corrective actions as expeditiously as possible.

Note: Sensors for combustible gases and hydrogen sulfide are not affected by this User Notice. These have been independently verified to Class 1 Division 1 hazardous locations and do not require any action.

**MSA is advising all customers that use SMC 4501 and SMC 5100 series gas detectors to review this User Notice and take the appropriate actions based on the specific gas detector in use and the hazardous location classification of the installed location.**

## **Addressing Affected Gas Detectors**

The solution depends on your specific detector and installation needs. In order to determine the solution, please supply answers to the SMC User Notice Questionnaire by going to the below website and submitting the form. Your solution will fall into 1 of 5 scenarios, detailed in the “Resolution Scenarios” section.

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## **SMC User Notice Questionnaire (submit answers via electronic form)**

Submit one form for each of your detector configurations that must remain in Class 1 Division 1 or Class 1 Division 2 hazardous locations.

Instructions to find the information on your detector are located in Appendix 2 and on the electronic form. It is recommended to read through all questions prior to disassembly/inspection of units.

Note: Opening your 5100 unit is only necessary if your units must remain in a hazardous location and you are unsure of the communication connection method and/or relay configuration of your unit. All local cautions and procedures must be followed prior to disassembly of units.

URL: [MSAafety.com/smc-user-notice](http://MSAafety.com/smc-user-notice)

QR code:



Form Questions: (the form may reduce the number of questions asked depending on your answers)

1. Are your detectors in a Class 1 Division 1 or Class 1 Division 2 hazardous location?
2. Can all of the detectors move be moved to a non-hazardous location while maintaining your detection needs?
3. For only the detectors that must remain in a hazardous location, please fill out the following information for each configuration in use:
  - a. 4501 and 5100 Models
    - i. Model Number (see Figure 1)
    - ii. Quantity
    - iii. Housing Type
    - iv. Hazardous Location
    - v. Is a T4 temperature rating acceptable?
    - vi. Thread Type (only needed for select applications)
  - b. 5100 Models Only
    - i. Firmware Revision (see Figure 2)
    - ii. Connection Method (see Figure 3)
    - iii. Relay Configuration (see Figure 4)

## **Resolution Scenarios**

### **Scenario 1: The detector is in a non-hazardous location.**

There are no hazardous location concerns.

MSA recommends to obscure the Class 1 Division 1 marking using a permanent black marker. (see Figure 5)

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### **Scenario 2: The detector is in a Class 1 Division 1 or Class 1 Division 2 hazardous location but can be relocated to a non-hazardous location while maintaining your detection needs.**

Relocate the detector to the non-hazardous location and install per instruction manual.

MSA recommends to obscure the Class 1 Division 1 marking using a permanent black marker. (see Figure 5)

### **Scenario 3: The detector is in a Class 1 Division 1 or Class 1 Division 2 hazardous location, cannot be relocated to a non-hazardous location and is gas type O<sub>2</sub>, CO or CO<sub>2</sub> (see Appendix 1)**

MSA will provide you with a replacement sensor body for your detector that has passed independent third-party testing to validate the hazardous location marking. Install the replacement sensor on your detector and dispose of the old sensor per local regulations.

For 5100 units with firmware revisions prior to 3.05, MSA will also provide you with a new front plate and PCBA assembly for installation into your detector. Install the new components in accordance with the instruction manual. The new front plate will not have a hazardous location marking on it.

### **Scenario 4: The detector is in a Class 1 Division 2 hazardous location, cannot be relocated to a non-hazardous location, and is a reactive gas type (see Appendix 1)**

Obscure the Class 1 Division 1 marking using a permanent black marker. (see Figure 5).

MSA will provide you with a replacement sensor body for your detector that has passed independent third-party testing to validate the hazardous location marking. Install the replacement sensor on your detector and dispose of the old sensor per local regulations.

### **Scenario 5: The detector is in a Class 1 Division 1 hazardous location, cannot be relocated to a non-hazardous location, and is a reactive gas type (see Appendix 1)**

MSA will provide you with an MSA PrimaXP detector to replace your current product, as well as an SMC 5100-99-IT transmitter if using a PSG or Modbus protocol with a Sentry controller.

Remove and dispose of your existing detector per local regulations. Install the PrimaXP and SMC 5100-99-IT (if applicable) in accordance with their respective instruction manuals. No additional product marking updates are required.



**MSA Customer Service Contact Information:**

If you have any questions regarding this User Notice, please contact MSA Customer Service as follows:

- U.S., Canada, or U.S. Territories – 1-866-672-0005 or by email at: [SMCSafetyNotice@MSAsafety.com](mailto:SMCSafetyNotice@MSAsafety.com).

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We apologize for any inconveniences that this may cause; however, your safety and continued satisfaction is important to us.

Issued by: Nathan Andrulonis  
Director, Product Safety

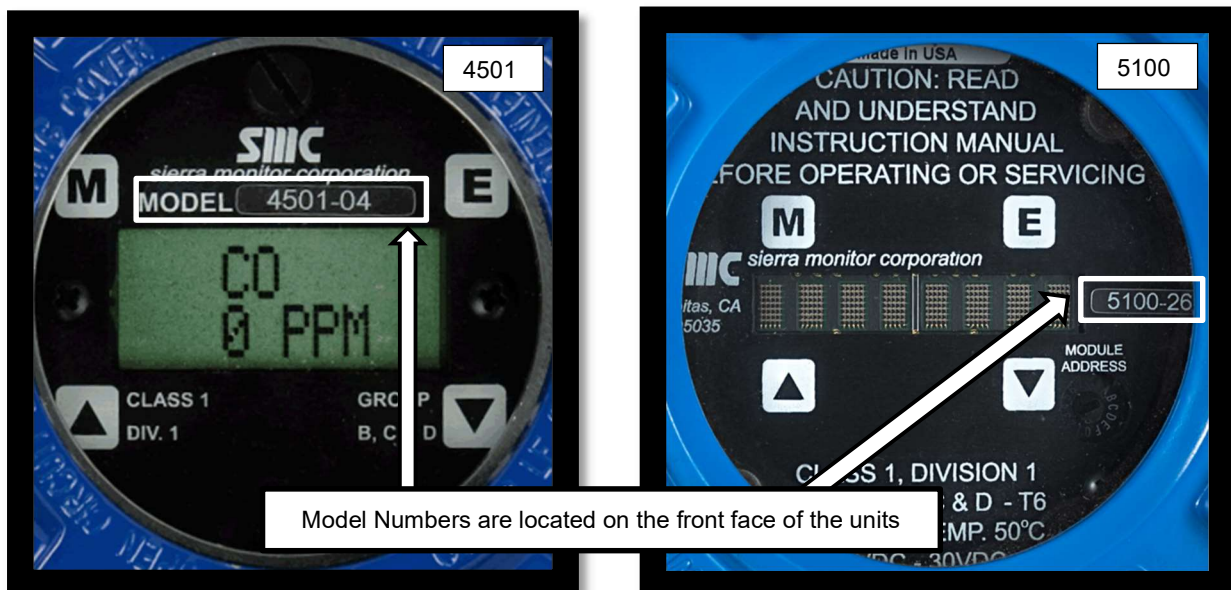
PS22031-02

**Appendix 1 – Affected Part Numbers**

4501 Models		
Model Number	Gas Type	Reactive
4501-03	Oxygen (O <sub>2</sub> )	No
4501-04	Carbon Monoxide (CO)	No
4501-06	Chlorine (Cl <sub>2</sub> )	Yes
4501-08	Chlorine Dioxide (ClO <sub>2</sub> )	Yes
4501-10	Sulfur Dioxide (SO <sub>2</sub> )	Yes
4501-12	Nitrogen Dioxide (NO <sub>2</sub> )	Yes
4501-25	Ammonia (NH <sub>3</sub> )	Yes
4501-26	Hydrogen Fluoride (HF)	Yes

5100 Models		
Model Number	Gas Type	Reactive
5100-03-IT	Oxygen (O <sub>2</sub> )	No
5100-04-IT	Carbon Monoxide (CO)	No
5100-06-IT	Chlorine (Cl <sub>2</sub> )	Yes
5100-08-IT	Chlorine Dioxide (ClO <sub>2</sub> )	Yes
5100-10-IT	Sulfur Dioxide (SO <sub>2</sub> )	Yes
5100-12-IT	Nitrogen Dioxide (NO <sub>2</sub> )	Yes
5100-21-IT	Hydrochloric Acid (HCl)	Yes
5100-25-IT	Ammonia (NH <sub>3</sub> )	Yes
5100-26-IT	Hydrogen Fluoride (HF)	Yes
5100-27-IT	Ethylene Oxide (EtO)	Yes
5100-88-IT	Carbon Dioxide (CO <sub>2</sub> )	No

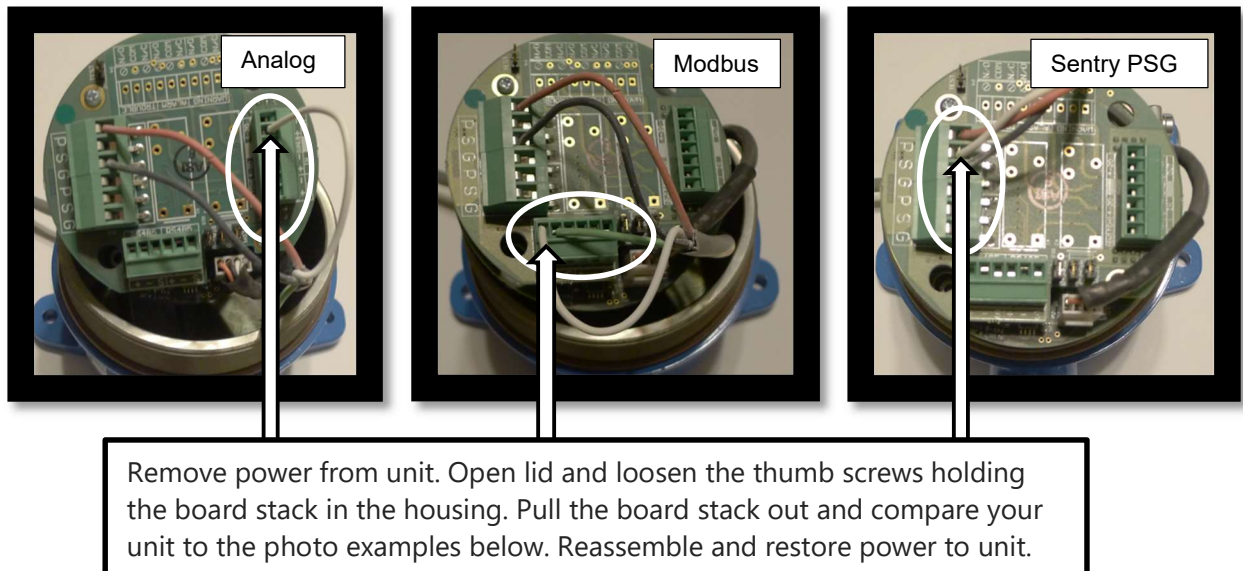
**Appendix 2 - Identifying Potentially Affected Product**



**Figure 1 – Model Number Identification for SMC 4501 & SMC 5100**

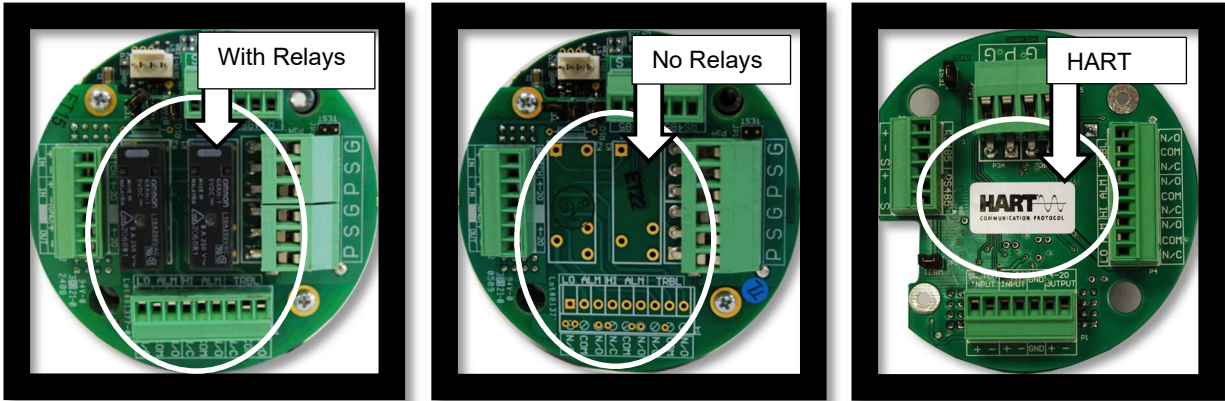


**Figure 2 – Firmware Revision Identification for SMC 5100**

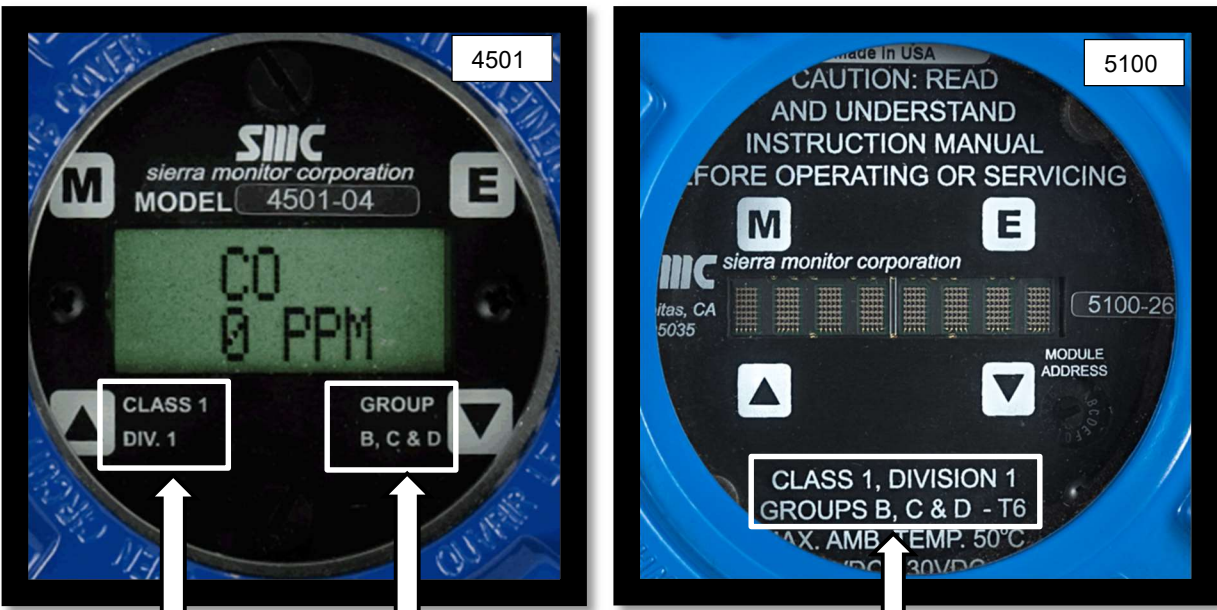


**Figure 3 – Communication Connection Method Identification for SMC 5100**

Remove power from unit. Open lid and loosen the thumb screws holding the board stack in the housing. Pull the board stack out and compare your unit to the photo examples below. Reassemble and restore power to unit.



**Figure 4 – Relay Identification for SMC 5100**



Remove power from unit. Open lid and obscure the markings within the boxes as shown with a permanent black marker. Close the lid and restore power to unit.

**Figure 5 – Marking Obscuration Details for Non-Hazardous Locations**