# AimSafety $PM_{100}$

## Personal Single Gas Monitor

## User's Manual


AimSafety™
Portable Gas Detection Solutions
by Macurco

P/N 34-2900-0206-2 Rev. A
July 2018

# Table of Contents

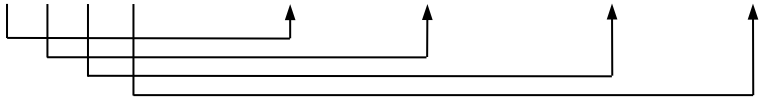
## ⚠ WARNING

- ⚠ Any unauthorized attempt to repair or modify the product, or any other cause of damage beyond the range of the intended use, including damage by fire, lightning, or other hazard, voids liability of the manufacturer.
- ⚠ Activate this product only if sensor, visual, detection, and audible cover are clear from contaminants such as dirt and debris that could block the area where gas is to be detected.
- ⚠ Do not clean and rub the LCD screen of the products with a dry cloth or hands in hazardous environment to prevent static electricity.
- ⚠ Perform cleaning and maintenance of the products in fresh air that is free of hazardous gases.
- ⚠ Test the response of the sensor regularly with a gas concentration exceeding the alarm set point.
- ⚠ Test LED, audio, and vibration manually.
- ⚠ Gas concentration measurements by the sensor can vary based on the environment (temperature, pressure and humidity). Therefore, calibration of $PM_{100}$ should be performed in the same (or similar) environment of the device's actual use.
- ⚠ If the temperature changes sharply during use of the device (e.g., indoors vs outdoors), the value of the measured gas concentration can suddenly change. Please use the $PM_{100}$ after the gas concentration value has stabilized.
- ⚠ Severe vibration or shock to the device may cause a sudden reading change. Please use $PM_{100}$ after the value of gas concentration has stabilized. Excessive shock to $PM_{100}$ can cause the device and/or sensor to malfunction.
- ⚠ All alarm values are set based on the alarm standard that is required by international standards. Therefore, alarm values should be changed only under the responsibility and approval of the administration of the work site where the instrument is used.
- ⚠ Use IR communications in the safety zone which is free of hazardous gases.
- ⚠ Do not attempt to replace the battery and sensor as $PM_{100}$ is designed to be disposable. Changing the battery and sensor may impair intrinsic safety and the attempt will void warranty.

## ⚠ CAUTIONS

- ⚠ Before operating this device, please read the manual carefully.
- ⚠ This device is not a measurement device, but a gas detector.
- ⚠ If calibration and self-test fails continuously, please do not use the device.
- ⚠ For the $O_2$ detector, perform calibration every 30 days in the fresh air environment.
- ⚠ Before use, please check the activation date, and if the activation date has past, please do not use the device.
- ⚠ Clean detectors with a soft cloth and do not use chemical substances for cleaning.
- ⚠ To maintain a 24-month lifetime, avoid the below activities except in necessary cases to check events(Max/Min), lifetime/concentration, and alarm set points. Otherwise, the frequent use of the button will deplete the battery lifetime less than 24 months.
  1. Push the button frequently without valid reasons.
  2. Frequent alarm operation or alarms are remained for a long time.
     *Normal Alarm Use: 1 time and 2 minutes per day.
  3. Connect with the PM Link frequently except the bump testing.
- ⚠ View a serial number on the label at the back side of the device. (ex, 20170101)
  1. The serial number indicates below.

ex: SG 01 01 001 2017(Year) 01(Months) 01(Day) 001(Manufacture Order)



# 1. General Information

The PM100 is a maintenance-free, disposable portable single-gas monitor that protects workers by providing exposure detection for specific gases in hazardous environments. The PM100 continuously monitors ambient air conditions and provides real-time gas concentrations on an easy to read LCD display. A three-tier alarm system warns the user of the presence of unsafe gas levels with audible, visual, and vibrating alarms. The PM100 has sensor options for Carbon Monoxide (CO), Hydrogen Sulfide ($H_2S$) and Oxygen ($O_2$).

## Key Features

**Lightweight and Compact**
3.3 oz (93 g) toxic sensors, 3.7 oz (104 g) oxygen sensor

**User Friendly**
Menu-driven, intuitive end-user operation

**Programmable Alarm Thresholds**
Audio, buzzer, and flashing display alarm

**Programmable Calibration and Bump Test Due Notifications**
On/Off, and timing based on end-user's needs

- Sensor options: CO, H2S, O2
- Large, easy-to-read display
- Single button operation
- Event logging
- Visual alarm with bright flashing LEDs
- Distinct audible alarm
- Vibrating alarm
- Durable weather resistant case
- Rugged clip

Programmable options (PM Link)

- Stealth Mode
- Go/No Go display
- Bump Test due
- Calibration due

# 2. Specifications

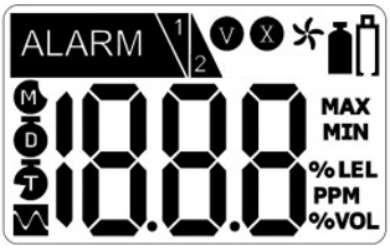
## 2.1. PM100 Specifications

| Model | PM100 | | |
|---|---|---|---|
| **Gas Type** | O2 | CO | H2S |
| **Detecting Method** | Diffusion | | |
| **Measure type** | Electrochemical Cell | | |
| **Range** | 0 – 30% Vol | 0 – 500 ppm | 0 – 100 ppm |
| **Sensor life** | 2 years | > 2 years | > 2 years |
| **Resolution** | 0.1% Vol | 1 ppm | 0.1 ppm |
| **User Settings** | User Selectable via PM Link and PC Software or Bump Test-Calibration Station | | |
| **Display** | LCD Display | | |
| **Alarm display** | RED, Flashing LEDs (Light-Emitting Diode) | | |
| **Audible alarm** | 90 dB at 4 inches (10 cm) | | |
| **Vibrating alarm** | Vibration Alarm | | |
| **Alarm level set** | User Selectable via PM Link and PC Software or Bump Test-Calibration Station | | |
| **Event Logging** | 30 events | | |
| **Mounting type** | Clip | | |
| **Program set mode** | User Selectable via PM Link and PC Software or Bump Test-Calibration Station | | |
| **Operating temperature** | -40°F to +122°F (-40°C to +50°C)<br>-31°F to +122°F (-35°C to +50°C) (for O2) | | |
| **Operating humidity** | 5% to 95% RH (Non-condensing) | | |
| **Battery** | 3.6V 1.2Ah | | |
| **Operating Life** | 24 months, based on 2 minutes of alarm per day (with limited IR communication usage) | | |
| **Material** | Polycarbonate and rubber | | |
| **Dimensions** | 3.6"(L) x 2.2"(W) x 1.3"(H) (91 mm x 54 mm x 32 mm) | | |
| **Weight** | 3.3 oz (93 g) Toxic, 3.7 oz (104g) O2 (Battery, clip included) | | |
| **Approval** | See Certificates | | |
| **Ingress Rating** | IP67 | | |
| **Compliance** | Electromagnetic Compatibility Directive 2014/30/EU | | |
| **Manufacturing Approval** | The detector manufacturer is certified compliant with ISO 9001:2000 provisions | | |
| **Options** | PM LINK, PM100 Bump Test-Calibration Station | | |
| **Warranty** | 2 years | | |

# 3. Product Overview

## 3.1. Monitor Overview


## 3.2. Display Overview




**LCD display symbols**

| | | | |
|---|---|---|---|
| ALARM | Alarm condition | M | Remaining Month(s) |
| 1 | Low Alarm | D | Remaining Day |
| 2 | High Alarm | T | Remaining Hour(s) |
| V | Stabilization Success Or Firmware Version | MAX | Max Peak Value |
| X | Stabilization Failure | MIN | Min Peak Value |
| | Fresh Air Calibration Icon | PPM %VOL | Measurement Unit |
| | Span Calibration Icon | | Lifetime less than 30 days Or Low Battery |
| 1888 | Real-Time Gas Readings Or Numerical Values Or Abbreviated Text | | |

# 4. Activation

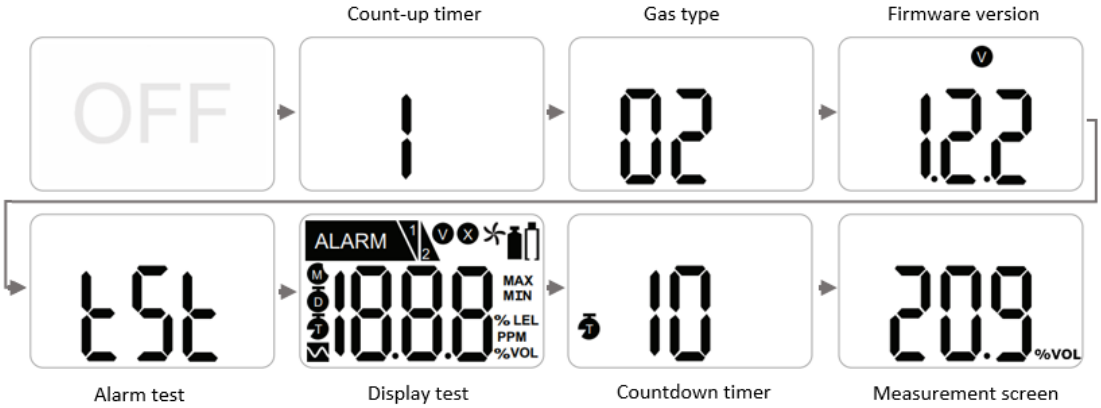
> ⚠ **CAUTION: Before use, check the activate by date on the box. Do not use the monitor if the activate by date has passed.**

**Note:** The PM100 monitor is designed to operate continuously for the life of the instrument and cannot be turned off once activated.

## 4.1. Activating the Monitor

To activate the monitor, press and hold the [Function key] for 3 seconds. While the key is depressed, a 3-second count-up timer will be displayed. Once the counter reaches three (3), release the [Function key].

The monitor will perform the following startup sequence.




The unit will display the gas type, firmware version, display/alarm test, followed by a 10-second stabilization countdown. Once the countdown ⓥ is complete, the monitor defaults to Measurement mode, displaying the current gas readings and the icon.

> ⚠ Sensor readings may drift during shipping. All newly purchased monitors should be bump tested to a known concentration of gas before use.

If sensor stabilization fails, the ⓧ icon will appear on the display and no gas concentrations will be displayed. Perform a calibration (see Calibration) or contact AimSafety for more information.

# 5. User Interface

The PM100 has two operational modes:

- **Measuring Mode** – Standard display operation with real-time gas readings always displayed
- **Basic Mode** – Remaining sensor life will be displayed unless an alarm condition is detected

**Gas concentrations** are displayed with gas specific units of measure based on the type of gas to be detect. Oxygen concentrations are displayed in percent by volume (%Vol) and toxic concentrations are displayed in parts per million. (PPM)

## 5.1. Display Modes

**Measuring Mode** is the default mode. Once the monitor is activated the meter will continually display measure gas concentrations in real-time.


**O2**


**H2S**


**CO**

**Basic Mode** is an optional mode where the remaining sensor life will be displayed if the detected gas levels are below the alarm threshold. The monitor will display the active gas reading only after an alarm threshold has been exceeded. Basic mode can only be enabled using the PM Link and software, or the Bump Test-Calibration Station.


**Month**


**Day**


**Hour**

## 5.2. Menu Screens

From the Measurement screen, pressing the [Function key] will step to the next screen.

**Note:** If you do not press the [Function key] within 10 seconds, the display reverts to the main screen.

**Stealth Mode** Press the [Function key] to advance to Stealth Mode (if enabled). Stealth is an optional setting that disables all audible, vibrating alarms and alarm LEDs. When Stealth is enabled, an "StL" screen is added to the menu to indicate that the audible and vibrating alarms are disabled. The display alarm flags are the only indication of an alarm condition.

**Peak MIN** Press the [Function key] to advance to Peak MIN indicated by the MIN icon on the display (O2 only), with the numerical value displayed. The Peak MIN is the lowest concentration of oxygen that the sensor has detected since the peaks were last cleared.

**Peak MAX** Press the [Function key] to advance to Peak MAX indicated by the MAX icon on the display, with the peak max concentration displayed. The Peak MAX is the highest concentration of gas that the sensor has detected since the peaks were last cleared.

**Clear Peaks** Press the [Function key] to advance to Clear Peaks indicated by "CLr" on the display. To clear the peaks, press and hold the [Function key] for three seconds. The unit will beep once, and the MIN/MAX icon will turn off.

**Remaining Life** Press the [Function key] to advance to Remaining Life indicated by one of three icons on the display. Remaining life is the amount of time left on the monitor before End-of-Life. The remaining life is displayed in months, days, or hours as indicated by the display icons.

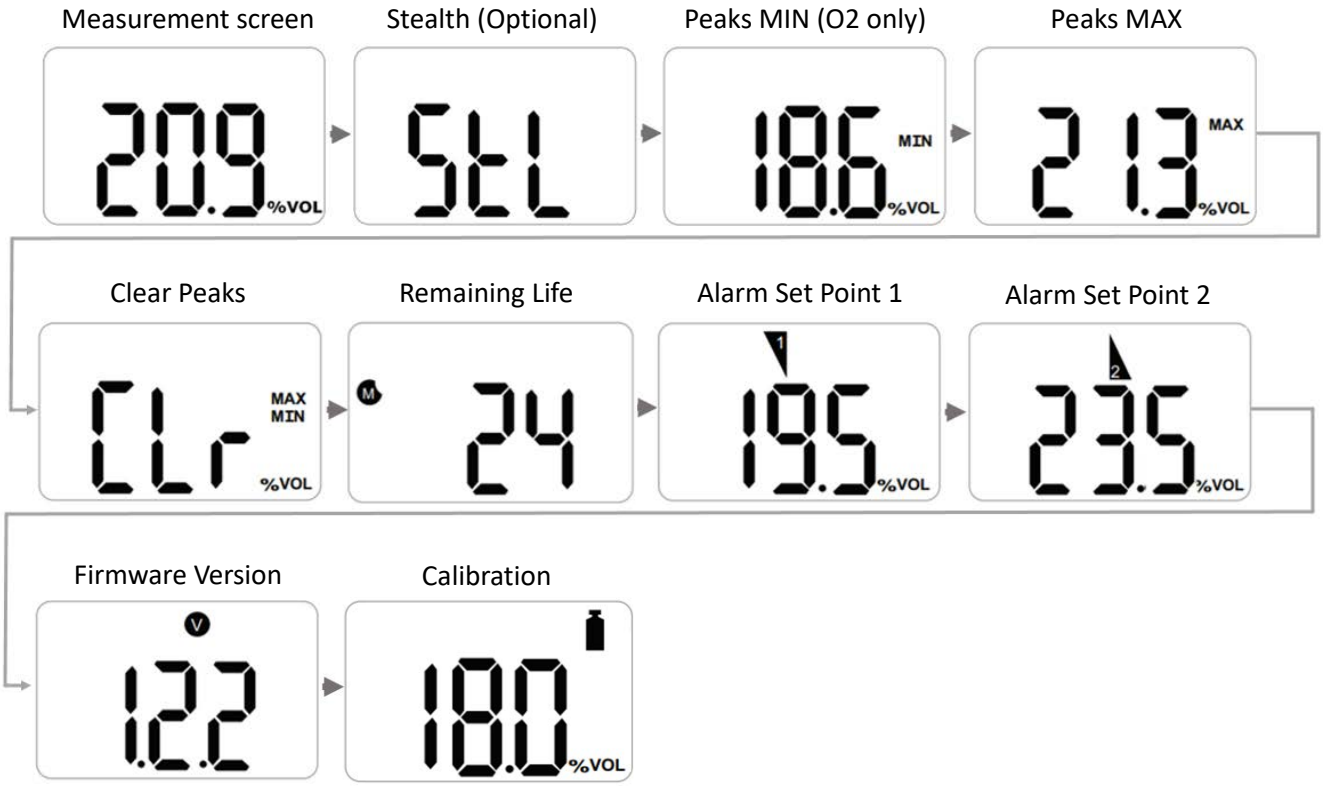
**Alarm 1** Press the [Function key] to advance to Alarm Set Point 1 indicated by the 1 flag on the display. This is the first (low for O2) set point that activates the monitors alarms. The unit will store this alarm data in event logging.

**Alarm 2** Press the [Function key] to advance to Alarm Set Point 2 indicated by the 2 flag on the display. This is the second (high for O2) set point that activates the monitors alarms. The unit will store this alarm data in event logging.

**Firmware** Press the [Function key] to advance to Firmware Version indicated by the V icon on the display. This is the current firmware version that is loaded into the monitor.

**Calibration** Press the [Function key] to advance to Calibration indicated by the calibration cylinder bottle icon on the display. The calibration gas concentration will be displayed. See Calibration for more information on monitor calibration.

### Menu Flow Chart




## 5.3. Alarm and Alerts

When the gas concentration exceeds the monitor's alarm set points the alarms will activate: The display will show the Alarm icon, the Alarm 1 or Alarm 2 icon, and the gas level. The monitor will vibrate, the buzzer will sound, and the LEDs will flash. **Immediately exit the area to clean air**. The alarms will clear once the gas concentrations go below the alarm set points.

**Alarm and Alert indication chart**

| Alarm | Alarm Standard | LCD Display | Alarm and Vibration Display |
|---|---|---|---|
| Low Alarm | Exceeds 1st Alarm set point |   Icons & gas concentration |   |
| High Alarm | Exceeds 2nd Alarm set point |   Icons & gas concentration |   |
| Life remaining | Below 30 days |  Icon | End-Of-Life in less than 30 days |
| End-Of-Life | Past 24 months |   | Monitor has reached End-Of-Life. (Replace the unit with a new PM100) |
| Test failure | Sensor test Or calibration failure |  Icon & buzzer | Perform a successful calibration to clear |
| Battery Low | Low battery power |   | Replace the unit with a new PM100 |
| Bump test | Bump test due |   | Perform a successful bump test to clear |
| Calibration | Calibration due |   | Perform a successful calibration to clear |
| Calibration Failed | Failed calibration |   | Perform a successful calibration to clear |

## 5.4. Default Alarm Set Points

**Note:** Alarm levels can only be changed using the PM Link and software, or the Bump Test-Calibration Station.

| Gas Type | CO | H2S | O2 |
|---|---|---|---|
| Low Alarm | 35 ppm | 10 ppm | 19.5% |
| High Alarm | 100 ppm | 15 ppm | 23.5% |

## 5.5. Self-Test Reminder

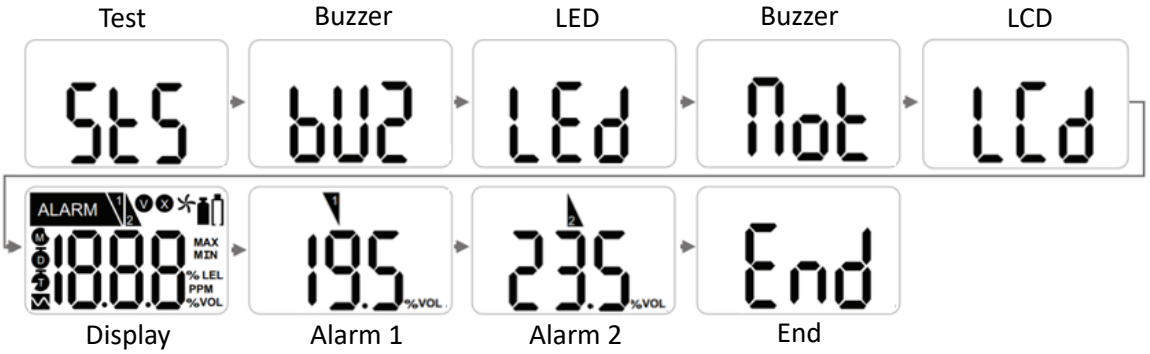
The Self-Test reminder option can be enabled using the PM Link and software or the Bump Test-Calibration Station. The Self-Test reminder can be configured to n/a (Off) or between 8 hours to 20 hours. The default configuration is set to "Off", no Self-Test reminder will be displayed.

When enabled, the monitor will prompt the user to perform the test by displaying "StS" on the display when the test is due.

- To activate the test, press the [Function key].

The unit will then perform the following:

- Buzzer test
- LED test
- Vibration
- LCD test
- Display Alarm set point 1
- Display Alarm set point 2
- End




The user is required to ensure that all the tests pass successfully and that the alarm values are set to the proper levels.

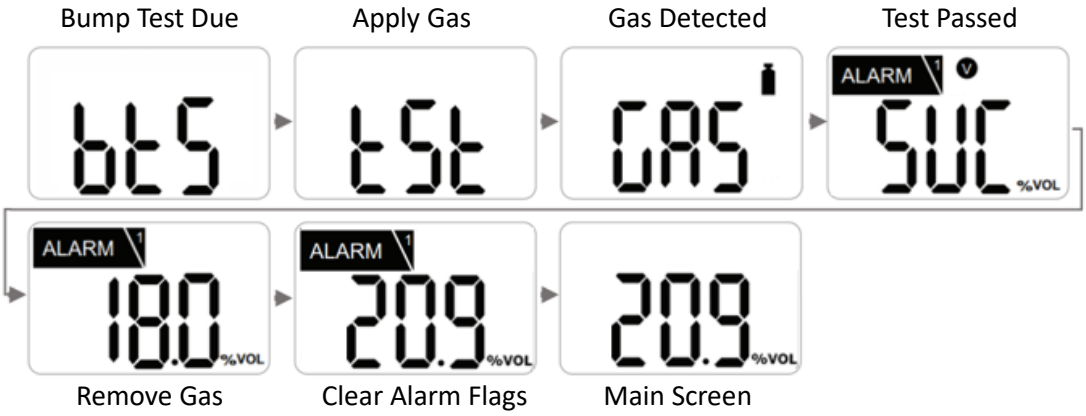
⚠ **Do not use the monitor if any of the tests fail or if the alarm values are incorrect**

## 5.6. Bump Test Reminder

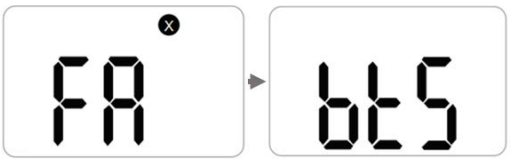
The Bump Test due reminder option can be enabled using the PM Link and software or the Bump Test-Calibration Station. The Bump Test reminder can be configured from n/a (Off) to 365 days. The default configuration is set to "Off", no Bump Test reminder will be displayed.

When enabled, the monitor will prompt the user to perform the test by displaying "btS" on the display when the test is due.

- Ensure that the sensor is reading zero (or 20.9% for Oxygen)
- Attach the calibration (cal) cap on top of the sensor inlet
- Connect the hose from the gas regulator of the calibration gas cylinder to the cal cap. Ensure the calibration gas and gas concentrations match the sensor installed in the instrument
- To activate the test, press and hold the [Function key] for 3 seconds and "tSt" will be displayed
- Turn on the gas regulator
- Once gas is detected, "GAS" will be displayed
- After the test is passed, "SUC" and the ⓥ icon will appear on the display followed by the alarm notification
- Once the test has passed, remove the calibration cap and turn off the calibration gas
- Allow a few minutes for the gas to dissipate
- After the gas has dissipated from the sensor, clear the sensor Peak values




If the sensor fails the bump test, an "FA" message with ⓧ the icon will briefly display, then the "bts" message will resume.




Check the calibration gas concentrations, cylinder expiration date, and the monitor gas settings and re-test the unit. Or perform a full calibration as defined in the calibration section.

⚠ **If the Bump Test fails, do not use the monitor until a successful Bump Test or Calibration is performed.**

# 6. Bump Test

A bump test is used to test that the monitor is working properly. During a bump test, a known concentration of gas is applied to the sensor to verify that the sensor responds to the gas, and the alarms activate. This is the only way to effectively confirm that all characteristics of the monitor and the sensor are working correctly.

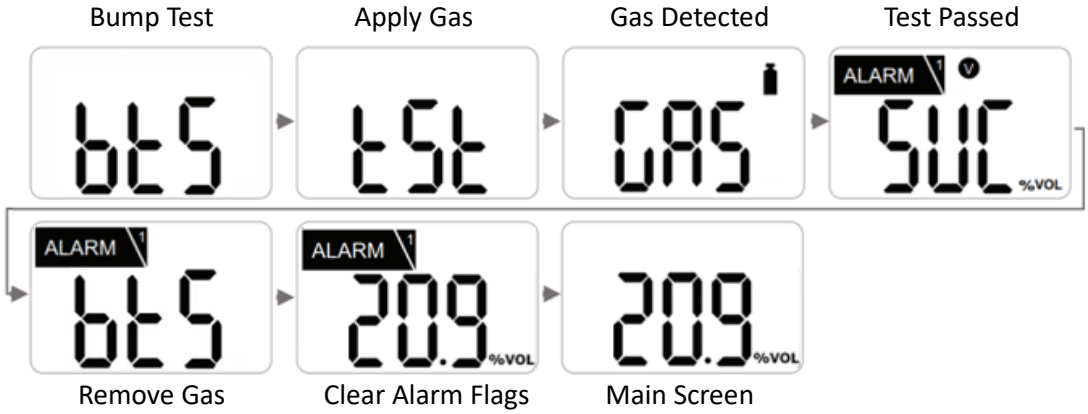
⚠ **A bump test should be conducted before each day's use.**

⚠ **Ensure that you are in a clean environment before performing a Bump Test.**

⚠ **The monitor must be calibrated if it fails a Bump Test.**

To perform a manual Bump Test: (without the Bump Test Reminder active)

- Ensure that the sensor is reading zero (or 20.9% for Oxygen)
- Attach the calibration (cal) cap on top of the sensor inlet
- Connect the hose from the gas regulator of the calibration gas bottle to the cal cap. Ensure the calibration gas and gas concentrations matches the sensor installed in the instrument.
- Access the Calibration menu (see section Accessing the Calibration Menu)
- "CAL" and the icon are displayed.
- Press the [Function key] once and "CAL" and the icon will appear.
- Press the [Function key] again "btS" will be displayed.
- Press and hold the [Function key] for 5 seconds and "tSt" will be displayed
- Turn on the gas regulator
- Once gas is detected, "GAS" will be displayed
- After the test is passed, "SUC" and the icon will appear on the display followed by the alarm notification and "btS"
- Once the test has passed, remove the calibration cap and turn off the calibration gas. The monitor will default to the main screen after 20 seconds or you can manually exit the calibration menu (see Exiting the Calibration Menu)
- Allow a few minutes for the gas to dissipate
- After the gas has dissipated from the sensor, clear the sensor Peak values (See Clear Peaks)




The unit is now ready for use. Otherwise do not use the monitor until the reason for the discrepancy for the test has been determined and corrected.

If the sensor fails the bump test, an "FA" message with the ⓧ icon will briefly display


Test Failed

Check the calibration gas concentrations, cylinder expiration date, and the monitor gas settings and re-test the unit. Or perform a full calibration as defined in the calibration section.

⚠ **If the Bump Test fails, do not use the monitor until a successful Bump Test or Calibration is performed.**

# 7. Calibration

Calibration is the process of adjusting the sensor's response by using a specific concentration of calibration gas. Sensors will drift for a variety of reasons, so it is important to perform a full calibration periodically to ensure that the sensors response to the target gas are accurate. A full calibration consists of two points, a Fresh Air Calibration and a Span Calibration.

**Fresh Air Calibration** adjusts the zero offset of the toxic sensor or sets the oxygen sensor to 20.9% Vol.

**Span Calibration** adjusts the sensors response to gas to account for sensor drift. It is recommended to perform a Fresh Air Calibration prior to a Span Calibration.

⚠ **CAUTION: For $O_2$ units: Initial calibration is performed on all devices prior to shipment. Once received, calibration should be performed monthly (or quarterly) depending on frequency of use.**

⚠ **All alarms are muted during calibration.**

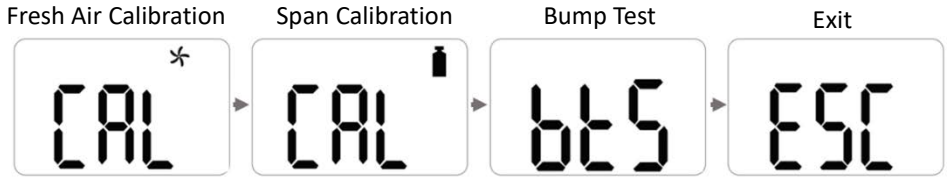
## 7.1. Accessing the Calibration Menu

To access the calibration menu:

- Press the [Function key] to navigate to the Calibration screen.
- While the Calibration screen is displayed, press and hold down the [Function key] for 5 seconds to access the Calibration mode.

Once the Calibration menu is accessed, "CAL" and the icon will be displayed. Calibration menu has four options:

- Fresh Air Calibration
- Span Calibration
- Bump Test
- ESC – Exit Calibration Mode




## 7.2. Exiting the Calibration Menu

Press the [Function key] until "ESC" is displayed on the screen. Press and hold the [Function key] for 5 seconds, the monitor will return to the Calibration screen. Press the [Function key] again and the unit will return to the Measurement screen.

**Note:** If you do not press the [Function key] within 20 seconds, the display reverts to the main screen.

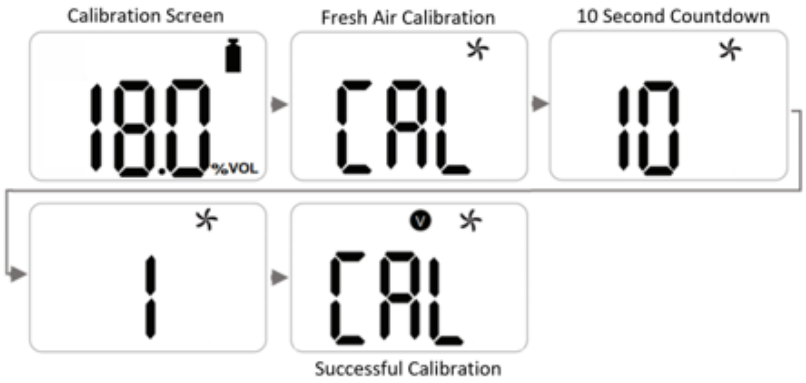
## 7.3. Fresh Air Calibration

⚠ **Fresh Air Calibration must be performed in a clean environment that is free from other gases (calibration is assumed to be performed in an environment with an Oxygen concentration of 20.9% Vol.). Fresh Air Calibration should not be performed in a confined space.**

To perform a Fresh Air Calibration:

- Access the Calibration menu.
- "CAL" and the icon will be displayed.
- Press and hold the [Function key] for 5 seconds to start the Fresh Air Calibration.
- When the calibration starts, a countdown (starting at 10) will appear on the screen.
  **Note:** Press the [Function key] during the 10 second countdown to abort.
- Once the countdown is complete "CAL", the and icons will be displayed indicating a successful Fresh Air Calibration.

**Note:** If you do not press the [Function key] within 20 seconds, the display reverts to the main screen.




If calibration fails, the icon will appear on the display. If this continues, please contact the sales representative or AimSafety Technical Support.

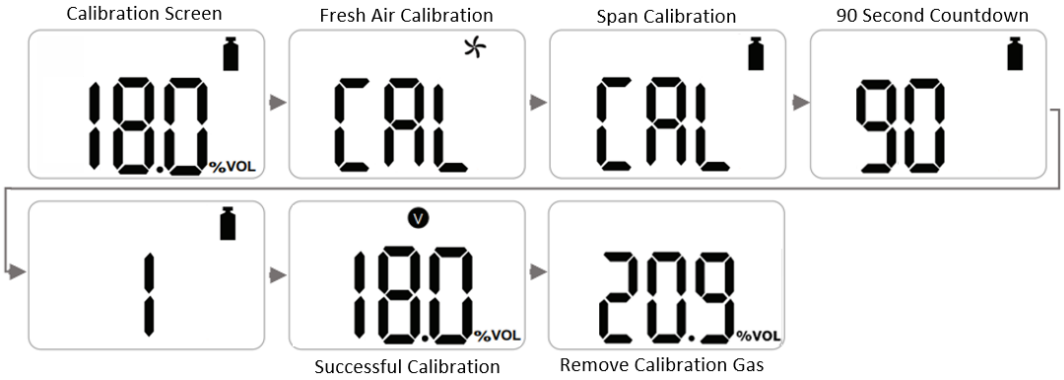
## 7.4. Span Calibration

⚠ **When performing a Span Calibration only use certified calibration gas at the required concentration level. Do not use expired calibration gas.**

To perform a Span Calibration:

- Access the Calibration menu.
- "CAL" and the icon are displayed.
- Press the [Function key] once and "CAL" and the icon will appear.
- Attach the calibration (cal) cap on top of the sensor inlet.
- Connect the hose from the gas regulator of the calibration gas bottle to the cal cap
- Press and hold the [Function key] for 5 seconds to start the Span Calibration.
- When the calibration starts, a 90-second countdown displays.
  **Note:** The countdown is only 60 seconds for $O_2$
- Turn on the calibration gas.
- Once completed, the icon and the current gas measurement readings will appear on the display.
- The device will return to Measuring mode.
- Turn off the calibration gas and remove the calibration cap.
- Clear the Peak values for the sensor. (See Clear Peaks)

⚠ **All alarms are muted for approximately 10 minutes after a successful span calibration.**




If the calibration fails, the and icons and CAL will cycle on the display until a successful calibration is performed. Contact the sales representatives or AimSafety Technical Support if a successful calibration cannot be performed.

**Default Calibration gas concentrations.**
Default calibration gas concentrations can be changed using the PM Link and PC software or with the Bump Test – Calibration Station.

| Gas Type | $O_2$ | CO | $H_2S$ |
|---|---|---|---|
| Concentration | 18.0% Vol | 100 ppm | 25 ppm |

# 8. Event Log

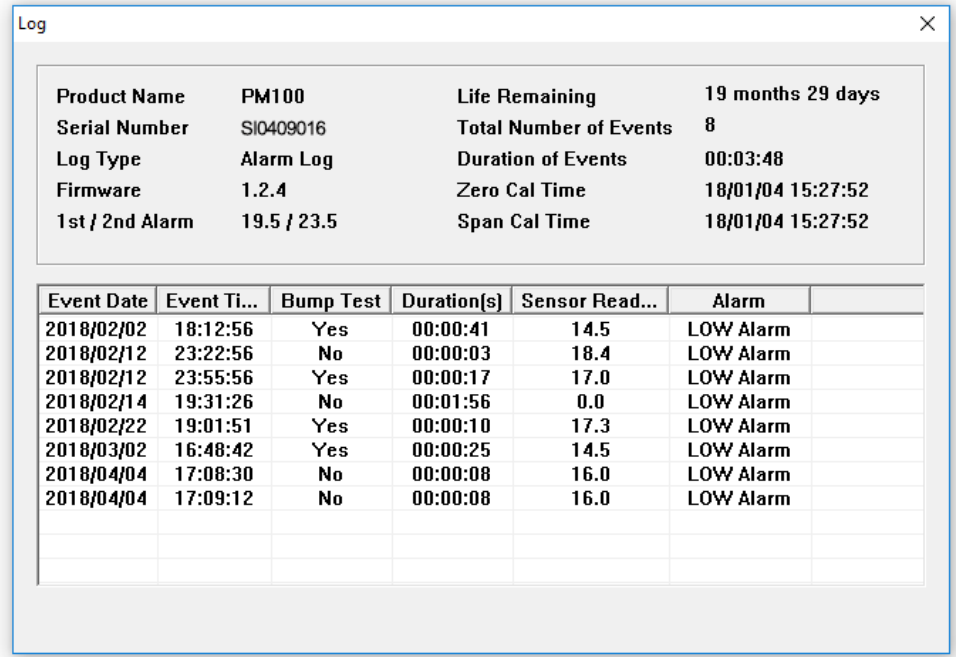
Event logging occurs anytime that an alarm condition is met. Once an alarm condition is met the monitor will automatically save that event in the memory. The monitor can store up to 30 events, once more than 30 events are stored, any new events overwrite the oldest ones. The stored log events can be downloaded using the PM Link and PC software or or with the Bump Test – Calibration Station.

Event log captures the following monitor information:

- Product Name
- Serial number
- Log Type
- Firmware version
- Alarm setpoints
- Life remaining
- Total Number of Events
- Duration of Events
- Zero Calibration date
- Span Calibration date

Each alarm event records the followings event details:

- Date
- Time
- Duration
- Sensor Readings
- Alarm Type




| Event Date | Event Ti... | Bump Test | Duration(s) | Sensor Read... | Alarm |
|---|---|---|---|---|---|
| 2018/02/02 | 18:12:56 | Yes | 00:00:41 | 14.5 | LOW Alarm |
| 2018/02/12 | 23:22:56 | No | 00:00:03 | 18.4 | LOW Alarm |
| 2018/02/12 | 23:55:56 | Yes | 00:00:17 | 17.0 | LOW Alarm |
| 2018/02/14 | 19:31:26 | No | 00:01:56 | 0.0 | LOW Alarm |
| 2018/02/22 | 19:01:51 | Yes | 00:00:10 | 17.3 | LOW Alarm |
| 2018/03/02 | 16:48:42 | Yes | 00:00:25 | 14.5 | LOW Alarm |
| 2018/04/04 | 17:08:30 | No | 00:00:08 | 16.0 | LOW Alarm |
| 2018/04/04 | 17:09:12 | No | 00:00:08 | 16.0 | LOW Alarm |

See the PM Link PC software and Bump Test-Calibration Station manual for more information on Event Log.

# 9. Maintenance and Cleaning

The PM100 monitor is designed to operate continuously for the life of the unit and cannot be turned off once activated. It is important to avoid the following activities as they will deplete the battery lifetime to less than 24 months.

1. Frequent or prolonged alarm activation. (Normal Alarm use: 2 minutes per day)
2. Unnecessary [Function key] operation
3. Connecting the PM Link frequently (except for regular bump testing/calibration)

## 9.1. Maintenance

Do not disassemble unit or attempt to repair or modify any component of this instrument. This instrument contains no user serviceable parts, and substitution of components may impair intrinsic safety which may adversely affect product performance.

## 9.2. Cleaning

⚠ **CAUTION: Do not attempt to clean the instrument in a hazardous environment. Cleaning with a dry cloth may generate a static charge and result in an explosion if located in a hazardous environment.**

Occasionally clean the monitor with a soft cloth. Do not use detergents or chemicals. If necessary, use a damp cloth (water only). It is recommended to install the Calibration Cap before cleaning the monitor housing, to keep dirt, dust, or moisture away from the sensor openings and to help keep the sensor filter clean.

Visually inspect the monitor and the IR port window on the top of the monitor. Wipe it with a soft cloth as needed.

# 10. Disposal

The PM100 is designed to be discarded 2 years after activation. To properly dispose of the instrument, follow local solid waste disposal regulations.

# 11. Certificates

The PM100 meets or exceeds the following certification standards.

| | | |
|---|---|---|
| IECEx: | Ex ia IIC T4 Ga | 1: Explosion protected<br>2: Protection Concept<br>3: Gas Group<br>4: Temperature Classification<br>5: Equipment protection level |
| | Class I, Zone 0, AEx ia IIC T4 Ga<br>Class I, Division 1, Groups A, B, C, D, T4<br>C22.2 No. 60079-0:2015; C22.2 No. 60079-11:2014;<br>C22.2 No. 61010-1-12:2010; UL 61010-1,<br>Ed. 3; UL 913, Ed. 8; UL 60079-0, Ed. 6; UL 60079-11, Ed. 6 | |
| ATEX: | CE 2198 II 1 G Ex ia IIC T4 Ga IP67<br>KRH 17 ATEX 0013<br>Directive 2014/34/EU | |
| KCS: | Ex ia IIC T4<br>KTL 16-KA2BO-0457 | |
| INMETRO | Ex ia IIC T4 Ga<br>BVC16.5919 | |
| Standards: | The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:<br>IEC 60079-0: 2011 Ed. 6<br>IEC 60079-11: 2011 Ed 6<br><br>UL 61010-1, Ed. 3<br>UL 913, Ed. 8<br>UL 60079-0, Ed. 6<br>UL 60079-11, Ed. 6<br><br>C22.2 No. 60079-0:2015<br>C22.2 No. 60079-11:2014<br>C22.2 No. 61010-1-12:2012<br><br>EN 60079-0: 2012+A11:2013<br>EN 60079-11: 2012 | |
| Compliance: | Electromagnetic Compatibility Directive 2014/30/EU | |
| Manufacturing Approval: | The monitor manufacturer is certified compliant with ISO 9001:2000 provisions | |

# 12. Limited Warranty

AimSafety warrants this product will be free from defective materials and workmanship for a period of two (2) years from date of manufacture, provided it is maintained and used in accordance with AimSafety instructions and/or recommendations. If any component becomes defective during the warranty period, it will be replaced or repaired free of charge, if the unit is returned in accordance with the instructions below. This warranty does not apply to units that have been altered or had repair attempted, or that have been subjected to abuse, accidental or otherwise. The above warranty is in lieu of all other express warranties, obligations or liabilities. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE ARE LIMITED TO A PERIOD OF TWO (2) YEARS FROM THE PURCHASE DATE. AimSafety shall not be liable for any incidental or consequential damages for breach of this or any other warranty, express or implied, arising out of or related to the use of said gas monitor. Manufacturer or its agent's liability shall be limited to replacement or repair as set forth above. Buyer's sole and exclusive remedies are return of the goods and repayment of the price, or repair and replacement of non-conforming goods or parts.

**Warranty Procedure**

Contact the local AimSafety authorized reseller or AimSafety Technical Support to obtain a Return Materials Authorization (RMA). An RMA requires the following information:

- Company name, contact name, phone number, and email address
- Description and quantity of items to be returned
- Equipment serial number(s)
- Reason for return

No returns shall be accepted without an AimSafety RMA. Any returns received without an RMA will be rejected and returned to the sender.

# 13. Contact Information

**Technical Support**

Monday through Friday, 8:00AM to 5:00PM Central (US) Time
Email: support@aimsafety.com
Phone (toll-free): 1-844-325-3050

**World Headquarters**

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