

# BW TECHNOLOGIES

## GasAlert100

### 100 Day Disposable Gas Detector

#### Instruction Sheet

#### Introduction

The GasAlert100 gas detector ("the detector") warns of hazardous gas at levels above a factory set alarm setpoint. The detector is a personal safety device. It is your responsibility to respond properly to the alarm.

Model (Order Number)	Gas Monitored	Maximum Operating Life
GA100-M	carbon monoxide (CO)	100 days
GA100-H	hydrogen sulfide (H <sub>2</sub> S)	100 days

The life of the battery decreases rapidly under alarm conditions.

D2088/1

BW1030-27-01-00-4.125x5.875-5252-1

© September 2002 BW Technologies. All rights reserved.

#### ⚠ Safety Information - Read First

- ⇒ **Warning: Substitution of components may impair intrinsic safety.**
- ⇒ **Do not activate the detector after the date on the package.**
- ⇒ **This product is a gas detector, not a measurement device.**
- ⇒ **Perform a self-test each day prior to use.**
- ⇒ **Make sure the sensor grill is free of dirt and debris.**
- ⇒ **Make sure the sensor grill is not covered.**
- ⇒ **Periodically test the sensor's response to gas by exposing the detector to a target gas concentration that exceeds the low alarm setpoint. Manually verify that the audible and visual alarms are activated.**



**Note**

**This instrument contains a lithium battery. Do not mix with the solid waste stream. Spent batteries should be disposed of by a qualified recycler or hazardous materials handler.**

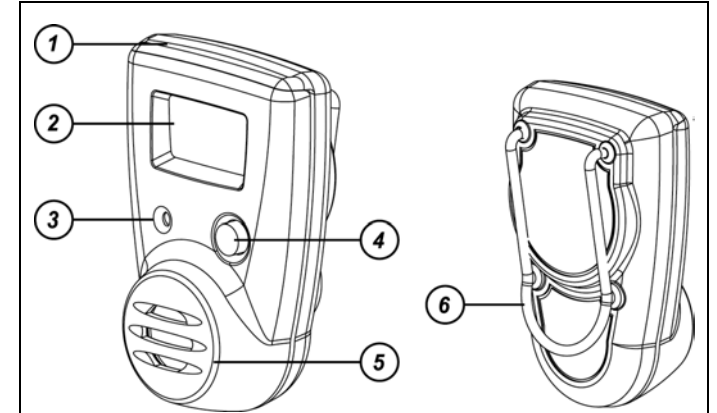
#### International Symbols

Symbol	Meaning
	Classified to both U.S. and Canadian Safety standards by Underwriter's Laboratories, Inc.
<b>ATEX</b>	Conforms to European ATEX Directive 94/9/EC-ATEX 95
<b>CE</b>	Conforms to European Union directives

#### Activating the Detector

Press the **Test** button. The detector emits one beep and one flash. Once activated, the detector cannot be turned off. The detector sets the life-remaining clock and performs a self-test.

If the detector passes the self-test,  shows on the display. Instructions describing what to do in the event of a self-test failure appear in the section "Self-Test."



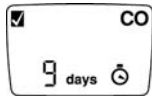
①	Visual alarm
②	Display
③	Audible Alarm
④	Test button
⑤	Sensor and sensor grill
⑥	Clip

## Display Features

①	Self-test status
②	High and low alarm setpoints
③	Gas monitored
② ④	Alarm condition
⑤	Life-remaining clock

## Life-Remaining Clock

The life-remaining clock indicates how much longer the detector will operate. The display shows the countdown of remaining days, and then hours.



## Gas Alarm Setpoints

Model	Low Alarm Setpoint	High Alarm Setpoint
GasAlert100 CO	35 ppm	200 ppm
GasAlert100 H <sub>2</sub> S	10 ppm	15 ppm

*Note: May be equipped with customer specified alarm setpoints. Press the Test button to display alarm setpoints at any time.*

## Gas Alarms

### Low Gas Alarm

Display	Audible Alarm	Visual Alarm
	Slow beeps (1 beep every 2 seconds)	Slow flashes (1 flash every 2 seconds)

### High Gas Alarm

Display	Audible Alarm	Visual Alarm
	Fast beeps (1 beep every second)	Fast flashes (1 flash every second)

When gas levels return to the acceptable range, the gas alarm stops.

*Note: The life of the battery decreases rapidly under alarm conditions.*

## Maximum Gas Exposure

The detector records a new maximum gas exposure when the gas concentration exceeds both an alarm setpoint and the previously recorded maximum exposure. When a new maximum gas exposure is recorded, the detector begins calculating the number of hours since the exposure occurred.

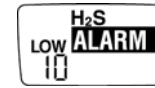
If the maximum gas exposure is not exceeded within 24 hours, both the maximum gas exposure reading and the time elapsed since the exposure occurred are automatically reset to zero.

## Viewing Maximum Gas Exposure

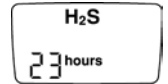
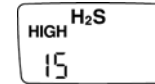
Press the **Test** button within 24 hours of receiving a gas alarm.

- If the display shows **AL**, the detector tells you:

- The low and high alarm setpoints:



- The maximum gas exposure and the hours since exposure:

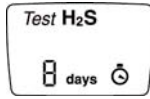


- If the display shows **Test** when the button is pressed, the display shows the gas exposure information at the end of the self-test.

For exposures above the measuring range, the display shows **OL**.


### Performing a Self-Test

When it is time to perform the self-test, the display shows **Test**.




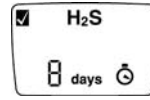
*Note: The self-test must be performed in an atmosphere that is free of background gas.*

Press the **Test** button.

1. The detector emits one beep and one flash.
2. The detector tests the battery.
3. The display shows all elements.
4. The detector performs a sensor integrity test.
5. The low and high alarm setpoints show on the display.
6. If you press **Test** when the display shows , the detector skips steps 1 through 4.

### Self-Test Pass

- The detector emits a short beep.
-  shows on the display.



- Twenty hours after running the self-test, **Test** shows on the display.

### Self-Test Fail

- The detector emits five short beeps.
- **Test** continues to show on the display.


Repeat the self-test. If the self-test fails three consecutive times, the display goes blank and the detector goes into safety shutdown mode.

### Automatic Battery Test

The detector automatically tests the battery every 2 hours. If the battery test fails, the detector runs another self-test 30 minutes later. After three consecutive battery test failures, the display goes blank and the detector goes into safety shutdown mode.

### Life-Ended Alarm

The life-ended alarm occurs when the life-remaining clock displays 0 hours.

Display	Audible Alarm	Visual Alarm
	Very slow beeps (1 beep per minute)	Very slow flashes (1 flash per minute)

The detector continues to operate for a maximum of 8 hours after the life-ended alarm. Press the **Test** button to turn off the detector.

### Safety Shutdown Mode

The display goes blank in safety shutdown mode. The detector then beeps and flashes quickly (twice per second) until the battery loses power. To turn off the detector before the battery loses power, press the **Test** button.

The detector goes into safety shutdown mode if:

- The self-test fails three consecutive times.
- The automatic battery test fails three consecutive times.
- You do not turn off the detector manually within 8 hours of the life-ended alarm.

## Safety Specifications

### GasAlert100 CO and GasAlert100 H<sub>2</sub>S

<b>Maximum operating life</b>	100 days after activation, assuming 3 to 5 minutes of alarm time/day in normal operation
<b>Detection range</b>	CO: 0 ppm to 300 ppm H <sub>2</sub> S: 0 ppm to 100 ppm
<b>Alarm setpoints</b>	CO: 35 ppm and 200 ppm H <sub>2</sub> S: 10 ppm and 15 ppm
<b>Calibration</b>	Not required

## General Specifications

<b>Shelf life</b>	1 year before activation
<b>Operating temperature</b>	H <sub>2</sub> S: -30 to +45 °C (-22 to +113 °F) CO: -15 to +45 °C (+5 to +113 °F)
<b>Operating humidity</b>	5 % to 95 % relative humidity (non-condensing)
<b>Audible alarm</b>	≈95 dB at 1 ft. (0.3 m)
<b>Visual alarm</b>	Wide-angled visual alarm bar with 2 red light emitting diodes (LEDs)
<b>Display</b>	Liquid crystal display (LCD); alphanumeric status panel
<b>Sensor type</b>	Electrochemical cells (temperature compensated)
<b>Size</b>	1.00 x 1.45 x 2.30 in (26 x 37 x 58 mm)
<b>Weight</b>	1 oz. (30 g)
<b>Battery</b>	Lithium, non-replaceable

<b>Intrinsic safety</b>	Classified by UL to both U.S. and Canadian Standards as intrinsically safe for Class I, Division 1, Group A, B, C, D T6 and Class I, Zone 0, Group IIC T6  ATEX: CE 0539 Ⓢ II 1 G SIRA 03ATEX2126 EX Approval: EEx ia IIC T4 CE: European Conformity
<b>Warranty</b>	100 days after activation, plus 1 year shelf life

If the equipment is likely to come into contact with aggressive substances (eg acidic liquids or gases), then it is the responsibility of the user to take suitable precautions (eg regular checks) to prevent it from being adversely affected, thus ensuring the type of protection is not compromised.

The user must check the chemical compatibility of the equipment materials and the constituents of the potentially explosive atmosphere.

### Contacting BW Technologies

To contact BW Technologies call:

1-888-749-8878 USA	1-800-663-4164 Canada
+44 (0) 1869-233004 Europe	+971-4-8871766 Middle East
+61-7-3818-8244 Australia	+1-403-248-9226 other countries

Visit BW Technologies' Web site at: [www.gasmonitors.com](http://www.gasmonitors.com)

<b>Corporate</b>	<b>USA</b>	<b>Europe</b>
BW Technologies Ltd. 2840 - 2 Avenue S.E. Calgary AB Canada T2A 7X9	BW Technologies Inc. 3279 West Pioneer Parkway Arlington TX USA 76013	BW Technologies Ltd. 101 Heyford Park Upper Heyford Oxfordshire UK OX25 5HA

## Warranty

### LIMITED WARRANTY & LIMITATION OF LIABILITY

BW Technologies Ltd. (BW) warrants this product to be free from defects in material and workmanship from the date of activation for the operational life of the instrument. Warranty is valid only if the detector is activated by the date on the package. This warranty extends only to the sale of new and unused products to the original buyer. BW's warranty obligation is limited, at BW's option, to refund of the purchase price, repair, or replacement of a defective product that is returned to a BW authorized service center within the warranty period. In no event shall BW's liability hereunder exceed the purchase price actually paid by the buyer for the Product.

This warranty does not include:

- fuses, disposable batteries or the routine replacement of parts due to the normal wear and tear of the product arising from use;
- any product which in BW's opinion, has been misused, altered, neglected or damaged by accident or abnormal conditions of operation, handling or use;
- any damage or defects attributable to repair of the product by any person other than an authorized dealer, or the installation of unapproved parts on the product; or

The obligations set forth in this warranty are conditional on:

- proper storage, installation, calibration, use, maintenance and compliance with the product manual instructions and any other applicable recommendations of BW;
- the buyer promptly notifying BW of any defect and, if required, promptly making the product available for correction. No goods shall be returned to BW until receipt by the buyer of shipping instructions from BW; and
- the right of BW to require that the buyer provide proof of purchase such as the original invoice, bill of sale or packing slip to establish that the product is within the warranty period.

**THE BUYER AGREES THAT THIS WARRANTY IS THE BUYER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BW SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, WHETHER ARISING FROM BREACH OF WARRANTY OR BASED ON CONTRACT, TORT OR RELIANCE OR ANY OTHER THEORY.**

Since some countries or states do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If any provision of this warranty is held invalid or unenforceable by a court of competent jurisdiction, such holding will not affect the validity or enforceability of any other provision.