BW Clip is a portable, single-gas detector manufactured by BW Technologies by Honeywell (BW). BW Clip continuously measures the concentration of a specific gas in the ambient environment, and activates an alarm when concentrations exceed alarm setpoints. It is your responsibility to respond appropriately to the alarms. BW Clip is a member of the GasAlert family of products. It is compatible with IntelliDoX and MicroDock II automatic test and calibration stations, as well as Fleet Manager II software version 4.0 or higher. For more information, visit the product website at www.honeywellanalytics.com

Safety Information: Read First

**WARNING**
1. Substitution of components may impair Intrinsically Safe.
2. Periodically test the response of the sensor 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.
3. Detectors in hibernation mode are not functional.

**CAUTION**
1. Activate the detector before the activation date on the package.
2. This product is a gas detector, not a measurement device.
3. Ensure that the sensor grill is free of dirt, debris, and is not obstructed.
4. Clean the exterior with a soft, damp cloth.
5. Bump test the detector in a normal atmosphere that is free of hazardous gas.
6. For optimal performance, periodically zero the sensor in a normal atmosphere (20.9% v/v O₂) that is free of hazardous gas.

Informations de sécurité – À lire au préalable

**AVERTISSEMENT**
1. Le remplacement d’un composant de l’appareil peut compromettre la sécurité intrinsèque du détecteur.
2. Testez périodiquement la réponse du capteur en exposant le détecteur à une concentration de gaz supérieure au seuil d’alarme basse. Vérifiez manuellement que les alarmes sonores et visuelles sont activées.
3. Détections en mode veille prolongée ne sont pas fonctionnels.

**MISE EN GARDE**
1. Activez le détecteur avant la date d’activation sur l’emballage.
2. Ce produit est un détecteur de gaz, pas un dispositif de mesure.
3. Veillez à assurer que la grille du capteur est exempt de saleté, les débris, et ne soit pas obstrué.
5. Veillez à effectuer un test fonctionnel du capteur dans une atmosphère normale qui est exempte de gaz dangereux.
6. Pour des performances optimales, zéro périodiquement le capteur dans une atmosphère normale (20.9% v/v O₂) qui est exempte de gaz dangereux.

LCD and Symbols

- **Audible alarm**
- **Pushbutton**
- **Sensor and sensor grill**
- **Infrared port**
- **Bubble label with product name and gas type**

**Getting Started**

- **LED visual alarms**
- **MM/DD** Operating life remaining in months (MM) or days (DD).
- **Real-time clock.** This symbol is displayed when real-time clock is enabled through Fleet Manager II via an IntelliDoX station.
- **Peak reading.** This symbol is displayed when a maximum gas exposure event has occurred within the past 24 hours.
- **Non-compliance warning.** This symbol is displayed when a diagnostic or compliance test fails; when the operating life countdown reaches 24 hours or less; and for up to 30 days after operating life expiry. It is also displayed when certain notifications are enabled through Fleet Manager II via an IntelliDoX station.
- **Low alarm and high alarm.** These symbols are displayed when a gas concentration that exceeds alarm setpoints is detected.
- **Pushbutton prompt.** When this symbol is displayed, press and hold the pushbutton until the symbol disappears.
- **EXPIRY** End of operating life warning. This symbol is displayed when the operating life countdown reaches 24 hours or less.
- **PEAK** Peak reading. This symbol is displayed when a maximum gas exposure event has occurred within the past 24 hours.
- **Bump test reminder.** If the detector is configured to display a bump test reminder, this symbol is displayed when a bump test is due. X indicates a failed test.
- **BW Clip O₂ models only.** Oxygen concentration is measured as percent by volume.
- **BW Clip H₂S, CO and SO₂ models only.** Toxic gas concentration is measured in parts per million.
- **Bump test reminder.** If the detector is configured to display a bump test reminder, this symbol is displayed when a bump test is due. X indicates a failed test.
- **BW Clip O₂ models only.** This symbol is displayed when more than 24 hours have elapsed since the last successful zero procedure was performed. X indicates a failed test.

**China RoHS 2 Card**

<table>
<thead>
<tr>
<th>Parts Assemble Name</th>
<th>Lead</th>
<th>Mercury</th>
<th>Cadmium</th>
<th>Hexavalent Chromium</th>
<th>Polyvinyl Chloride (PVC)</th>
<th>Polybrominated Biphenyl (PBB)</th>
<th>Polybrominated Diphenyl Ethers (PBDE)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

All parts and sub-assemblies listed in this table contain hazardous substances below the limit requirements of GB/T 26572.

<table>
<thead>
<tr>
<th>EXPiry</th>
<th>MM/DD</th>
<th>Operating life remaining in months (MM) or days (DD).</th>
</tr>
</thead>
</table>

**BW Clip Factory Calibration Certificate**

This instrument was factory inspected, tested and calibrated in accordance with the conditions and requirements of our registered Quality System, Operating Standards and Sales Agreements.
Activate a New Detector
1. Move to a normal atmosphere (20.9% v/v O₂) that is free of hazardous gas.
2. Press and hold the pushbutton until a 5 second countdown is displayed, and then continue to hold until the countdown is complete.
3. When the countdown is complete, the LCD and LEDs turn on and then turn off. The detector performs an internal diagnostic test.
4. When the diagnostic test is successful, the alarm setpoints are displayed and the LEDs flash.
5. The sensor stabilization countdown is displayed. During the countdown, the detector vibrates continuously for 20 seconds. The time required to stabilize varies depending on sensor type. When the countdown reaches 0, the LEDs flash and the audible alarm beeps.
6. When the type of gas detected and the operating life countdown are displayed, the detector is in normal operating mode.

Normal Operating Mode
When the detector is in normal operating mode, the type of gas detected is permanently displayed. The remaining operating life is displayed until it is disrupted by a pushbutton action, gas alarm, or error event.

Operating Life
When the detector is activated for the first time, the operating life countdown is displayed. The countdown displays remaining operating life in months until the countdown reaches 90 days or less before expiry.

90 Days or Less Remaining
When the operating life countdown reaches 90 days or less before expiry, the countdown display changes to days. The countdown displays the remaining operating life in days until the countdown reaches 24 hours or less before expiry.

24 Hours or Less Remaining
When the operating life countdown reaches 24 hours or less before expiry, the countdown display changes to hours, and the EXPIRY! warning and non-compliance symbol are displayed.

End of Operating Life
When the operating life countdown ends, the detector deactivates and detector safety functions are disabled. It is possible to retrieve event logs for a limited time after expiry. The EXPIRY! warning and non-compliance symbol are displayed for up to 30 days after expiry.

Internal Diagnostic Tests
Activated detectors automatically perform one internal diagnostic test every 24 hours. If the internal diagnostic test fails, the diagnostic fail-safe begins.

Diagnostic Fail-Safe
1. The EXPIRY! warning and non-compliance symbol are displayed.
2. The detector beeps and vibrates.
3. The LEDs flash 2 times per second for 15 seconds.
4. OFF or an error code is displayed. The detector is deactivated.

It is possible to retrieve the event logs for a limited time after expiry. If you are unable to retrieve the event logs, contact BW.

Alarms and Warnings
An alarm is initiated when the sensor is exposed to a gas concentration that exceeds alarm setpoints. The alarm persists until the alarm gas concentration returns to an acceptable range. You can use Fleet Manager II via an IntelliDoX station to enable the display of the gas concentration reading during an alarm. Battery life decreases rapidly when the detector is in alarm condition.

Low Alarm
- Audible: 1 beep per second
- Visual: 1 flash per second
- Vibration: 1 vibration per second

High Alarm
- Audible: 2 beeps per second
- Visual: 2 flashes per second
- Vibration: 2 vibrations per second

Over-Limit and Under-Limit Alarms
If the gas concentration is beyond the sensor range, OL (over-limit) or -OL (under-limit) is displayed.

- Audible: 2 beeps per second
- Visual: 2 flashes per second
- Vibration: 2 vibrations per second

Automatic Zero Reminder for O₂ Models
For O₂ models only, the Automatic Zero Reminder is displayed when more than 24 hours have elapsed since the last successful zero procedure was performed.

Peak Readings
The peak readings symbol is displayed when the sensor is exposed to a gas concentration that exceeds the alarm setpoints. It is no longer displayed when more than 24 hours have passed since the last alarm, or when a successful bump test is performed via an IntelliDoX or MicroDock II station.

Non-compliance Symbol and LED Indicators
The non-compliance warning symbol is displayed when:
• an internal diagnostic test fails;
• a bump test or zero procedure fails;
• a bump test is due, if enabled;
• the sensor is exposed to a gas concentration that exceeds alarm setpoints, if enabled.

The non-compliance warning symbol is no longer displayed when more than 24 hours have passed since the last alarm, or when a successful bump test is performed via an IntelliDoX or MicroDock II station. The non-compliance warning symbol is permanently displayed when the service-life countdown reaches 24 hours or less before expiry, and for up to 30 days after expiry.

When Non-compliance after gas exposure is enabled through Fleet Manager II via an IntelliDoX station, the LEDs flash in an alternating pattern when the non-compliance warning symbol is displayed. When the symbol is first displayed, the top LEDs flash. After 30 seconds, the side LEDs flash. After 30 seconds, the pattern repeats until the non-compliance warning symbol is no longer displayed.

NOTE: When the detector is bump tested via a MicroDock II station, an abnormal test result may occur if non-compliance LEDs are flashing. To suspend the flashing for up to 10 minutes, press and release the pushbutton. When the flashing stops, insert the detector and perform the test. If the bump test fails, the LEDs resume flashing.
Recall Events and Settings
When the detector is in normal operating mode, press the pushbutton at any time to scroll through events and settings that are not empty or disabled through Fleet Manager II via an IntelliDoX station. Events and settings are displayed in this order:

1. **Peak Reading**, if available, and when a maximum gas exposure event has occurred within the past 24 hours.
2. **Time of Peak Reading**, if Real-time Clock display is enabled.
3. **Low Alarm Setpoint**
4. **High Alarm Setpoint**
5. **Real-time Clock**, if enabled.
6. **Firmware Version**
7. **Next Bump Due**, if enabled.
8. **Hibernation**, for 2-year H₂S and CO hibernation models only.

While an event or setting is displayed, press the pushbutton to scroll to the next available event or setting. If you do not press the pushbutton, or if you have reached the last available event or setting, the detector returns to normal operation.

Zero the Sensor
Over time and through use, the sensor baseline at zero exposure may drift from the manufacturer’s baseline. For optimal performance of O₂ models, BW recommends that you zero the O₂ sensor once every 24 hours or when the Automatic Zero Reminder is displayed. For all other models, BW recommends that you zero the sensor periodically.

Zero Procedure

1. Move to a normal atmosphere (20.9% v/v O₂) that is free of hazardous gas.
2. Press and hold the pushbutton until a 5 second countdown is displayed, and then continue to hold until the countdown is complete.
3. When the countdown is complete, the Zero procedure begins, and the Zero symbol is displayed.
4. When the Zero is successful, PASS is displayed, and then the detector returns to normal operation.
5. If the Zero is not successful, the non-compliance LED flashes. FAIL and the non-compliance warning symbol are displayed. Press the pushbutton to acknowledge the result and return to normal operation. The non-compliance warning symbol is displayed and the non-compliance LED flashes. Perform the Zero procedure again. If the procedure fails again, contact BW.

Bump Tests
When the detector is configured to display a bump test reminder, the bump test symbol is displayed when a bump test is due. For best results, bump test the detector via an IntelliDoX or MicroDock II station. Bump tests performed via an IntelliDoX or MicroDock II station are logged as bump tests. Manual bump tests are logged as unsafe gas concentrations.

Event Logs
The detector stores the last 35 events that occurred, including peak readings, bump tests and auto zeros. Each record contains:
- detector serial number, sensor type and life-remaining;
- total number of events that have occurred;
- event type and duration;
- alarm level(s) in ppm or %;
- time elapsed since the alarm occurred in days/hours/minutes;
- duration of the alarm (minutes/seconds).

Use Fleet Manager II via an IntelliDoX or MicroDock II station to transfer event logs from the detector to a computer. When logs are transferred via an IntelliDoX station, the most recent 35 events are transferred. When logs are transferred via a MicroDock II station, the most recent 10 events are transferred.

Optional Settings
Use Fleet Manager II via an IntelliDoX station to enable the following optional settings for BW Clip detectors.

Display Gas Reading During Alarm
When Display gas reading during alarm is enabled, the gas concentration is displayed when a gas alarm event is detected. The gas concentration is displayed until the alarm event ends.

Non-compliance After Gas Exposure
When Non-compliance after gas exposure is enabled, the LEDs flash in an alternating pattern when the sensor is exposed to a gas concentration that exceeds alarm setpoints. When the gas exposure is detected, the top LEDs flash. After 30 seconds, the side LEDs flash. After 30 seconds, the pattern repeats until more than 24 hours have passed since the last alarm, or when a successful bump test is performed via an IntelliDoX or MicroDock II station.

Real-time Clock Display
When Real-time Clock Display is enabled, you can display the current time by pressing the pushbutton to Recall Events and Settings, and then continuing to press the pushbutton until the time is displayed.

Time may be displayed in 12-hour or 24-hour clock format.

Hibernation
Hibernation is a factory installed feature that is available for 24-month H₂S and CO detectors. When Hibernation is activated, the operating life countdown is suspended. Use Hibernation to deactivate the detector for 7 days or longer, up to a maximum of 12 months. When Hibernation is activated, all detector safety functions are disabled.

Activate Hibernation via BW Clip Hibernation Case

1. Have ready a BW Clip Hibernation Case. To purchase a Case, contact BW or an authorized distributor.
2. Move to a normal atmosphere (20.9% v/v O₂) that is free of hazardous gas.
3. Verify that the detector is in normal operating mode.
4. Press the pushbutton to Recall Events and Settings, and then continue to press the pushbutton until the Hibernation symbol is displayed.
5. While the Hibernation symbol is displayed, press the pushbutton until a 5 second countdown is displayed. When the countdown is complete, the 20-second Hibernation counter is displayed.
6. While the Hibernation counter is displayed, place the detector into a BW Clip Hibernation Case and then close the case firmly. The detector enters Hibernation mode. All detector safety functions are disabled.
7. To re-activate the detector, open the case.

Activate Hibernation through Fleet Manager II via IntelliDoX

1. Use Fleet Manager II to activate Hibernation on Insertion via an IntelliDoX station, and then insert the detector in the configured station. The detector event logs are retrieved, and the detector enters Hibernation mode. All safety functions are disabled, and the detector may be removed from the IntelliDoX station.
2. To re-activate the detector, press and hold the pushbutton until a 5 second countdown is displayed, and then continue to hold until the LCD and LEDs turn on and off. The detector performs a self-diagnostic test. When the test is successful, the type of gas detected and the remaining operating life are displayed. The detector is in normal operating mode.
3. For more information, refer to the operator manuals for the IntelliDoX station and Fleet Manager II software version 4.0 or higher.
About this Publication
This publication is an operator guide for BW Clip portable single-gas detectors manufactured by BW Technologies by Honeywell. It is intended for use with the following models:
• 24- and 36-month H₂S and CO Detectors
• 24-month O₂ detector
• 24-month SO₂ detector

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Contact Us
Corporate Headquarters
BW Technologies by Honeywell
Suite 110 441-6 Street SE
Calgary, Alberta
Canada, T2G 4E6
Toll-free: 1-800-863-4164

Americas
BW Technologies by Honeywell
405 Barclay Blvd.
Lincolnshire IL, USA 60069
Toll-free: 1-888-749-8878

Europe
BW Technologies by Honeywell
Hatch Pond House
4 Stiford Road
Nuffield Industrial Estate
Poole Dorset BH17 0RZ  United Kingdom
Toll-free: +44(0)1295 700300

Other
BW Technologies by Honeywell
Toll-free: 1-403-248-9226
info@gasmonitors.com
www.honeywellanalytics.com

Warranty Registration
www.honeywellanalytics.com/support/product-registration

Maximum Operating Life
24-month Detector
2 years after activation, assuming 2 minutes of alarm time per day.
Note: 24-month H₂S and CO detectors that use hibernation may extend the service period of the detector up to an additional year. The service life will end once the detector reaches 24 months of actual operation. Hibernation provides a maximum service life of 36 months.

36-month Detector
3 years after activation, assuming 1 minute of alarm time per day.

Detection Range
H₂S 0 to 100 ppm
CO 0 to 300 ppm
O₂ 0 to 25% by volume
SO₂ 0 to 100 ppm

Factory Alarm Setpoints

<table>
<thead>
<tr>
<th></th>
<th>Low Alarm</th>
<th>High Alarm</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₂S</td>
<td>10 ppm</td>
<td>15 ppm</td>
</tr>
<tr>
<td>CO</td>
<td>35 ppm</td>
<td>200 ppm</td>
</tr>
<tr>
<td>O₂</td>
<td>19.5% v/v</td>
<td>23.5% v/v</td>
</tr>
<tr>
<td>SO₂</td>
<td>5 ppm</td>
<td>10 ppm</td>
</tr>
</tbody>
</table>

Use Fleet Manager II via an IntelliDoX station to adjust alarm setpoints. For more information, refer to the operator manuals for Fleet Manager II software version 4.0 and the IntelliDoX automatic test and calibration station.

Specifications

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Shelf Life</td>
<td></td>
</tr>
<tr>
<td>H₂S</td>
<td>One (1) year before activation</td>
</tr>
<tr>
<td>CO</td>
<td>One (1) year before activation</td>
</tr>
<tr>
<td>O₂</td>
<td>Six (6) months before activation</td>
</tr>
<tr>
<td>SO₂</td>
<td>One (1) year before activation</td>
</tr>
<tr>
<td>Instrument Weight</td>
<td></td>
</tr>
<tr>
<td>alligator clip included</td>
<td>92 grams (3.2 ounces)</td>
</tr>
<tr>
<td>Instrument Dimensions</td>
<td></td>
</tr>
<tr>
<td>alligator clip included</td>
<td>41 x 50 x 87 millimeters (1.6 x 2.0 x 3.4 inches)</td>
</tr>
<tr>
<td>Operating Temperatures</td>
<td></td>
</tr>
<tr>
<td>H₂S</td>
<td>-40°C to +50°C (40°F to +122°F)</td>
</tr>
<tr>
<td>CO</td>
<td>-30°C to +50°C (-22°F to +122°F)</td>
</tr>
<tr>
<td>O₂</td>
<td>-20°C to +50°C (4°F to +122°F)</td>
</tr>
<tr>
<td>SO₂</td>
<td>-30°C to +50°C (-22°F to +122°F)</td>
</tr>
<tr>
<td>Internal Vibrating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5% to 95% relative humidity (non-condensing)</td>
</tr>
<tr>
<td>Audible Alarm</td>
<td>+55 dB at 10 cm (3.9 in)</td>
</tr>
<tr>
<td>Visual Alarm</td>
<td>Flashing, wide-angled alarm lens with red LEDs plus alarm LCD readout</td>
</tr>
<tr>
<td>Display</td>
<td>Liquid crystal display (LCD)</td>
</tr>
<tr>
<td>Sensor Type</td>
<td>Electrochemical cells</td>
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<tr>
<td>Battery</td>
<td>Lithium, non-replaceable</td>
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<tr>
<td>Ingress Protection</td>
<td>IP 66/67</td>
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Alarm Setpoints

<table>
<thead>
<tr>
<th></th>
<th>Instant low and instant high</th>
</tr>
</thead>
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Calibration

<p>| | |</p>
<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>H₂S</td>
<td>not required</td>
</tr>
<tr>
<td>CO</td>
<td>not required</td>
</tr>
<tr>
<td>SO₂</td>
<td>not required</td>
</tr>
<tr>
<td>O₂</td>
<td>Perform the Zero procedure every 24 hours or when the Automatic Zero Reminder is displayed.</td>
</tr>
</tbody>
</table>

Intended Use
This product is classified for use in hazardous atmospheres that are not more than 21% v/v O₂.

Recycling
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.

CAUTION
Products may contain materials that are regulated for transportation under domestic and international dangerous goods regulations. Return product in compliance with appropriate dangerous goods regulations. Contact freight carrier for further instructions.

Limited Warranty and Limitation of Liability

BW Technologies (BW) warrants this product to be free from defects in material and workmanship under normal use and service for a period of two or three years (depending upon detector), beginning on the date of activation. 24-month H₂S and CO detectors are covered for up to an additional 12 months when hibernation is used, limited by a total of 24 months of detector operation. This 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; or
• 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.

The obligations set forth in this warranty are conditional on:
1) proper storage, installation, calibration, use, maintenance and compliance with the product manual instructions and any other applicable recommendations of BW;
2) 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
3) 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.

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