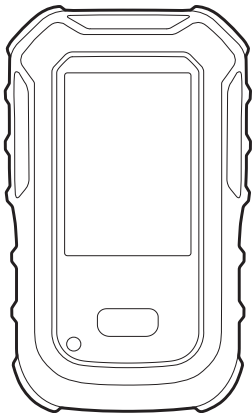


Quick
Reference
Guide



Honeywell BW™ Ultra

Portable Five-gas Detector
with Internal Pump

Introduction

The **Honeywell BW™ Ultra** gas detector warns of hazardous gas at levels above user-defined alarm setpoints.

The detector is a personal safety device. It is your responsibility to respond properly to the alarm.

Monitored Gases

The detector can monitor up to five gases at a time.

Refer to the *Honeywell BW™ Ultra User Manual* for the full list of gases.

What's in the Box

- Honeywell BW™ Ultra gas detector
- Battery (factory-installed)
- Charging adapter
- 1 Dust porous filter 7/16"
- 5 Pump filters
- USB memory stick containing user manuals
- Quick Reference Guide
- Screwdriver telescope with double end
- 3m PVC tube
- 2 Fitting mini quick connector to 1/8"
- 2 Fitting male Luer-Lock to 1/8"
- 1 screen protector (factory-installed)

Safety Information

Use the detector only as specified in this manual, otherwise, the protection provided by the detector may be impaired.

- Only the instrument capable of sounding the alarms and showing readings on a display should be used for immediate safety critical use. Wireless communication and infrastructure are only for informational monitoring.
- Use only Honeywell HU-BAT battery pack. Using any other battery can cause an explosion or fire.
- Deactivating the detector by removing the battery pack may cause improper operation and harm the detector.
- Use only Honeywell approved battery chargers such as the Multi-Unit Cradle Charger.
- If using the detector near its upper or lower operating temperature, Honeywell recommends zeroing or activating the detector in that environment.
- Charge the detector before first-time use. Honeywell recommends the detector also be charged after every workday.
- Calibrate the device on a regular schedule, depending on use and sensor exposure to poisons and contaminants. Honeywell recommends calibrating at least once every six months.
- For optimal performance, periodically zero the sensor in a normal atmosphere (20.9% v/v O₂) that is free of hazardous gas.
- The combustible sensor is factory calibrated to 50% LEL methane. If monitoring a different combustible gas in the % LEL range, calibrate the sensor using the appropriate gas.
- Only the combustible gas detection portion of this detector has been assessed for performance by CSA International.
- Honeywell recommends that the combustible sensor is checked with a known concentration of calibration gas after any exposure to contaminants/poisons such as sulfur compounds, silicone vapors, halogenated compounds, etc.

- Honeywell recommends that the sensors be bump tested before each day's use to confirm their ability to respond to gas. Manually verify that the audible, visual, and vibrator alarms are activated. Calibrate if the readings are not within the specified limits.
- Portable safety gas detectors are life safety devices. The accuracy of ambient gas reading(s) is dependent upon factors such as accuracy of the calibration gas standard used for calibration and frequency of calibration.
- The detector is designed for use only in potentially explosive atmospheres where oxygen concentrations do not exceed 20.9% (v/v). Oxygen deficient atmospheres (<10% v/v) may suppress some sensor outputs.
- Extended exposure of the detector to certain concentrations of combustible gases and air may stress the detector element and seriously affect its performance. If an alarm occurs due to a high concentration of combustible gases, a calibration should be performed. If necessary, replace the sensor.
- High concentrations of certain toxic gases, for example, H₂S, may hurt the LEL sensor. This effect, known as inhibition, is usually temporary but in extreme circumstances can impair the sensitivity of the LEL sensor after any gas exposure that causes alarm in the toxic gas sensors.
- The Honeywell BW™ Ultra is provided with an antistatic coating over the LCD window to minimize the risk of ignition due to electrostatic discharge. Periodic inspection of this coating is required to ensure no degradation, delamination, abrasions or other deformities to this surface.
- Care must be taken to avoid exposure to excessive heat, harsh chemicals or solvents, sharp edges and abrasive surfaces. Clean the exterior with a soft, damp cloth.
- The Canadian Standards Association (CSA) requires the LEL sensor to be bump tested before each day's use with calibration gas containing between 25% and 50% LEL. The instrument must be calibrated if the displayed LEL value during a bump test fails to fall between 100% and 120% of the expected value for the gas.



WARNINGS

- Warning: Substitution of components may impair Intrinsic Safety.
- To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.
- Protect the combustible sensor from exposure to lead compounds, silicones, and chlorinated hydrocarbons. Although certain organic vapors (such as leaded gasoline and halogenated hydrocarbons) can temporarily inhibit sensor performance, in most cases the sensor will recover after calibration.
- Caution: High off-scale LEL readings may indicate an explosive concentration.
- Any rapid up scaling reading followed by a declining or erratic reading may indicate a gas concentration beyond the upper scale limit, which can be hazardous.
- 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.
- The lithium battery may present a risk of fire or chemical burn hazard if misused. Do not disassemble, incinerate, or heat above 212°F (100°C), or incinerate. Batteries must only be charged in a safe area free of hazardous gas. Batteries exposed to heat at 266°F (130°C) for 10 minutes can cause fire and explosion.
- Dispose of used lithium cells immediately. Do not mix batteries with the solid waste stream. Spent batteries should be disposed of by a qualified recycler or hazardous materials handler.

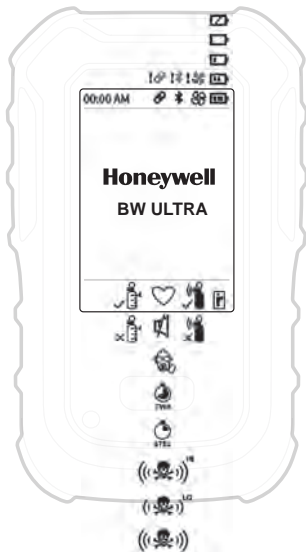
Appearance

1. Visual alarm indicator
2. Exhaust port
3. Screen
4. Button
5. Beeper Aperture
6. Pump inlet
7. Alligator clip
8. Pump assembly
9. Charging connector and IR Interface

























Screen Icons

Several icons are displayed in the detector's screen as conditions dictate.



Screen Icons

	BLE		Pump/header
	BLE Pairing Error		Pump passed
	Paired		Pump critical fail
	Pairing failed		Warning/failure/error/low battery
	Stealth mode enabled		Hole watch mode high
	Battery -three levels		Hole watch mode low
	Low battery		Hole watch -Oxygen bar
	IR LINK connection		Correction factor
	Calibration passed		Peak gas exposure
	Calibration failed		Press button
	Calibration cancelled		Press and hold button

Screen Icons



Target gas



Bump test cancelled



Bump test passed



Bump test failed



Over limit alarm



High alarm



Low alarm



Inert mode



Sensor failure



STEL alarm



TWA alarm



Firmware update in progress



Sensor disabled



Heartbeat

Activate the Detector

Activate the detector in a safe area with an atmosphere of 20.9% oxygen and free of hazardous gas.

1. For first time use, charge the battery for up to 8 hours or until LED light turns green using the charging adapter provided. Refer to Charge the battery for more information.
2. Press and hold the button for three seconds.
3. For first time use, a **Warming sensors** message is displayed and a 30 minutes countdown is displayed. In most cases, this countdown only lasts a couple of minutes.
4. When the detector displays **Pump test Block inlet**, block the pump inlet with a finger, and then after a couple of seconds unblock the pump inlet.
The detector performs a quick pump test. A **Pump Test passed** message is displayed.
If you do not block the pump inlet, the detector will turn off after two minutes.
If necessary, you will be instructed by screen prompts to calibrate newly-installed sensors.
The detector will then perform a self-test, including testing the sensors. This process could take several minutes.
5. When the self-test is complete, press and hold the button to zero sensors. After the autozero is complete, the detector then checks the sensors for calibration and bump test.
If the detector identifies sensors requiring calibration or bump testing, press the button and follow the on-screen instructions.

Alarms

When the detector goes into alarm it flashes, vibrates, and produces a loud siren noise. Depending on the type of alarm, these flashes, vibrations, and noises will be different.

There are ten types of alarms.

- Low alarm
- High alarm
- TWA alarm
- STEL alarm
- Multi alarm
- Sensor Failure alarm
- Over-Limit alarm
- Normal Deactivation
- Low battery alarm
- Critical battery alarm

NOTE: In Stealth mode the Honeywell BW™ Ultra only vibrates.

IMPORTANT: Regardless, when a detector goes into alarm, always take appropriate action. Never ignore or dismiss an alarm.

For more information on the alarms, refer to the *Honeywell BW™ Ultra User Manual*.

Navigate the Menu

There are four main menu items.

- **See Information**
- **Start Bump Test**
- **Zero Sensors**
- **Start Calibration**

1. Double pressing the button displays all four options on the screen. **See Information** is selected and highlighted by default.
2. Press the button to transition the selection to the next choice.
3. Press and hold for three seconds to enter the selected option.
4. Follow on-screen instructions for your selected operation. Most of the detector's procedures are described in this guide.

Standards and Certifications

The Honeywell BW™ Ultra gas detector is in conformity with the following standards and certifications:

Approvals: Approved by CSA to both U.S. and Canadian Standards

CAN/CSA C22.2 No. 157 and C22.2 No. 152

ANSI/UL - 913 and ANSI/ISA - 12.13.01 Part 1

CSA: Class I, Division 1, Group A, B, C, and D

ATEX: DEMKO 17 ATEX 1833X

II 1 G Ex da ia IIC T4 Ga

EN 60079-0:2012, EN 60079-1:2014, EN 60079-11:2012

Ex ia I Ma, Ex ia IIC T4 Ga (Tamb: -40 °C to +50 °C)

Ex ia I Ma, Ex ia d IIC T4 Gb (Tamb: -20 °C to +50 °C) – when infrared sensor is assembled.

IECEX: Ex da ia IIC T4 Ga IECEX UL 17.0010X

IEC 60079-0:2011, IEC 60079-1:2014, IEC 60079-11:2011

Ex ia I Ma, Ex ia IIC T4 Ga (Tamb: -40 °C to +50 °C)

Ex ia I Ma, Ex ia d IIC T4 Gb (Tamb: -20 °C to +50 °C) – when infrared sensor is assembled.

KTL: GasAlertMicroClip XT: 12-KB4BO-00531

Inmetro: DNV 12.0134

cULus: Class I, Div. 1, Groups A, B, C and D with a Temperature Class of T4