

USER MANUAL



Honeywell BW™ Icon & BW™ Icon + Portable Multiple Gas Detector

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Honeywell

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1 Introduction

Learn what you need to know about the Honeywell BW™ Icon Gas Detector before operating.

Product Description

The Honeywell BW™ Icon & Honeywell BW™ Icon+ gas detectors warns of hazardous gas at levels above user-defined alarm setpoints. The detector can monitor up to four gases at a time.

Safety



CAUTION

- The detector is a personal safety device. It is your responsibility to respond properly to the alarm.
- For safety reasons, this equipment must be operated and serviced by qualified personnel only.
- The lithium battery in this product presents a risk of fire, explosion, and chemical burn if misused. Do not disassemble, incinerate, or heat above 212°F (100°C). Batteries exposed to heat at 266°F (130°C) for 10 minutes can cause fire and explosion. Batteries must only be charged in a safe area free of hazardous gas.
- 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 vehicle Charger.
- Do not use the apparatus if it is damaged. Inspect the apparatus before use. Look for cracks and missing parts.

Standards and Certifications

IECEX: IECEX SIR 20.0020X

Ex ia op is I Ma Ex ia op is IIC T4 Ga, $-40^{\circ}\text{C} \leq \text{Tamb} \leq 60^{\circ}\text{C}$ (with IR sensor installed)

Ex ia I Ma Ex ia IIC T4 Ga, $-40^{\circ}\text{C} \leq \text{Tamb} \leq 60^{\circ}\text{C}$

 2813

ATEX: Sira 20ATEX2012X



I M1 Ex ia op is I Ma, $-40^{\circ}\text{C} \leq \text{Tamb} \leq 60^{\circ}\text{C}$ (with IR sensor installed)



II 1G Ex ia op is IIC T4 Ga, $-40^{\circ}\text{C} \leq \text{Tamb} \leq 60^{\circ}\text{C}$ (with IR sensor installed)



I M1 Ex ia I Ma, $-40^{\circ}\text{C} \leq \text{Tamb} \leq 60^{\circ}\text{C}$



II 1G Ex ia IIC T4 Ga, $-40^{\circ}\text{C} \leq \text{Tamb} \leq 60^{\circ}\text{C}$

RE-D Directive 2014/53/EU

EMC Directive 2014/30/EU

ROHS Directive (EU) 2015/863 amending 2011/65/EU

IP: IP66, IP68 (1.2 meters for 45 minutes)

Contains FCC ID: SU3RMBLED

Contains IC: 20969-RMBLED

CAN ICES-3(A)/NMB-3(A)

FCC Compliance statement

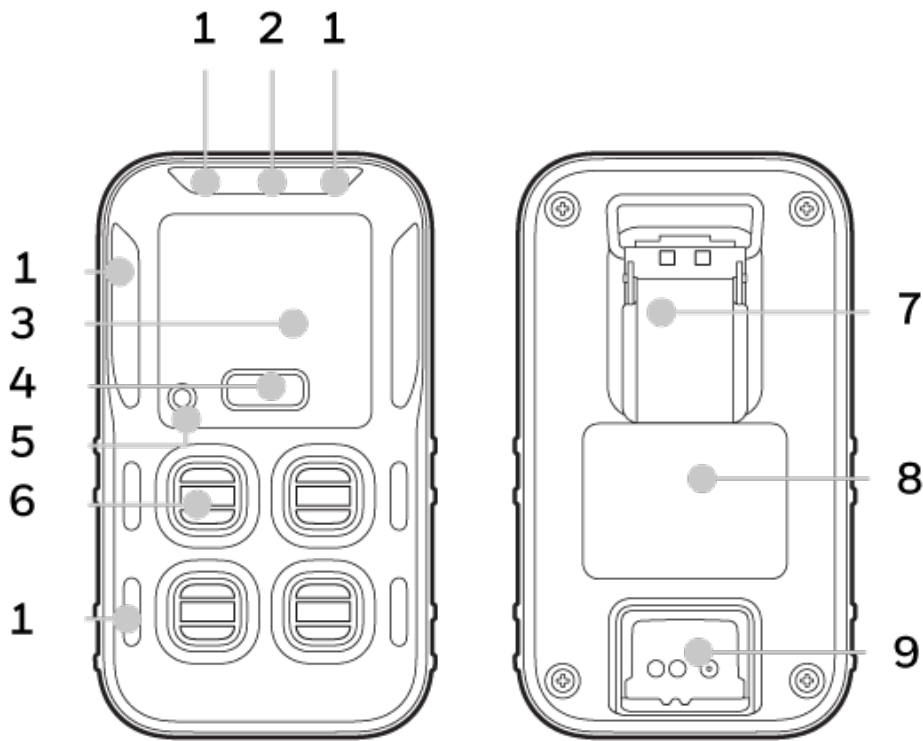
This device complies with part 15 of the FCC Rules. operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

What's in the Box

1	Honeywell BW™ Icon gas detector
1	Battery (factory-installed)
1	USB charger
1	Calibration cap
1	Klick Fast stud
1	Quick Reference Guide
1	Tubing

Overview



1	LED Alarm	6	Sensor
2	IntelliFlash	7	Clip
3	Display	8	Battery
4	Button	9	Charging Port
5	Beeper		

User Interface	
	Alarm One — Shows when alarm one is breached and gas highlighted next to sensor
	Alarm Two — Shows when alarm two is breached. Alarm two will over write any alarm one status.
TWA	Time Weighted Average — Settable in Safety Suite DC for each toxic sensor.
STEL	Short Term Exposure Limit — Settable in Safety Suite DC for each toxic sensor.
	Bump — Shows when bump is due and you can configure to have a count down.
	Calibration — Shows when bump is due and you can configure to have a count down.
	Battery status — Shows battery status and when on charge will show charging status.
	Bluetooth — All devices have Bluetooth – double click to enter menu. for search mode

2 Operations

Learn what you can do with your Honeywell BW™ Icon Detector, from commissioning to Calibration.

Activate the Detector

To turn the detector on, press and hold the button for four seconds. LEDs turn on, and the detector vibrates and beeps.

Self Test

When the detector is activated, it performs several start-up tests.

- Battery
- Data Flash
- RTC. Real Time Clock
- Temperature sensor.
- BLE module
- Sensors
- Bump and Calibration due date

When the detector has passed all the start-up self-tests, it enters the regular operation mode.

Deactivate the Detector

To turn the detector off, press and hold the button for four seconds. LEDs turn on, and the detector beeps four times.

Common Button Operations

Feature	Operation
Power On	4-second hold
Power Off	4-second hold
Enter or Exit menu	Double-Press
Switch Menu (bump, cal, & BLE)	Single-Press
Initiate selected	3-second hold
Acknowledge latched alarm	1-second hold

Bluetooth Pairing

The user can pair the Honeywell BW™ Icon to a mobile device via built-in Bluetooth Low Energy (BLE). The Honeywell Device Configurator app, installed on the mobile device, can then show gas readings and alarms from the BW Icon unit that is connected.

Readings and alarms can then be sent to Honeywell remote monitoring software

On the Honeywell BW™ Icon, the Bluetooth connection is on by default.

1. Turn On the BW Icon.
2. In your mobile device, open the Device Configurator app
3. In your BW Icon:
 - Double press to enter the menu
 - Single press until the BLE icon is displayed
 - Hold press 3 secs to initiate the pairing mode.
4. In the Device list screen from the Device Configurator app, select the BW Icon Serial Number to start pairing.

Calibration

Perform a calibration to adjust the sensitivity levels of sensors and ensure accurate responses to gases.

The detector can be calibrated in two ways:

- Apply gas from a cylinder to the sensors manually through the calibration cap, and using the Safety Suite Device Configurator (SSDC) software or the Device Configurator (DC) app.
- Use an IntelliDoX module.



CAUTION

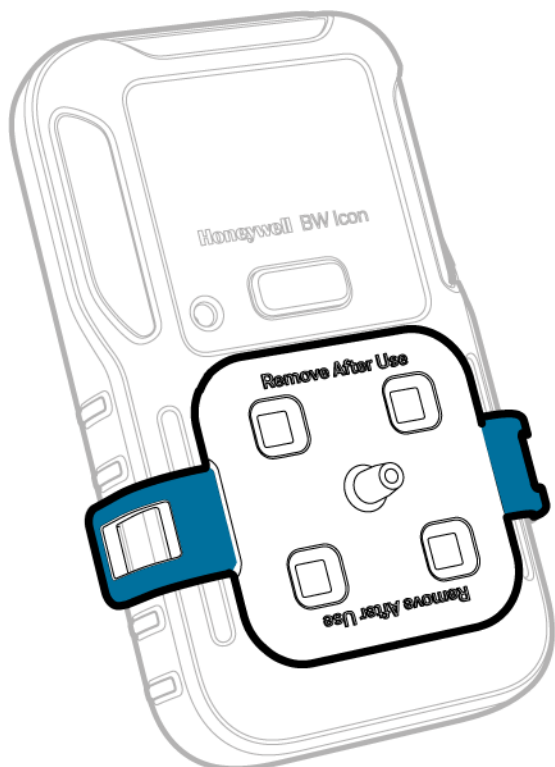
Move to a normal atmosphere (20.9% v/v O₂) that is free of hazardous gas. Use 50% LEL for test gas.

Details for calibration and maintenance:

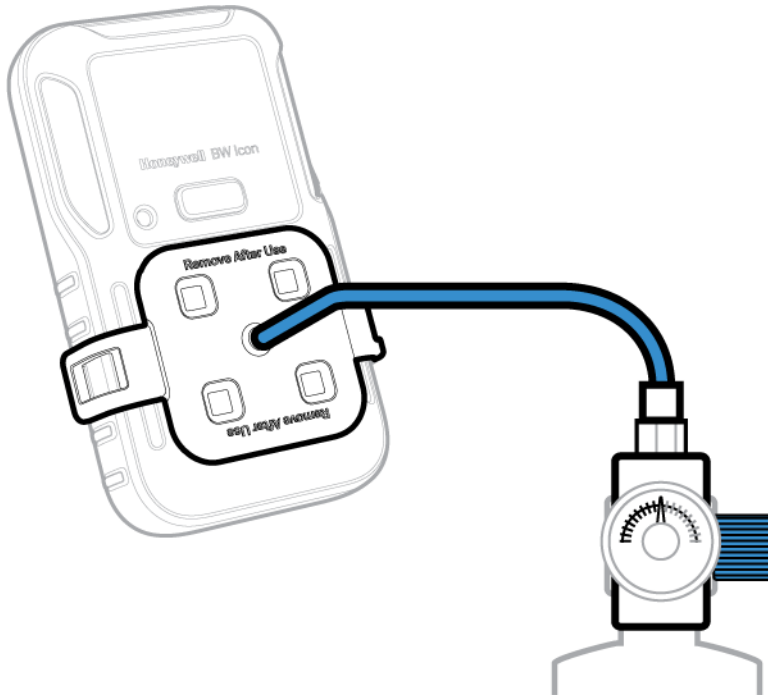
- Recommendations for calibration of the equipment on a routine basis including the maximum time interval between calibrations.
- Calibrate the apparatus before first-time use and then on a regular schedule, depending on use and sensor exposure to poisons and contaminants. Honeywell recommends that the sensors be calibrated regularly and at least once every 180 days (6 months).
- 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.

Procedure to calibrate the detector via the calibration cap and the DC app on a mobile device

1. Turn On the BW Icon. Place the cap over the detector, and then press down on both tabs to snap it into place.



2. Attach the hose.



3. In your mobile device, open the Device Configurator app
4. In your BW Icon:
 - Double press to enter the menu
 - Single press until the BLE icon is displayed
 - Hold press 3 secs to initiate the pairing mode.
5. In the Device list screen from the Device Configurator app, select the BW Icon Serial Number to start pairing.
6. In your Mobile device:
 - Tap on the Menu button
 - Select **Remote Calibration**
 - Follow onscreen instructions.
7. In the mobile device, open the **Device Configurator** App, and then go to the main menu and select Remote Calibration.
8. Enter the **Operator Name**, and then Tap **Save**. The IntelliFlash LED flashes amber to indicate the calibration process has started.
9. In the Input Gas level screen, check the sensor that you want to calibrate and enter the Span gas concentration, and then tap **OK**.

Input Gas Levels

☒	LEL	50
☐	O ₂	
☐	H ₂ S	
☐	CO	

OK

10. Open the cylinder valve by turning the pressure regulator knob clockwise. The Zero process starts and a message is displayed when succeeded.
11. Follow onscreen instructions to know when to apply gas and when the calibration process is complete.
12. The process is complete when the results are displayed on your mobile device. You can now remove the cap by pulling on the tabs.

Bump Test

The detector can be tested in two ways:

- Apply gas from a cylinder to the sensors manually through the calibration cap, and using the Safety Suite Device Configurator (SSDC) software or the Device Configurator (DC) app.
- Use an IntelliDoX module.



CAUTION

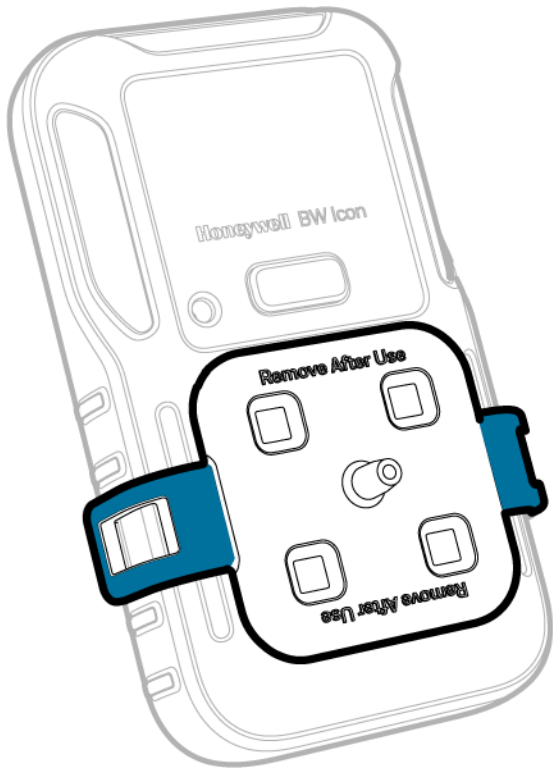
Move to a normal atmosphere (20.9% v/v O₂) that is free of hazardous gas. Use 50% LEL for test gas.

Details for Bump Test and maintenance:

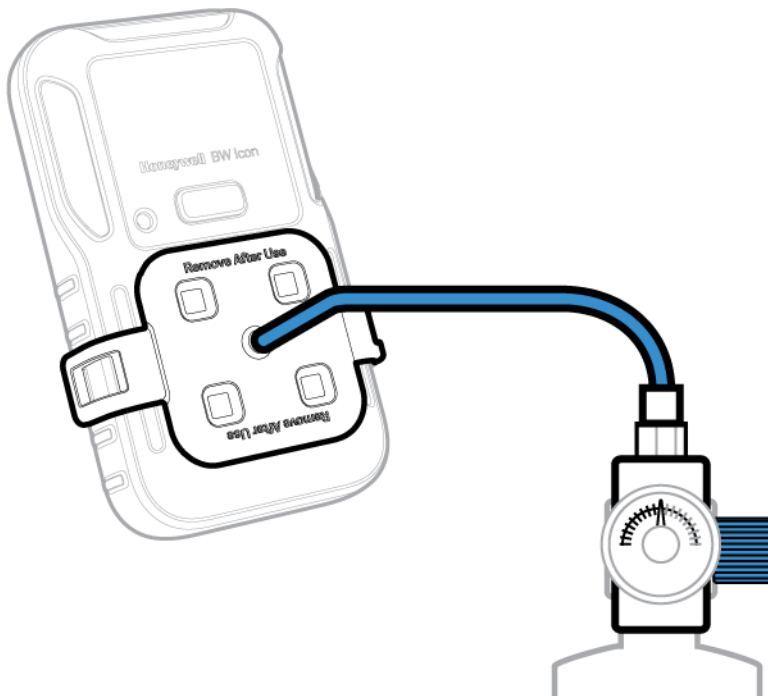
- Recommendations for initial checking of the equipment on a routine basis including the maximum time interval between calibrations.
- Perform a functional check with gas before each day of use.
- Honeywell recommends bump testing the sensors before each day's use to confirm their ability to respond to gas by exposing the apparatus to a gas concentration that exceeds the alarm setpoints. Manually verify that the audible and visual alarms activate.
- 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.

Procedure to Bump Test the detector via the calibration cap and the DC app on a mobile device

1. Turn On the BW Icon. Place the cap over the detector, and then press down on both tabs to snap it into place.



2. Attach the hose.



3. In your mobile device, open the Device Configurator app
4. In your BW Icon:
 - Double press to enter the menu
 - Single press until the BLE icon is displayed
 - Hold press 3 secs to initiate the pairing mode.
5. In the Device list screen from the Device Configurator app, select the BW Icon Serial Number to start pairing.
6. In your Mobile device:
 - Tap on the Menu button
 - Select **Bump**
 - Follow onscreen instructions.
7. In the mobile device, open the **Device Configurator** App, and then go to the main menu and select Bump.
8. Enter the **Operator Name**, and then Tap **Save**. The IntelliFlash LED flashes amber to indicate the calibration process has started.
9. In the Input Gas level screen, check the sensor that you want to calibrate and enter the Span gas concentration, and then tap **OK**.

Input Gas Levels		
☒	LEL	50
☐	O2	
☐	H2S	
☐	CO	

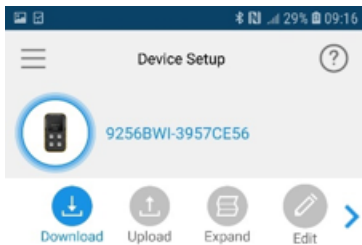
10. Open the cylinder valve by turning the pressure regulator knob clockcounterwise. The Zero process starts and a message is displayed when succeeded.
11. Follow onscreen instructions to know when to apply gas and when the bump test process is complete.
12. The process is complete when the results are displayed on your mobile device. You can now remove the cap by pulling on the tabs.

Capture Real Time Reading

1. Pair your BW Icon with a mobile device.
2. In your mobile device, open the **Device Configurator** app.
3. Tap **Menu** 
4. Tap **Measurements** 
5. Tap **Start Recording**.

Set the Detector via Device Configurator

1. Pair the BW Icon with the Device Configurator App on your mobile device.
2. Tap the menu button 
3. Tap **Device Setup** 
4. Tap Download, to get the configuration table.



5. Confirm the value of the setting: 1 to turn on, 0 to turn off. Multiply 100 times for the value of the concentration. For example, for 50ppm, you need to input 5000. Finally, tap **Upload** to apply changes.

3 Maintenance

Charge the Battery

You can charge the battery via an IntelliDox module, the charger adaptor & USB Charger, and the Multi-unit Cradle Charger.

Note:

The lithium battery may require 5 hours to full capacity. While charging, the battery icon will flash amber once per second. The time needed to charge will increase if the apparatus is activated. The detector may be warm during charging; this is normal. To preserve the life of the battery, deactivate the device when not in use.

The battery operating temperature is $-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$.



WARNING

The Icon uses a lithium battery that may present a risk of fire or chemical burn hazard if misused. Do not disassemble, heat above 100°C , or incinerate.



CAUTION

- To avoid personal injury and property damage, adhere to the following:
- Charge the battery immediately when the apparatus emits a low battery alarm.
- Charge the battery in a safe area that is free of hazardous gas in a temperature range from $0 \sim 45^{\circ}\text{C}$.
- If the device is out of charging range, the battery icon flashes in blue.
- Charge the battery using Honeywell charger adapters designed for this apparatus only. Do not use any other charger adapters. Failure to adhere to this caution can lead to fire and explosion.
- If replacing the battery, use only approved lithium polymer cells that are available through Honeywell. User of any other cell can cause fire and explosion.

-   Dispose of used lithium cells immediately. Do not disassemble and do not dispose of in fire. Do not mix with the solid waste stream. Spent batteries must be disposed of by a qualified recycler or hazardous materials handler.
- Keep lithium cells away from children.

Battery Capacity Indicator

Satus	Duration	Indication or Alarm
Battery low	Less than 5 hours	IntelliFlash and the battery icon flashes in amber every 15 seconds.
Battery critical	Less than 20 minutes	IntelliFlash LED is amber, The battery icon LED is red, and the alarm LED flashes every 15 seconds.
Battery depleted		The battery icon LED is solid red for five seconds, and then the detector powers off.

Status	Percentage	Indication or Alarm
Charging	Less than 100%	Battery icon LED flashes amber.
Fully charged	100%	Battery icon LED flashes green.

Note: The Auto-power is on if the device is inserted into an IntelliDox module, and if the battery is low, the device will auto power on after the battery capacity exceed. The auto-power is off if there is no communication with the IntelliDox for five minutes.

Charge the battery via the USB Charger

1. Press and hold the button to deactivate the detector.
2. Plug the USB charger into an USB port.
3. Attach the charging adapter to the charging Port.

Charge the battery via the Multi-Unit Cradle Charger

1. Deactivate the detector.
2. Insert the detector into the detector bay and press down firmly on the detector to ensure contact between the detector and the contact pins. The detector can be activated during charging.
3. After charge is complete, the battery icon LED flashes green.
4. Remove the detector.



Note: For further information, refer to the Multi-Unit Cradle Charger User Manual.

Firmware Update

1. Open the Device Configurator app on your mobile phone.

2. Tap **Menu** 

3. Tap **Firmware** 

4. Tap Update



5. Tap **YES** to implement the Firmware update, and wait until Update Successfully is displayed.

6. Tap **OK**.

Learn from about strategic information related to the Honeywell BW™ Icon Detector.

Sensor Poisons and Contaminants

Several cleaners, solvents, and lubricants can contaminate and cause permanent damage to sensors.

Cleaners and Lubricants	Silicones	Aerosols
Brake cleaners	Silicone cleaners and protectants	Bug repellents and sprays
Lubricants	Silicone based adhesives, sealants, and gels	Lubricants
Rust inhibitors	Hand/body and medicinal creams that contain silicone	Rust inhibitors
Window and glass cleaners	Tissues containing silicone	Window and glass cleaners
Dish soaps	Mold releasing agents	
Citrus based cleaners	Polishes	
Alcohol based cleaners		
Hand sanitizers		
Anionic detergents		
Methanol (fuels and antifreezes)		

Sensor Specifications

Gas Type	Measuring Range	Resolution	Measuring Unit	New Sensor Warm Up Time	Working Temperature
CO	0~2000 ppm	1 ppm	ppm, mg/m3, umol/mol	0.5h	-40°C to +60°C
H2S	0~200 ppm	0.1 ppm	ppm, mg/m3, umol/mol	0.5h	-40°C to +60°C
O2	0~30% VOL	0.1% VOL	%VOL	12h	-40°C to +60°C
NDIR-CH4	0~100% LEL	1% LEL	%LEL/%VOL		-40°C to +60°C
SO2	0~150 ppm	0.1 ppm	ppm, mg/m3, umol/mol	0.5h	-20°C to +50°C/ intermittent -40°C to +55°C

Gas Type	Default SPAN Value	SPAN Value Range	Calibration Flow Rate
CO	100	35~500	500ml/min
H2S	25	10~100	500ml/min
O2	18.0%	0~25%	500ml/min
NDIR-CH4	50%	10~100%	500ml/min
SO2	20	10~100	500ml/min

Gas Type	Default Low Alarm	Low Alarm Setting Range	Default High Alarm	High Alarm Setting Range	Default TWA	TWA Setting Range	Default STEL	STEL Setting Range
CO	35	10~2000	200	10~2000	35	0 (disable), 10~2000	50	0 (disable), 10~2000
H2S	10.0	1~200	15	1~200	10	0 (disable), 1~200	15	0 (disable), 1~200
SO2	2	0.5~150	5	0.5~150	0.5	0 (disable), 0.3~150	1	0 (disable), 0.3~150
O2	19.5%	0.5~20.2, 21.6~25%	23.0%	0.5~20.2, 21.6~25%	N/A	N/A	N/A	N/A
NDIR-CH4	10%	5~60%	20%	5~60%	N/A	N/A	N/A	N/A

General Specifications

	BW Icon	BW Icon +
Size	108.2mm x 61.5mm x 43.2mm(4.29" x 2.44" x 1.7 ") with Alligator Clip 108.2mm x 61.5mm x 37.8 mm(4.29" x 2.44" x 1.49") with Klick Fast Stud	
Weight	185g with Alligator Clip, 169g with Klick Fast Stud	
Appearance Colour	Yellow(PMS 123C), Dark Gray(NCS 8500 N)	
Working Temperature	-40°C to +60°C	
Working Humidity	0%~95%	
Working Atmospheric Pressure	80kPa to 120kPa	
IP Rating	IP 66 IP 68, 45min@underwater 1.2m	
Gas Type	CO,H ₂ S,O ₂ ,SO ₂ ,CH ₄	CO,H ₂ S,O ₂ ,SO ₂ ,CH ₄ ,CL ₂ and other gas
Sensor Indication	4*RGB LED to show Red, Green, Blue and Amber with animation Brightness by sample confirmation.	
Display	8 Icon LED to show Alarm and Information, Green and Amber LED to show device status.	
Alarms Condition	Low Alarm, High Alarm, TWA Alarm, STEL Alarm, Negative Drift Alarm, Over Limit Alarm, Multi Gas Alarm.	
Visual Alarm	6 Red LED	
Audible Alarm	95 dB at 10cm	
Battery	Rechargeable Polymer Li-Ion battery 1250mAh, FT583759PA	
Battery Life	2 months (8 hour per day at room temperature with NDIR CH ₄ sensor)	
Charging	Less than 5 hours via charger adaptor/USB Charger, Adaptor/Cradle Charger, 0-45°C, safety area only.	
Communication	BLE Distance: up to 6m, supports SC, DC, OTA firmware upgrade IR Link	

	BW Icon	BW Icon +
	and IR module.	
Datalogging	Continuous datalogging (45 days at 15 seconds interval and 8 hours per day)	
Calibration	Manual calibrate with Safety Suite Device Configurator or Device Configurator app, Automatic with IntelliDoX.	
Serial No.	18 characters	
Warranty	2 years warranty, 6 months shelf life.	3 years warranty, 6 months shelf life.

Time Out Events

Action	Time Out
Auto exit error screen and power off	5 seconds
Auto skip error message screen and enter warmup	5 seconds
Auto exit menu and turn off Icon LED	6 seconds
Auto exit Force bump and Calibration	30 seconds
Exit auto detected span gas	60 seconds
Pairing, bump, and calibration result display	5 seconds
BLE pairing timeout	60 seconds

Troubleshooting

Problem	Cause	Solution
Battery icon blinks for 5 seconds when press button to power on.	Depleted battery	Charge the rechargeable battery pack
The detector, side LEDs, all bays, and IntelliFlash blink for 5 seconds when press the button to power on.	The detector expired	The apparatus is over two years lifetime, cannot continue to use.
All bays and IntelliFlash	All sensors fail	Replace the sensor or the

Problem	Cause	Solution
light for 5 seconds		PCBA
The detector, side LEDs, and IntelliFlash light for 5 seconds, and sound two long beeps.	RTC fail	Replace PCBA
The detector, side LEDs, and IntelliFlash light for 5 seconds, and sound five short beeps.	Data flash fail	Replace PCBA
The detector, side LEDs, and IntelliFlash light for 5 seconds, and sound one long beep and two short beeps.	Temperature sensor fail	Replace PCBA
BLE icon and IntelliFlash light for 5 seconds	BLE fail	Replace PCBA
Sensor bay and IntelliFlash light for 5 seconds	Sensors fail	Replace the sensors
Bump icon lights for 30 seconds.	Bump overdue and must carry out bump testing before use.	Hold the button for 3 seconds to start the bump testing or detector will auto power off after 30 secs.
Detector alarms after start-up sequence	Sensor not stabilized	SPE O2 sensor: Wait for at least 10 min before power on.
	Sensors require calibration	NDIR-CH4 sensor must carry out calibration 5 minutes after warmed up for power on
Detector does not respond when button is pressed	The battery state is critically low, or the battery is depleted.	Charge the rechargeable battery pack
	Apparatus is performing operations that do not require user input.	Button operation restores automatically when the operation ends.
Apparatus Doesn't accurately measure gas.	Sensor(s) require calibration.	Carry out calibration.
	Apparatus is colder/hotter than gas temperature.	Allow the apparatus to attain ambient temperature before use.

Problem	Cause	Solution
	The sensor filter is blocked.	Replace sensor filter
The detector does not alarm.	Alarm setpoints set incorrectly.	Define the alarm setpoint in Device Configurator.
	Alarm setpoints set to zero.	Define the alarm setpoint in Device Configurator.
	Apparatus is in calibration mode.	Complete the calibration procedure.
	Apparatus is in DC mode.	Stop data communication via a mobile phone.
	Apparatus is in IR communication.	Stop data communication via IR Link.
The device alarms without reason	The sensor is exposed to a puff of the target gas.	Apparatus is operating normally. Use caution in suspected areas. Check the peak gas exposure reading.
	Alarm setpoints are set incorrectly.	Define the alarm setpoint in Device Configurator.
	Sensors require calibration.	Carry out calibration.
	Missing or faulty sensors.	Replace the sensors.
	Battery temperature is out of acceptable range.	Move to lower temperature ambient to charge the battery.
Battery indicator doesn't display when charging.	Battery is depleted.	Charge the battery for 8 hours. If the battery indicator doesn't light after charging, contact Honeywell
Battery icon flashes in blue.	Battery is out of required charging temperature range.	Move to 0~45°C ambient temperature.

DataLogs and Event Logs

DataLogs

The detector records various information to create a report. The detector is capable of storing 45 days of data under the following condition estimation:

- 8 hours and 2 minutes of alarm per day.
- A recording of data logs in 15 seconds interval.
- Power ON/OFF twice per day.
- One Bump Test per day

When the memory is full, the detector replaces the oldest datalogs with the most recent datalogs.

Event Logs

The detector records a maximum of 50 gas alarm and maintenance events and error conditions.

The following alarm events are recorded:

- Low alarm
- High alarm
- STEL alarm
- TWA alarm
- Over range
- Negative

The following maintenance events are recorded:

- Automated bump test or calibration
- Manual sensor zero
- Bump test
- Calibration

Any error condition is recorded, such as:

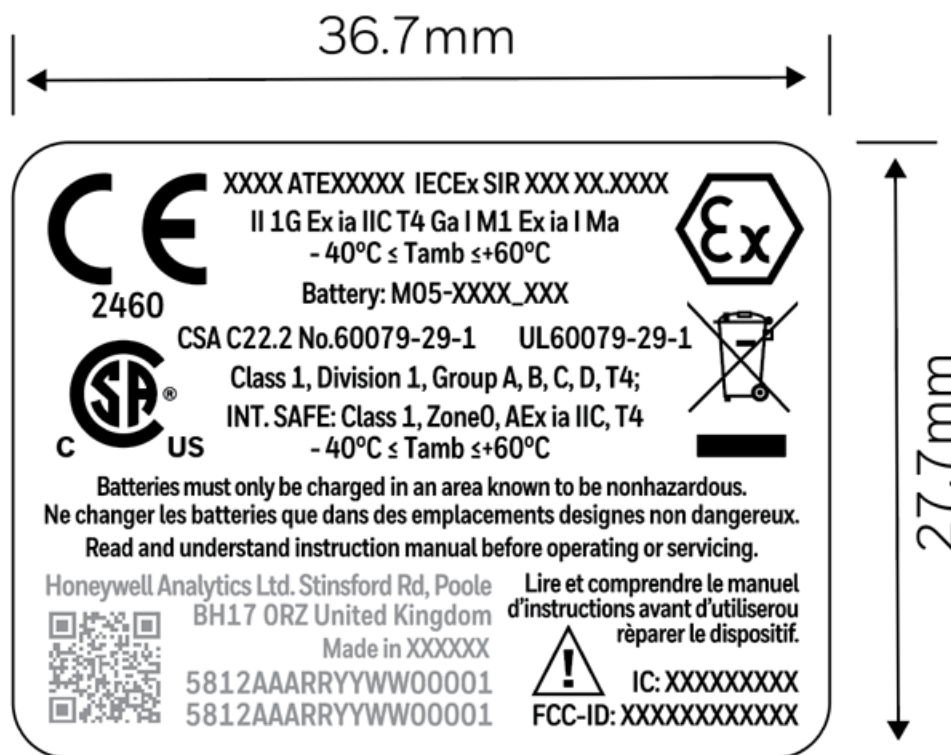
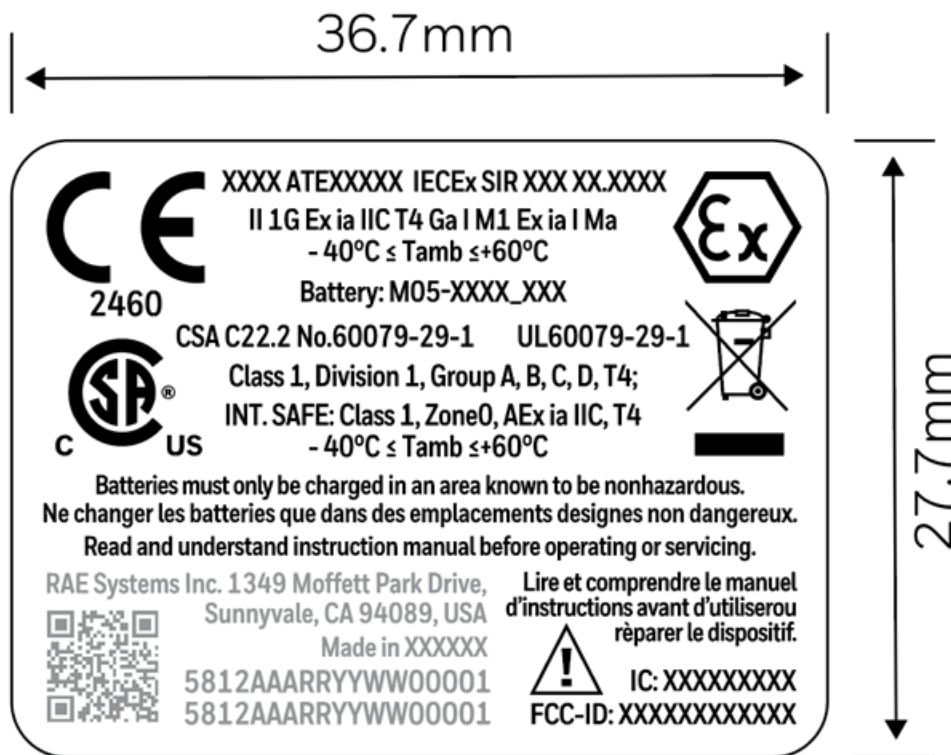
- BLE not found
- RTC fail
- Broken Datalog link
- Sensor fail (reflex, count out of range, no communication)
- Temperature Fail

Alarms

Item	Alarm Set-point	Ressetting	Silencing
Negative Alarm	<-5%LEL	Keep alarm until reading increase above or equal to -5%LEL	Silence when transmitting data to Device Configurator or IR Link
Default Low Alarm	10%LEL	Keep alarm until reading decrease to below 10%LEL	Silence when transmitting data to Device Configurator or IR Link
Default High Alarm	20%LEL	Keep alarm until reading decrease to below 20%LEL	Silence when transmitting data to Device Configurator or IR Link
Default TWA	N/A		
Default STEL	N/A		
Over Alarm	>100%LEL	Keep alarm until reading increase over 100%LEL	Silence when transmitting data to Device Configurator or IR Link

Gas Type	Setting Resolution	Low Alarm Setting Range	High Alarm Setting Range	TWA Setting range	STEL Setting Range
NDIR-CH4	1% LEL	5~60%	5~60%	N/A	N/A

Certified Labels



Replacement Parts

- PCBA and Serial No. label
- PCB Frame
- Front housing
- Back housing
- Housing screws
- Battery pack
- Sensor filter
- Digital NDIR sensor
- Digital EC sensors
- Analog EC sensors
- Vibrator
- Alligator Clip and screw
- Sensor nameplate
- Frame screw

Accessories:

M05-2011-000 Calibration cap

Security Information

This manual provides additional information for the customer and organization related to identification and risk management associated with the use of the system in connected infrastructure. It applies to a system with the following components:

- Fleet Management Software
- Docking Station (IntelliDoX, MicroDoc)
- Gas Detection Instruments

Some controls such as custom operating system, encrypted data for firmware updates, and elimination of confidential data from the system (except for gas log files if designated as confidential by the customer) are already built into the system. This manual is focusing on additional controls that could be added by the customer.

Security considerations for system installation

- To minimize unauthorized external access to the system, Fleet Management Software should operate behind a sufficiently robust and current company firewall.
- Ensure virus protection is installed, signature files are up-to-date, and subscriptions are active as per applicable IT policies.
- Allow only digitally signed software from trusted sources to run on PC, where Fleet Management Software is installed.
- To minimize the possibility of tampering with docking stations, instruments, and PCs, it is recommended to limit physical access to authorized personnel only.

Security considerations for instruments equipped with wireless connectivity

- Bluetooth communication should always be set to OFF unless the user requires this functionality
- If possible pair devices ONLY when in a physically secure area

System Monitoring

It is highly recommended to perform regular security inspections of the system and review authorized access data.

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