

## USER MANUAL



**Model: HSA/BC/10**  
Sealed Battery Operated Carbon Monoxide Alarm with 10 Year Life



## INTRODUCTION

HSA/BC/10 is a Carbon Monoxide alarm with a 10 year sealed lithium battery.

- Electrochemical Sensor
- Test/Silence Function
- Low Battery Warning
- Self Testing Diagnostic
- Supplied with wall plugs and screws

This instruction leaflet contains important information on the correct installation and operation of your alarm. Read this leaflet fully before attempting installation and retain it for future reference.

## SPECIFICATION

<b>Power Source:</b>	Non-Replaceable Lithium Battery
<b>Detection Type:</b>	Electrochemical CO
<b>Alarm Conditions:</b>	50PPM (Between 60 to 90 min) 100PPM (Between 10 to 40 min) 300PPM (Less than 3 min)
<b>Temperature Ambient:</b>	0°C to 40°C
<b>Humidity Ambient:</b>	10% to 90% (non-condensing)
<b>Alarm Sound Level:</b>	85 Decibels at 3m
<b>Approved by BSI to:</b>	BS EN 50291-1:2018 & BS EN 50291-2:2019
<b>Installation Standard:</b>	BS EN 50292:2023
<b>Apparatus:</b>	Type B



## AVOID THESE LOCATIONS

- Situations where the temperature may fall below -10°C or rise above 40°C for extended periods.
- Humid areas such as **BATHROOMS, SHOWER ROOMS** where the relative humidity may exceed 90% as vapour will cause false alarms.
- Next to a door or window or in the path of air discharged from a **FURNACE, AIR CONDITIONING VENT** or **CEILING FAN**.
- Where the air flow to the apparatus would be obstructed by **CURTAINS** or **FURNITURE**.
- In **VERY DUSTY** or **DIRTY** environments such as workshops.
- Do not locate in **INSECT INFESTED AREAS**. Insects and contamination on the alarm sensor can increase its response time.
- Directly above a **SINK** or **COOKER**.
- In or below a **CUPBOARD** even if the boiler is located in a cupboard.

- The following conditions can result in transient CO situations in the home:
- Excessive spillage or reverse venting of fuel burning appliances caused by:
  - Outdoor ambient conditions such as wind direction and/or velocity, including high gusts of wind; heavy air in the vent pipes (*cold/humid air with extended periods between cycles*).
  - Negative pressure differential resulting from the use of exhaust fans.
  - Simultaneous operation of several fuel burning appliances competing for limited internal air.
  - Vent pipe connection vibrating loose from clothes dryers, furnaces, or water heaters.
  - Obstructions in or unconventional vent pipe designs which amplify the above situations.
  - Extended operation of unvented fuel burning devices (*range, oven, fireplace, etc.*).
  - Temperature inversions which can trap exhaust gases near the ground. Car idling in an open or closed attached garage, or near a home.

### WARNING

This carbon monoxide alarm is designed for indoor use only. Do not expose to rain or moisture. It will not protect against the risk of carbon monoxide poisoning when the battery has drained. **DO NOT** open or tamper with the alarm as this could cause a malfunction.

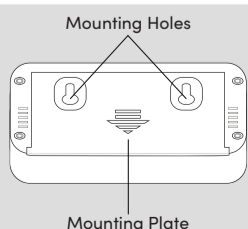
## MOUNTING

Before installing the CO alarm, it is crucial to thoroughly review the provided instructions.

**WARNING - The apparatus should be installed by a competent person.**

1. Choose a suitable location on the wall that complies with section **POSITIONING OF THE ALARM**.
2. Locate the alarm on the wall in its exact final position and mark the location of the screw hole.
3. Using a 5mm drill bit, drill the hole locations. Be vigilant of any electrical wiring or pipework in the area.
4. Insert the provided wall plug into the marked holes, position the mounting plate and tighten the screws **DO NOT OVER TIGHTEN**.

Fig.6



## DIAGRAM

Fig.1 Back View

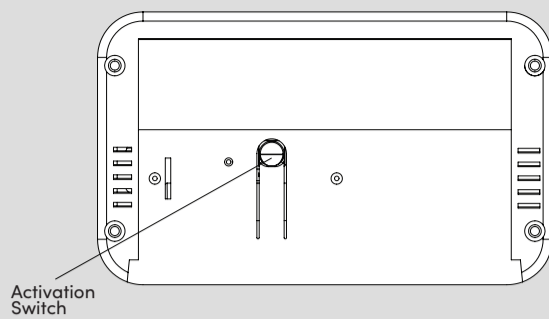


Fig.2 Front View

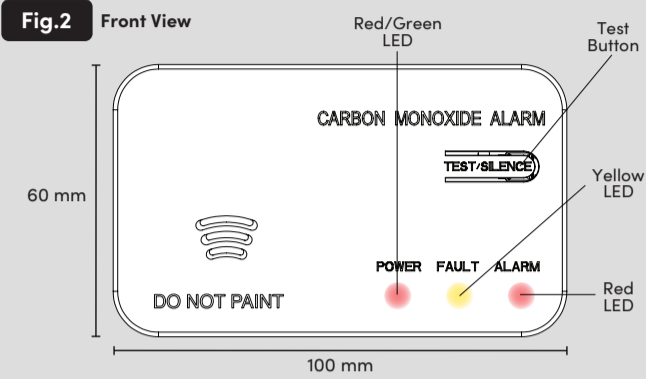


Fig.3 Side View

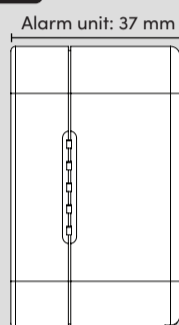
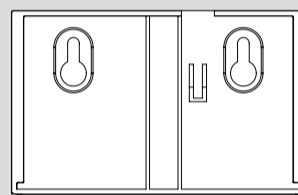


Fig.4 Mounting Plate



## POSITIONING OF THE ALARM

Ideally, a CO alarm should be installed in every room containing a fuel burning appliance. Additional apparatus may be installed to ensure that adequate warning is given to occupants in other rooms, by locating apparatus in:

- Remote rooms in which the occupant spend considerable time whilst awake and from which they may not be able hear an alarm from apparatus in another part of the premises and every sleeping room.

However, if there is a fuel burning appliance in more than one room and the number of CO alarms is limited, the following points should be taken into consideration when deciding on the best location:

- An apparatus should be located in a room containing a flueless or open-flued appliance.
- If there is an appliance in a room where people spend most time, an apparatus should be placed in that room.
- If there is an appliance in a room where people sleep, an apparatus should be placed in that room.
- In a bedsit, the apparatus should be placed as far from the cooking appliances as possible but near to where the person sleeps.
- If the appliance is in a room not normally used, such as a boiler room, the apparatus should be placed just outside the room so that the alarm will be heard more easily.
- This apparatus is appropriate for domestic premises (caravan holiday homes), caravans, motor homes and boats.

Carbon monoxide has a similar density to warm air and can be fitted in various locations. Apparatus located in the same room as a fuel-burning appliance:

- If the apparatus is located on a wall, it should be located at a height greater than the height of any door or window but at least 150 mm from the ceiling. If the apparatus is mounted on a ceiling, it should be at least 300 mm from any wall.
- The apparatus should be at a horizontal distance of between 1m and 3m from the potential source.
- If there is partition in a room, the apparatus should be located on the same side of the partition as the potential source.
- In rooms with sloped ceilings, the apparatus should be located at the high side of the room.

**Apparatus located in sleeping rooms and in rooms remote from a fuel burning appliance:**  
The apparatus should be located relatively close to the breathing zone of the occupants.

Fig.5.1 Position of the alarm in a room with fuel burning appliance

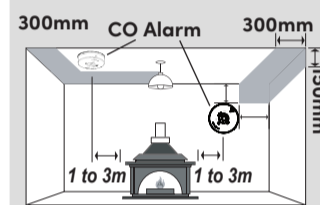
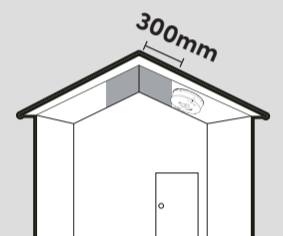


Fig.5.2 Position of alarm with no appliance in the room



## LOW BATTERY SIGNAL

In case the battery is at the end of its life, the apparatus will sound a short chirp with a red LED flash simultaneously every minute. The CO alarm should be replaced immediately. This low voltage warning will be given for at least 30 days.

Under normal operating conditions, the batteries will last a minimum of ten years.

## HUSH FUNCTION

While the CO alarm is chirping, press and hold the Test/silence button for 2 seconds. If the CO alarm detects a CO concentration under 30ppm, the alarm unit will be silenced for 10 hours. If the alarm unit did not silence, that means the CO Level is higher than 30ppm. Read Section - **"WHAT TO DO IF THE ALARM SOUNDS"**.

Never ignore a CO unit's alarm. A true alarm is an indication of potentially dangerous levels of carbon monoxide. CO alarms are designed to alert you to the presence of carbon monoxide before an emergency and before most people would experience symptoms of carbon monoxide poisoning, giving you time to resolve the problem calmly.

## END OF LIFE DEVICE REPLACEMENT

After 10 years of operation, the yellow LED will flash 3 times and beep 3 times simultaneously every 48 seconds. At this stage, the device **MUST BE REPLACED**.

If the end of life indicator does not trigger after 10 years of use, the device **MUST STILL BE REPLACED**. (Check date of installation label located on the top of the alarm).

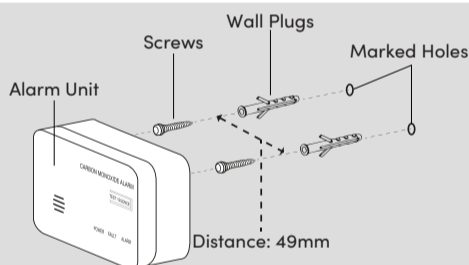
## UNIT MALFUNCTION

Your CO alarm performs an internal self-diagnosis every minute to make sure that it is functioning properly. In the rare event that your alarm malfunctions, the apparatus will sound a double short chirp and the yellow LED flashes simultaneously every minute. In this case the alarm must be replaced.

If the CO alarm is confirmed to be faulty, you may uninstall and deactivate the unit:

- Hold "Test/Mute" button for 60 seconds. The green and red LEDs will turn on.
- The CO alarm is now deactivated. Once the device is deactivated, the CO alarm can no longer be powered back on. The device must now be replaced.

Fig.7



## COMMISSIONING

### STEPS TO ACTIVATE THE CARBON MONOXIDE ALARM:

1. Fill out the 'Date of Installation' Label located on the top of the alarm.
2. Align the alarm unit with the mounting plate on the wall/ceiling.
3. Slide the alarm onto the mounting plate. The battery activates when hooked onto the mounting plate.
4. **Note:** It is designed to provide a 10 year lifespan during regular operation. The alarm is now securely attached to the surface, initially a green LED will flash 5 times and the alarm will beep once, then a green flashing LED will illuminate every 40-60 seconds to signal normal operation. If any other sequence of flashing LEDs occur, refer to the **OPERATING YOUR CO ALARM** section of this manual.
5. Press and **HOLD** the test button for 3 seconds, the alarm will sound.

## OPERATING YOUR CO ALARM

During normal operation the CO alarm performs a self testing diagnostic every minute.

**IMPORTANT:** After installation, test your alarm (See the paragraph **"TESTING YOUR CO ALARM"**)

CONDITION INDICATION	
Green Light	Alarm unit activation & power on
Red Light	High CO concentration warning Low battery signal
Yellow Light	Unit malfunction End of life signal

When the apparatus detects dangerous levels of CO gas, it will give an alarm signal. The red LED will flash and the sounder will chirp 4 times simultaneously every 5 seconds.

CO LEVEL (PPM)	RESPONSE TIME (MIN)
50	60-90
100	10-40
300	<3

### WARNING

This product may not alarm at low carbon monoxide levels. Individuals with medical problems may consider using warning devices which provide audible signals for carbon monoxide concentrations under 30 PPM.

## TESTING YOUR CO ALARM

It is recommended that you test your **CO** alarm once a month to ensure the alarm is working correctly.

### DO NOT TEST WITH CO GAS.

Testing with CO gas will put you at unnecessary risk.

Test the unit by holding the Test/Reset button for 3 seconds. The red **LED** will flash and the sounder will chirp 4 times simultaneously. Then the unit will enter into the normal operation mode and the green **LED** should flash once every 48 seconds.

## WHAT TO DO IF THE ALARM SOUNDS

**WARNING** – Actuation of your CO alarm indicates the presence of carbon monoxide (CO), which can **KILL YOU**. If the alarm signal sounds:

- Immediately move to fresh air.
- Where possible turn off all fuelled appliances and stop using them.
- Call your emergency services.
- Do not re-enter the premises until emergency services responders have arrived, the premises have been aired out and your alarm remains in its normal condition.
- Call a qualified appliance technician to investigate for sources of CO from fuel burning equipment and appliances, and inspect for proper operation of this equipment. If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician consult the manufacturers' instructions, or contact the manufacturers directly, for more information about CO safety and this equipment. Make sure that motor vehicles are not, and have not been, operating in an attached garage or adjacent to the residence.

## SAFESPEC APP

Download data from this carbon monoxide alarm and export reports via Safespec app.

Download Safespec for IOS and Android by scanning the QR code.



1. Open the Safespec app and press "Download Alarm Data".
2. Press "Test/Silence" 4 times, triggering extraction noise.
3. Hold the phone facing the alarm until the status report appears.

## MAINTAINING YOUR CO ALARM

Your alarm will alert you to potentially hazardous **CO** concentrations in your home when maintained properly. To maintain your alarm in proper working order, it is recommended that you clean the outside case regularly to prevent dust or dirt build up in the slots. **DO NOT USE CLEANING AGENTS, BLEACH, POLISH OR ANY CHEMICALS.** Chemicals can permanently damage or temporarily contaminate the sensor. Simply wipe with a damp cloth **OR** a clean tissue.

**NOTE** – If you will be staining or stripping floors or furniture, painting, wall-papering, or using aerosols or adhesives, remove the CO alarm to a remote

location before in order to prevent possible damage to or contamination of the sensor.

The following is a list of substances which, at high levels, can affect the sensor and may cause a nuisance alarm that is not a carbon monoxide alarm: Methane, propane, isobutane, ethylene, ethanol, alcohol, isopropanol, benzene, toluene, ethyl, acetate, hydrogen, hydrogen sulfide, sulfur dioxides. Also most aerosol sprays, alcohol based products, paints, solvents, adhesives, hair sprays, after shaves, perfumes and some cleaning agents.

**NOTE** – Battery sealed in not for replacement.

This product cannot be repaired. If the unit is tampered with it will invalidate the guarantee. If the unit is faulty please return it to your original supplier with your proof of purchase.

## SYMPTOMS OF CO POISONING

The following symptoms may be related to CO poisoning:

SYMPTOMS OF CO POISONING	
35 ppm	The maximum allowable concentration for continuous exposure for healthy adults in any 8 hour period.
200 ppm	Slight headaches, fatigue, dizziness, nausea after 2-3 hours.
400 ppm	Frontal headaches within 1-2 hours, life threatening after 3 hours.
800 ppm	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 3 hours.
1600 ppm	Headache, dizziness and nausea within 20 minutes, Death within 1 hour.
6400 ppm	Headache, dizziness and nausea within 1-2 minutes.

Many cases of reported **CARBON MONOXIDE POISONING** indicate that while victims are aware they are not well, they become so disoriented they are unable to save themselves by either leaving the building or calling for assistance. Young children and household pets are typically the first affected.

**The apparatus may not prevent the chronic effects of carbon monoxide exposure, and the apparatus will not fully safeguard individuals at special risk.**

## IMPORTANT SAFEGUARDS

Installation of your CO alarm is only one step in your safety plan. Educate yourself and family to the sources and symptoms of CO poisoning and how to use your carbon monoxide alarm:

- Buy appliances accepted by a recognised testing laboratory.
- Have installations done by professionals.
- Have your appliances checked regularly by a qualified serviceman.
- Clean chimneys & flues yearly.
- Make regular visual inspections of all-fuel-burning appliances.
- Check appliances for excessive rust and scaling.
- Be aware of CO poisoning symptoms.

### DO NOT:

- Burn charcoal inside your home, RV, camper, tent, cabin or attached garage.
- Install, convert or service fuel burning appliances without proper knowledge, skill and expertise.
- Use a gas range, oven or clothes dryer for heating.
- Operate unvented gas burning appliances using kerosene or natural gas in closed room.
- Operate gasoline powered engines indoors or in confined areas.
- Ignore a safety device when it shuts an appliance off.
- Ignore any warning from your CO alarm.

**WARNING: installation of the apparatus should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.**

**WARNING: Risk of electric shock or malfunction if the apparatus is tampered with.**

**THIS PRODUCT IS A SEALED UNIT AND CANNOT BE REPAIRED – IF THE UNIT IS TAMPERED WITH IT WILL INVALIDATE THE GUARANTEE IF THE UNIT IS FAULTY PLEASE RETURN IT TO YOUR ORIGINAL SUPPLIER WITH YOUR PROOF OF PURCHASE.**

## GUARANTEE

This alarm is in guarantee under normal use and service for a period of 5 years (including battery) from date of purchase. The company will not be obligated to repair or replace parts which are found to be in need of repair because of misuse, damage or alterations present after the date of purchase. If the alarm is proven to be faulty, within the guarantee period, it must be returned to where it was purchased, carefully packaged, with the fault clearly stated along with proof of purchase. The liability of the company arising from the sale of this alarm shall not in any case exceed the cost of replacement of alarm and in no case shall the company be liable for consequential loss or damages resulting from the failure of the alarm.

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Waste electrical products should not be disposed of with normal household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice. New regulations will encourage the recycling of Waste from Electrical and Electronic Equipment (*European "WEEE Directive" effective August 2005*).



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V1.0

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