HiSPEC

LIGHTING • FIRE & CO DETECTION

LITHIUM BATTERY POWERED CARBON MONOXIDE ALARM

BEAB Approved

CE

MODEL:
HSA/BC/RF10-PRO

Main Features:

- **Electrochemical Sensor**
- **Wireless interconnection via RF 868MHz**
- **Wireless Interconnect with max. 20pcs RF-PRO Series alarm & control units**
- **Test/silence Button**
- **Low Battery Warning**
- **Self-Test Function**
- **Approved to EN50291-1:2010+A1:2012**

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

SPECIFICATIONS

Power Source	: 'Lifetime Power' 3V Lithium Battery
Battery Life	: 10 Year (sealed)
Type of Gas sensed	: Carbon Monoxide
Alarm Response Time	: 50 PPM (Between 60 to 90 min.) 100 PPM (Between10 to 40 min.) 300 PPM (Less than 3 min.)
Operation Temperature	: -10ºC ~ 40ºC
Ambient Humidity	: 10%-90%
Sounder Level	: 85 Decibels at 3 m
Wireless Interconnection	
Radio Frequency	: 868MHz
Interconnect method	: Self-learn, self pair (Home Grouping)
Interconnect distance	: 80m open area / 30m indoor area
Max interconnect unit	: 20pcs Hispec RF-PRO Series alarm units

WHAT IS CARBON MONOXIDE

Carbon Monoxide (CO) is an insidious poison that is released when fuels are burnt. It is a colourless, odourless, tasteless gas and therefore very difficult to detect with the human senses. CO kills hundreds of people each year and injures many more. It binds to the hemoglobin in the blood and reduces the amount of oxygen being circulated in the body. In high concentrations, CO can kill in minutes.

CO is produced by the incomplete combustion of fuels such as wood, charcoal, coal, heating oil, paraffin, petrol, natural gas, propane, butane etc.
Common Sources of CO:
Attached garages / Oil and Gas furnaces / Wood stoves / Barbecues / Wood and gas fireplaces / Gas appliances / Portable generators / Gas or kerosene heaters / Clogged chimneys / Cigarette smoke

LOCATING THE CO 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 for 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 alarm 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 boiler room, the apparatus should be placed just outside the room so that the alarm will be heard more easily.

⚠ CAUTION

This alarm will only indicate the presence of carbon monoxide gas at the sensor. Carbon Monoxide gas may be present in other areas.

This carbon monoxide alarm is designed to detect carbon monoxide gas from ANY source of combustion. It is NOT designed to detect smoke, fire or any other gas.

POSITIONING THE CO ALARM

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 1 m and 3 m 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.

Areas to be avoided include the following:

- Situations where the temperature may drop below -10ºC or exceed 40ºC
- In a damp or humid area
- Any area where high levels of dusty, dirty or greasy emissions could contaminate or clog the sensor.
- Where the air flow to the apparatus would be obstructed by curtains or furniture.
- Next to a door or window or in the path of air discharged from a furnace / air conditioning vent or ceiling fan.
- Outside the building
- Directly above a sink or cooker
- In or below a cupboard

The following conditions can result in transient CO situations in the home:

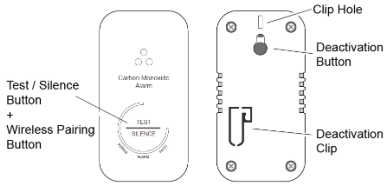
- Excessive spillage or reverse venting of fuel burning appliances caused by:
  1.) Outdoor ambient conditions such as wind direction and/or velocity, including high gusts of wind; heavy air in the vent pipes (cold/humid air with extended periods between cycles).
  2.) Negative pressure differential resulting from the use of exhaust fans.
  3.) Simultaneous operation of several fuel burning appliances competing for limited internal air.
  4.) Vent pipe connection vibrating loose from clothes dryers, furnaces, or water heaters.
  5.) 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 malfunction.

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.

ALARM OVERVIEW



HOME GROUPING

This CO alarm can link up to 19 other CO, smoke and heat alarms, and the control unit from the Hispec RF-PRO range.

On the First Alarm;

- Hold the Test / Silence Button for 10 seconds. (RED LED stays lit) **Alarm is now in Home Grouping mode.**

On all additional alarms;

- Press the Test / Silence Button 2 times slowly so the red & green LEDs flash each time. The red LED will flash 3 times.
- **The alarms are now Home Grouped.**

Removing an alarm from the Home Group:

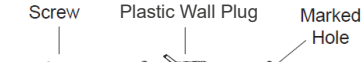
- Press the Test/Pairing Button 5 times slowly so the red & green LEDs flash each time.
- The red LED on the CO unit will then flash 10 times to indicate the CO unit has been reset.

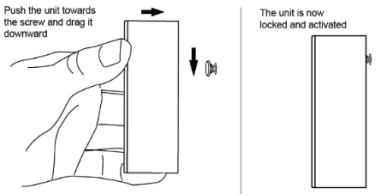
INSTALLING AND ACTIVATING THE CO ALARM

This CO alarm is powered by a 'Lifetime Power' 3V Lithium battery and requires no additional wiring. It can either be free-standing or installed on the wall using the fixings provided.

Wall mount installation:

- Having established the mounting location, ensure that there is no electrical wiring or pipe work in the area adjacent to the mounting surface.
- Mark the mounting hole's location.
- Drill holes in the position marked and insert the plastic wall plug into the hole.





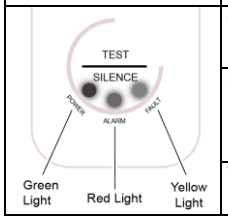
- Hook the alarm unit onto the screw and drag the alarm download This will activate the CO Alarm and will cause it to make a **loud** chirp. Read section "Alarm Condition" in OPERATING YOUR CO ALARM.

IMPORTANT: After installation, test your alarm (see the paragraph "Test your CO alarm".
The apparatus should be installed by a competent person.

OPERATING YOUR CO ALARM

During normal operation the CO alarm performs a self-check test every minute.

Alarm Condition

LED Light	Condition Indication	
	Green Light	- Alarm Unit Activation and Power on
	Red Light	- High CO concentration Warning - Low Battery Signal
	Yellow Light	- Unit Malfunction - End of Life Signal

Alarm unit Activation and Power on
After the CO Alarm is hooked on and installed, the green LED will flash 5 times. Then, the green LED will continually flash every 48 seconds to indicate power is on.

High CO Concentration Warning
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.

Test / 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".

Low Battery Signal
In case the battery is at the end of its life, the apparatus will sound a short chirp with a Yelllow LED flash simultaneously every minute. This low voltage warning will be given for at least 7 days.
Under normal operating conditions, the batteries will last ten years.

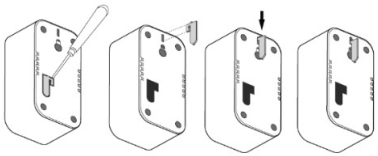
End of Life Signal
After 10 years operation, the yellow LED will flash 3 times and beep 3 times simultaneously every 48 seconds. Read below "Deactivating Unit".

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 will flash simultaneously every minute. In this case the alarm must be replaced.

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, before most people would experience symptoms of carbon monoxide poisoning, giving you time to resolve the problem. Read section "What to do if alarm sounds".

Deactivating Unit
If the CO alarm is confirmed to be faulty or at the end of it's life, you may uninstall and deactivate the CO alarm by following these steps:

- Unhook the alarm unit from wall.
- Use a screwdriver to lever the deactivation clip out
- Fit the deactivation clip into the clip hole and push downward
- The alarm unit is now deactivated



TESTING YOUR CO ALARM
It is recommended that you test your CO alarm once a month to ensure it is working correctly.

Test the unit by holding the Test / Silence button for 3 seconds. The sounder will chirp 4 times and the red LED will flash for 30 seconds. The unit will then enter back into normal operation mode.

SILENCE FEATURE
Important: The alarm will not silence if it has detected carbon monoxide gas. (CO concentration higher than 30ppm). The silence function is applicable only to the Low Battery Warning Signal, End of Life Signal and Fault Warning signal.

To operate the silence feature, press the test button and hold for approximately 3 seconds. The alarm unit will enter a dormant period for 10 hours. After 10 hours, the CO alarm will resume its operation. You should be alert to the signal the alarm gives and replace the unit.

WHAT TO DO IF THE ALARM SOUNDS
⚠ WARNING
Activation of your CO alarm indicates the presence of carbon Monoxide (CO), which can KILL YOU.
If alarm signal sounds:

1. Immediately move to fresh air – outdoors or by an open door/window. Do a head count to check that all persons are accounted for.
2. Where possible turn off all fuelled appliances and stop using them.
3. Call your emergency services if anybody is unwell or missing.
4. Do not re-enter the premises nor move away from the open door/window until emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.
5. 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 and 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.

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:

- Test your alarm at least once a month.
- 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.
- Do not paint the CO alarm

NOTE - If you will be staining or stripping wood floors or furniture, painting, wall-papering, or using aerosols or adhesives, remove the CO alarm to a remote location beforehand 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, iso-butane, ethylene, ethanol, alcohol, iso-propanol, 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: THE APPARATUS SHALL NOT BE EXPOSED TO DRIPPING OR SPLASHING.

SYMPTOMS OF CO POISONING
The following symptoms may be related to 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

The following symptoms are related to CARBON MONOXIDE POISONING and are to be discussed with ALL members of the household:

Mild Exposure: Slight headache, nausea, vomiting, fatigue (often described as "flu-like" symptoms).
Medium Exposure: Severe throbbing headache, drowsiness, confusion, fast heart rate.
Extreme Exposure: Unconsciousness, convulsions, cardio-respiratory failure, death.

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 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 dioxide exposure and it 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 approved by a recognized testing laboratory.
- Install the appliances properly, following the manufacturers' instructions.
- Have installations done by professionals.
- Have your appliances checked regularly by a qualified serviceman.
- Clean chimneys and flues yearly.
- Make regular visual inspections of all-fuel-burning appliances.
- Check appliances for excessive rust and scaling.
- Do not barbecue indoors, or in attached garage.
- Open windows when a fireplace or wood burning stove is in use.
- Be aware of CO poisoning symptoms.

DO NOT:

- Burn charcoal inside your home, RV, camper, tent or cabin
- 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

END OF UNIT LIFE
With normal use the battery will last at least 10 years. However, battery life will be reduced if the apparatus remains in alarm for long periods of time.
The apparatus must be replaced when a fault warning signal is given.

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.

YOUR CO ALARM WARRANTY
These CO alarms are warranted to be free from defects in materials and workmanship, under normal use and service, for a period of five (5) years from date of purchase. Hispec will not be obligated to repair or replace parts, which are found to be in need of repair due to misuse, damage, or alterations occurring after the date of purchase. The liability of Hispec, arising from the sale of this CO alarm, shall not in any case exceed the cost of the purchase price of the CO alarm. In no case shall Hispec be liable for personal injury, property damage, or any other consequential loss or damage, resulting from the failure of the fire alarm.

CO alarms are not a substitute for property, life, or other insurance of any kind.

This does not affect your statutory rights.

This alarm is suitable for private dwellings only and is not intended for commercial or industrial dwellings.

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. Regulations encourage the recycling of Waste from Electrical and Electronic Equipment (European "WEEE Directive" effective August 2005).

HiSPEC
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