



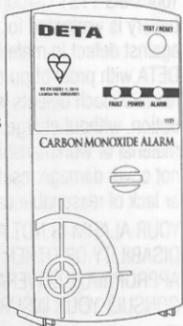
BS EN 50291-1: 2010
Licence No: KM554921

GN2943/R1

CARBON MONOXIDE ALARM

COVERS

- Simple Fitting Instructions
- Location Guide
- Operating Guide
- Basic Safety Tips
- Simple Maintenance Instructions



PLEASE KEEP THIS MANUAL IN A SAFE PLACE

MAINS POWERED,
230-240 VAC (⚡), 50-60 Hz, 7W.
Model: 1121

**IMPORTANT: PLEASE READ
AND RETAIN THIS OWNERS MANUAL**

When installing this alarm for use by others, please leave this manual or a copy with the end user.

WARNING: APPARATUS CONFORMING TO THIS STANDARD (BSEN50291:2010) MAY NOT PROTECT PEOPLE WHO ARE AT SPECIAL RISK FROM CARBON MONOXIDE EXPOSURE BY REASON OF AGE, PREGNANCY OR MEDICAL CONDITION. IF IN ANY DOUBT, CONSULT YOUR MEDICAL PRACTITIONER.

Important: Not suitable as a smoke, fire, or combustible gas alarm. This device is not suitable for installation in a hazardous location, as classified in BSEN 60079-10:1996.

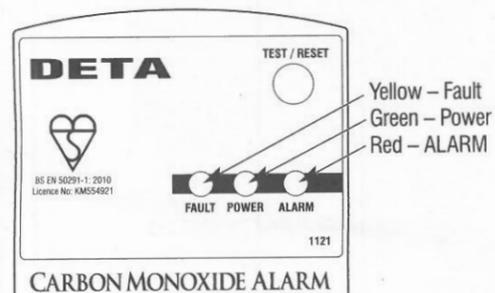
This Carbon Monoxide alarm shall not be seen as a substitute for proper servicing of fuel-burning appliances, or sweeping of chimneys, or as a substitute for either a smoke alarm or a combustible gas alarm.

A. Audible and visual warnings

-Alarm sounder

- •••• •••• A repeating series of 4 beeps with red light – **FULL ALARM**
- •••• •••• A repeating series of 4 beeps WITHOUT LIGHTS – An interconnected alarm is in **FULL ALARM**
- ••• Three short beeps every 60 seconds – **END OF LIFE SIGNAL REPLACE ALARM**
- •• Two short beeps every 60 seconds with yellow light – **FAULT**
- • A single beep every minute with a yellow light flash – **LOW BATTERY**
- •••• Two sets of four beeps with red Light – **WHEN TESTED WITH TEST BUTTON**

Indicator lights



The Green (power) Light – When the alarm is powered by the mains supply the green light will remain on all the time.

End of life indication

Your carbon monoxide alarm will give you an audible and visual warning when it reaches end of life (6 years). The end-of-life signal can be silenced for up to 2 days. Do not disconnect the alarm until a replacement has been purchased.

For your records, please record the following details:

Date purchased:.....

Where purchased:.....

Date installed (Month/Year):

Replace alarm 6 years after installation.
Please write the date in the space provided (Month/Year):

The alarm will also provide an audible end-of-life signal approximately 6 years after installation to remind you to replace the unit.

The end-of-life signal can be silenced for up to 2 days. Do not disconnect the alarm until a replacement has been purchased.

The Red (Alarm) Light – This light will be on if the alarm is detecting carbon monoxide. It will be accompanied by a repeating series of four beeps followed by a 5 second pause.

The Yellow (fault) Light – If a circuitry or sensor fault occurs, the yellow light will stay permanently on and be accompanied by 2 short beeps every 60 seconds. Call Customer Services if this should happen on: +44 (0) 800 1412561.

NOTE 1: On interconnected alarm system with more than one alarm, only the originating alarm will show the red light. All the others will just sound the alarm.

Warning: Do not attempt to open the unit or tamper with the internal circuitry as this may result in the risk of electric shock and/or unit malfunction.

B. What to do if the alarm sounds

If harmful levels of carbon monoxide are detected, your alarm will emit a series of four beeps followed by a short pause; this will be accompanied by a flashing red light. This pattern will be repeated until the alarm is successfully reset. If the alarm is emitting a different pattern of beeps see section A above.

If the alarm sounds, respond as follows:

1. If anyone is experiencing the effects of carbon monoxide poisoning—headache, dizziness, nausea or other 'flu-like' symptoms:—
2. Open the doors and windows to ventilate.
3. Turn off any fuel-burning appliances where possible and stop using them.
4. Evacuate the property leaving the doors and windows open.
5. Ring your gas or other fuel supplier on their emergency number. Record those numbers here:—

Gas Supplier _____

Gas Safe Engineer _____

Hospital/Doctor _____

6. Do not re-enter the property until the alarm has stopped.
7. Get medical help immediately for anyone suffering the effects of carbon monoxide poisoning (headache, nausea), and advise that carbon monoxide poisoning is suspected.
8. Do not use the fuel-burning appliances again until they have been checked by an expert. In the case of gas appliances this must be a Gas Safe registered installer.
9. If no symptoms exist, operate the Test/Reset button and immediately ventilate the home by opening the windows and doors.
10. The alarm can be silenced by pressing the Test/Reset button.
11. If you have interconnected CO alarms in the system, you have to reset the initiating alarm which can be identified by the red alarm light being 'on'.

What to do after resetting the alarm

A full continuous alarm within six minutes after reset confirms ongoing presence of harmful levels of carbon monoxide. If this occurs follow instructions 2 to 8 as per above.

What to do after a carbon monoxide problem has been corrected?

After a carbon monoxide problem has been corrected reset your alarm by pushing the Test/Reset button as per the following instructions.

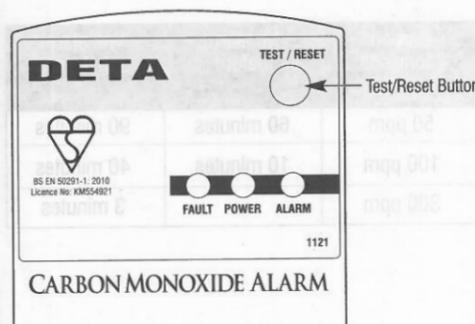
Because CO may dissipate by the time an investigator arrives, it may be difficult to locate the source of CO. DETA shall not be obligated to pay for any carbon monoxide investigation or service call.

Warning: This device will only alarm if carbon monoxide is detected. If not responded to, the presence of carbon monoxide can be fatal.

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

How to reset the alarm

The alarm will reset once the carbon monoxide has dispersed. Should you wish to attempt to do a manual reset press the test/reset button. The unit will re-alarm if the levels of carbon monoxide are still hazardous. To reset after an alarm, press the Test/Reset.



C. What are the possible symptoms of carbon monoxide poisoning?

Carbon monoxide (CO) is odourless, colourless, tasteless and very toxic. When inhaled, it produces an effect known as chemical asphyxiation.

Injury is due to the combining of CO with the available haemoglobin in the blood, which lowers the oxygen-carrying capacity of the blood. In the presence of carbon monoxide, the body is quickly affected by oxygen starvation. The following symptoms are related to carbon monoxide poisoning and should be discussed with all members of the household so that they know what to look for:

Extreme Exposure (A-C) below. Unconsciousness, convulsions, cardio respiratory failure, death.

Medium Exposure (D-G below) Severe throbbing headache, drowsiness, confusion, vomiting, fast heart rate

Mild Exposure (H-J below) Slight headache, nausea, fatigue (often described as 'flu-like' symptoms)

- A - 50% COHb (Permanent Brain Damage – Death)
- B - 45% COHb (Coma and Permanent Brain Damage)
- C - 40% COHb (Collapse)
- D - 35% COHb (Vomiting)
- E - 30% COHb (Drowsy)
- F - 25% COHb (Headache and Nausea)
- G - 20% COHb (Headache)
- H - 15% COHb (Slight Headache)
- I - 10% COHb (None)
- J - 5% COHb (None)

Many cases of reported CARBON MONOXIDE POISONING indicate that while the victims are aware they are not well, they become so disorientated they are unable to exit the building or call for assistance. Young children and household pets may be the first affected. Exposure during sleep is particularly dangerous because the victim usually does not awaken. For most people, mild symptoms generally will be felt after several hours of exposure to 100 ppm of carbon monoxide. Higher levels will lead to more severe symptoms or death.

D. What is carbon monoxide and why should you be concerned?

Carbon monoxide is a dangerous, poisonous gas. It is often referred to as the Silent Killer because it has no odour or taste and it can't be seen. The presence of carbon monoxide inhibits the blood's capacity to transport oxygen throughout the body, which can eventually lead to brain damage. In any enclosed space (home, office, recreational vehicle or boat) even a small accumulation of carbon monoxide can be dangerous.

E. What are the potential sources of carbon monoxide?

Although many products of combustion can cause discomfort and adverse health effects, it is carbon monoxide (CO) that presents the greatest threat to life. CO is produced by the incomplete combustion of fossil fuels such as natural gas, propane, heating oil, paraffin, coal, charcoal, petrol or wood. The incomplete combustion of fossil fuel can occur in any device that depends on burning for energy or heat such as gas fires, central heating boilers, room heaters, water heaters, cookers or grills and in any petrol-powered vehicle or engine (e.g. generator set or lawnmower). Tobacco smoke also adds CO to the air you breathe.

When properly installed and maintained, your natural gas boiler and hot water heater do not pollute your air space with carbon monoxide. Natural gas is known as a 'clean burning' fuel because under correct operating conditions the combustion products are water vapour and carbon dioxide, which are not toxic. Carbon dioxide (CO₂) is also present in the air we exhale and is necessary for plant life). The products of combustion are vented from boilers and water heaters to the outside by means of a flue, duct or chimney.

Correct operation of fuel-burning equipment requires two key conditions. There must be:

- An adequate supply of air for complete combustion.
- Proper venting of the products of combustion from the boiler through the chimney, vent or duct to the outside.

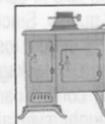
Typical Carbon Monoxide Problems

1. Equipment problems, due to defects, poor maintenance, damaged or cracked heat exchangers
2. Collapsed or blocked chimneys or flues, dislodged, disconnected or damaged vents
3. Downdraught in chimneys or flues; this can also be caused by very long or circuitous flue runs, improper location of flue outlets or wind conditions
4. Improper installation or operation of equipment, chimneys or vents
5. Short stays in rented accommodation (e.g. flats, holiday cottages etc)
6. Air tightness of house envelope resulting in a lack of air for the combustion process
7. Inadequate exhaust of space heaters or fuel-burning appliances
8. Vent fans/chimneys competing for air supply

Potential sources of carbon monoxide in your home/office:



Clogged Chimney Flue



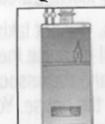
Wood Burning Stove



Wood or Gas Fireplace



Car and Garage



Gas Water Heater



Gas Appliances



Portable Gas or Paraffin Heater



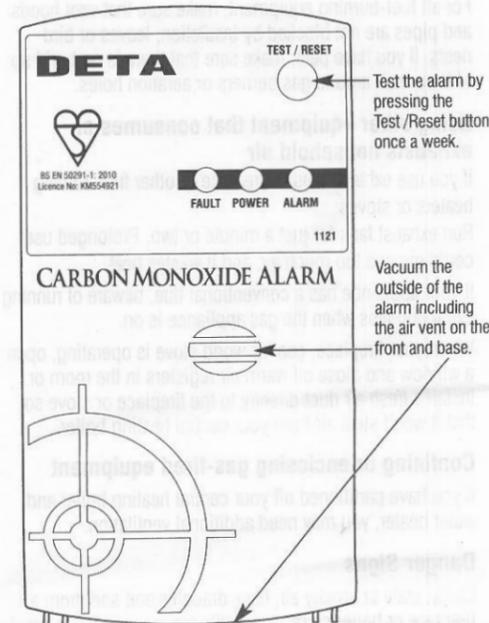
Gas or Oil Boiler



Cigarette Smoke

F. How can you maintain your alarm?

An alarm is useful only if it works. The following illustration explains proper maintenance.



G. How can you test the alarm?

A green power light indicates that power is supplied. (See previous section). To test the alarm (wait at least ten minutes after installing it or after power failure/switch-off), press, hold and then release the Test/Reset button. A flashing red light will be accompanied by a repeating series of four beeps followed by a 5 second pause. Test weekly.

Test button will only function when alarm is fully installed on the pattern.

H. A Malfunctioning unit

If a circuitry or sensor fault occurs, the yellow light will stay permanently on and be accompanied by 2 short beeps every 60 seconds. Call Customer Services if this should happen. **WARNING:** If the green light is off the alarm may be without power and therefore will not indicate a fault condition.

J. Tips for the Homeowner

Energy Conservation and Indoor Air Quality

Two steps that homeowners take to conserve energy may adversely affect indoor air quality. Since air leakage can account for as much as 40% of heat loss, houses are being made more airtight. Reduced air leakage will contribute to higher concentrations of air contaminants from indoor sources and can cause draught reversal in the central heating boiler or fireplace chimney when the demand for air by fireplaces, central heating boilers and exhaust fans exceed the air supplied by leakage area and supply ducts.

Converting from oil to gas, without taking steps to prevent chimney deterioration, will increase the risk of chimney blockage, draught failure and the associated release of combustion products into the house. You should always use properly qualified Gas Safe registered gas installers.

Dirt and Blockage

Never insulate or try to seal up a draught hood, wind cap or exhaust vent on any gas appliance (central heating boiler, hot water heater, cooker, dryer or space heater). Keep area around appliances clean. Don't store anything that could restrict air circulation close to equipment. If you have a gas water heater, make sure that combustion air openings at the bottom of the tank and the opening below the draft diverter (on top of the tank next to the flue duct) remain unblocked. If you have a gas dryer, the exhaust duct must be vented to the outside and have a hood at the end. Check that the exhaust system is not blocked by lint or debris and that the flapper in the hood moves freely.

For all fuel-burning equipment, make sure that vent hoods and pipes are not blocked by insulation, leaves or bird nests. If you have pets, make sure that there is no build up of fur or hair around gas burners or aeration holes.

Using other equipment that consumes or exhausts household air

If you use exhaust fans, a fireplace or other fuel burning heaters or stoves:

Run exhaust fans for just a minute or two. Prolonged use could remove too much air, and it wastes heat.

If your appliance has a conventional flue, beware of running extraction fans when the gas appliance is on.

When your fireplace, coal or wood stove is operating, open a window and close off warm air registers in the room or install a fresh air duct directly to the fireplace or stove so that it won't steal air from your central heating boiler.

Confining or enclosing gas-fired equipment

If you have partitioned off your central heating boiler and water heater, you may need additional ventilation.

Danger Signs

Stuffy, stale or smelly air, back draughts and soot from a fireplace or boiler chimney usually means your home needs more air for proper combustion and healthy living.

For gas-fired equipment, mostly yellow (rather than clear blue) burner flames, a pilot light that keeps going out, or a smell of gas indicate trouble. Turn off the equipment and contact the gas emergency service, number in the telephone directory, under 'Gas'.

K. Additional Safety Tips

DETA CO alarms are manufactured to the highest standards to ensure faultless operation and long life. The manufacturers do, however, recommend that no CO alarm should be used for more than twelve years, in order to minimise the chance of a fault occurring. This device requires no special disposal procedures and may be disposed of in household refuse. Have your fuel-burning equipment checked periodically for safety and efficiency by a qualified service engineer. If you are adding a wood or coal burning stove to a home, make sure that the stove is properly installed and vented.

Check with the Building Inspectors Department of your local council and always use a qualified (Gas Safe registered) gas installer.

If you have already installed a wood or coal stove without building regulation approval, consult your local Building Control Officer. Some 'do-it-yourselfers' have unknowingly created dangerous conditions.

Do not expose yourself to carbon monoxide through carelessness. Never operate a petrol engine in a confined or enclosed space such as a garage or tool shed. Never use a paraffin stove or charcoal grill in a confined space such as a closed garage or caravan. On brick chimneys inspect and clean-out regularly to ensure that the chimney is free and clear of debris.

Regardless of the fuel your boiler, fireplace or stove uses, your chimney should be inspected from time to time by a competent person. Any 'Efficiency' devices must always be installed by a Gas Safe registered installer. When using paints, household cleaning supplies or similar materials, be sure that you're using them in a well-ventilated area. Following sensible maintenance and safety procedures in the home will give you fuel savings without endangering your health.

Installation



L. Where should you install the alarm?

Which room to put the alarm?

Ideally, you should have an alarm in or near every room that has a fuel-burning appliance. However, if you have more than one appliance, but only one alarm, you should take the following into consideration when deciding where best to put the alarm.

- If there is a fuel-burning appliance in the room where you sleep, you should put the alarm in that room.
- If there is a fuel-burning appliance in the room that you use a lot. e.g. a sitting room, you should put it in that room.
- If you live in a bed-sit put the alarm as far away from the cooking appliances as possible, but near to the place where you sleep.
- If the fuel-burning appliance is in a room not normally used (e.g. a boiler room) put the alarm just outside the room so that you will be able to hear the alarm more easily.

If the alarm is in the same room as the appliance:-

It should be mounted on or close to the ceiling at a height greater than that of any door or window. It should be at least 300mm from any wall, light fitting or any other obstruction. If mounted on a wall it should be at least 150mm from the ceiling. If mounted in a room with a sloped or gabled ceiling it should be at least 1 metre lower than the highest point of the room as long as that is above doors and windows.

If the alarm is in a room that is remote from the appliance, then the alarm should be in the breathing zone of the occupants.

- An alarm should be between 1m and 3m from the fuel-burning appliance.

Do not put a CO alarm:

- Outside the building.
- In close proximity to a vehicle exhaust pipe; this will damage the alarm.
- In or below a cupboard.
- In a damp or humid area.
- Near paint thinners, adhesives, polishes, aerosols, or household cleaning products. Other substances may also affect the reliability of the unit.
- Directly above a sink or cooker.
- Next to a door window or extractor fan or anywhere that it would be affected by draughts.
- In exhaust streams from gas engines, vents, flues or chimneys.
- Where it would be obstructed by curtains or furniture.
- In an area where the temperature could drop below -10°C or rise to above 40°C.
- Where humidity is less than 30% R.H. or more than 90% R.H.
- Where dirt or dust could block the sensor and stop it working.
- Where it could be easily knocked or damaged, or where it could be accidentally turned off or removed.

M. How should you install the alarm?

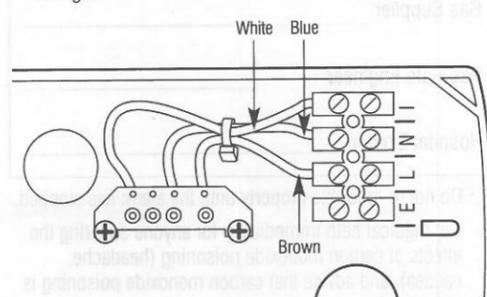
For mains powered models: DETA 1121

This unit is designed for permanent connection to a 230-240 VAC 50-60Hz supply. The maximum current draw is 45mA – select fuse accordingly.

Warning: Wiring should be installed only by a qualified electrician in accordance with the current IEE Wiring Regulations for Electrical Installations (BS7671).

Important: The circuit used to power the alarm must be a 24 hour voltage circuit that cannot be turned off by a wall switch. It is recommended that CO alarms be wired on a separate circuit (ie one with no other lights or appliances) to ensure maximum reliability of mains power supply.

1. ELECTRICITY MUST BE TURNED OFF AT THE DISTRIBUTION BOARD BEFORE COMMENCING ANY WORK IN ORDER TO PREVENT ELECTRICAL SHOCK OR EQUIPMENT DAMAGE.
 2. Select a suitable location in accordance with the guidance in section L of this manual and complying with the requirements set out above.
 3. Remove CO alarm from packaging.
 4. Place pattress at chosen location with the connector block uppermost. Mark and then drill holes for suitable fixings, corresponding to the slots in the base of the pattress.
 5. Bring supply wires from mains into the pattress.
- N.B. The DETA 1121 mains powered alarm is supplied complete with a pattress within which wiring connections are made and does not therefore require a junction box. The pattress is provided with knockouts in the base for entry from the back or an end port knockout for mini-trunking.
6. Secure pattress to mounting surface using suitable fixings.



7. Connect the incoming live wire to the terminal marked L, the incoming neutral wire to the terminal marked N and the incoming green and yellow earth wire into the unused terminal marked E.

This alarm can be interlinked to 11 other CO alarms (12 in all). To interlink to another alarm connect the incoming wire used for the interlink connection to the terminal marked I. The incoming wire must be rated the same as the incoming live and neutral.

NOTE: NO connection should be made to the mains supply earth terminal. Simply secure the incoming earth wire at terminal marked E to prevent contact with live neutral or interlink wires.

8. Carefully offer the alarm up to the pattress ensuring the connection pins locate into the sockets in the pattress.
9. Secure alarm to pattress using securing screws supplied in separate polythene bag.
10. Turn electricity supply back on.
11. Ensure the green power light is on and press the test button. The alarm will sound 2 series of 4 beeps with red light followed by a single flash of the yellow and green lights.
12. If the alarm is interconnected to other CO alarms, pressing the test button on one alarm will cause the others to sound within a few seconds. The red light will only show on the originating alarm.

Warning: This device should remain permanently installed. It should not be used on an intermittent basis, nor as a portable detector for the spillage of combustion products from fuel-burning appliances or chimneys.

N. Technical information

Your alarm utilizes a proprietary Electronic Sensing Technology that permits the unit to vary the exposure time before the alarm sounds based on carbon monoxide concentrations.

The carbon monoxide concentrations and time standards for the alarms are as follows:

Carbon Monoxide Concentration	No alarm before	Will alarm before
50 ppm	60 minutes	90 minutes
100 ppm	10 minutes	40 minutes
300 ppm	—	3 minutes

O. Guarantee Information

Limited Guarantee

Your Deta 1121 Carbon Monoxide alarm, excluding the battery is warranted for five years from the date of purchase against defect in material and workmanship. Units returned to DETA with proof of purchase date during this period as a result of such defects will be repaired, or replaced at DETA's option, without charge. This warranty only covers defects in material or workmanship in normal residential use and does not cover damage resulting from negligent handling, misuse or lack of reasonable care.

YOUR ALARM IS NOT A SUBSTITUTE FOR PROPERTY, DISABILITY OR OTHER INSURANCE OF ANY KIND. APPROPRIATE COVERAGE IS YOUR RESPONSIBILITY, CONSULT YOUR INSURANCE AGENT.

This warranty does not affect a customer's statutory rights in any way.

In the event of a problem with your alarm or you have any questions concerning use and care of the product or concerning service, please consult your owners manual.

If you require any further help or clarification please write to:

DETA ELECTRICAL COMPANY LIMITED
Kingsway House, Laporte Way, Luton, Bedfordshire. LU4 8RJ. UK

www.detaelectrical.co.uk

PLEASE KEEP THIS MANUAL IN A SAFE PLACE

Please note that specifications may be subject to change.



Yellow - Fault
Green - Power
Red - Alarm

Important:

Please read and retain this owner's manual. When installing this alarm for use by others, please leave this manual or a copy with the end user and ensure they are fully conversant with its sitting, operation and maintenance.