Kidde Sealed Battery, Long Life Carbon Monoxide Alarm

10LLCO

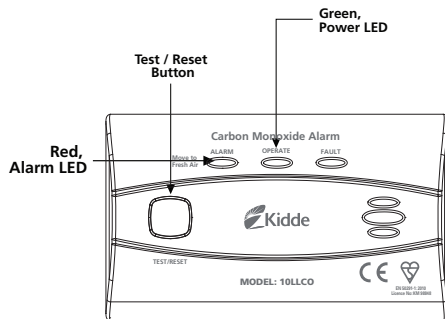**10LLDCO**
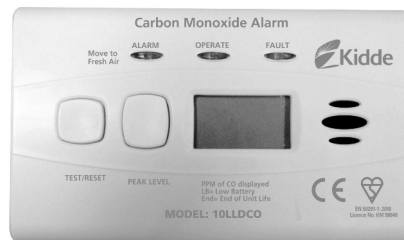
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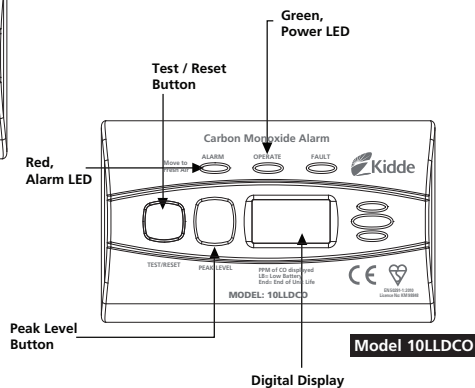License No. KM98848

Contents

Product Features and Specifications

Green,
Power LED

Test / Reset
Button

Red,
Alarm LED

Carbon Monoxide Alarm

ALARM   OPERATE   FAULT

Move to
Fresh Air

Kidde

TEST/RESET

MODEL: 10LLCO   CE

Model 10LLCO

Green,
Power LED

Test / Reset
Button

Red,
Alarm LED

Carbon Monoxide Alarm

ALARM   OPERATE   FAULT

Move to
Fresh Air

Kidde

TEST/RESET   PEAK LEVEL   PPM of CO displayed
LB: Low Battery
End: End of Unit Life

MODEL: 10LLDCO   CE

Peak Level
Button

Model 10LLDCO

Digital Display

1. What is Carbon Monoxide?

Carbon monoxide (CO) is a highly poisonous gas that has no taste, colour or smell.

Potential Sources of CO
• Wood-burning stoves
• Gas boilers and fires
• Gas Hobs
• Oil and coal burning appliances
• Portable gas heaters
• Blocked flues and chimneys
• Fumes from integral garages
• Barbecues
• High concentrations of tobacco smoke

This CO alarm is no substitute for proper maintenance of your appliances.

Carbon monoxide can be produced from poorly burning appliances or from blocked flues and chimneys.

If your alarm has sounded and you have ventilated the room the CO may have dispersed before help arrives. It is crucial that the source of CO is determined and appropriate maintenance carried out.

Carbon monoxide is a cumulative poison meaning long-term exposure to low levels may cause symptoms. This alarm is time-weighted – the higher the level of CO, the sooner it will alarm.
NOTE: The apparatus may respond to brief exhaust gas emissions, for example during the initial start-up of an appliance. Also, hydrogen acts as an interferent and can arise from some battery charging activities and the curing of concrete or cement under certain circumstances. Volatile Organic Compounds (VOCs), e.g. alcohols, which may eventually activate the alarm, can be generated from use of damp-proofing materials or other coatings containing alkylalkoxysilanes.

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Further information for Caravan and Boat Owners

The following can lead to carbon monoxide being produced:

• Using LPG cooking appliances for space heating

• Leaving LPG appliances on overnight

• Barbecues within the boat cabin or near a caravan door (e.g. under an awning)

To be safe, know the possible sources of CO in your home. Keep fuel burning appliances, chimneys and vents in good working condition. Learn the early symptoms of exposure, and if you suspect CO poisoning, move outside into fresh air and get emergency help. Your first line of defence is an annual inspection and regular maintenance of your appliances. Contact a licensed contractor or call your local utility company for assistance.

This alarm has not been tested specifically for use in caravans or boats. Only CO alarms certified to EN50291-2 are fully approved for this purpose.

Alarm levels as defined by EN50291-1:2010

The table below shows the response times at which your CO alarm will sound;

Parts per Million (PPM) of CO	Time until Alarm
50	60 – 90 minutes
100	10 – 40 minutes
300	Must alarm in less than 3 minutes

CO Advice and Information

The table below shows the effects of different levels of CO poisoning on the body;

Parts per Million (PPM)	Effects on Adults
100	Slight headache, nausea, fatigue (flu-like symptoms)
200	Dizziness and headache within 2 – 3 hours
400	Nausea, frontal headache, drowsiness, confusion and rapid heart rate. Risk to life after over 3 hours of exposure
800	Severe headaches, convulsions, vital organ failures. Death possible within 2 – 3 hours

2. Important Safety Information

If you recognise any of the above symptoms consult your Doctor immediately.

Young children, elderly and pets are more susceptible to the dangers of CO.

Your Kidde alarm is designed to detect CO gas. It is not designed to detect smoke, fire or other gas such as natural gas.

This product is intended for use in ordinary family homes. It is not designed to measure compliance with occupational safety and the HSE.

Individuals with certain specific medical conditions may need an alarm that operates below 30ppm. If this applies consult your Doctor.

IMPORTANT: Ensure that all family members are familiar with the symptoms of CO poisoning and how your alarm works.

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

3. What to do if Your Alarm Sounds!
Carbon Monoxide Alarm Procedure

⚠ **WARNING! Activation of the alarm indicates the presence of Carbon Monoxide (CO) which can kill you.**

Based on recommendations from EN 50292, follow these steps if alarm sounds (4 loud audible pulses followed by a pause for 5 seconds, repeating):

1. Keep calm and open all doors and windows. Turn off all fuel-burning appliances if possible. Note: it is possible that outdoor conditions could influence domestic CO alarms (bad traffic pollution in cold weather, for example). In these circumstances, the level of indoor CO might actually increase when doors and windows are opened.

2. If the alarm continues to sound, even after being reset (where appropriate), then evacuate the premises, alerting other occupants to the risk. Leave doors and windows open. Do not re-enter the premises.

3. Get medical help for anyone suffering the effects of CO poisoning, and advise that CO inhalation is suspected.

4. Call Gas Emergency Services: 0800 111 999, or your local Gas Safe Registered Engineer:

GAS SAFE ENGINEER'S PHONE NUMBER:

Additional telephone numbers are available for solid fuel (HETAS) and oil (Oftec) users at the back of this manual

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Never ignore the sound of the alarm! Never restart the source of the CO problem until it has been corrected. If the alarm is sounding, pressing the test/reset button will terminate the alarm. If the CO condition that caused the alert in the first place continues, the alarm will reactivate. If the unit alarms again within six minutes, it is sensing high levels of CO which can quickly become a dangerous situation.

4. Switching on Your CO Alarm

NOTE: Your CO alarm must be installed by a competent person using the guidance that follows:

1. The alarm is shipped turned off and is activated the first time the mounting bracket is attached. To activate the alarm; for wall-mounting install the mounting bracket using the instructions below and slide the alarm until it snaps into place. For tabletop applications simply slide the bracket onto the unit until it snaps into place.

2. To test the alarm, press the test button. The alarm will beep once followed by 4 loud pulses, then a brief pause and then 4 more pulses, ending with a single beep. The alarm has a 'ramp-up' horn so during the test sequence it will sound more softly, making it more comfortable for the user. This confirms that the alarm is powered up and working.

3. Check that the green LED flashes at 30 second intervals to show that the alarm has power. This is easiest to see in a dark area, or with lights switched off.

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5. Installation Instructions – Recommended Locations

- When wall-mounting place the alarm a horizontal distance of between 1 metre and 3 metres from a fuel burning appliance.
- Wall-mounted alarms should be close to the ceiling, but at least 150mm away to avoid being in 'dead-air' space.
- Locate within hearing distance of bedrooms* and place at sleeping height if a heating appliance is in the bedroom.
- CO alarms in rooms with sloped ceilings should be located on the high side of the room.
- Ceiling mounted alarms should be at least 300 mm from any wall.
- If there is a partition in the room, locate the alarm on the same side of the partition as the potential source.

*A CO alarm should be installed in all rooms containing a fuel burning appliance. Additional CO alarms should be installed in rooms where most awake time is spent, in every sleeping area, and on every level of the home.

Locations to Avoid

- Avoid locating next to draughts, such as doors, windows, extractor fans, air vents or other similar ventilation openings.
- Avoid locating close to obstructions (e.g. behind curtains, shelves or furniture).
- Avoid dusty, dirty or greasy areas, such as garages or workshops
- Avoid humid (bathrooms), cold (< -10 $^{\circ}$C) or hot (> 40 $^{\circ}$C) or damp areas and keep away from sinks.

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6. Installation Instructions – Mounting

THIS ALARM MUST BE INSTALLED BY A COMPETENT PERSON AND IS TO BE INSTALLED

ACCORDING TO THESE INSTRUCTIONS

Wall-mounting (recommended by the manufacturer, if possible)

Wall Mounting

1. Using bracket as a guide, drill two holes in a wall 7cm (2 3/8") apart.

2. Insert the two fixings, that are supplied, into the holes.

3. Slide bracket on to screws then tighten.

4. Slide alarm onto base plate to activate it, and remember to test it.

5. The alarm is tamper-proof and can only be removed using a screw driver.
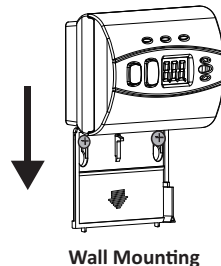
Free-standing

ALWAYS BE CAREFUL TO LOCATE A FREE-STANDING ALARM WHERE IT IS UNLIKELY TO BE KNOCKED TO THE FLOOR, AND IN ACCORDANCE WITH THE INSTALLATION INSTRUCTIONS - RECOMMENDED LOCATIONS SECTION.

Ensure free-standing alarms are placed in the upright position, and not lying flat on a surface.

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7. Using Your Alarm (non-digital version, 10LLCO)

Recognising Alarm Signals and Warnings

Feature	What this means	Required Action
Green LED flashes every 30 seconds	Normal operation	None
Amber LED flashes every second, beeps every 60 seconds	Low battery	If cold allow unit to warm up for a couple hours then replace if still beeping
Two chirps and two red LED flashes every 30 seconds.Amber LED flashing every second.	End of life of the alarm	Replace the alarm
Amber LED flashes every second, beep every 30 seconds and green LED blinks error code every other 30 seconds.	Fault	Replace the alarm
Constant tone	Malfunction	Replace the alarm
Loud continuous alarm (four loud alarm sounds, repeated for four minutes, followed by two patterns per minute) with the red LED	Dangerous levels of CO have been detected	Follow emergency procedures (see Page7)
Red LED flash every 60 seconds	Historical event in last 14 days	Check your appliances

7. Using Your Alarm (non-digital version, 10LLCO)

Testing

Test your alarm each week by pressing the test button. It will beep once followed by 4 loud pulses, then a brief pause and then 4 more pulses, ending with a single beep. During this test sequence, the red LED will flash for 10 seconds.

This confirms that the alarm is powered up and working.

Re-setting the Alarm

If the alarm sounds, the test / reset button will silence the alarm unless it is still detecting dangerous levels of CO. The green light will then flash every 30 seconds to indicate that the alarm has power.

Alarm Memory (non-digital only)

The red LED will flash every 60 seconds to indicate if a CO event has occurred whilst the house has been unoccupied. This automatically cancels after 14 days or if the reset button is pressed.

7. Using Your Alarm (for Digital unit only, 10LLDCO)

Additional features for the CO alarm with the digital display screen, model 10LLDCO;

Digital Screen	Digital Screen	LED	Sound emitted	What this means	Required action
0.	Dot flashes every 5 second	Green flash every 30 seconds	None	Normal operation. (LCD will not show levels < 30ppm)	None
197.	Displays up to 999	Red LED flashes	Full alarm	Dangerous levels of CO has been detected	Follow emergency procedures (see Page 7)
888.	Shows 3 dashes, then 888	Red LED flashes Green and Amber LED on	1 beep, then 2 sets of 4 beeps, followed by 1 beep	Successful test or reset sequence in operation	None
Lb .		Amber LED flashes every second	Chirp every 60 seconds	Low batteries (Lb)	If cold allow unit to warm up for a couple hours then replace if still beeping
Err.		Amber LED flashes every second and green flashes error code every other 30 seconds	Chirp every 30 seconds	Fault	Replace the alarm
			Constant tone	Malfunction	Replace the alarm
End		Two chirps and two red LED flashes every 30 seconds. Amber LED flashing every second.	Chirps twice every 30 seconds	End of Life	Replace the alarm

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7. Using Your Alarm (for Digital unit only) – Cont'd

Peak Level Display

Press peak level button to display the highest CO reading between 11 – 999ppm since the peak level was reset.

This feature is useful to help you to know what levels of CO may have been detected in your absence so corrective action can be taken (such as servicing your boiler).

NOTE: The peak level memory is cleared to zero if while holding the peak level button the test reset is pressed and released before releasing the peak level.

CO levels up to 30ppm can occur under normal non-dangerous conditions. Such conditions could include nearby heavy traffic, starting a vehicle in an attached garage, starting a fire or a nearby charcoal barbecue.

8. Maintenance of Your Alarm

To keep your alarm in good working order:

- **Test every week**
- **Vacuum regularly to remove dust**
- **Keep away from solvents or detergents**
- **Avoid spraying air-freshener, hair-spray near the alarm**
- **Do not paint the alarm. If decorating or using adhesives close to the alarm, remove it temporarily**
- **Keep away from nappy buckets**

The following substances can affect the sensor and cause false alarms:

Methane, Propane, Iso-butane, Iso-propanol, Ethylene, Benzene, Toluene, Ethyl acetate, Hydrogen Sulphide, Hydrogen, Sulphur Dioxide, alcohol based products, paints, thinners, solvents, adhesives, hair-sprays, aftershaves or perfumes and some cleaning agents.

NOTE: there could be other compounds occurring within a particular household which could cause similar effects.

9. Troubleshooting

Symptom	LCD Screen Display (model 10LLDCO only)	Problem	Action Required
Single chirp every 60 seconds. Amber LED flashes every second	Lb .	Low batteries	If cold allow unit to warm up for a couple hours then replace if still beeping
Single chirp every 30 seconds with Amber LED flashes every second.	$Err.$	Alarm fault	Replace alarm (contact Kidde if still in guarantee)
Constant tone Alarm		Alarm malfunction	Replace alarm (contact Kidde if still in guarantee)
Two chirps and two red LED flashes every 30 seconds. Amber LED flashing every second.	End	End of Life of the alarm	Replace the alarm

10. Product Specifications

Power	Sealed in lithium battery
Sensor	Electrochemical CO Sensor
Accuracy	Depending on the ambient condition (temperature, humidity) and the condition of the sensor, the alarm readings may vary. The digital readings tolerances are: Ambient: 27°C +/- 12°C (80°F +/- 10°F), atmospheric pressure +/- 10%, 40% +/- 3% relative humidity
Temperature Range	Operating range: 0°C to 40°C
Humidity	Up to 90% non-condensing
Alarm Sound	At Least 85dB (A) at 1 metre @ 3.4 +/- 0.5 KHz pulsing alarm
Size and weight	Weight: 160g Dimensions: 118mm x 70mm x 40mm

NOTE: Constant exposures to extreme temperatures or humidity can reduce battery life.
End of Life - This alarm will chirp twice every 30 seconds and the red LED flashes twice after at least 10 years operation to let you know it has reached its end of life.

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11. Warnings and Important Notices

⚠ **WARNING: THIS CARBON MONOXIDE ALARM IS NOT A SUBSTITUTE FOR INSTALLING AND MAINTAINING AN APPROPRIATE NUMBER OF SMOKE ALARMS IN YOUR HOME. THIS ALARM WILL NOT SENSE SMOKE, FIRE, OR ANY POISONOUS GAS OTHER THAN CARBON MONOXIDE. FOR THIS REASON YOU MUST INSTALL SMOKE ALARMS TO PROVIDE EARLY WARNING OF FIRE AND TO PROTECT YOU AND YOUR FAMILY FROM FIRE AND ITS RELATED HAZARDS.**

⚠ **WARNING: THIS PRODUCT IS INTENDED FOR USE IN ORDINARY INDOOR RESIDENTIAL AREAS. IT IS NOT DESIGNED TO MEASURE COMPLIANCE WITH COMMERCIAL AND INDUSTRIAL STANDARDS. THIS ALARM IS NOT SUITABLE FOR INSTALLATION IN HAZARDOUS LOCATIONS . INDIVIDUALS WITH MEDICAL PROBLEMS MAY CONSIDER USING WARNING DEVICES WHICH PROVIDE AUDIBLE AND VISUAL SIGNALS FOR CARBON MONOXIDE CONCENTRATIONS UNDER 30 PPM.**

IMPORTANT: THIS CARBON MONOXIDE ALARM IS DESIGNED TO DETECT CARBON MONOXIDE FROM ANY SOURCE OF COMBUSTION INCLUDING IMPROPER OR MALFUNCTIONING APPLIANCES. THE INSTALLATION OF THIS DEVICE SHOULD NOT BE USED AS A SUBSTITUTE FOR PROPER INSTALLATION, USE AND MAINTENANCE OF FUEL BURNING APPLIANCES INCLUDING APPROPRIATE VENTILATION AND EXHAUST SYSTEMS

⚠ **WARNING: THIS ALARM WILL NOT WORK WITHOUT POWER. THIS ALARM REQUIRES A CONTINUOUS SUPPLY OF POWER.**

⚠ **WARNING: THIS UNIT IS NOT A SMOKE ALARM. IT WILL NOT SENSE SMOKE . FOR EARLY WARNING OF FIRE YOU MUST INSTALL SMOKE ALARMS.**

IMPORTANT: IF ANY FAULT SIGNALS OCCUR, CONTACT THE MANUFACTURER OR SUPPLIER AND DO NOT CONTINUE USING THE ALARM.

⚠ **WARNING: THE DEVICE CANNOT WARN AGAINST THE CHRONIC EFFECTS OF EXPOSURE TO CARBON MONOXIDE OR PROTECT INDIVIDUALS WHO ARE AT SPECIFIC RISK.**

⚠ **WARNING: ALTERING THE ALARM IN ANY WAY MAY LEAD TO A RISK OF ELECTRIC SHOCK OR PREVENT IT FROM FUNCTIONING CORRECTLY.**

12. Guarantee

TEN YEAR LIMITED GUARANTEE

GUARANTEE COVERAGE: THE MANUFACTURER WARRANTS TO THE ORIGINAL CONSUMER PURCHASER, THAT THIS PRODUCT WILL BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF TEN (10) YEARS FROM DATE OF PURCHASE. THE MANUFACTURER'S LIA-BILITY HEREUNDER IS LIMITED TO REPLACEMENT OF THE PRODUCT. REPAIR OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT WITH REPAIRED PRODUCT AT THE DISCRETION OF THE MANUFACTURER. THIS GUARANTEE IS VOID IF THE PRODUCT HAS BEEN DAMAGED BY ACCIDENT, UNREASONABLE USE, NEGLECT, TAMPERING OR OTHER CAUSES NOT ARISING FROM DEFECTS IN MATERIAL OR WORKMANSHIP. THIS GUARANTEE EXTENDS TO THE ORIGINAL CONSUMER PURCHASER OF THE PRODUCT ONLY.

Guarantee Disclaimers: Any implied guarantees arising out of this sale, including but not limited to the implied warranties of description, merchantability and fitness for a particular purpose, are limited in duration to the above guarantee period. In no event shall the Manufacturer be liable for loss of use of this product or for any indirect, special, incidental or consequential damages, or costs, or expenses incurred by the consumer or any other user of this product, whether due to a breach of contract, negligence, strict liability in tort or otherwise. The Manufacturer shall have no liability for any personal injury, property damage or any special, incidental, contingent or consequential damage of any kind resulting from gas leakage, fire or explosion. This guarantee does not affect your statutory rights. Guarantee Performance: During the above guarantee period, your product will be replaced with a comparable product if the defective product is returned, postage prepaid, to Kidde Safety Europe ltd, Ash House, Littleton Road, Ashford, TW15 1TZ, UK. Telephone 0333 772 2227 together with proof of purchase date. Please include a note desciding the problem when you return the unit. The replacement product will be in guarantee for the remainder of the original guarantee period or for six months, whichever is longer. Other than the cost of postage, no charge will be made for replacement of the defective product. Important: Do not open unite. Opening unit will void guarantee.

Your Carbon Monoxide Alarm is not a substutute for property, disability, life or other insurance of any kind. Appropriate insurance coverage is your responsibility. Consult your insurance agent.

For Guarantee Service: In many cases the quickest way to exchange your CO alarm is to return it to the original place of purchase. If you have questions, call the KIDDE customer service department on 0333 772 2227.

13. Environmental Protection

Waste electrical products should not be disposed of
with household waste. Please recycle where
facilities exist. Check with Local Authority or
Supplier for recycling advice

14. Useful Contact Information

Kidde Helpline	(UK) 0800 917 0722 / (Ireland) 1 800 818 601	
Emergency No.s	Gas Emergency Services	0800 111 999
	HETAS (Solid Fuel Emergency)	0845 634 5626
	Oftec (oil)	0845 658 5080

Kidde Website   **www.TenYCO.kiddefyrnetics.co.uk**

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Ashford,
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Made in China

P/N: 2539-7201-06