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Kidde 230V Mains Carbon Monoxide Alarms with Rechargeable Battery back-up – User Guide 4MCO

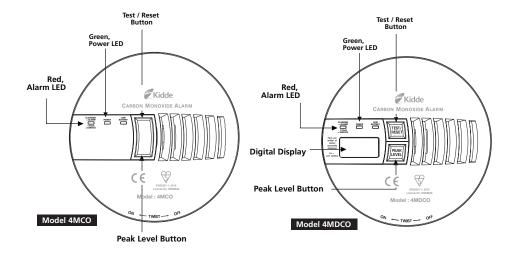


WARNING :This alarm will not operate without Mains power. During a power failure the unit will operate for at least 24 hours on battery back up

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## **1.Diagram of Alarms**



## 2. What is Carbon Monoxide?

Carbon monoxide (CO) is a highly poisonous gas with 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 not a substitute for the correct 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. Longterm exposure to low levels may cause symptoms. This Kidde 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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#### 3. Safety information

To be safe, know the possible sources of CO in your home. Keep fuel burning appliances and their chimneys and vents in good working condition. Learn the early symptoms of exposure, and if you suspect CO poisoning, move outside to 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.

In rented properties your Landlord (or Council/ Housing Association), will have an Emergency Response phone number, and be liable for the regular maintenance of their combustion appliances (Gas/LPG/Oil/Solid Fuel).

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.

## 3. Safety information-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

## 3. Important Safety Information

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

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

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

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

NOTE: 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.

## 4. 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 °C) or hot (> 40 °C) or damp areas and keep away from sinks.

## 4. Installation Instructions – Supply and Interconnect

**Refer to Separate Easy Installation Instructions** 

NOTE: THIS ALARM IS DESIGNED FOR INSTALLATION BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH THE LATEST IEE REGULATIONS AND RELEVANT BRITISH STANDARDS.

THIS ALARM MUST BE POWERED BY A CONSTANT 230V AC, 50Hz SUPPLY THAT IS NOT CONTROLLED BY ANY FORM OF SWITCH.

THIS ALARM INTERCONNECTS WITH UP TO 24 KIDDE DEVICES (OF WHICH 18 CAN BE INITIATING) INCLUDING SMOKE, CO AND HEAT ALARMS. (SEE BELOW)

THIS ALARM IS NOT DESIGNED TO BE INTERCONNECTED WITH OTHER MANUFACTURER'S PRODUCTS, UNLESS OTHERWISE SPECIFIED.

Firex	Kidde	
KF10R	1SFWR	Mains Ionisation Alarm with Rechargeable battery back-up
KF10	1SFW	Mains Ionisation Alarm with alkaline battery back up
KF20R	2SFWR	Mains Optical Alarm with Rechargeable battery back-up
KF20	2SFW	Mains Optical Alarm with alkaline battery back up
KF30R	3SFWR	Mains Heat Alarm with Rechargeable battery back-up
KF30	3SFW	Mains Heat Alarm with alkaline battery back up
	4MCO	Mains CO Alarm with rechargeable battery back-up
	4MDCO	Mains CO Alarm with rechargeable battery back-up, digital display

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## 5. Using Your Digital Alarm(4MDCO) – what the signals mean

		LEDs	LCD	Sounder	Unit Status	Action
Normal Operation	Red			None	Normal Operation	None
	Amber		LI.			
Alarm	Red	Flashing	197.	4 loud beeps/pause/4	CO detected	See section
	Amber		Displays CO ppm ( 30-999)	loud beeps- repeated		
Interconnected CO	Red	Flashing	E 🛙.	4 loud beeps/pause/4	Interconnected CO alarm	See section
alarm detects CO	Amber			loud beeps- repeated	detects CO	
Interconnected Heat/Smoke	Red	Flashing	FicE.	3 loud beeps/pause/3 loud beeps- repeated	Smoke or heat has been detected from an intercon- nected smoke or heat alarm	EVACUATE THE PREMISES ACCORDING TO YOUR ESCAPE PLAN
alarm detects hazard	Amber					
Error condition -1	Red	Flashing every 30 secs	Err.	Chirp/30 secs	Unit has failed	Replace
	Amber	Flashing every 30 secs	<b>_</b> ,,.			
Error condition -2	Red Amber	ON		Constant loud sound	Unit microprocessor has failed	Replace
End of Life	Red	Flashing	<b></b>	Chirp twice every 30 seconds	The unit has reached the	Replace
	Amber	Flashing twice every 30 secs	Err.		end of its life	
Charging the battery	, s s		1.6.	NONE	Battery backup is charging (unit	Nothing
back up	Amber	Flashing every 15 secs	(Lb Flashes)		is monitoring for CO)	
Low battery	Red	Flashing every 15 secs		Chirp / 15 secs	Back up battery is	Ensure switch is On at the rear of the unit - if
	Amber	Flashing every 15 secs	Lb.		discharged	persists contact Kidde

NOTE: If AC mains is connected and active, the Green LED will be on continuous. If Green LED is not on, see Section 6.

## 5. Using Your Non-Digital Alarm(4MCO) – what the signals mean

	LEDs		Sounder	Unit Status	Action	
Normal Operation	Red		None	Normal Operation	None	
Normal Operation	Amber		None	Normal Operation	None	
Alarm	Red	Flashing	4 loud beeps/pause/4	CO detected	See section	
	Amber		loud beeps- repeated			
Interconnected CO	Red	Flashing	4 loud beeps/pause/4	Interconnected CO alarm	See section	
alarm detects CO	Amber		loud beeps- repeated	detects CO		
Interconnected Heat/Smoke	Red	Flashing	3 loud beeps/pause/3	Smoke or heat has been detected from an intercon-	EVACUATE THE PREMISES ACCORDING TO YOUR ESCAPE PLAN	
alarm detects hazard	Amber		loud beeps- repeated	nected smoke or heat alarm		
Error condition -1	Red	Flashing every 30 secs	Chirp/30 secs	Unit has failed	Replace	
	Amber	Flashing every 30 secs	cm p/ 50 sees	officiality		
Error condition -2	Red	ON	Constant loud sound	Unit microprocessor has	Replace	
	Amber			failed	neplace	
End of Life	Red	Flashing	Chirp twice every	The unit has reached the	Replace	
	Amber	Flashing twice every 30 secs	30 seconds	end of its life		
Charging the bat-	Red		NONE	Battery backup is charging (unit	Nothing	
tery back up	Amber	Flashing every 15 secs		is monitoring for CO)		
Low battery	Red	Flashing every 15 secs	Chirp / 15 secs	Back up battery is	Ensure switch is On at the rear	
	Amber	Flashing every 15 secs		discharged	of the unit - if it persists contact Kidde	

NOTE: If AC mains is connected and active, the Green LED will be on continuous. If Green LED is not on, see Section 6.

# 5. Using Your Alarm – Cont.

## Testing

Each week your alarm should be tested by pressing the test button. The alarm will beep once followed by a brief pause. Then the alarm will sound fully with 4 beeps a pause and then 4 beeps.

During testing the red LED will flash.

The Digital model will display "888" followed by a 200+ number.

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.

## Peak Level Memory – Digital model only

Pressing the Peak level memory button tells you if you have had levels of CO>9ppm. To reset keep the peak level button pressed and press the test button for 2 seconds.

## **End of Life Notification**

After 7 years of continuous operation, the unit will chirp twice every 30 seconds, and the amber LED will flash twice. The red LED will also be flashing. Unit has reached end of life, and must be replaced.

NOTE: Constant exposures to extreme temperatures and humidities may affect battery life.

## 6. Mains Power Failure – Digital Alarm (4MDCO)

	LEDs		LCD	Sounder	Unit status	Action
Loss of Mains	Red	OFF	0 or CO ppm		Unit has no mains	Restore the
power	Green	Flashing every 7 secs	displayed every 60 secs		power and the battery back up will have	mains ASAP
	Amber	OFF			limited life	
Low Battery	Red	Flashing every 15 secs	Lb and 0 or CO	Chirp/15 secs	Back up battery is dis-	Restore the
when mains	Green	Flashing every 7 secs	ppm alternate - only for the		charged	mains ASAP
has failed	Amber	Flashing every 15 secs	first 5 minutes			
Battery back	Red	Flashing every 60 secs	None	Chirp/60 secs	Unit will no longer	Restore the
up close to	Green	Flashing every 7 secs			detect CO	mains ASAP
discharge	Amber	OFF				

# 6.Mains Power Failure – Non Digital Alarm (4MCO)

	LEDs		Sounder	Unit status	Action
Loss of Mains	Red	OFF		Unit has no mains	Restore the mains
power	ower Green Flashing every 7 secs power and the battery back up will have	ASAP			
	Amber	OFF		limited life	
Low Battery	Red	Flashing every 15 secs	Chirp/15 secs	Back up battery is dis-	Restore the mains
when mains	Green	Flashing every 7 secs		charged	ASAP
has failed	Amber	Flashing every 15 secs			
Battery back	Red	Flashing every 60 secs	Chirp/60 secs		
up close to	Green	Flashing every 7 secs		detect CO	ASAP
discharge	Amber	OFF			

# 7. Interconnected systems

Interconnected systems of Kidde Models - 1SFW, 1SFWR, 2SFW, 2SFWR,3SFW, 3SFWR, 4MCO, 4MDCO				
	CO Alarm	Smoke/Heat Alarm		
Press CO test button	Normal test sequence - 4 loud beeps pause and then 4 loud beeps and so on.	Do not sound		
Press Smoke/Heat Alarm test button	3 loud beeps pause 3 beeps with Red LED flashing	3 loud beeps pause 3 loud beeps with Red LED flashing		
Smoke/Heat Alarm Event	3 loud beeps pause 3 loud beeps with Red flashing. The Digital model will display " Fire"	3 loud beeps pause 3 loud beeps with Red flashing.		
CO event	Alarms with 4 loud beeps pause 4 beeps and so on	Do not sound		
Smokes/Heat alarm will overide CO				

## 7. Interconnected systems

Interconnecte	Interconnected systems of Firex models, KF10, KF10R, KF20, KF20R, KF30, KF30R				
	CO Alarm	Smoke/Heat Alarm			
Press CO test button	Normal test sequence - 4 loud beeps pause and then 4 loud beeps and so on.	Normal test sequence - 4 loud beeps pause and then 4 loud beeps and so on.			
Press Smoke/Heat Alarm test button	3 loud beeps pause 3 beeps with Red LED flashing	3 loud beeps pause 3 loud beeps with Red LED flashing			
Smoke/Heat Alarm Event	3 loud beeps pause 3 loud beeps with Red flashing. The Digital model will display " Fire".	3 loud beeps pause 3 loud beeps with Red flashing.			
CO event	Alarms with 4 loud beeps pause 4 beeps and so on.	Alarms with 4 loud beeps pause 4 beeps and so on.			
	Smokes/Heat alarm will overide CO				

## 8. 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):

- 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:

#### PHONE NUMBER:

Never restart the source of the CO problem until it has been corrected. Never ignore the sound of the alarm! 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.

## 9. Maintenance of Your Alarm

This is a Mains Alarm. Isolate before removing for decorating. If in doubt contact a qualified electrician.

Warning: Do not tamper with the apparatus, as there is a risk of electric shock or malfunction. 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

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.

## **10.Troubleshooting**

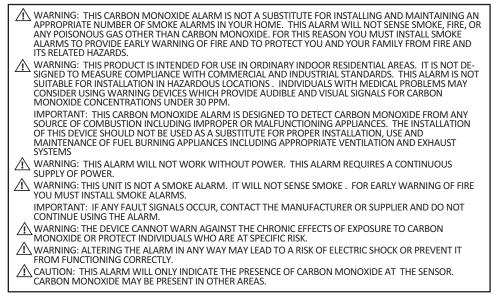
	LEDs		LCD (4MDCO)	Sounder	Unit Status	Action
Error condition -1	Red	Flashing every 30 secs	Err.	Chirp/30 secs	Unit has failed	Replace
	Amber	Flashing every 30 secs				Replace
Error condition -2	Red	ON		Constant	Unit micro- processor has	Replace
	Amber			lound sound	failed	
End of Life	Red	Flashing	Err.	Chirp twice	The unit has reached the end	Replace
Ella of Life	Amber	Flashing twice every 30 secs		every 30 sec- onds	of its life	
Low battery	Red	Flashing every 15 secs	NONE	Chirp/15 secs	Backup battery is discharged	Ensure switch is ON at the rear of the unit-if it
	Amber	Flashing every 15 secs			alsonangeu	persists, contact Kidde

NOTE: If AC mains is connected and active, the Green LED will be on continuous. If Green LED is not on, see Section 6.

# **11. Product Specifications**

Power	240V, 50Hz 30mA max
Sensor	Electrochemical CO Sensor
Storage and Transport Conditions	-20 °C to +60°C, 5 - 95% RH (no condensing)
Temperature Range	Operating range: 0°C to 40°C
Humidity	up to 90% relative humidity (RH), non-condensing
Alarm Sound	85db+ at 10' (3 metres) @ 3.4 +/- 0.5 KHz pulsing alarm
Size and weight	Weight: 220g Dimensions: 145mm x145mm x 40mm

## 12. Warnings and Important Notices



#### 13. Warranty

#### SEVEN YEAR LIMITED WARRANTY

WARRANTY 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 SEVEN (7) 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 WARRANTY IS VOID IF THE PRODUCT HAS BEEN DAMAGED BY ACCIDENT, UNREASONABLE USE, NEGLECT, TAMPERING OR OTHER CADUSES NOT ARISING FROM DEFECTS IN MATERIAL OR WORKMANSHIP. THIS WARRANTY EXTENDS TO THE ORIGINAL CONSUMER PURCHASER OF THE PRODUCT ONLY.

Warranty Disclaimers: Any implied warranties 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 warranty period. In no event shall the Manufacture 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 warranty does not affect your statutory rights. Warranty Performance: During the above warranty 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. Telephone 01753 685148, together with proof of purchase date. Please include a note describing the problem when you return the unit. The replacement product will be in warranty for the remainder of the original warranty 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 unit. Opening unit will yoid warranty. Your Carbon Monoxide Alarm is not a substitute for property, disability, life or other insurance of any kind. Appropriate insurance coverage is your responsibility or fitness for any particular purpose, with respect of the batteries.

For Warranty 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

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## **14. Environmental Protection**

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with Local Authority or retailer for recycling advice 2512-7220-03\_v4:\_ 2016.1.14 2:04 PM Page 23

## **Useful Contact Information**

Kidde Helpline Emergency No.s (UK) 0800 917 0722 / (Ireland) 1800 818 601Gas Emergency Services0800 111 999HETAS (Solid Fuel Emergency)0845 634 5626Oftec (oil)0845 658 5080

Kidde Website

www.kiddesafetyeurope.co.uk

Manufacturer Address (Made in China)

Kidde Safety Europe Ltd, Ash House, Littleton Road, Ashford, TW15 1TZ, UK

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