FERGUSON

CARBON MONOXIDE ALARM

Intertek
10LWK2615

CE 21

Standards tested to:
EN50291-1:2018

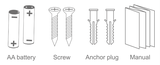
IMPORTANT! PLEASE READ CAREFULLY AND SAVE.
This user's manual contains important information about your CO Alarm's operation. If you are installing this CO Alarm for use by others, you must leave this manual—or a copy of it—with the end user.

PACKING LIST

PART NAME	QUANTITY
CO alarm	1 Piece
Mounting bracket	1 Piece
AA battery	2 Pieces
Screw	2 Pieces
Anchor plug	2 Pieces
Manual	1 Piece

CO alarm

Mounting bracket



AA battery Screw Anchor plug Manual

CONTENTS

1.TECHNICAL SPECIFICATIONS AND FEATURES

1.1 TECHNICAL SPECIFICATIONS

Power	DC 2×1.5V Alkaline AA LR(PAIRDEER)
Sensor Lifespan	max.10 years
Temperature	−10°C~+40°C
Humidity	0%~95%RH non-condensing
Sound Level	≥85dB at 3m
Alarm output	Visual and audible indication
Warm-up period	Approx.100 seconds
Mounting method	Wall mounting or ceiling mounting
According to	EN 50291-1: 2018
Battery life	5 years

1.2 FEATURES

- Advanced electrochemical CO sensor technology
- Digital temperature compensation technology
- Low battery warning
- Anti-RF Interference
- LCD backlight, visible in the dark (Optional)
- Hush mode:silence an unwanted alarm

IMPORTANT:
The apparatus should be installed by a competent person.If the apparatus is tampered with, then there is possible hazards of electric shock or malfunction.

What you should know about carbon monoxide(CO)

Carbon monoxide(CO) is a dangerous poison.It is a colourless,odourless and tasteless gas. CO gas is generated by combustion of carbonaceous materials,namely,when not enough oxygen is available.

This hazard can occur, for example,in open fireplaces, boilers,stoves and automobile exhaust. This toxin is bound in the blood where it prevents the transport of oxygen,which can cause death by suffocation.Everyone is susceptible but experts agree that unborn babies,pregnant women,senior citizens and people with heart or respiratory problems are especially vulnerable.

Initial carbon monoxide poisoning symptoms are similar to the flu with no fever and can include dizziness,severe headaches,nausea,vomiting and disorientation.If symptoms of carbon monoxide poisoning are experienced, seek medical attention immediately.CO poisoning can be determined by a carboxyhaemoglobin test.

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

1.Mild Exposure:Slight headache,nausea,vomiting, fatigue(often described as"Flu-like"symptoms).
2.Medium Exposure:Severe throbbing headache, drowsiness,confusion,fast heat rate.
3.Extreme Exposure:Unconsciousness,convulsions, cardiorespiratory failure,death.

Important information

Note that there are other hazards where the CO detector will not trigger an alarm, such as gas leaks,fires or explosions. A CO detector is no substitute for smoke,fire,heat or other gas detectors!

This device is intended for use within private housing.It is suitable neither for commercial or industrial applications nor for use on recreational craft or commercial vessels.

This detector is intended to protect persons from the acute effects of carbon monoxide. It can not provide people with special medical properties complete security. If in doubt you should consult a physician.

Gas appliances/equipment should be installed by trained personnel only.Get the devices/equipment in good mechanical condition and have them checked regularly.The installation of the CO detector should not be used as a substitute for proper installation,use and maintenance of fuel-fired facilities,including appropriate ventilation and exhaust systems.

Danger CO Levels

Concentration of CO in Air (parts per million)	APPROXIMATE INHALATION TIME AND SYMPTOMS DEVELOPED
50ppm	The maximum allowable concentration for continuous exposure for healthy adults in any 8-hour period.
200ppm	Slight headache,fatigue,dizziness,nausea after 2-3 hours.
400ppm	Frontal headaches within 1-2 hours,life threatening after 3 hours.
800ppm	Dizziness,nausea and convulsions within 45 minutes,Unconsciousness within 2 hours. Death within 2-3 hours.
1600ppm	Headache,dizziness and nausea within 20 minutes.Death within 1 hour.
3200ppm	Headache,dizziness and nausea within 5-10 minutes.Death within 25-30 minutes.
6400ppm	Headache,dizziness and nausea within 1-2 minutes.Death within 10-15 minutes.
12800ppm	Death within 1-3 minutes.

2. ALARM CONDITIONS

CARBON MONOXIDE CONCENTRATION AND RESPONSE TIME		
CO concentration	No alarm within	Alarm at the latest after
30 ppm	120 min	—
50 ppm	60 min	90 min
100 ppm	10 min	40 min
300 ppm	—	3 min

3. IMPORTANT SAFETY INFORMATION

WARNING!

PLEASE READ AND SAVE THESE INSTRUCTIONS.

IMPORTANT!

- This Carbon Monoxide (CO) Alarm is a sophisticated instrument that has been carefully designed and tested to detect CO build-up in residential environments.
- CO cannot be seen, smelled or tasted and can be fatal. The build-up of CO in the blood is called the carboxyhaemoglobin level and interferes with the body's ability to supply itself with oxygen. Depending on the concentration, carbon monoxide can kill in minutes.
- The most common sources of CO are malfunctioning, or misuse of gas appliances used for heating and cooking, vehicles engines, electric generators, blocked chimneys or flues, portable fuel burning heaters, fireplaces, fuel powered tools and operating a grill in an enclosed space.
- Indications of CO poisoning include symptoms similar to the flu, but with no fever. Other symptoms include dizziness, fatigue, weakness, headache, nausea, vomiting, sleepiness and confusion. Everyone is susceptible to the danger of CO, but unborn babies, small children, pregnant women, senior citizens and people with heart or respiratory problems may experience symptoms sooner. Each year a qualified technician should inspect and clean your heating system, vents, chimney, and flues.
- Dangers, Warnings, and Cautions alert you to important operating instructions or to potentially hazardous situations. Pay special attention to these items.
- **THIS IS NOT A SMOKE ALARM!** This CO Alarm is designed to detect carbon monoxide from ANY source of combustion. It is NOT designed to detect smoke, fire, or any other gas.

- This CO Alarm is approved for use in single-family residences. It is NOT designed for marine or RV use.

CAUTION!

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

WARNING!

- Always check your home for a potential problem after any alarm. Failure to do so can result in injury or death.
- NEVER ignore any alarm, If there is any question as to the cause of an alarm it should be assumed that the alarm is due to dangerous levels of carbon monoxide and the dwelling should be evacuated.See Section 9 WHAT TO DO IF THE ALARM SOUNDS for more information on how to respond to an alarm. Failure to respond can result in injury or death.
- Test this Carbon Monoxide Alarm once a week. If it ever fails to test correctly, have it replaced immediately! If the CO Alarm is not working properly, it cannot alert you to a problem.
- This product is intended for use in ordinary indoor locations of family living units. Individuals with medical conditions that may make them more sensitive to carbon monoxide may consider using warning devices which provide audible and visual signals for carbon monoxide concentrations under 30 ppm. For additional information on carbon monoxide and your medical condition contact your physician.

4. HOW DOES YOUR CO ALARM WORK

1. Test / Hush Button
2. Power Light
3. Alarm Light
4. Fault Light
5. LCD Display
6. Battery Cover
7. Alarm Horn

NOTE: "DISPLAY" item only covers the model with digital display.

CONDITION	OPERATION	LED	HORN	DISPLAY
Power up and Warm-up	Install 2 * AA battery correctly to power the alarm on. Warm-up lasts approx.100 seconds. LCD backlight will be on for 5 seconds. LCD will display "888" during warm-up period. When completed, LEDs and backlight turn off.	The red/yellow/green LEDs flash alternately,	One short beep	888
Stand-by condition	After warm-up period, the alarm turns to standby condition.	The green LED flashes every 30 seconds.	None	None
Test condition	Press and release Test/Hush Button to check whether CO alarm works normally.	Green and yellow LEDs turn off. Red LED flashes four times.	The alarm sound four beeps.	tES
Alarm condition	The presence of carbon monoxide.	Red LED flashes every 5 seconds.	Four beeps every 5 seconds	Display Number from 25-999
Low battery	None	Yellow LED flashes every 30 seconds.	One beep every 30 seconds	Lb
Malfunction	None	Yellow LED flashes twice every 30 seconds.	Two beeps every 30 seconds	Err
End of unit life	None	Yellow LED flashes twice every 30 seconds.	One long beep and one short beep every 30 seconds	End
Exceed CO measuring range	None	Red LED flashes every 5 seconds.	Four beeps every 5 seconds	999
Hush condition	Silence an unwanted alarm, push and release the test/hush button, it will enter hush mode.	RED LED flashes quickly	None(Hush condition duration: about 10 minutes)	Display number from 25 to 999
	When the CO alarm is alarming as low battery, push the test/hush button, it will enter hush mode.	Yellow LED flashes every 30 seconds.	None(Hush condition duration: about 12 hours)	Lb

* Attention: If remote silencing function is available, any remote silencing feature shall only be used in line of sight of the CO alarm.
Hushing: When the CO Alarm is sounding an alarm after a suspected false alarm,you can press the Test/Hush button and the CO alarm will remain silent for 10 minutes. While the Alarm is silenced, it will continue to monitor the air for CO. The alarm will sound again, if CO level still at dangerous level. The Hush Feature is intended to temporarily silence the Alarm horn, if will not correct a CO problem.

5. WHERE TO LOCATE

5.1 A CO Alarm should be centrally located outside of each separate sleeping area.In the immediate vicinity of the bedrooms. For added protection, install additional CO Alarms in each separate bedroom, and on every level of your home.

5.2 If your bedroom hallway is longer than 40 feet (12 metres), install a CO Alarm at BOTH ends of the hallway.

5.3 In a single-level home:

- Install at least one CO Alarm near or within each separate sleeping area.
- For added protection, install an additional CO Alarm at least 20 feet (6 metres), away from the furnace or fuel burning heat source.

5.4 In a multi-level home---(same as above plus) :

- Install at least one CO Alarm near or within each separate sleeping area.
- For added protection,install at least one CO Alarm on each level of the home. If you have a basement, install that CO Alarm at the top of the basement stairs.

◇ CO alarms for limited protection
◆ Additional CO alarms for better coverage

- For added protection, install an additional CO Alarm at least 20 feet (6 metres) away from the furnace or fuel burning heat source.

6. LOCATIONS TO AVOID

IMPORTANT: Improper location can affect the sensitive electronic components in this alarm. To avoid causing damage to the unit, to provide optimum performance, and to prevent unnecessary nuisance alarms, DO NOT locate CO alarms :

6.1 In garages, kitchens, furnace rooms, or in any extremely dusty, dirty or greasy areas.

6.2 Where combustion particles are produced. Combustion particles form when something burns. Areas to avoid include poorly ventilated kitchens, garages, and furnace rooms. Keep units at least 20 feet (6 metres) from the sources of combustion particles (stove, furnace, water heater, space heater) if possible. In areas where a 20-foot (6 -metre) distance is not possible — in modular, mobile, or smaller homes, for example — it is recommended the CO Alarm be placed as far from these fuel-burning sources as possible. The placement recommendations are intended to keep these Alarms at a reasonable distance from a fuel-burning source, and thus reduce "unwanted" alarms. Unwanted alarms can occur if a CO Alarm is placed directly next to a fuel-burning source. Ventilate these areas as much as possible.

6.3 Within 5 feet (1,5 metres) of any cooking appliance.

6.4 In extremely humid areas. This Alarm should be at least 10 feet (3 metres) from a bath or shower, sauna, humidifier, vaporizer, dishwasher, laundry room, utility room or other source of high humidity.

6.5 In areas where temperature is colder than -10°C or hotter than 40°C . These areas include non-airconditioned crawl spaces, unfinished attics, uninsulated or poorly insulated ceilings, porches, and garages.

6.6 In turbulent air , like near ceiling fans, heat vents, air conditioners, fresh air returns, or open windows. Blowing air may prevent CO from reaching the sensors.

6.7 In direct sunlight.

(3) Screw the alarm into the bracket.
IMPORTANT: Constant exposures to high or low humidity may reduce battery life.After installing or changing the batteries, reinstall your alarm. Test your alarm by using the test button.

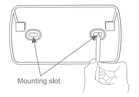
7.2 MOUNTING

For wall mounting or ceiling mounting, follow these steps:

(1) Draw a horizontal line 4 inches (10 cm) long on the area of walls where this CO alarm is intended to locate.

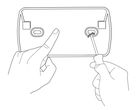
(2) Locate the mounting bracket in your chosen position. Align the two longest mounting slots with the line. Draw a mark in the centre of each slot.

Note: The arrow marked in the bracket shall be placed upwards for wall mounting.



(3) Drill the holes at the marks with a 3/16-inch (5mm) drill.
Note: Keep CO alarms away from getting plaster dust when you drill the holes.

(4) Insert the anchor plugs and screw the mounting bracket to the chosen position.**DO NOT OVERTIGHTEN THE SCREWS**, this will distort the mounting bracket.



Caution:

6.8 When scouring or stripping a wooden floor,painting, wallpapering or using adhesive or aerosol,you should remove the carbon monoxide alarm and keep it in a safe place to prevent damaging the sensor.

6.9 High concentrations of the following substances can damage the sensor,which often results in a false alarm: methane,propane,isopropyl butane,ethylene,ethanol, isopropyl alcohol,benzene,toluene,ethylacetate, hydrogen,hydrogen sulfate and sulfur dioxide.Also aerosol sprays,alcoholic products,paint,solvents, adhesive,hair spray,aftershave,perfume and certain cleaning agents can cause damage.

7.HOW TO INSTALL

7.1 BATTERY INSTALLATION AND REPLACEMENT

To install or replace the batteries in this CO alarm, please perform the following steps:

(1) Slide open the battery cover to expose the battery compartment.

(2) If replacing batteries, remove the old batteries and properly dispose of them as recommended by the battery manufacturer. If installing 2 new AA batteries, note the polarity illustration in the battery compartment. When batteries are correctly installed, the alarm horn sounds one beep.

9. WHAT TO DO IF THE ALARM SOUNDS

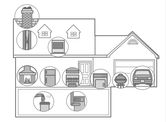
9.1 Call your emergency services (fire dept.).

9.2 Immediately move to fresh air - outdoors or by an open door/window. Do a head count to check that all persons are accounted for. Do not re-enter the premises nor move away from the open door/window until the emergency services responders have arrived, the premises have been aired out, and your alarm remains in its normal condition.

9.3 After following steps 9.1-9.2, if your alarm reactivates within a 24 hour period, repeat steps 9.1-9.2 and 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.

9.4 If problems are identified during this inspection have the equipment serviced immediately. Note any combustion equipment not inspected by the technician and consult the manufacturer's instructions, or contact the manufacturer's 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.

9.5 Do not press the Test Button, the Test Button can not cancel the alarm.



10. TROUBLESHOOTING

PROBLEM	SOLUTION
Press Test button,CO alarm shows no response.	Please check whether batteries are properly installed. If no problem with batteries and CO alarm still shows no response, please contact your local distributor.
Yellow LED flashes and the alarm sounds one beep every 30 seconds.	Battery is low -- REPLACE IT IMMEDIATELY!
Yellow LED flashes twice and the alarm sounds two beeps every 30 seconds.	Sensor or unit malfunction. Please contact your local distributor.

8. MAINTENANCE

To keep your alarm in good working order, you must follow these steps:

8.1 Test the alarm once a week by pressing the Test button.

8.2 Vacuum the alarm cover once a month to remove accumulated dust.

8.3 Never use detergents or solvents to clean the alarm. Chemicals can permanently damage or temporarily contaminate the sensor.

8.4 Avoid spraying air fresheners, hair spray, paint or other aerosols near the alarm.

8.5 Do not paint the unit. Paint will seal the vents and interfere with proper sensor operation.

11. LIMITATIONS OF CO ALARMS

11.1 CO alarms may not waken all individuals.
If children or others do not readily waken to the sound of the CO alarm, or if there are infants or family members with mobility limitations, make sure that someone is assigned to assist them in the event of an emergency.

11.2 This CO Alarm will not sense carbon monoxide that does not reach the sensor.CO may be present in other areas. Doors or other obstructions may affect the rate at which CO reaches the CO Alarm, For this reason, if bedroom doors are usually closed at night, we recommend you install a CO Alarm in each bedroom and in the hallway between them.

11.3 CO Alarms may not sense CO on another level of the home. For example, a CO Alarm on the second level, near the bedrooms, may not sense CO in the basement. For this reason, one CO Alarm may not give adequate warning.Complete coverage is recommended. Place CO Alarms on each level of the home.

11.4 CO Alarms may not be heard.
The Alarm horn loudness is above 85 dB at 3.2ft feet(1 metre). However, if the CO Alarm is installed outside the bedroom, it may not wake up a sound sleeper or one who has recently used drugs or has been drinking alcoholic beverages.This is especially true if the door is closed or only partly open.Even persons who are awake may not hear the alarm horn if the sound is blocked by distance or closed doors. Noise from traffic, stereo, radio, television, air conditioner, or other appliances may also prevent alert persons from hearing the alarm horn. This CO Alarm is not intended for people who are hearing impaired.

11.5 CO Alarms are not a substitute for a smoke alarm.
Although fire is a source of carbon monoxide, this CO Alarm does not sense smoke or fire. This CO Alarm senses CO that may be escaping unnoticed from malfunctioning furnaces, appliances, or other sources. Early warning of fire requires the installation of smoke alarms.

11.6 CO Alarms are not a substitute for life insurance.
Though these CO Alarms warn against increasing CO levels, we do not warrant or imply in any way that they will protect lives from CO poisoning. Homeowners and renters must still insure their lives.

11.7 CO Alarms have a limited life.
Although the CO Alarm and all of its parts have passed many stringent tests and are designed to be as reliable as possible, any of these parts could fail at any time. Therefore, you must test your CO Alarm weekly.

11.8 CO Alarms are not foolproof.
Like all other electronic devices, CO Alarms have limitations. They can only detect CO that reaches their sensors. They may not give early warning to rising CO levels if the CO is coming from a remote part of the home, away from the CO Alarm. The CO Alarm may not prevent the chronic effects of long time exposure to CO gas.

12. DISPOSAL

Correct Disposal of This Product(Waste Electrical&Electronic Equipment) (Applicable in the European Union and other European countries with separate collection systems).

This marking shown on the product or its literature,indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal,please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.Household users should contact either the retailer where they purchased this product,or their local government office,for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

***Always throw used batteries to the battery recycling bin.**
***If the battery is built-in inside the product,open the product and remove the battery.**

Warning:

Except the battery replacement, it's forbidden for the user to disassemble the CO alarm privately which may cause damage to the CO alarm.

Caution:

The CO alarm is for indoor use only,and it is not designed for use in a recreational vehicle or mobile home.

The CO alarm should be installed by a competent person. This apparatus is designed to protect individuals from the acute effects of carbon monoxide exposure.It will not fully safeguard individuals with specific medical conditions.If in doubt,please consult a medical practitioner.

Simplified Declaration of Conformity
Importer: Ferguson Sp. z o.o., ul. Dworska 1, 61-619 Poznań
Name: Standalone CO Alarm FACO1
Type of device: Carbon monoxide sensor
The aforementioned product complies with Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonization of the laws of the Member States relating to the making available on the market of radio equipment, and repealing Directive 1999/5/EC. The full Declaration of Conformity is available for download at:
https://ferguson-digital.eu/declarations-of-conformity/?lang=en