CE

FireAngel

KM694290
BS EN 50291-1:2010
+A1:2012

CW1-PF MAINS POWERED CARBON MONOXIDE ALARM WITH 9V BATTERY BACK-UP USER MANUAL

220-240 V AC 50 Hz mains powered carbon monoxide (CO) alarm with 9V battery back-up.

WARNING: Wiring should be installed by a qualified electrician in accordance with local building standards. The wiring must conform to current regulations for electrical installations. Check with local building regulations for your property, to ensure compliance.

For the earliest warning, we recommend this CO alarm is fitted in a room where the temperature is between -10°C (14°F) and 40°C (104°F). Prolonged exposure to temperatures outside those stated above will reduce product life.

This CO alarm is not intended for any non-residential, commercial or industrial application, nor for any other purpose than described above. It is not designed for use in recreational vehicle (RV) or boat. This alarm must be installed by a competent person, able to install according to the instructions. Please keep this user manual in a safe place.

Technical Support
Online: www.fireangel.co.uk/support
E-mail: technicalsupport@fireangel.co.uk
Phone: 0800 141 2561 (EIRE Phone: 1-800 523 171)

Note: This user manual is also available in large text and other formats. Please email: technicalsupport@fireangeltech.com or call 0800 141 2561 for further information.

GW-19R14

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1. POSITIONING

Your carbon monoxide (CO) alarm is suitable for the landing, hallway, bedroom, living room, dining room and kitchen.

Aim to install the alarm in a bedroom or hallway located close to the sleeping area. If more than one sleeping area exists, locate additional alarms in each sleeping area. Do not install the CO alarm in areas which are excessively dusty, dirty or greasy. Dust, grease and household chemicals can effect the performance of the sensor.

Common sources of CO include: oil and gas boilers, portable generators, oil or solid fuel cookers, gas or paraffin heaters, barbecues, clogged chimneys, wood or gas fireplaces, any gas or fossil fuel-burning appliance.

If the alarm is located in the same room as a fuel-burning appliance, it should ideally be located 1-3m from the potential CO source. Apparatus located in sleeping rooms and in rooms or areas, e.g. hallways, landings, remote from a fuel-burning appliance should be located relatively close to the breathing zone of the occupants.

CO alarms should be sited at least 300mm from light fittings and walls. Ideally as central as possible in the room. If there is fluorescent lighting, CO alarms should be installed at least 1500mm from these fittings and wiring. Keep any wiring at least 1000mm from fluorescent lighting. Do not use circuits containing fluorescent light fittings or dimmer switches.

CO alarms should be positioned at no more than 600mm vertically below the highest point in the room.

If positioning your CO alarm on the wall, the top of the alarm must be between 150mm and 300mm below the ceiling, and at least 300mm from a neighbouring wall.

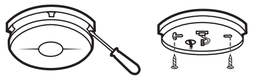
For further guidance on siting and mounting of the apparatus consult EN 50292-2013.

Installation of the alarm should not be used as a substitute for proper installation, use and maintenance of fuel burning appliances including appropriate ventilation and exhaust systems.

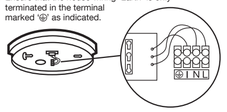
2. INSTALLATION

2a **Switch off electricity supply.**
Ensure a permanent connection to the house wiring is made in a suitable junction box.

2b Using a screwdriver, gently open the 3 clips on the base to remove the base plate.
Fit the base to ceiling using the screws provided. Feed the wiring through the hole in the base plate or via YT2 trunking knock-outs at the side.

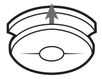


2c Connect the wiring to the connector terminals.
Ensure that the house wiring 'Earth' is only terminated in the terminal marked ⏚ as indicated.

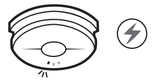


2d Unwrap battery. Insert battery into battery compartment (match '+' to '+'). Press and hold the Test button. The alarm will sound.

2e **IMPORTANT:** Align arrows on the side of the alarm and the side of the base. Gently push alarm onto base.



2f Turn the electricity supply back on and check that the green LED is on.



2g **ALARM TEST:**
Press the Test button.
The alarm will sound.

Press and hold the Test button for 10 seconds. The alarm will sound the normal alarm volume of 85dB.

If desired, the alarm can be interconnected with up to 11 other smoke (SW1), heat (HW1) or carbon monoxide (CW1) alarms from the FireAngel range via the 'I' connector. (See Optional Interconnecting Feature).

IMPORTANT: The circuit used to Power the alarm must be a 24 hour voltage circuit that cannot be turned off by a switch.

We recommend: For mains powered alarms, each with an integral standby supply, the mains electricity supply should take the form of either a) an independent circuit at the dwelling's main circuit board, in which case no other electrical equipment should be connected to this circuit (other than a dedicated monitoring device installed to indicate failure of the mains electricity supply to the alarms); or b) a separately electrically protected, regularly used local lighting circuit. The wiring must conform to current regulations for electrical installations.

Ensure dust cover is removed before operation.

Once connected to power, three color LEDs (green/amber/red) will light up briefly and the device will beep. The green LED will then flash constantly for 40 seconds. If the alarm is powered by the battery the green LED will flash once every 33 seconds. If the alarm is powered from the mains the green LED will remain on constantly.

3. CO ALARM AWARENESS

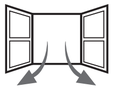
A loud alarm is a warning that potentially lethal levels of carbon monoxide are present.
NEVER IGNORE THIS ALARM, FURTHER EXPOSURE CAN BE FATAL.
Immediately check residents for symptoms of CO poisoning. Contact the proper authorities to resolve all CO problems.

3a The CO alarm signal pattern is a repeated cycle of 4 quick beeps followed by 5 seconds of silence. The red LED will flash the same pattern.

Red LED: ● ● ● ● --- 5s --> ● ● ● ●
Alarm sound: 🔊 🔊 🔊 🔊 --- 5s --> 🔊 🔊 🔊 🔊

The alarm sound will start at a lower volume for around 10 seconds, then increase to the normal alarm volume of 85dB.

3b Keep calm; open doors & windows to ventilate the property. Stop using all fuel-burning appliances and if possible, turn them off.



3c Evacuate the property, leaving doors & windows open.

3d Ring your fuel supplier on their emergency number. Do not use appliances again until they have been checked by an expert.

Write your fuel supplier's emergency number here:

3e Get medical help immediately for anyone suffering the effects of CO poisoning (headache, nausea), and advise that carbon monoxide poisoning is suspected.

DEPENDING ON THE LEVEL OF CO DETECTED, IT CAN TAKE UP TO 10 MINUTES TO CLEAR THE SENSOR AND THE ALARM TO STOP. DO NOT RE-ENTER THE PROPERTY UNTIL THE ALARM HAS STOPPED.

The following symptoms may be related to CO poisoning which all household members should be aware of:
- Mild Exposure: Slight headache, vomiting, fatigue (often described as 'flu-like' symptoms).
- Medium Exposure: Severe throbbing headache, drowsiness, confusion, fast heart rate.
- Extreme Exposure: Unconsciousness, convulsions, cardiorespiratory failure, death.

Your CO alarm monitors levels of CO as parts per million (ppm) in the air surrounding the detector.
35ppm The maximum allowable concentration for continuous exposure for healthy adults in any 8 hour period (as recommended by the Occupational Safety & Health Administration).
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 & convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2 - 3 hours.

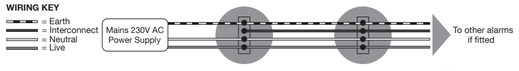
This apparatus is designed to protect individuals from the acute effects of carbon monoxide exposure. It may not protect people who are at additional risk from CO exposure due to age, pregnancy or medical condition. If in doubt, consult your doctor.

4. OPTIONAL INTERCONNECTING FEATURE

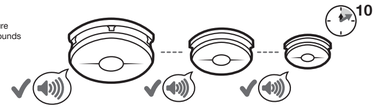
Up to 12 FireAngel mains smoke (SW1), heat (HW1) or carbon monoxide (CW1) alarms can be interconnected on a single network.

4a For multiple alarm installations use a 'three core and earth' style cable between all the alarms to be interconnected.
Connect the interconnect cable between each alarm's 'I' terminal.

WIRING KEY
= Earth
= Interconnect
= Neutral
= Live



4b Test each alarm and ensure every connected alarm sounds within 10 seconds.



On an interconnected network, only the alarm that senses carbon monoxide will sound and flash its LED. Other connected alarms will sound a CO alarm warning signal but will not flash their LED. Do not connect more than 11 other devices.

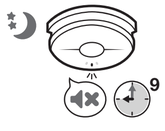
IMPORTANT: The interconnect wire (minimum 0.75 mm2 cable) must be treated as Live, it should be insulated and sheathed.

5. SLEEP EASY™ FEATURE

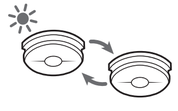
If a low battery double 'chirp' occurs at night, the alarm can be silenced so it does not keep you from sleeping.

5a Press the Test button.

5b The alarm will silence for 9 hours and the amber LED will continue to flash.



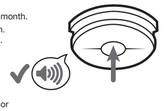
5c Replace the alarm the following day.



Your alarm will still detect CO during the Sleep Easy mode but you must replace the battery within 4 days.
YOUR ALARM CANNOT BE SILENCED IF THE CHIRP IS INDICATING A FAULT.

6. MAINTENANCE

6a Test the alarm every month.
Press the Test button.
The alarm will sound.

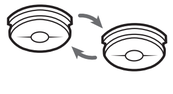


6b Vacuum your alarm every 3 months.

6c Do not use cleaners or solvents.

6d Do not paint the alarm.

6e Replace the alarm every 10 years.



Do not use any other test method except the process described in this manual.
Do not tamper with the alarm as this could cause electric shock or malfunction.

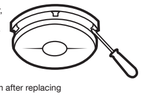
7. LOW BATTERY WARNING

This CO alarm will not protect against the risk of carbon monoxide poisoning when the mains power is off and the battery has drained.

7a When the alarm battery is low, the alarm will 'chirp' twice and the amber LED will flash every 33 seconds.

7b **Switch off electricity supply.**

7c Using a screwdriver, gently open the 3 clips on the base to remove the alarm.



7d Replace the batteries and re-install. (See 'Installation')

7e Always test the alarm after replacing the batteries.

8. FAULT INDICATION

8a If there is a fault, the alarm will 'chirp' once and the amber LED will flash every 38 seconds.

8b If within warranty, contact Technical Support.

End of Life indication: Your alarm will chirp three times and the amber LED will flash every 33 seconds when the device reaches the end of its 10 year life. This signal cannot be silenced and **the alarm will need to be replaced immediately.**

THE CO ALARM MUST BE REPLACED IMMEDIATELY IF THERE IS A FAULT. IF THE ALARM HAS A FAULT IT CANNOT DETECT A CO LEAK.

TECHNICAL SPECIFICATION

Model: CW1-PF
Product standards: EN 50291-1:2010+A1:2012
Type of apparatus: Type A
Power: 5W
Power Supply: 220~240VAC(~) 50Hz with 9V battery back-up
Battery Life: 1 year
Battery Spec.: DC 9V (Raymax: 6LR61; Duracell: MN1604 Gold Peak: 1604A,1604S)
Sensor of CO: Electrochemical
CO alarm sensitivity Setting: Certified to EN50291-1:2010+A1:2012
30PPM Without alarm before 120 minutes
50PPM Between 60 to 90 minutes
100PPM Between 10 to 40 minutes
300PPM Less than 3 minutes

This CO alarm is designed to detect carbon monoxide gas from any source of combustion. It is not designed to detect any other gas. It will only indicate the presence of carbon monoxide gas at the sensor. Carbon monoxide gas may be present in other areas.

Product life: 10 years
Low Battery warning silence: about 9 hours
Output signal: Level signal
Operation Ambient Condition: -10~+40°C, 30~93%RH non-condensing
Storage/Transport Ambient Condition: -20~+50°C, 10~95% RH non-condensing
Alarm sound : ≥85dB at 1m @3.2±0.5KHz
Detection range: Max. 40 m^2 within a room.
Size: Ø 140mm, T=55mm
Weight: 250g (net)

TROUBLESHOOTING GUIDE

If the green LED does not light when the alarm is connected to power	• Check that your CO alarm is connected to the power supply and that the battery is correctly installed.
If your CO alarm does not sound during testing	• Check that your alarm is connected to the power supply and that the battery is installed correctly. • If testing after installation, allow a few seconds for the alarm to settle. • Push and hold the centre of the test button firmly. • Check that the alarm is not in Fault warning mode.
If your CO alarm sounds unusual or 'chirps' intermittently	• Check the location of your CO alarm. • Check that your CO alarm is definitely the source of the chirping; make sure the noise isn't coming from another alarm. • If the alarm 'chirps' and the amber LED flashes every 38 seconds - a Fault is indicated. See Maintainance and Fault Indication sections. • If the alarm 'chirps' and the amber LED flashes twice every 33 seconds - replace battery immediately. • If the alarm 'chirps' and the amber LED flashes three times every 33 seconds - the alarm has reached the end of its life. Replace alarm immediately! • Clean the CO alarm
If you experience frequent unwanted alarms	• NEVER IGNORE ANY ALARM. Have all your fuel burning appliances checked. • Check the location of your CO alarm. • Clean the CO alarm.

WARRANTY AND DISPOSAL

Sprue Safety Products Ltd warrants to the original purchaser that its enclosed CO alarm be free from defects in materials and workmanship under normal residential use and service for a period of 5 (five) years from the date of purchase (not including the replaceable battery). Provided product is sent back to Sprue Safety Products with proof and date of purchase, Sprue Safety Products Ltd hereby warrants that during the 5 (five) year period commencing from the date of purchase Sprue Safety Products Ltd, at its discretion, agrees to replace the unit free of charge. The warranty on any replacement CW1 alarm, will last for the remainder of the period of the original warranty in respect of the alarm originally purchased – that is from the date of original purchase and not from the date of receipt of the replacement product. Sprue Safety Products Ltd reserves the right to offer an alternative product similar to that being replaced if the original model is no longer available or in stock. This warranty applies to the original retail purchaser from the date of original retail purchase and is not transferable. Proof of purchase is required.

This warranty does not cover damage resulting from accident, misuse, disassembly, abuse or lack of reasonable care of the product, or applications not in accordance with the user manual. It does not cover events and conditions outside of Sprue Safety Products Ltd's control, such as Acts of God (fire, severe weather etc.). It does not apply to retail stores, service centres or any distributors or agents. Sprue Safety Products Ltd will not recognise any changes to this warranty by third parties. This warranty does not cover replaceable batteries which are considered user-replaceable parts.

Sprue Safety Products Ltd shall not be liable for any incidental or consequential damages caused by the breach of any expressed or implied warranty. Except to the extent prohibited by applicable law, any implied warranty of merchantability or fitness for a particular purpose is limited in duration for 5 (five) years.

This warranty does not affect your statutory rights. Except for death or personal injury, Sprue Safety Products Ltd shall not be liable for any loss of use, damage, cost or expense relating to this product or for any indirect, or consequential loss, damages or costs incurred by you or any other user of this product.

DISPOSAL

Waste electrical products should not be disposed of with your other household waste. The alarm is ideally suited for disposal within the waste electronic and electrical equipment (WEEE) recycling scheme.

Please recycle where facilities exist. Check with your local authority, retailer or contact our Technical Support team for recycling/disposal advice as regional variations apply.

Once the batteries are removed, the low battery warning chirp will stop. The batteries should always be removed before disposal.
Do not attempt to open. Do not burn.