

CO-250 F

BETRIEBSANLEITUNG OPERATING INSTRUCTIONS



VERSION 1407-2015

ENGLISH

Carbon Monoxide Detector – Model CO-250 F

Introduction

Thank you for purchasing the carbon monoxide alarm model CO-250 F. This is one single station alarm. Please take a few minutes to thoroughly read this user's guide and save for future reference.

IMPORTANT: Installation and maintenance only to be carried out by specialist!

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 carboxyhemoglobin 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 heart 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! More information is available on the Internet, e.g. on www.protector24.de. 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
(ppm = parts per million)

APPROXIMATE INHALATION TIME AND SYMPTOMS DEVELOPED

| | |
|-------------------|---|
| 50 ppm | The maximum allowable concentration for continuous exposure for healthy adults in any 8-hour period. |
| 200 ppm | Slight headache, fatigue, dizziness, nausea after 2-3 hours. |
| 400 ppm | Frontal headaches within 1-2 hours, life threatening after 3 hours. |
| 800 ppm | Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2-3 hours. |
| 1,600 ppm | Headache, dizziness and nausea within 20 minutes. Death within 1 hour. |
| 3,200 ppm | Headache, dizziness and nausea within 5-10 minutes. Death within 25-30 minutes. |
| 6,400 ppm | Headache, dizziness and nausea within 1-2 minutes. Death within 10-15 minutes. |
| 12,800 ppm | Death within 1-3 minutes. |

Your detector detects a threat only where it is installed. Carbon monoxide must reach detector in described level and time to start alarming.

THIS CO ALARM MEETS THESE ALARM RESPONSE TIMES (As required in EN50291)

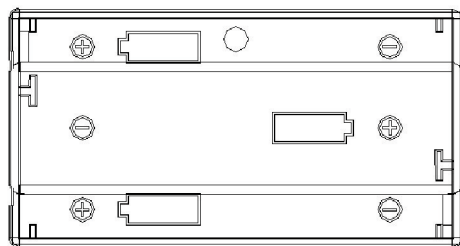
- At 50 PPM, the unit must alarm within 60-90 minutes
- At 100 PPM, the unit must alarm within 10-40 minutes
- At 300 PPM, the unit must alarm within 3 minutes

Specifications:

| | |
|----------------------------------|---|
| Alarm system in accordance with: | EN50291-1:2010 +A1:2012 |
| Sensor: | 'FIGARO' electrochemical carbon monoxide sensor TGSS042 |
| Power supply: | 3 x 1.5V AA alkaline batteries |
| Temperature: | Operating range -20°C to 50°C |
| Humidity: | Operating range 5% to 100% relative humidity |
| Mounting: | Accessories available for wall mounting |
| Alarm: | 85+ dB at 1 m at 3.4 ± 0.5 kHz cadence |
| Test/reset button: | button to test function |
| Display precision: | 25-999 ppm (± 15%), measured at 20°C (± 5°C). Atmospheric pressure ± 10% and 40% (± 5%) relative humidity. |
| Size and weight: | ø 119 mm x 37.5 mm / 120g without batteries |
| Sensor lifespan: | 8 years from the time of initial operation but not longer than 10 years from the production date stated on the reverse. |

QUICK SET UP

Install three AA batteries into the battery box. Observe the battery polarity markings at the bottom of the battery box.



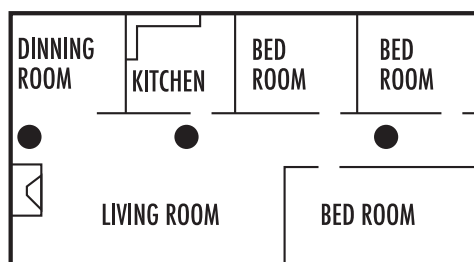
Caution: Please do not press the test/reset button when you install the batteries!

Once the batteries have been inserted the alarm will beep once and the three LEDs will flash in sequence. '888 ppm' will be shown on the display and the blue background lighting is on. After approximately 1-2 minutes the display and the display lighting will go out and the green LED will flash every 4 seconds, thus indicating normal operation. Now replace the battery cover and the alarm is ready for use.

INSTALLATION LOCATION:

IMPORTANT: THIS ALARM MUST BE MOUNTED ON A WALL. INSTALL ONLY AS DETAILED!

If you have only one detector, place it near sleeping areas, not near fuel burning appliances, such as fireplaces, furnaces or hot water heaters.



Where To Install Your CO Detector

- The following suggestions are intended to help you with the placement and installation of your CO detector.
- Place out of the reach of children. Under no circumstance should children be allowed to handle the CO detector.
- Install in a bedroom or hallway located close to the sleeping area. Take special care to verify the alarm can be heard in sleeping areas.
- It is recommended that a CO detector be installed on each level of a multilevel home.
- Locate at least 5 feet away from all fuel burning appliances.
- Placing at eye level (around 150cm-300cm from the floor) allows for optimum monitoring of the red and green indicator lights.
- It is permissible to mount the detector on the height of bed in the bedroom or lay it on the bedside night table (CAUTION! - please take into account the very loud alarm!).
- In exceptional circumstances, the detector can be used as a portable device and take it where you want to detect a threat. The detector should move with caution. Moving the sensor can cause damage and void the warranty.

Where Not To Install Your CO Detector!

- Do not install in kitchens, garages or furnace rooms that may expose the sensor to substances that could damage or contaminate it.
- Do not install within 60 cm of heating or cooking appliances.
- Do not install near vents, flues, chimneys or any forced/unforced air ventilation openings.
- Do not install near ceiling fans, doors, windows or areas directly exposed to the weather.
- Do not install in dead air spaces, such as peaks of vaulted ceilings or gabled roofs, where CO may not reach the sensor in time to provide early warning.
- Do not install this unit near deep-cell large batteries. Large batteries have emissions that can cause the alarm to perform at less than optimum performance.
- Do not obstruct the vents located on the alarm. Do not place the alarm where drapes, furniture or other objects block the flow of air to the vents.

Installation Instructions

Mounting

- Using the template provided. Mark the position of the two mounting holes by using the template.
- Drill two holes using a 6 mm drill for the plastic plugs supplied, (ensure you don't drill into the house wiring).
- Screw the unit to the wall.

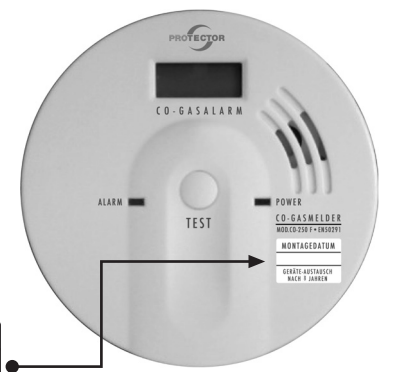
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These operating instructions are published by Protector GmbH, An den Kibonaten 37, 26160 Bad Zwischenahn, Germany

The operating instructions reflect the current technical specifications at time of print. We reserve the right to change the technical or physical specifications.

When setting up the device please inscribe the installation date on the attached label and affix it easily visible onto the CO detector (e.g. as shown on the adjoining figure) and replace the detector when

- 8 years have passed after installation date or
- 'Er' is shown on the LC display



Operating and Alarm Characteristics

| LC-DISPLAY | LCD DISPLAY SHOWS | ALARM SOUND | UNITS STATUS | RECOMMENDATION |
|--------------------------|---|--|---|--|
| 257 PPM "For example" | A display of CO concentration from 25-999 ppm. Blue backlight is lighted. Red LED flashes. | 4 quick beeps. Repeated every 5 seconds. | Concentrations of CO detected. Alarm condition. | Refer to "What to do When the Alarm Sounds". |
| 888 PPM | Brief "888 ppm" for approximately 60-120 seconds. Blue backlight led is lighted for 60-120 seconds. | None. (beeps when install batteries is normal) | Self test when first powered up. | CO has not been detected. Numbers shown for test purpose only. |
| | Display is blank. Green LED flashes every 4 seconds. | None. | Normal DC operation with good batteries. (now detecting CO) | None. |
| 0 PPM | A steady display of "0 ppm". Blue backlight led is lighted for 20 seconds. | 4 quick beeps. | Test/Reset button is pressed. | CO has not been detected. Numbers shown for test purpose only. |
| Lb | "Lb" displayed. Yellow LED flash every 20 seconds. | One quick beep every 20 seconds | Batteries need to be replaced. | Replace all three AA batteries immediately. |
| Err | "Err" displayed. Yellow LED flashes every 60 seconds. | Two quick beeps every 20 seconds. | Unit is Error condition. | Unit has malfunctioned. Replace immediately. |
| HHH | "HHH" displayed. Blue backlight is lighted. Red LED flashes. | 4 quick beeps. Repeated every 5 seconds. | Concentrations of CO is more than 999 ppm. | MOVE TO FRESH AIR IMMEDIATELY! |
| End | "End" displayed. Red LED flashes every 20 seconds. | Two quick beeps every 20 seconds. | End of unit life. About 72 months from first powered on. | Replace unit immediately. |

Test button (self-test and peak value memory)

- Press the test button briefly, the display light comes on and the alarm beeps 4 times, the red LED flashes 4 times. The alarm shows the highest value that has been detected since the last time the test button was pressed.
- Then the alarm beeps once, the red LED flashes once and the display shows '1+1'. This means that the alarm is testing itself.
- After the self-test has been carried out successfully the display shows 'PAS' and beeps 3 times. At the same time the LED flash 3 times. Then the display lighting goes off and the display shows 'CO' and 'Oppm'.
- If the self-test has not been carried out successfully then the display shows 'Er', the yellow LED flashes and the alarm beeps twice. This is repeated every 60 seconds.

Muting

In the event of an alarm the CO alarm can be muted for 5 minutes by pressing the test button. After 5 minutes the alarm will return to normal operation. If the CO concentration is still high then the alarm will continue.

Caring for your Carbon Monoxide Detector

- To keep your CO detector in good working order, you must follow these simple steps:
- Test the detector once a week by pressing the Test/Reset button
- Vacuum the detector cover once a month to remove accumulated dust. Use the soft brush attachment of your vacuum cleaner.
- Instruct children never to touch, unplug or otherwise interfere with the unit. Warn children of the dangers of CO poisoning.
- Never use detergents or solvents to clean the detector. Chemicals can permanently damage or temporarily contaminate the sensor.
- Avoid spraying air fresheners, hair spray, paint or other aerosols near the CO detector.
- Do not paint the CO detector. Paint will seal the vents and interfere with proper sensor operation.
- Do not mount the CO detector directly above or near a diaper pail, as high amounts of methane gas can cause temporary readings on the digital display.

What to do When the Alarm Sounds

- Operate the Test/Reset button;
- Call your emergency services;
- 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.
- After following steps 1-3, if the alarm reactivates within a 24 hour period, repeat steps 1-3 and call a qualified appliance technician to investigate sources of CO from fuel burning equipment and appliances, and to inspect for proper operation of equipment. 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 the equipment. Make sure that motor vehicles are not, or have not been, operating in a garage attached or adjacent to the residence. 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 five minutes, it is sensing high levels of CO which can quickly become a dangerous situation.

Note:

- The batteries will usually last over 4 years in standby under normal conditions. An undepleted battery can power a unit in alarm for over 100 hours. The life will be reduced if the unit regularly goes into alarm or if it is exposed to excessive temperatures for long periods.
- The Units can work for more than 6 years after first powered. The entire unit must then be replaced. It must also be replaced when the date is exceeded 7 years over the manufacture data which was marked on the back label of the unit.

Never carry out repairs yourself!

Warranty

8 YEAR LIMITED GUARANTEE

For eight years after the date of purchase, the defect-free condition of the product model and its materials is guaranteed. This guarantee is only valid when the device is used as intended and is subject to regular maintenance checks. The scope of this guarantee is limited to the repair or reinstallation of any part of the device, and is only valid if no unauthorised modifications or attempted repairs have been undertaken. Customer statutory rights are not affected by this guarantee.

Please note!

No claim can be made under guarantee in the following circumstances:

- Operational malfunction
- Empty batteries or faulty accumulator
- Erroneous coding/channel selection
- Fault through other radio installation (i.e. mobile operation)
- Unauthorised modifications / actions
- Mechanical damage
- Moisture damage
- No proof of guarantee (purchase receipt)

Claims under warranty will be invalidated in the event of damage caused by non-compliance with the operating instructions. We do not accept any responsibility for consequential damage! No liability will be accepted for material damage or personal injury caused by inappropriate operation or failure to observe the safety instructions. In such cases, the guarantee will be rendered void.

Liability limitation

The manufacturer is not liable for loss or damage of any kind including incidental or consequential damage which is the direct or indirect result of a fault in this product.

SAFETY NOTES

Do not paint, decorate with foil or stickers, or cover the CO detector as this will impair its functioning.

Observe the maintenance schedules (see General Maintenance), otherwise the functioning may be impaired. Avoid strong electromagnetic fields (mobile phones, wireless equipment, microwaves) as this will impair the functioning.

Danger of damage to hearing! The alarm sound is very loud. Do not test CO detector near your ears.

Danger of poisoning! Batteries are extremely dangerous if swallowed. Keep batteries and CO detector out of the reach of small children. If a battery has been swallowed see a doctor immediately.

Danger of explosion! Do not recharge, shorten or take batteries apart or throw into fire. Do not let children play with the CO detector or its packaging material.

Make all household members familiar with the CO detector's functioning and its signals. For reasons of safety and licensing (CE), unauthorised conversion and /or modification of the product is prohibited.

Do not take the product apart! There is a danger of lethal electric shock! Do not leave packaging material lying about since plastic foils and pockets and polystyrene parts etc. could be lethal toys for children.

Handle the product with care - it is sensitive to bumps, knocks or falls even from low heights.

The warranty will be null and void in case of damages arising from violations of these operating instructions. We are not liable for consequential damages!

We accept no liability for material damages or injuries arising from inappropriate use or violation of the safety instructions. In such cases all warranty claims are null and void!