

COS-X2 Plus

Carbon Monoxide Detector



INSTRUCTIONS

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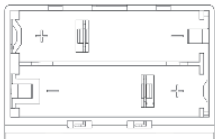
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Specifications

Model Number	COS-X2 plus	
Alarm Condition	EN50291-1:2018+AC:2021	
Sensor	Electrochemical carbon monoxide sensor Digital Relative Humidity and Temperature sensor 3 sensors in 1: CO + Temperature + Relative Humidity	
Power	2x1.5V AA alkaline batteries	
Battery Life	5 years under normal operating condition, replaceable.	
Recommended Batteries	Size AA Alkaline battery, Nanfu AA LR6, Pairdeer AA LR6, Gold Peak, GN15A, Energizer EN91, Duracell MN1500	
Temperature	Operating range	-10°C to 40°C
	Storage range	-20°C to 50°C
Humidity	Operating range 10%-90% relative humidity	
Mounting	Accessories supplied for wall mounting	
Alarm	85+ dB on 3m @ 3.4 ± 0.5 KHz pulsing alarm	
Test/Reset Button	Test button verifies proper unit operation	
Accuracy of Digital Display	25-999 ppm (±15%) when measured in condition of 20°C (±5°C). Atmosphere pressure ±10% and 50% (±10%) relative humidity Temperature Display Range: -9°C - 99°C (±1°C) Relative Humidity Display Range: 1%RH - 99%RH (±3%RH)	
Size & Weight	126mm×77mm×34.2mm/138g without battery	
Life Time	10 years	
	The expected lifetime of the sensor could be affected by the transport and storage time	
Warranty	One-year limited warranty from date of purchase against defects in material and workmanship on CO detector unit	



Quick Set Up







Ensure precise battery installation by following the polarity markings at the base of the battery box and inserting 2 AA batteries into the designated slots.






Upon the initial battery installation, the unit will emit a single beep, and the transparent button will sequentially flash red, green, and yellow lights for 2 minutes. Throughout this preheating phase, all characters will be illuminated with a white backlight. Subsequently, the LCD will showcase the temperature and relative humidity, transitioning to a functional state with the cessation of the white backlight. The button light will then intermittently flash green every 60 seconds, indicating that the unit is operational. Secure the battery cover. Your CO detector is now functioning properly.

Operating and Alarm Characteristics

LCD Display	LCD Display Shows	Alarm / Light Status	Units Status	Recommendation
	The LCD displays temperature and relative humidity updated every 1 minute.	The button light flashes green light once every 60 seconds.	Normal detecting status.	The unit displays temperature and relative humidity if CO concentration is below 25ppm.
	The unit displays CO concentration with range of 25-999ppm.	The button light flashes green light once every 60 seconds.	Normal detect status with CO concentration.	After the CO concentration exceeds 40ppm, the white backlight of the LCD will be turned on.

LCD Display	LCD Display Shows	Alarm / Light Status	Units Status	Recommendation
	The LCD displays the current CO concentration in ppm.	The unit beeps 4 times and the button light flashes red light 4 times every 5 seconds. The white backlight will remain on.	The unit is in alarm status.	The unit will alarm until the CO concentration drops below 40 ppm. The unit can't be silenced if the CO concentration is more than 300ppm.
	The alarm is silenced and the LCD displays the CO concentration and the mute symbol.	No beeps and the button light flashes 4 times every 5 seconds. The white backlight is off.	The unit is in silence state after alarm.	Press the button is again, the unit will resume to alarm status.
	The LCD displays "Lb" and a low battery symbol.	The unit beeps once and the button light flashes yellow light once every 60 seconds.	The voltage of battery is low.	The batteries should be replaced.
	LCD display "Err".	The unit beeps twice and the button light flashes yellow light twice every 60 seconds.	The sensor is in a short or open circuit status.	The unit should be replaced.
	LCD display "FULL" "ppm CO".	The unit beeps 4 times and the button light flashes red every 5 seconds. The white backlight remains on.	CO concentration above 999ppm.	MOVE TO FRESH AIR IMMEDIATELY!!!
	LCD display "End".	The unit beeps 3 times and the button light flashes yellow 3 times every 60 seconds.	Life expiration of the unit.	The unit should be replaced.

LCD Display	LCD Display Shows	Alarm / Light Status	Units Status	Recommendation
	The LCD displays the peak value of recorded CO concentration and "ppm CO" and "MAX" symbol.	The unit beeps once after pressing the button.	CO peak value display.	After displaying the peak value, the unit will clear the peak value automatically.
	LCD display "tEST". (It means "TEST".)	The button light flashes red, green, and yellow light.	The unit is undergoing self-test.	
	LCD display "PASS".	The button light flashes green light three times.	The unit is in normal working status.	

Note: The user must not dismantle the CO alarm privately as this may result in damage to the CO alarm.

PRESS TEST BUTTON:

1. Press the button to activate the LCD display with a white backlight. A single beep precedes the appearance of the "MAX" symbol, indicating the highest recorded CO concentration (peak value) since the last button-test. The peak CO concentration resets after this display.

2. Subsequently, the unit emits four beeps. The LCD reads "t ES t" (meaning "TEST"), and the button light flashes with red, green, and yellow lights once, signifying the commencement of a self-test.
3. Upon completion of the self-test, a single beep sounds. The button light flashes green three times, and the LCD displays "PASS" if the unit is functioning correctly. The backlight turns off, and the LCD resumes displaying the current temperature and relative humidity.

In the event of a faulty test, the LCD shows "Err," the button light flashes yellow twice, and the buzzer beeps twice every 60 seconds.

ALARM SILENCE:

1. This unit features an Alarm Silence function that enables you to press the button and silence the "beeps" for 5 minutes. Simultaneously, the button light will continue flashing the RED light four times every 5 seconds while the white backlight switches off. This silencing period does not affect the unit's ability to detect CO, and if the CO concentration reaches over 300 ppm during the Alarm Silence Period, the alarm will reactivate to the alarm state.
2. **WARNING:** If the CO concentration exceeds 300 ppm, the unit cannot enter the Alarm Silence Status. This is an extremely hazardous state, and you must **MOVE TO FRESH AIR IMMEDIATELY.**
3. The Alarm Silence Period will automatically end after 5 minutes of silence. The unit will resume alarm status if the CO level remains above 40 ppm.
4. The Alarm Silence Period will also end if the CO level drops below 40 ppm, and the unit will return to normal CO monitoring status.
5. During the Alarm Silence Period, pressing the test button once more will cause the unit to return to its alarm state.

This carbon monoxide alarm is suitable for use in domestic premises, including caravan holiday homes, caravans, and motor caravans.

Installation must be performed by a competent person capable of following the provided instructions.

Please keep this user manual in a secure location.

Installation Location

If you have only one detector, place it near sleeping areas and avoid positioning it close to fuel-burning appliances such as fireplaces, furnaces, or hot water heaters.



Where to Install Your CO Detector

Common sources of carbon monoxide 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 appliances, and even adjoining properties.

The following suggestions are intended to guide you in placing and installing your carbon monoxide detector:

- Do not install the CO alarm in locations that are excessively dusty, dirty, or greasy. Dirt, grease, and household chemicals may impair sensor performance.
- Ensure that the CO detector is placed out of the reach of children, and under no circumstances should children handle the device.

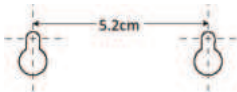
- Install the detector in a bedroom or hallway near the sleeping area, ensuring that the alarm can be heard clearly in sleeping areas.
- Ideally, install a CO detector on each level of a multilevel home for comprehensive coverage.
- Position the detector at least 5 feet away from all appliances that burn fuel to enhance accuracy.
- Mount the detector at eye level (approximately 150cm-300cm from the floor) for optimal monitoring of the red and green indicator lights.
- In exceptional circumstances, the detector can be used as a portable device, but caution must be exercised during relocation to prevent damage and warranty voidance.

NOTE: Installing a CO alarm device is not a substitute for properly installing, using, and maintaining fuel-burning appliances, which requires appropriate ventilation and exhaust systems.

Installation Instructions

Mounting

1. Utilize the provided template to mark the location of the two mounting holes.
2. Drill two holes using the supplied 6mm drill for the plastic plugs. Ensure you avoid drilling into the house wiring.
3. Screw the unit to the wall.



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.

NOTE: The detector only detects carbon monoxide within its designated installation location. The alarm will only activate when the gas reaches the specified level and timeframe.

NOTE: The device aims to protect individuals from the immediate effects of carbon monoxide exposure but is not a comprehensive safeguard for those with specific medical conditions. If there is any uncertainty, seek advice from a medical practitioner.

The equipment may not entirely prevent the long-term consequences of carbon monoxide exposure and will not fully protect individuals at high risk.

This CO alarm meets these alarm response times
(As required in EN50291-1: 2018+AC:2021)

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

Maintain your Carbon Monoxide Detector

To ensure that your CO detector remains operational, follow these simple steps:

- Test the detector each month by pressing the Test/Reset button
- Remove accumulated dust from the detector cover once a month by vacuuming using the soft brush attachment. Remember to unplug it from the socket before vacuuming.
- Educate children to never touch, unplug, or interfere with the unit. Advise them about the risks of carbon monoxide poisoning.
- Never use detergents or solvents for cleaning, as they can damage the sensor.
- Refrain from spraying air fresheners, hair spray, paint, or any other aerosols near the carbon monoxide detector.
- Do not paint the CO detector to seal the vents and interfere with proper sensor operation.
- It is not recommended to place the detector directly above or near a diaper pail as it can cause false readings due to high levels of methane gas.

What to do When the Alarm Sounds

1. Press the Test/Reset button;
2. Contact your emergency services;
3. Immediately move to a fresh air location- outdoors or by an open door/window. Conduct a headcount to ensure everyone is present. Do not attempt to re-enter the building or move away from the open door/window until the emergency services responders arrive, the area has been ventilated, and the alarm is in its normal state.
4. If the alarm reactivates within 24 hours after completing steps 1-3, repeat the process and contact a qualified appliance technician to examine fuel-burning equipment and appliances for sources of CO and inspect for proper operation.

If any issues arise during the inspection, promptly arrange for the equipment to be serviced. Take note of any combustion equipment that was not inspected by the technician, and refer to the manufacturer's guidelines or contact them directly for additional details on CO safety and equipment operation. Ensure that no motor vehicles have been or are being used in a garage attached to or adjacent to the residence.

If the alarm sounds, pressing the test/reset button will stop the alarm. If the CO condition that initially triggered the alert persists, the alarm will be reactive. If the alarm sounds again within five minutes, the unit is detecting dangerous levels of CO which could quickly escalate to a hazardous situation.

NOTE: Never ignore any alarm. If there is any uncertainty regarding the cause of an alarm, it should be assumed that the alarm has been triggered by hazardous levels of carbon monoxide and the premises should be evacuated immediately. Failing to respond may lead to personal injury or loss of life.

DISPOSAL & RECYCLING:



You must dispose of the carbon monoxide detector properly according to local laws and regulations. Because this machine contains electronic components, it should be discarded and separated from household waste. When it reaches its end life, contact local authorities to learn about disposal and recycling options. You can help protect the environment! Please remember to respect the local regulations, and dispose of the non-working electrical equipment to an appropriate waste disposal center.