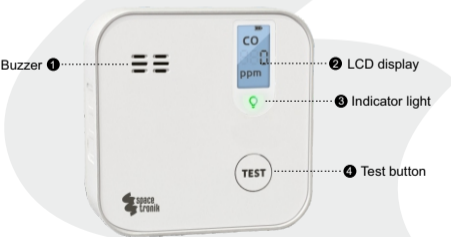




USER MANUAL

CO DETECTOR

SA-DC03



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1. Product Description

The SA-DC03 household standalone carbon monoxide detector (detector) can detect carbon monoxide gas leakage, prevent the damage caused by the leakage, it adopts high-stability electrochemical gas sensor, with characteristics of stability, minor sensitivity drift etc. The detector flashes red with alarm sound when the alarm detects a carbon monoxide gas leakage and reaches the alarm condition set by the alarm. This detector is suitable for installing in residential houses with potential CO gas occurrence.

2. Products Characteristics

- Electrochemical Sensor
- Temperature Compensation
- Battery Low Voltage Alarming
- Automatic Detection of Sensor Faults
- Anti-reverse and anti-leakage function of battery, more safe

3. Technical Parameter

Power Supply	DC3V (CR123A)
Standard	EN 50291-1:2018+AC:2021

Sensor Life	10 years
Battery Life	10 years (typical value)
Sensor Type	Electrochemical
Standby Current	< 20 uA
Alarm Current	< 45 mA
Alarm Sound	> 85 dB@3m
Alarming Status	when CO concentration is 30ppm, no alarm before 120 minutes elapse when CO concentration is 50ppm, alarm within 60-90minutes. when CO concentration is 100ppm, alarm within 10-40minutes. when CO concentration is 300ppm, alarm within 3 minutes.
Operating Temperature	-10 °C - +40 °C
Operating Humidity	≤ 95%
Installation Mode	fastened by screw or 3M glue
Size	86.5 mm * 86.5 mm * 30.5 mm

4. Operating Instruction

LCD Display content	meaning	Phenomenon description
	Product preheating	LCD will display countdown for 120seconds, the green indicator light flashes per 2 seconds
	Normal mode	green indicator light flashes once per 40 seconds
	Alarm mode	the buzzer sounds 4 times continuously. Red light flashes. At the same time, the LCD screen displays the real-time concentration
	Overrange	Carbon monoxide level is out of range

	Test mode	LCD display "000ppm",the indicator blinks red,green,yellow and red, the buzzer buzzes
	Sensor fault	The yellow indicator light flashes twice per 40 seconds with buzzer buzzes twice when there is fault, LCD display "Err". Press the self-check button and a fault prompt will appear immediately
	Battery low voltage	The yellow indicator light flashes once per 40 seconds with buzzer buzzes once when low battery voltage, LCD display blank battery level, need to replace the battery at once
	End-of-life product	LCD display "End", yellow indicator light is on all the time, buzzer buzzes 3 times per 60 seconds, that means the device reaches the end of the service life and cannot operate normally

1) When the carbon monoxide concentration exceeds 30 PPM, LCD displays real-time concentration.
When the carbon monoxide concentration reaches 50ppm, the alarm will alarm within 60-90 minutes.
When the carbon monoxide concentration reaches 100ppm, the alarm will alarm within 10-40 minutes.
When the carbon monoxide concentration reaches 300ppm, the alarm will alarm within 3 minutes.
Once the product alarms, the alarm can only stop when the carbon monoxide concentration is below 30 PPM.
When the carbon monoxide concentration exceeds 999 PPM, the LCD can only display 999 PPM.

2) You can self-test the product by pressing the test button.
Pressing the button and entering the test mode normally indicates that the product is normal . The product needs to be tested once a week.

3) This product does not have mute function, including concentration alarm mute function, fault alarm mute function, low voltage alarm mute function, etc.

5. Installation Instruction

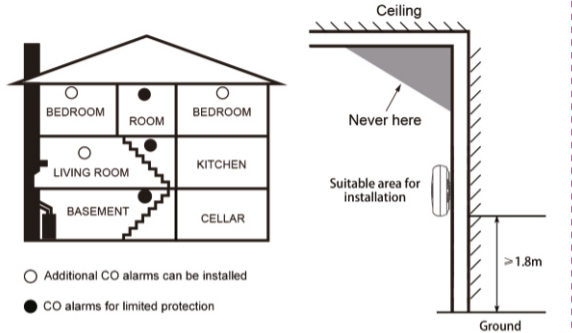
5.1 Installation Process

- 1) Slide the mounting plate down,remove the transparent plastic film on the battery, and then insert the batteries while observing polarity.
- 2) Drill two 4 mm diameter holes in the wall with a spacing of 46 mm,Then insert two plastic plugs into the holes, Align the hanging plate hole in the package with the plastic plug hole, Finally fix it with screws until the screw heads fit snugly against the siding.



- 3) Press the Self-test button, guarantee the device can alarm with sound and light.
- 4) Align the holes on the back of the device to the mounting plate, and install it.

5.2 Recommended Installation Location



- 1) The apparatus should be installed by a competent person, and it can only be mounted on walls.
- 2) Please guarantee that all the sleeping area can hear the alarming sound, if there is only 1 piece of carbon monoxide detector, please install closely to the bedroom, not in the basement. Installation height is at least 1.8m above the ground.

- 3) Please install in the place out of reach of the children. Children is not allowed to operate the carbon monoxide detector in any cases.
- 4) Recommend to install 1 piece of detector each floor in multi storey residential buildings. Do not install in the places with poor ventilation, such as vaulted ceiling or the top of mountain type proof. Meanwhile, do not install in the places with strong wind, closed to the ventilator scoop or opened door/window.
- 5) Keep the detector 1-3m away from all the fuel, combustion appliances, put it on the eye level for better monitoring the red, green, yellow indicator lights.
- 6) Keep carbon monoxide detector away from the dusty, dirty or greasy areas, such as kitchen, garage and furnace chamber, the dust, grease and household chemicals will affect the sensor. Substances that may affect the equipment are general as follows:
Methane, propane, isobutene, isopropanol, ethylene, benzene, toluene, ethyl acetate, hydrogen sulfide, sulfur dioxides, alcohol-based products, paints, thinner, solvents, adhesives, hair sprays, aftershaves, perfumes, and some cleaning agents.
- 7) Keep the detector away from humid areas, such as bathroom. Avoid spraying aerosols near carbon monoxide detector. Do not install in the

space where the temperature is lower than -10°C or higher than 40°C . Do not install at the back of the curtain or furniture. The carbon monoxide gas must be able to reach the sensor for guaranteeing detection can be done correctly.

6. Safety Knowledge about Carbon Monoxide

6.1 Carbon Monoxide Description

1) After carbon monoxide gas enters the body, it will combine with the hemoglobin in the blood to produce carboxyhemoglobin, which leads that the hemoglobin cannot combine with oxygen, resulting in tissue hypoxia, death by suffocation. Carbon monoxide is toxic, colorless, odorless, tasteless gas, so it is easy to ignore and cause poisoning.

2) Carbon monoxide toxic symptom

Mild: mild headache, weakness, chest tightness

Serious: severe headache, nausea, impaired limb movement, irritability, confusion, impaired visual acuity, muscle weakness, dizziness.

Extremely Serious: convulsions, unconsciousness, coma, collapse,

- ## 6.2 Carbon Monoxide Safety Protection
- 1) Open the window often, maintain indoor ventilation, install the carbon monoxide detector in proper position for real-time monitoring of the carbon monoxide concentration, remind people to leave the dangerous space when alarming to prevent them from carbon monoxide poisoning.
 - 2) Places where carbon monoxide easily exist.
Fuel Combustion appliance, such as: portable heater, gas or wood burning fireplace, gas stove, gas dryer. Damaged or inadequately ventilated area, such as corrode or disconnected water heater ducts, leaked tube chimney or flue, broken heat exchanger, blocked chimney, or opening Appliance with wrong usage, such as BBQ in enclosed areas.

6.3 Carbon Monoxide Damage

Carbon monoxide has an anesthetic effect on the human central nervous system, severe cases can cause suffocation or death. Carbon monoxide inhalation concentration, time and symptoms as follows:

50ppm	maximum concentration for healthy adult can tolerate in 8 hours
200ppm	Mild headache, weak in 2-3 hours

400ppm	Forehead pain within 1-2 hours, threaten life after 3 hours.
800ppm	dizziness, nausea, cramps within 45 minutes, loss feeling within 2 hours, die in 2-3 hours
1600ppm	headache, dizziness, nausea within 20 minutes, die in 1 hour
3200ppm	headache, dizziness, nausea within 5-10 minutes, die in 25-30 minutes
6400ppm	headache, dizziness, nausea within 1-2 minutes, die in 10-15 minutes
12800ppm	die in 1-3 minutes

6.4 Alarming Processing

When the carbon monoxide gas concentration exceeds alarming value, the detector will automatically enter continuous alarming status, we should do by below steps:

- 1) Close the pipe valve immediately.
- 2) Open the window immediately, maintain indoor ventilation.
- 3) Inform relevant departments and professionals to deal in time, if it is false alarming after checking, the user needs to check whether the detector is installed in proper position.

- 4) Never ignore any alarm. If there is any question as to the cause of an alarm it should be assumed that the alarm is triggered by dangerous levels of carbon monoxide and the dwelling should be evacuated. See section 4 Operating Instruction for more information on section 6.4 Alarming Processing IF respond to an alarm. Failure to respond can result in injury or death.

6.5 Warning

- 1) Do not use heavy objects to suppress the alarm, do not drop the alarm from high altitude.
- 2) This detector can not be used as smoke alarm.
- 3) Do not put in humid places.
- 4) Put in the places out of children's reach.
- 5) Do not put in the places of high voltage and strong magnetic field.
- 6) It's forbidden for the user to disassemble the CO alarm privately which may cause damage to the CO alarm.
- 7) 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.

7. Troubleshooting

- 1) When the yellow LED light flashes once per 40 seconds with buzzer Buzzing once when low battery voltage, the battery needs to be replaced at once.
- 2) The yellow life indicator light is always on, and the buzzerbeeps three times every 60s. At this time, the equipment can no longer operate normally, and the product life is terminated. Please replace the alarm with a new one.
- 3) The yellow indicator light flashes twice per 40 seconds with buzzer buzzing twice. It means sensor fault. Please contact dealer or our company.
- 4) Press testing button, no signs for the detector, please confirm whether the battery was installed correctly, if the battery was installed correctly and no signs for the detector, please contact dealer or our company.

8. Contact Us

Thanks for choosing our products, we provide the warranty according to the national laws and regulations, if the products break down within the warranty period, or you have any questions during the products installation and usage, please contact us in time, we will provide timely and extremely service for you.

Hereby Spacetrnik Sp. z o.o. declares under its sole responsibility that the product SA-DC03 is in conformity with following directives: EMC (2014/30/UE), RoHS (2011/65/UE + 2015/863/UE). Full document (declaration of conformity) is available for download from the website www.spacetrnik.eu.

The WEEE symbol (the crossed-out wheeled bin) using indicates that this product is not home waste. Appropriate waste management aids in avoiding consequences which are harmful for people and environment and result from dangerous materials used in the device, as well as improper storage and processing. Segregated household waste collection aids recycle materials and components of which the device was made. In order to get detailed information about recycling this product please contact your retailer or a local authority.

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