USER MANUAL

METHANE GAS DETECTOR

SA-DG02

MADE IN P.R.C. FOR
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Contents

Thanks for choosing SA-DG02 household standalone combustible gas detector. In order to ensure your personal and system safety and realize the best product performance, please read this manual carefully and completely before installing, using or repairing this device, and the Warnings and Notes in this manual should be paid special attention to.

Warnings:

- Please read this User Manual carefully before using this device!
- Please keep the circuit open before installing and connecting wires to prevent electric shock!
- Non-professionals should not connect electric wires!

1.Product Description

The SA-DG02 household combustible gas detector (detector) adopts high quality gas sensor. It is made with high performance MCU and advanced electronic elements as well as sophisticated technologies. Its software and hardware technology enables it to simultaneously monitor sensor failure while detecting gas leakage concentration, with high safety and reliability.
This detector is suitable for installation in residential houses with potential gas leakage, it can consecutively monitor indoor combustible gas concentration, when the gas concentration reaches

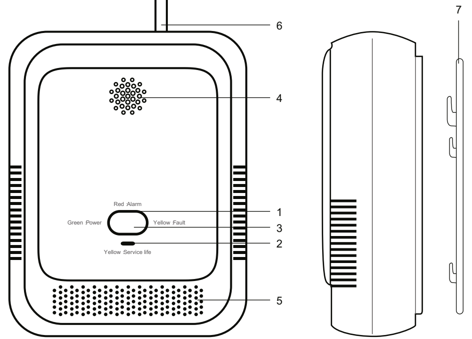
its alarming value, the solenoid valve is automatically controlled to cut off the gas source and the detector will send out sound and light alarm. It will help you to take immediate action to prevent fire, blast and injury accidents from happening.

Standard implemented: EN 50194-1:2023

2.Technical Parameters

Model	SA-DG02
Operating Voltage	AC 100 V - 240 V 50 Hz - 60 Hz
Operating Environment	Tempt.: 0 °C - +55 °C Relative Humidity: <95% (non-condensation) Ambient Pressure: 86 kPa - 106 kPa
Response Time	≤30 s
Storage Temperature	-25 °C - +55 °C
Sampling Method	Free diffusion
Applicable for	Methane (CH_4)
Sensor Type	Semi-conductor
Sensor Life	5 years (typical value)
Alarming Value	7%LEL ± 3%LEL
Alarming Mode	Sound + light
Alarming Sound Level	≥85 dB (1 meter ahead)
Installation	Wall-mounted
Size (L*W*H)	112 mm x 86 mm x 33.5 mm
Standard	EN 50194-1:2023

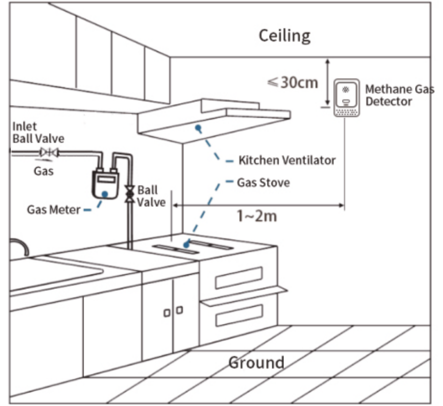
3. Structure and Function Indication



SN	Function Indication
1	Status indicator
2	Service life indication
3	Button
4	Sound alarm holes
5	Gas detection holes
6	Power supply cable
7	Mounting baseplate

4. Installation Instruction

4.1 This detector is only suitable for indoor environment. Please install it where there is potential gas leakage or accumulation. Since liquefied petroleum gas is heavier than air, the horizontal distance between the detector and the gas appliance or valve should not be greater than 1 - 2 m, and the installation height should be within 0.3 m from the ceiling. Users could choose to install the detector according to below diagram based on actual situation.



4.2 Avoid areas as below

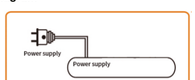
- Areas of ventilation inlet/outlet, exhaust fan, doors/windows with strong air flow;
- Areas with moisture and water drops;
- Areas right above heat source or water steam;
- Areas above gas appliances;
- Areas easy to be polluted;
- Areas covered by obstacles;

If the room is to be painted or refurbished, please install the detector after the refurbishment or painting work.

4.3 Installation Method

1. Choose a place on the wall suitable for installing the detector;
2. Use expansion screws to fix the installation baseplate;
3. Power on the detector and check to ensure it works normally;
4. Install the detector by hanging it onto the baseplate.

4.4 Wiring Diagram



Notes:

1.The power supply cable is with a plug, please directly connect to a correct socket.

5. Operating Instruction

1. Connect the detector to the power source, green power source indicator will flash, then the detector will enter preheat status and lasts for 3 minutes, during preheating, the detector could not detect gas leakage; 3 minutes later, the detector will enter normal detection mode, its green power source indicator will be normally on.
2. When the gas concentration value in the air reaches the set alarming point, the detector will enter alarming mode, its red indicator will flash, at the same time, it sends out beeping alarm; Then, please shut off the gas supply immediately and open the window, and do not turn on any electrical appliances (including cellphone), if necessary, please ask for gas experts to eliminate the gas leakage failure.
3. In the alarm state, when the gas concentration value is below the safe value, the detector will disarm the alarm automatically, if the detector send out sound-light alarm, it means the gas concentration exceed standard.
4. If the ring light show yellow, on all the time, and beep all the time, it means detector faults, can not detect correctly, please contact distributor for repairing.
5. For daily inspection, please short press the button once, the detector enters the analog alarm mode, sends out an analog sound and light alarm signal, the red light flashes, the

sounds, and then returns to the normal monitoring state. If the detector does not alarm normally, please contact the distributor or manufacturer for maintenance. For the alarm with output function, press and hold the alarm button for 15 seconds, the solenoid valve will perform the closing action, if the function is not normal, please contact the distributor or manufacturer for maintenance.
6. If the service life indicator flash(flash 3 times and cycle), meanwhile, beep by 3 times and cycle, that means the sensor life is due, please contact the distributor or manufacturer for repair or buying a new one.
7. Indicator light status

Mode	LED Ring Indicator	Service Life Indicator	Buzzer
Preheating mode	Green light flash	—	—
Normal mode	Green light on all the time	—	—
Testing state	Red light flash	—	Beep 4 times
Failure mode	Yellow light on all the time	—	Beep all the time
Alarming mode	Red light flash	—	Beep 4 times and cycle
Service life due	—	flash	Beep 3 times and cycle

6. Troubleshooting

Failure	Possible Reason(s)	Measure(s)
Green power source indicator not on	Power source cable not connected correctly	Check and connect the power source cable correctly
	Power source indicator damaged or circuit failure	Contact distributor or manufacturer for repair
No sound and light alarm during self-check	Circuit failure	Contact distributor or manufacturer for repair
No response to detected gas	Still under preheating	Wait till preheating ends
	Circuit failure	Contact distributor or manufacturer for repair
Continuously alarming after turned on and time-lapse	The environment is with large number of cigarette smoke, alcohol or volatile organic compounds like petrol, perfume, banana oil or paints	Move to clean air spaces and try it again
	Over-long storage time	Power on and wait for 2 hours or more
	Circuit failure	Contact distributor or manufacturer for repair

Notes:

For any failures cannot be resolved by yourself, do not disassemble the detector, please contact the distributor or manufacturer for guidance.

7. Notes

1. The large number of cigarette smoke, alcohol or volatile organic compounds like petrol, perfume, banana oil or paints inside the room may cause the detector to alarm;
2. Do not use gas sample without clear concentration value to test this detector, ultra-high concentration gas will not only damage shorten the detector sensor service life but also harm human health;
3. Please contact your distributor or manufacturer for help and use correct gas sample with correct concentration value to test the detector once a year;
4. This product cannot be used nor stored in any environment with corrosive gases (like chlorine gas);
5. Please routinely clean the dust or oil contamination on the detector surface with brush or dry soft rag;
6. After long-term storage or long-time transportation, please power the detector on and wait for 24 hours or more to realize optimal performance.

7. Under normal operating environment, the semiconductor sensor could work for 5 years.

8. Product Maintenance

1. Please clean the detector at least one time a year, make sure its gas inlet is free of dust or oil contamination;
2. After cleaning, install the detector back to its baseplate and conduct function check;
3. Conduct an analog alarming test each half year to make sure it works normally;
4. Do not expose the detector to high concentration gas sample for long time or frequently, or it will lower its sensor sensitivity or shorten its sensor life or even damage the sensor;
5. The detector should be connected to stable power source;
6. When detector is found in failure status, please contact the distributor or manufacturer for repair or buy a new one.

Hereby Spacetronik Sp. z o.o. declares under its sole responsibility that the product SA-DG02 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.spacetronik.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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