



HF-GN110 & HF-GP110 Combustible Gas Detector

User Manual

Legal Disclaimer

Read all information and instructions in this document carefully before using the device and keep it for further reference.
For more device information and instructions, please refer to other documents (if any) accompanying the device or scan the QR code (if any) on the packaging to get more information.
COPYRIGHT ©2024 Hangzhou Hikfire Technology Co., Ltd. All rights reserved.

About this Document

The document includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the document is subject to change, without notice, due to firmware updates or other reasons. Please contact our Customer Service for the latest version of this document.

Please use this document under the guidance of professionals.

Note: The interface varies with the models. Please refer to the product datasheet for details.

Trademarks

HIKFIRE and other Hikfire's trademarks and logos are the properties of Hikfire in various jurisdictions. Other trademarks and logos mentioned are the properties of their respective owners.

DISCLAIMER

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS MANUAL AND THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, ARE PROVIDED "AS IS" AND "WITH ALL FAULTS AND ERRORS". HIKFIRE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. THE USE OF THE PRODUCT BY YOU IS AT YOUR OWN RISK. IN NO EVENT WILL HIKFIRE BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES, INCLUDING, AMONG OTHERS, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF DATA, CORRUPTION OF SYSTEMS, OR LOSS OF DOCUMENTATION, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, OR OTHERWISE, IN CONNECTION WITH THE USE OF THE PRODUCT, EVEN IF HIKFIRE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSS.

YOU ACKNOWLEDGE THAT THE NATURE OF THE INTERNET PROVIDES FOR INHERENT SECURITY RISKS, AND HIKFIRE SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER-ATTACK, HACKER ATTACK, VIRUS INFECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKFIRE WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

YOU AGREE TO USE THIS PRODUCT IN COMPLIANCE WITH ALL APPLICABLE LAWS, AND YOU ARE SOLELY RESPONSIBLE FOR ENSURING THAT YOUR USE CONFORMS TO THE APPLICABLE LAW. ESPECIALLY, YOU ARE RESPONSIBLE FOR USING THIS PRODUCT IN A MANNER THAT DOES NOT INFRINGE ON THE RIGHTS OF THIRD PARTIES, INCLUDING WITHOUT LIMITATION, RIGHTS OF PUBLICITY, INTELLECTUAL PROPERTY RIGHTS, OR DATA PROTECTION AND OTHER PRIVACY RIGHTS. YOU SHALL NOT USE THIS PRODUCT FOR ANY PROHIBITED END-USES, INCLUDING THE DEVELOPMENT OR PRODUCTION OF WEAPONS OF MASS DESTRUCTION, THE DEVELOPMENT OR PRODUCTION OF CHEMICAL OR BIOLOGICAL WEAPONS, ANY ACTIVITIES IN THE CONTEXT RELATED TO ANY NUCLEAR EXPLOSIVE OR UNSAFE NUCLEAR FUEL-CYCLE, OR IN SUPPORT OF HUMAN RIGHTS ABUSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATTER PREVAILS.



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the RE Directive 2014/53/EU, the EMC Directive 2014/30/EU, the LVD Directive 2014/35/EU, the RoHS Directive 2011/65/EU, 2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info

- CAUTION: Risk of explosion if the battery is replaced by an incorrect type.
- Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
- Dispose of used batteries according to the instructions.

English

Product Information

1 Cautions

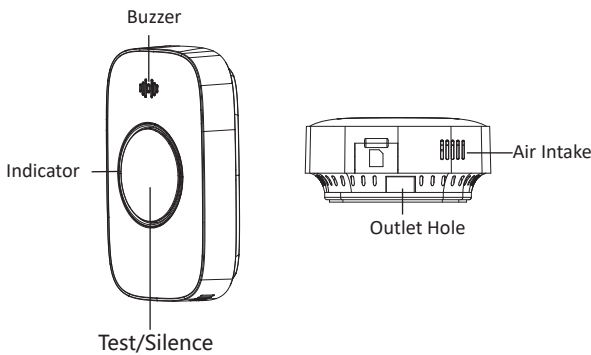
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Correctly install and maintain the detector. Although detector can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners should have adequate insurance to protect their lives and properties.
- Please do not place the device in areas that children can touch.
- The detector has multiple power supplies. Please disconnect all power supplies during maintenance.
- Please power off during equipment wiring and installation.
- The plug or socket of the detector is a device that disconnects the power, please do not cover it.
- The equipment can be directly or modified when needed to connect to the IT distribution system.
- + identifies the positive electrode used or generating direct current, - identifies the negative electrode used or generating direct current.
- Do not place exposed flame sources, such as lit candles, on the device.
- To reduce the risk of fire or electric shock, do not let indoor equipment be exposed to rain or moisture.
- Please do not drop objects onto the device or vigorously vibrate the device, and keep the device away from locations with magnetic field interference. Avoid installing the device in a place that is prone to surface vibration or impact.
- This product is only used to detect the gas concentration in the surrounding environment of the equipment. When the product is in good operating condition, if gas occurs leakage, the detector can emit sound and light alarm signals.
- The product needs to be preheated for about 4 minutes after being powered on.
- Keep the packing so that in case of any problem, pack the detector in its original packing and send it to the agent or return it to the factory for disposal.
- If the detector does not work properly, contact the dealer or the nearest service center.
- Never attempt to disassemble the detector yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

2 Overview

The gas detector provides the users an early alert, when the gas leakage in the protected area reaches the alarm concentration.

3 Appearance

***The pictures in this manual are all product diagram, please refer to the actual product.**

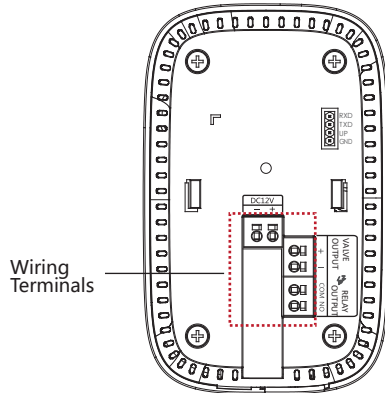


! The product is equipped with a power adapter at the factory. To ensure proper operation and safety, it is necessary to use the corollary adapter. Please do not replace the power adapter without permission.

4 Indicator

Detector State	Indicator State	Buzzer State
Preheat	Four lights flash alternately.	/
Standby	Power indicator is green and always on.	/
Alarm	Alarm indicator is red and always on.	Beep every 0.5 seconds
Fault	Fault indicator is yellow and always on.	Keep beeping
Malfunction	Fault indicator is yellow and flashes.	/
Test	Four lights flash alternately once.	A long beeping
Silence	Alarm indicator is red and always on.	/

5 Interface Wiring



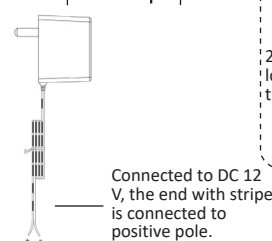
Terminals Description

*** These are for professional use.**

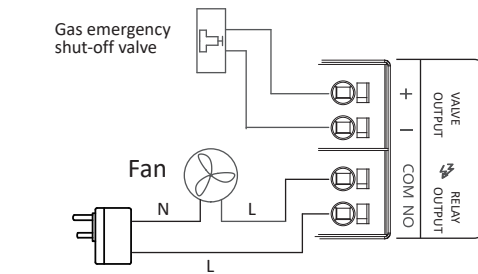
- RXD Recieving data end
- TXD Sending data end
- UP Interface working power output
- GND Reference level

Wiring Description

DC 12 V Power Interface



Control Output Interface



***The above diagram includes two control outputs, one for connecting the fan and the other for connecting the gas emergency shut-off valve.**
-The control output port of the fan can be connected to a maximum specifications of 220 V/1.5 A.
-The gas emergency shut-off valve is a manual on/off solenoid valve, and the valve output connects to the solenoid valve. The allowable output specification of the solenoid valve is 12 V/1.5 A.
*The adapter interface is used to power the device and supports connecting to the original power adapter in the packaging.

6 Installation

Installation Notification

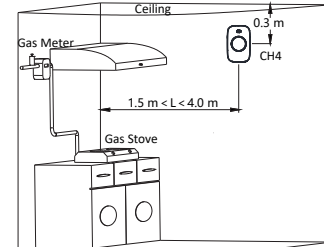
- Install the detector according to the instructions in this guide.
- To prevent injury, the camera must be securely attached to the wall in accordance with the installed instructions.
- Please install the detector in areas where gas leaks may occur, such as the kitchen.
- Please do not install the detector directly above the stove or on the gas source to avoid direct entry of oil fumes, water vapor, interference smoke, etc. into the detector, which may cause a decrease in sensor sensitivity or false alarms.
- Avoid installing the detector in a location with excessive airflow or obstruction by objects, otherwise it may cause false alarm.
- It is prohibited to disconnect the power supply of the detector at will (except for maintenance of the detector, etc.).
- After completing the indoor decoration, please fully ventilate for a period of time before installing the detector to avoid toxic and ineffective sensors caused by volatile chemicals (especially those containing silicon volatile substances such as silicone and glass glue). Do not paint the surface of the detector to avoid affecting its performance.

- It is prohibited to install detection alarms in the following locations:
Places with strong magnetic interference, such as motors, high-power fans, high-power transformers, induction heating device, high-frequency welding machines, X-ray machines, etc.
- Places that shield radio signals or cause attenuation of radio signals, such as those with a large number of metal objects or close to large metal objects.
- Places directly affected by exhaust, steam, and oil fumes generated by combustion appliances.
- Places that is closed, such as cabinets.
- Places with water mist or drip lights that are relatively damp, such as bathrooms.
- Places that are prone to power outages.
- Places with obstructions between detectors and gas device.
- Places where dirt or dust may accumulate and block the detector.
- Near doors and windows or any place that may be affected by airflow, such as exhaust fans or air vents.

Installation Location

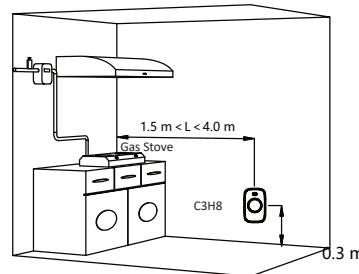
CH4

When installed near a gas stove, the edge of the detector should be 1.5 m to 4 m away from the wall where the gas stove is located and 0.3 m away from the ceiling.



C3H8

When installed near a gas stove, the edge of the detector should be 1.5 m to 4 m away from the wall where the gas stove is located and 0.3 m away from the ground.



Installation Steps

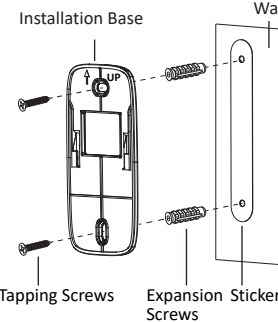
Pre-Installation

Confirm installation position signal strength

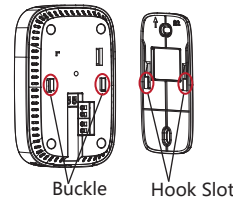
Confirm whether the installation position is appropriate through signal query operation, and install the detector in a position with strong signal. For signal query operation, please refer to **7 Function**

Steps:

- According to the drilling position and the sticker, position the screw holes on the wall.
- Install a plastic expansion screw at the drilling position. Fix the installation base with two self tapping screws.



- Align the buckle on the back panel of the detector with the hook slot on the installation base, and tighten the detector and the installation base from top to bottom to complete the installation.



7 Function

Power on & Start up

Power on the detector. It is in a preheating state for about 4 minutes. During the preheating process, the four indicator lights flash alternately. After the preheating is completed, the green light remains on, and the detector enters a standby state (normal monitoring state).
***When the detector recovers from the fault, it will return to the preheating state.**

Silence

In the alarm state, short press the [Test/Silence] button to silence (the silence cycle is 60 seconds).
***Silence cycle: If the gas concentration still exceeds the standard, the detector will emit an audible alarm signal again after 60 seconds.**

Reset

Press and hold the [Test/Silence] button for more than 2 seconds in the silence or alarm state to restore the detector to standby mode.
***After resetting, if the gas concentration still exceeds the standard, the detector will immediately emit an audible and visual alarm signal again.**

Simulated Alarm Indication Status

In standby or preheating mode, press and hold the [Test/Silence] button for 2 to 6 seconds, then release it to enter the simulated alarm (lasting for 15 seconds, during which the alarm indicator light remains red, and the buzzer beeps every 0.5 seconds).

Alarm/Alarm Recovery

Alarm: In standby mode, when the gas concentration exceeds the set concentration, the detector alarm is triggered. After 10 seconds, the exhaust fan is turned on and the gas emergency shut-off valve is closed. Alarm recovery: When the external concentration is lower than the set concentration value, the detector returns to standby mode, the exhaust fan automatically closes, and the gas emergency shut-off valve needs to be manually opened by the user.

Test

In preheating/standby mode, short press the [Test/Silence] button to enter the test mode of the detector. Check whether the detector's buzzer, indicator light, and control output are working properly; After testing, the detector will automatically exit the test state.
***The test status lasts for about 10 seconds and cannot be performed again during the test period.**

8 Maintenance

To ensure the normal operation of the detector, it is recommended to maintain the detector according to the following methods.

-Strictly follow the product instructions and correctly install and operate the detector.

-It is prohibited to use non-standard test gases to test this detector. High concentrations of gases may damage the detector and cause explosion.

-When the sensor reaches the specified service life, please replace the detector in a timely manner.

-Due to the fact that the lifespan of the sensor is measured under laboratory conditions, and there may be adverse factors in the actual installation environment that may shorten the lifespan of the sensor, it is recommended to regularly test the detector during its lifespan. A known concentration of detection standard gas (recommended concentration of testing standard gas: methane 1VOL%~2VOL%, propane 0.42VOL%~0.84VOL%, with a mixture of pure gas and clean air) should be used to align it with the detector's air intake for ventilation, and confirm whether the detector's alarm function is normal. If the detection fails to alarm, the manufacturer should be contacted in a timely manner for confirmation.

-It is recommended to perform a self check on the detector every month: that is, press the test/silence button while in operation to ensure that the detector can sound and light alarms normally.

-It is recommended to clean the detector housing every quarter, clean the dust and oil stains from the detector air inlet, and ensure that the detector air intake is unobstructed and the alarm sound is normal. When cleaning, it is advisable to use a semi dry towel and not use chemical solvents such as alcohol, aromatherapy water, or very wet towels for cleaning.

-It is recommended to calibrate the detector once a year.

***Calibration should be carried out by qualified institutions and must be carried out with standard gases and calibration tools. Do not operate without authorization.**

9 Specifications

Type	HF-GN110	HF-GP110
Alarm Volume	70dB~115dB @1m(A-weighted)	
Gas Type	CH4	C3H8
Measuring Range	0~25%LEL	
Alarm Threshold	8%LEL	10%LEL
Output Signal	1-way solenoid valve output interface 1 way exhaust fan output interface	
Working Principle	Catalytic Combustion	
Power Supply	AC 220 V	
Protection Level	IP 30	
Environment	Temperature: -10 ℃~55 ℃; Humidity: ≤93% (40 ℃、non-condensing)	
Dimension	122 mm × 77 mm × 34 mm	