

Wireless Gas Alarm Controller

Instruction Manual



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1.1 Appearance diagram



1.2 Introduction

This wireless gas alarm controller detects the concentration of flammable gases in the air. It supports two PowerBus probes and uses a microprocessor as the control unit for multi-point centralized systems. When the concentration of flammable gas in the environment reaches or exceeds a preset value, the controller immediately issues an audible and visual alarm and drives ventilation or other peripheral devices via relays to prevent explosions and fires, thus protecting lives. This system is widely applicable to factories, oil depots, liquefied gas stations, gas stations, refueling stations, paint booths, and other fire and explosion-proof locations for safety monitoring and alarm purposes.

The wireless gas alarm controller uses a low-voltage DC carrier power supply bus, employing full-amplitude voltage transmission and current signal feedback, providing high communication anti-interference capabilities. Due to its non-polarity, arbitrary topology performance, it can adapt to various wiring materials used in the field and achieve long-distance communication. Cables can be laid in any configuration, such as bus, tree, or star, greatly facilitating construction and wiring, preventing misconnections, and simplifying construction and maintenance.

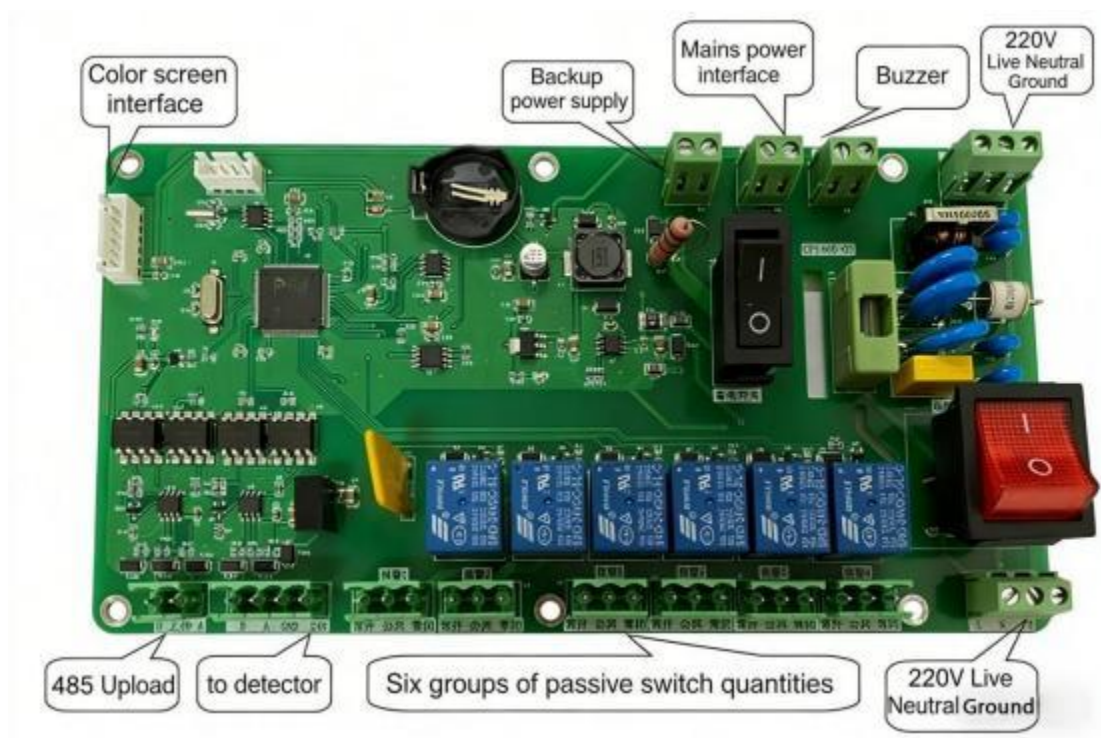
1.3 Technical parameters

Display Screen:	4.3-inch color screen
Operation Method:	Touch screen operation
Operating Voltage:	AC220V±10% 50HZ
Backup Power Supply:	24V 1.3AH lead-acid battery (optional)
Switch Output:	Six sets of passive relay outputs, contact capacity 10A/AC220V
Operating Temperature and Humidity:	-10°C—50°C ≤ 95%RH
System Power:	Maximum power consumption 10W (without external devices)
Number of Detectors:	<128
Detector Connection:	Lora Wireless
Data Upload:	RS485(Modbus-RTU)
Alarm Points:	Two-level alarm, user-configurable
Alarm Indication:	Indicator light + LCD display, buzzer alarm tone
Operating Method:	Fixed installation, wall-mounted
Storage Capacity:	Stores 2000 alarm records
Dimensions:	245*340*90 (mm)
Wiring Specifications:	None

1.4 Operation panel

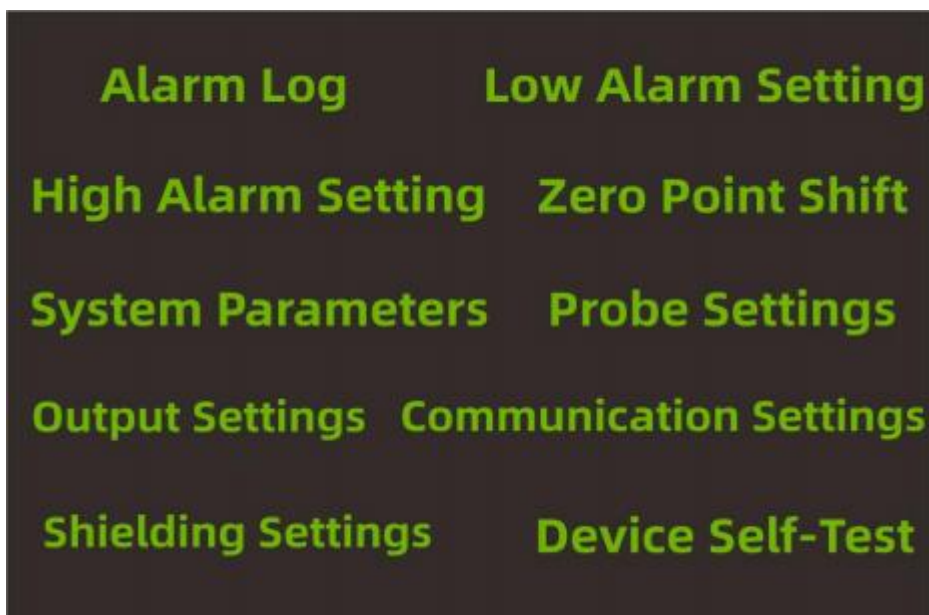


1.5 Motherboard Interface Definition



Port name	Port Description
+Detector-	A two-wire connection to the detector allows for arbitrary connection regardless of polarity.
L N PE	Live wire, Neutral wire, Ground wire
Buzzer	An alarm sounds.

1.6 Menu Description



After pressing [Confirm], enter the password: 1111. You will then enter the menu shown in the image above. Use the [Up] and [Down] keys to select the appropriate menu item, and press [Confirm] to adjust the relevant parameters. The menu is shown in the table below:

Menu Items	Menu Description
Alarm Log	View High Alarm, Low Alarm, and Fault Records
Low Alarm Setting	Low Alarm Setting (Level 1 Alarm Value)
High Alarm Setting	High Alarm Setting (Level 2 Alarm Value)
Zero Point Shift	Zero-point Shift Operation for Detectors (can be set individually or all)
System Parameters	Adjust System Time and Other Parameters
Probe Settings	Set Detector Quantity or Baud Rate and Other Settings
Output Settings	Set Detector Corresponding Relay Output Function (can be set individually or all)
Communication Settings	Set Upload Address and Baud Rate Parameters
Shielding Settings	Select Shielded Channels
Device Self-Test	Self-Test Controller and Detectors for Each Channel

1.7 System maintenance

1. On-duty personnel must operate the main unit strictly according to the instruction manual;
2. Do not open the chassis door arbitrarily, and do not modify the internal structure of the chassis;
3. Test the controller every two months to ensure it can alarm normally;
4. When performing system maintenance, all power supplies (main power and

backup power) must be turned off;

5. When the main unit malfunctions, on-duty personnel should observe the main unit's fault display, record the fault, and then handle the fault according to "Common Faults and Troubleshooting Methods." If the fault cannot be resolved, please record it and immediately notify the dealer;

1.8 Common Faults

Fault Symptoms:	Possible causes of failure:	Troubleshooting Methods:
Detector channel display:	Detector malfunction or no detector connected	Check the detector; if the corresponding channel does not need to be closed, then close that channel.
No display	Switch or fuse malfunction	Check if the switch is on; check if the fuse is blown.
Channel concentration cannot be displayed in a loop	Alarm status	If an alarm is triggered, handle the alarm by pressing the reset button.
Main unit has leakage current	Undergrounding	Check if the safety ground is connected.
One relay is not working	Incorrect relay settings	Check if the relay configuration is as required; change it to the desired setting.