

Gas alarm controller Operating Instructions

(2025.3.4 V1.0)

Henan Duotesi Electronic Technology Co., Ltd

一、Instrument appearance drawing



(7 "color screen touch model)

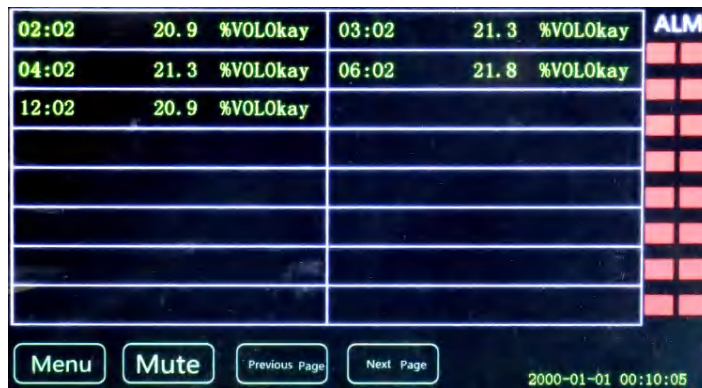
二、Gas alarm controller intro

The gas detection alarm controller is used to detect the content of combustible or toxic gases in the air, and supports four-bus or wireless detectors, while centralized control of multiple points. The system uses a microprocessor as the control unit, when the concentration of combustible or toxic gas in the environment reaches or exceeds the preset value, the controller immediately sends an audible and visual alarm, and the relay can drive the exhaust air or other peripheral actions to prevent explosion and fire accidents, so as to protect life. The system can be widely used in factories, oil depots, liquefied gas stations, gas stations, gas stations, painting rooms and other places that need fire and explosion protection, safety monitoring and alarm.

三、 Technical parameter

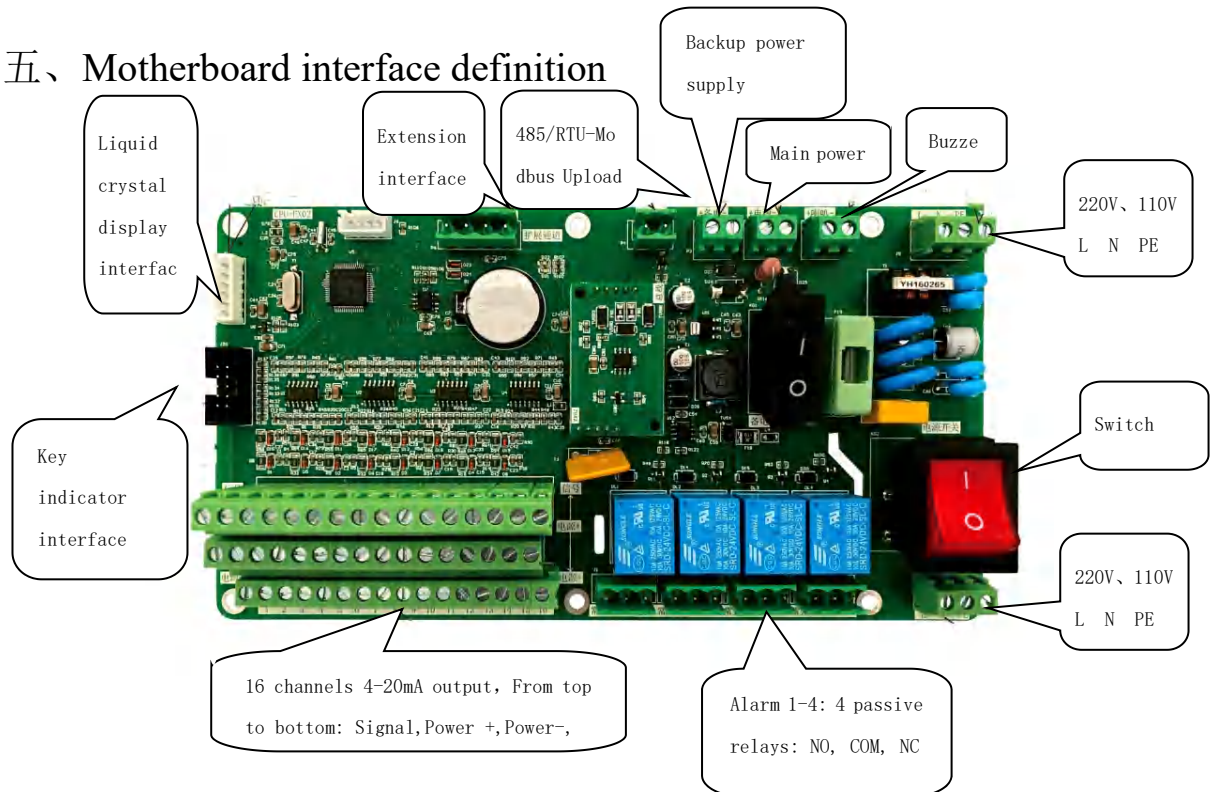
Display screen:	7 "color screen model
Mode of operation:	Touch screen operation
Operating voltage:	AC110V / AC220V
Backup power supply:	24V 1.3AH lead-acid battery (optional)
Switching output:	Four sets of passive relay outputs, contact capacity
Working temperature and humidity:	-10°C—50°C ≤ 95%RH
System power:	Maximum power consumption 10W (without external devices)
Network capacity:	≤250 PCS (more than 30 PCS require external power supply or accessories)
Detector connection:	Four-bus or wireless connection
Data upload:	RTU- Standard modbus protocol
Call point:	Two-level alarm, can be set freely by the user
Alarm indication:	Indicator + LCD display buzzer alarm sound prompt
Working mode:	Field fixed installation, magnetic or backplane
Storage capacity:	Can store 20000 alarm record information
Apparent dimension:	Size 290*420*120 (mm)
Wiring specifications:	If four cables need to be connected to wireless devices, it is recommended to use ≥RVVP4*1.5 national standard shielded cables with a single core cable diameter of ≥1.5mm and a cable length of ≤1000m.

四、The operation panel displays the status



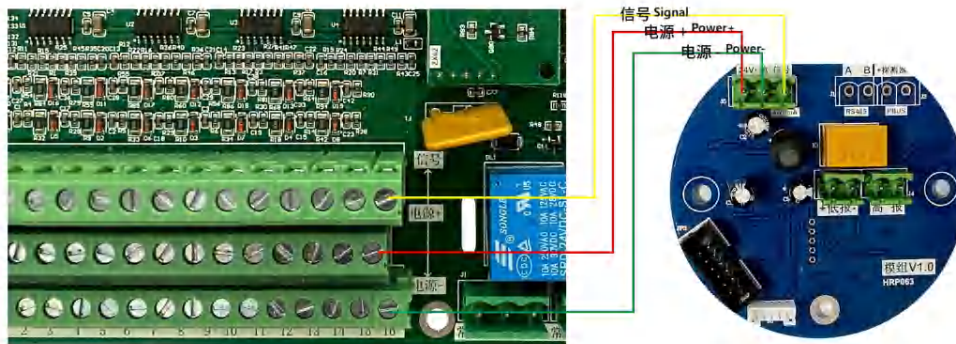
7 "color screen model: Each screen on the home page displays 16 detector information, and the right side displays the alarm detector number

五、Motherboard interface definition



Port name	Port description
B A GND 24V	Connect the four-bus detector
B Upload A	485/RTU-Modbus Upload port
Call the police 1-16	16 groups of passive switching quantity: normally open public normally closed
L N PE	Live line, neutral line, ground line

六、【Branch-Type Controller】Wiring Diagram

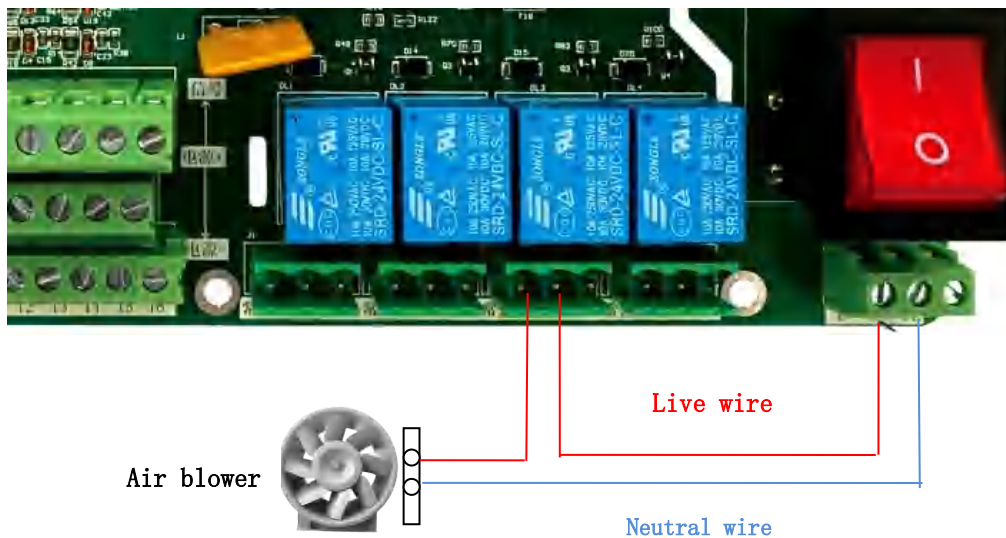


RED (Power+): ----- Detector (Power+ or 24V)

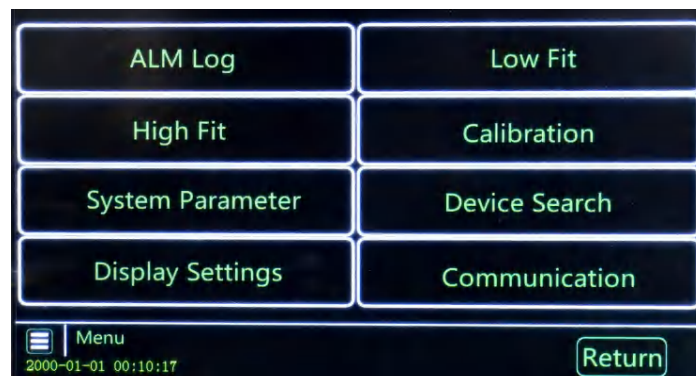
GREEN (Power-): ----- Detector (Power- or GND)

YELLOW (Signal): ----- Detector (I/A or Signal)

七、【Air blower or Solenoid valve】Wiring Diagram



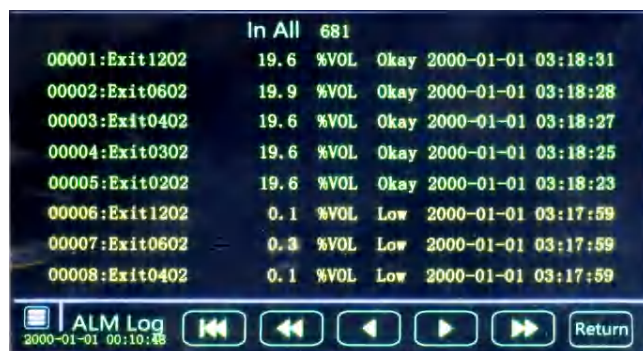
八、Menu description



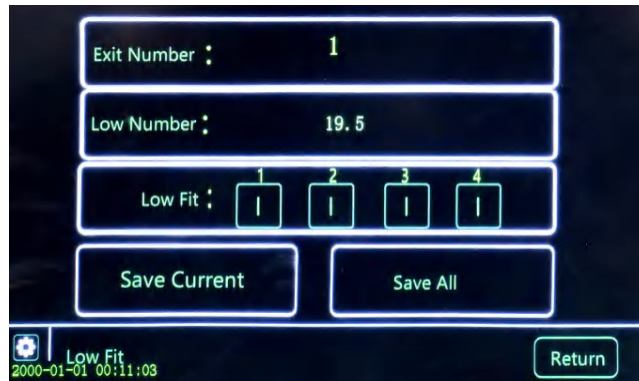
Take the color screen model as an example, click [menu] on the main page to enter the menu shown in the above figure, enter the corresponding menu according to the user's needs, and adjust the relevant parameters.

Menu item	Menu description
ALM Log	View high and low alarm records
Low Fit	Low alarm setting (detector low alarm prevail)
High Fit	High alarm setting (detector high alarm prevail)
Calibraton	For adjustment or calibration
System parameter	Adjust parameters such as the system time
Device Search	Device Search function
Display Settings	Set detector unit, range, resolution, etc
Communication	Set the upload address and baud rate

【 ALM Log 】



Check the alarm record of each channel, record the alarm channel, gas name, alarm concentration, gas unit, alarm status, alarm time and other information.

【 LOW Fit 】

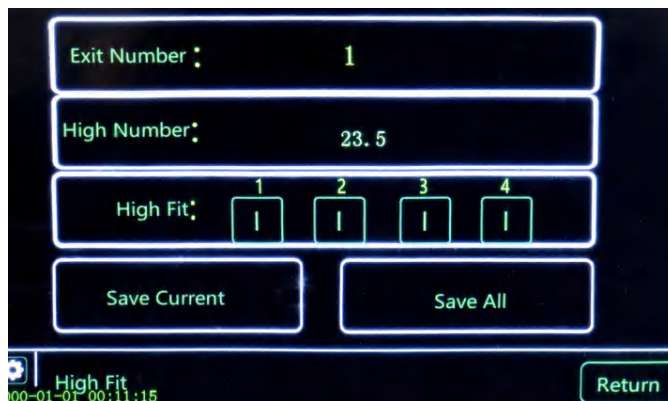
--> Exit Nnumber: Changes the current channel number.

--> Low Number: Modifies the low alarm value of the current channel.

--> Low Fit: When the current channel is low alarm, alarm relays 1 to 4 are activated.

-->Save Current : Save only the Settings of the current channel.

--> Save All : Save all channels according to the current Settings.

【 High Fit 】

--> Exit Nnumber: Changes the current channel number.

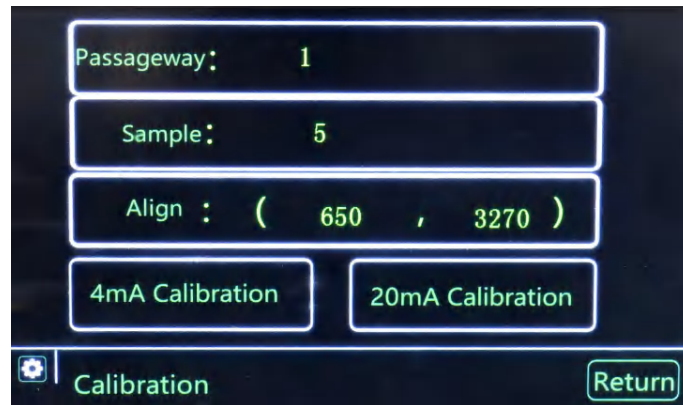
--> High Number: Modifies the high alarm value of the current channel.

--> High Fit: When the current channel is high alarm, alarm relays 1 to 4 are activated.

-->Save Current : Save only the Settings of the current channel.

--> Save All : Save all channels according to the current Settings.

【Calibraton】



--> Passageway: Change the current channel number.

--> Sampling : Sampling value of the current channel. It cannot be modified.

--> Align : 4mA and 20mA correspond to sampling values and cannot be modified.

--> 4mA Calibration : Save the calibration value of 4mA (zero).

--> 20mA Calibration : Save 20mA calibration values (full scale).

【System Parameter 】

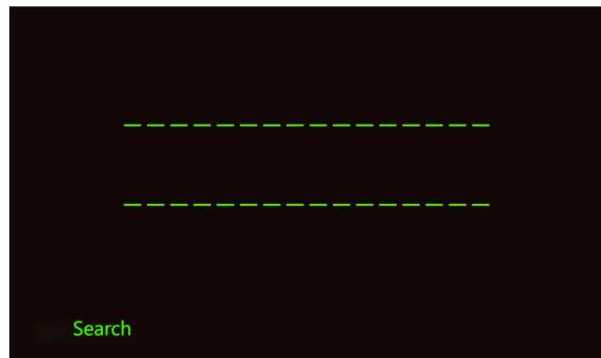


--> Date Setting: Change the current date and time.

--> Clear Records: Clear all alarm records.

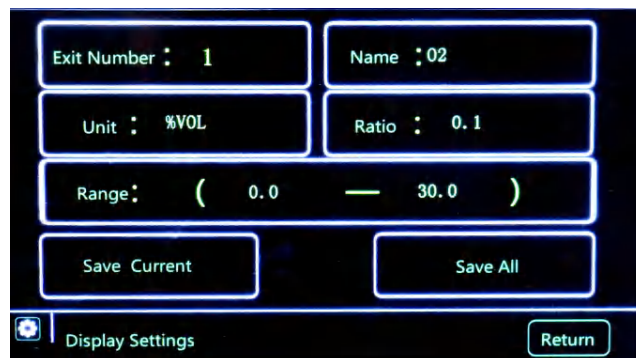
--> Pulse Output: Pulse output value.

--> Save : Save the current time.

【 Device Search 】

--> "Searching..." is displayed after entering the menu.

--> After the probe number appears on the horizontal line, press "OK" to save the current Settings.

【 Display Settings 】

--> Exit number: Change the current channel number.

--> Name: Change the gas name of the current channel.

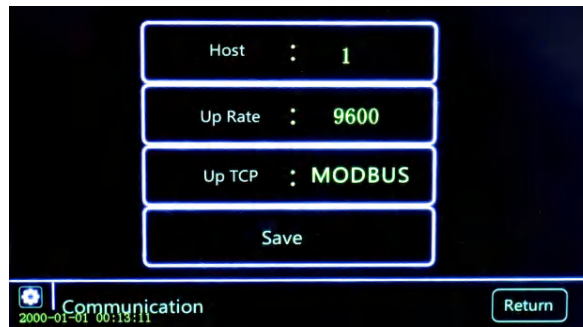
--> Unit: Change the unit of the current channel gas concentration.

--> Ratio: Minimum resolution.

--> Range: Modify the range of the current channel gas concentration.

--> Save current: Only the Settings of the current channel are saved.

--> Save all : Save all channels according to the current Settings.

【 Communication 】

--> Host : Modify the station address of the current alarm controller.

--> Up Rate: Change the upload baud rate.

--> Upload TCP: Modbus or Internal Protocol.

--> Save : Save the current Settings.

Upload TCP:

“Modbus “can be used to upload devices such as DCS or PLCS

The "internal protocol" can upload the alarm controller data to another bus alarm controller.

九、 System maintenance

1. The personnel on duty shall operate the host correctly in strict accordance with the instruction manual;
- 2.can not open the chassis door at will, can not change the internal structure of the chassis;
3. every two months, test the controller to ensure that the controller can alarm normally;
4. system maintenance, must turn off all power (main power, backup power);

5. when the host failure, the staff on duty should observe the host fault display, and make a fault record, and then according to the "common faults and handling methods" to deal with the fault, if the fault still can not be solved, please make a record and immediately notify the dealer;

十、Common fault

Fault phenomenon	Possible cause of failure	Treatment method
Detector channel display	The detector is faulty or no detector is connected	Check the detector, if the corresponding channel does not need to be closed
Do not show	Switch or safety failure	Check whether the switch is on and the insurance is blown
Channel concentration cannot be cycled	Alarm or not	If there is alarm handling alarm, alarm contact press reset button
The main engine has electrical leakage	ungrounded	Check whether the safety grounding is connected
A relay does not operate	Wrong relay setting	Check if the relay configuration is the required setting and change to the required setting