Instruction Manual of JTY-GD-H605 Independent Smoke Detector

Read through these instructions before using this device to ensure correct installation and use!

I. General

JTY-GD-H605 independent smoke detector (Detector hereunder) is a smoke-sensing detector. While monitoring, the green indicator blinks per 60 seconds. When the concentration of the smoke reaches the set point, the detector will emit an audible ‘Didi tick’ repeatedly and the red indicator on the detector will remain on during the audible signal. The detector can revert to the normal condition when the concentration of the smoke goes lower than the set point. And it includes self-check and battery low power indicate function. The state of the detector can be sent to Sanjiang Cloud Platform based on the international LORAWAN standard protocol. For details of the detector access platform mode and status information, see the Sanjiang Cloud Platform related manual.

The detector is applicable in places where fire might generate volume smoke, i.e. in industrial and civil buildings such as in the restaurant, hotel, teaching building, office building, computer room, archives and stack room.

II. Features and technical parameters

- Working voltage: DC9V(1200mAh)
- Working current:

  During monitoring ＜10μA
  In alarm mode ＜25mA
  Impulse current ＜120mA
- LEDs: in three colors (green: normal; red: fire alarm; yellow: failed)
- Alarm volume:＞80dB(at a 3 meter (9.8 ft) distance)
- Environment: Temperature: -10℃~55℃
- Relative humidity:≤95%(40℃±2℃ non-condensing)
- Exterior size:106mm(4.2’’)×106mm(4.2’’)×46mm(1.8’’) (Length × Width ×Height)
- Weight: 162g
- Mounting hole distance: 52-70mm
- Housing material/color: ABS (white)
- Standard: GB20517-2006
- Areas covered: ≥40 ㎡(See the provisions in the GB 50116-2013 Code for Design of Automatic Fire Alarm System).

III. Positioning

Where to install the smoke detector:

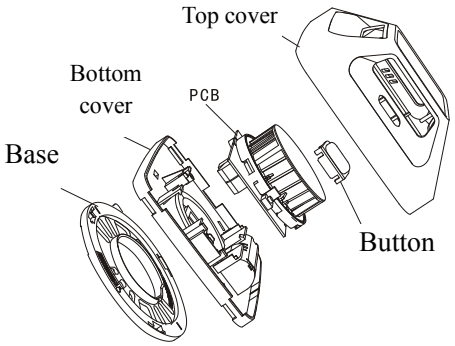
Residence, lounges, cafes, dance hall, hotel, apartment, inns, restaurant, etc.

Where NOT to install the smoke detector:

- In the garage. Products of combustion are present when you start your car and could set off nuisance alarms.
- In front of forced air supply ducts used for heating and air conditioning, near ceiling fans, or other high air flow areas.
- In dusty areas. Dust particles may cause nuisance alarms or product failure.
- In very humid areas. Moisture or steam can cause nuisance alarms.
- In insect infested areas.
- The kitchen and the place where smoke remains under normal circumstances.
- Places where corrosion gases are likely to occur.

IV. Structural features and working principle

- Detector structure diagram (see figure 1)



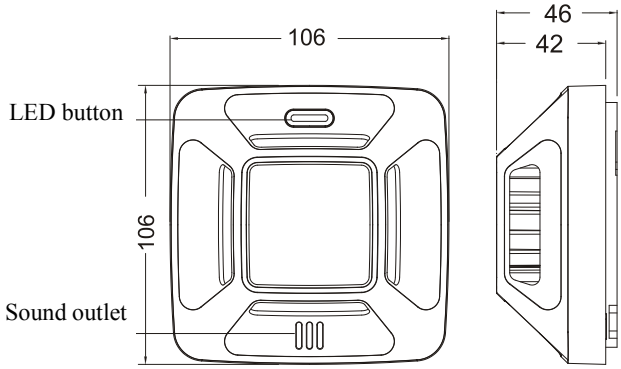


Figure 1 Figure 2

Note: The top cover, button, PCB, bottom cover and base in Fig.1 are assembled into a whole (Fig.2, hereinafter referred to as detector).

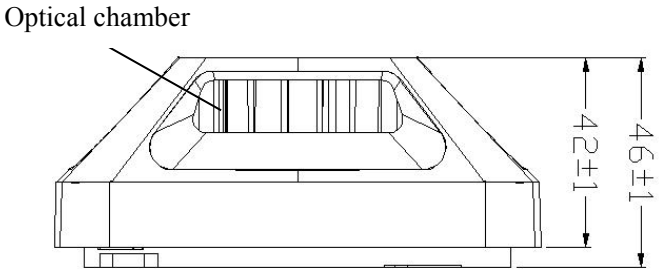
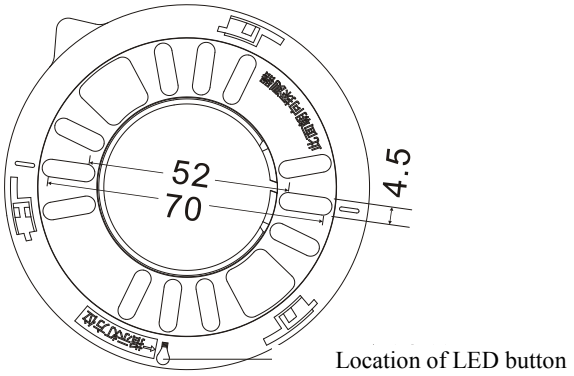


Figure 3

- External structure (see figure2/3)



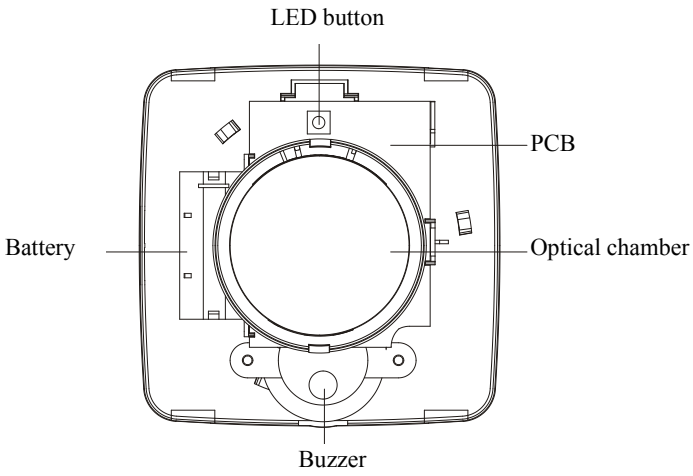


Figure 4 Figure 5

- Internal structure (see figure 5)
- Operating principle: Smoke detection is done by the optical chamber, which include one set of infrared emitting and receiving diode. The receiving diode can not receive the infrared light of the infrared emitting diode when there is no smoke, and the circuit has no voltage output. When the smoke enters the optical chamber, the infrared light emitted by the infrared diode is scattered, and the scattered infrared light is received by the receiving diode so that a voltage output is generated in the circuit. The heavier the smoke, the stronger the scattering and the higher the generated voltage. When the voltage reaches the predetermined value, the detector will send an alarm signal and complete the alarm function.

V. Installation and testing

- The detector installation is fixed by the special screw included, the included screws are suitable for most types of ceiling materials, like wood, concrete or plaster. Fix the base to the ceiling . After installing the base, screw the smoke detector to the base. The detector must be properly attached to the base.
- The detector installation location shall meet the following requirements:

When the height of the installation is less than 6 meters. The distance between the lower surface of the detector and the ceiling shall not exceed 0.3 m.
The smoke alarm should not be installed within 3m (9.8ft) in front of the air supply ducts.
The detector should be installed more than 0.6 meters away from the wall or the wall-beam.

- Detector protection area:
  When the space height is 6 ~ 12 meters, the protected area is 60 square meters
  When the space height is less than 6 meters, the protected area is 40 square meters
- Testing: Push the button on the cover and hold it down. This will sound the detector if the electronic circuitry, horn and battery are working properly. The detector will emit an audible ‘Didi tick’ every 2 seconds and the red indicator on the detector will remain on. If no alarm sounds, the unit has defective batteries or other failure. Erratic or low sound coming from your alarm may indicate a defective alarm. Release the button the detector will return to normal operation.

VI. Operation and instructions

Indicator status :

- Normal condition: the indicator (green light) flashes every 60 seconds.
- Battery low power mode: the indicator (yellow light) flashes every 30 seconds.
- Circuit failures condition: the indicator (yellow light) flashes every 2 seconds.
- Alarm status: the indicator (red light) remains on.

Buzzer status:

- Battery low power mode: emit an audible ‘Di’ every 30 seconds.
- Circuit failures condition: emit an audible ‘Di’ every 2 seconds.
- Alarm status: emit an audible ‘Didi tick’ every 2 seconds.

Alarm status:

- When the concentration of the smoke reaches the set point, the alarm will emit an audible ‘Didi tick’ every 2 seconds and the red LED on the detector will remain on during the audible signal.
- The alarm can revert to the normal condition when the concentration of the smoke goes lower than the set point.

Hush function:

- The hush function is very useful in a kitchen area or other areas prone to nuisance alarms. If a nuisance alarm is set off, press the test button and holding it down for a minimum of 3 seconds. This will temporarily desensitize the alarm circuit, the detector will silence immediately during this time. This indicates that the detector is in a temporarily desensitized mode. The detector will reset in these following situations:
  A. Higher concentration of smoke;
  B. The detector will automatically reset after approximately 1 minutes;
  (The hush feature can be used repeatedly until the air has been completely cleared.)

VII. Troubleshooting

Failures	Causes	Methods	Remarks
Alarming immediately after power-on	Internal circuit is broken	Return to the manufacturer for repairs	
	Dust particles/Steam/Moisture exceed normal condition	Repower on until the air has been completely cleared	
	Unstable alarm	Press the LED button for more than 3 seconds or repower the detector again.	
Cannot work when it is powered on	Incompliant voltage	Check the battery voltage	
	Internal circuit is broken	Return to the manufacturer for repairs	
Cannot alarm during test	Internal circuit is broken	Return to the manufacturer for repairs	
	Buzzer failure	Return to the manufacturer for repairs	
	Battery low power	Replace the battery of the same model	
No sound or low volume of the buzzer	Damage of the buzzer	Return to the manufacturer for repairs	
	Battery low power	Replace the battery of the same model	

IIX. Maintenance

- Test the detector once a week to make sure it works. Never use an open flame or combustible materials to test the smoke alarm since this may damage the smoke alarm or ignite flammable materials nearby and cause a fire.
- Under normal circumstances, the battery life can reach about five years, but harsh environment such as high temperature and humidity will shorten the battery life.

- When the detector reports battery low power failure, please replace the same type of battery in time. After the battery is replaced, press the test button to make sure the detector works in normal condition.
- In the case of the detector about battery low power, replace the existing battery with a new one of the same model in time in the way below:

  A. Rotate the detector gently clockwise and then remove it from the base in the downward direction.

  B. Take out the battery from the battery slot.

  C. Mount the new battery according to the positive and negative electrode marks in the battery slot.

  D. Align the detector’ s mounting bayonet with the base, press it into the base and rotate it gently anticlockwise to mount the detector.

  E. If there is an audible and visual alarm after the testing button is pressed following battery replacement, it suggests successful battery replacement.
- When the detector meets failure condition, please do not disassemble the detector by yourself, for more information, please contact the manufacturer. And return to the manufacturer for repair.

IX. Suggestions

- Replace the battery after a real fire and the detector goes off.
- It is recommended to return the detector that has been used for more than 3 years to the manufacturer for maintenance and inspection.
- It is recommended to replace detectors that have been in use for more than 10 years.
- A smoke detector can provide an early warning of a fire but it does not prevent fires from occurring and is not a substitute for an insurance policy..
- The smoke alarm cannot set off an alarm signal if the smoke from a fire does not reach the smoke alarm.

X. Environmental disposal instructions

- The crossed-out wheeled bin symbol indicates that the item should be disposed of separately from household waste. The item should be handed in for recycling in accordance with local environmental regulations for waste disposal. By separating a marked item from household waste, you will help reduce the volume of waste sent to incinerators or land-fill and minimize any potential negative impact on human health and the environment. For more information, please contact the manufacturer.

XI. Parking list

NO	Accessory	Quantity
1	JTY-GD-H605 detector	1PCS
2	9Vlithium battery(1200mAh)	1 PCS
3	Cross recessed pan head self-tapping screw (wooden thread)3×18	2 PCS
4	Plastic expansion rubber plug Ø5×25	2 PCS
5	User’s Manual	1 copy

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