



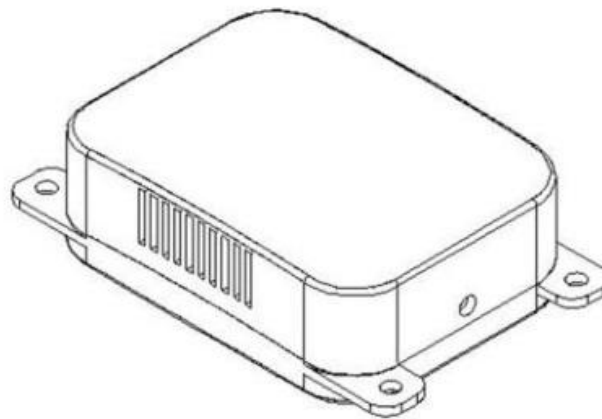
User Manual of Vehicle Smoke Detector with Relay Output

Model No. ATL-V1602



1. Overview

Vehicle smoke detector with relay output (hereinafter referred to as the detector) adapts special structure designed infrared photoelectric sensor, reliable performance MCU, and SMT chip processing production process, with the features of high sensibility, reliable and steady performance, low power consumption, decent and durable, easy to use, etc.



The product is not suitable for use in the following environment:

- ◆ With great smoke under normal circumstances.
- ◆ With great dust, mist, steam, oil mist pollution, corrosive gas.
- ◆ The relative humidity is greater than 97%
- ◆ The wind speed is more than 5m/s.

2. Work Principle



The detector adopts photoelectric sensor with special structure design and reliable performance of MCU, can effectively smoldering or the smoke. The light would be refracted, when the smoke enters the detector, then the light changing could be detected by light receiving element, because there is a linear relation between the light and smoke concentration. Detector would make Parameters Acquisition continuously, analysis and judgment, when confirming the light intensity data reaches a predetermined threshold, start relay output. When the smoke in the environment returns to normal state, the detector automatically returns to the normal working state.

Self test: under normal circumstances, press the test button, the detector would test the internal function test itself, relay output.

Note: when the detector alarm, it would be outputting relay passive contacts, contact capacity is 1A/24VDC, the default setting from factory is normally open.

3. Technical parameters

Power supply: DC9V ~ DC28V

Current: static current $\leq 200\mu\text{A}$

Alarm current $\leq 45\text{mA}$

Operating temperature: -40

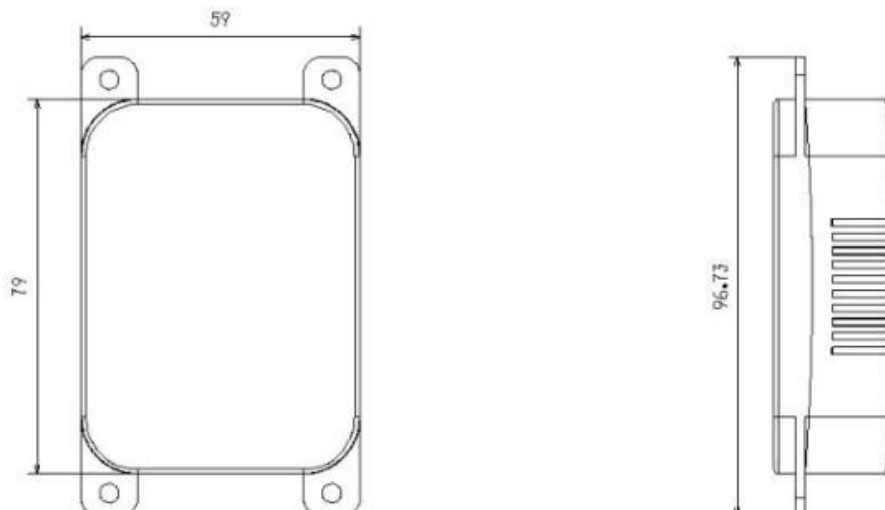
Degrees C ~ +90

Relative humidity: $\leq 97\%RH$ (40 - 2 Deg. C)

Output form: The default setting of the relay passive contact is normally, contact capacity is 1A/24VDC.

Smoke sensitivity : 0.15 ~ 0.3dB/m

4. Appearance





5. Installation and commissioning

- (1) Punch 4 holes with diameter of 6mm on the wall ;
- (2) Put the expanding tube into the punched holes, screw tapping screws, reserve a 2-3mm space;
- (3) First connecting the detector with power cable and signal cable, and the redundant signals cable can be cut off according to the actual requirements;

Connection mode

Red cable ---DC+

Black cable --- DC9-DC30V power supply;

White cable - normally open contact of relay output;

6. Instructions

Normal state: detector boot with 2HZ, let relay be closed / open 5 times, it would be working.

Self test: Detectors should be inspected regularly, operate it like this: when you press the button, relay output contacts closed; loose the button, the detector

automatically return to normal working condition.

7. Failure analysis and troubleshooting

No alarm output: check if the wire is bad contact

Frequent false alarm: Check if there was too much dusty on the detector, and clean the external of the detector (black plastic part.)

8. Maintenance

Any fault happened when use, please contact your supplier, and don't disassemble and repair privately. If it isn't being used for a long time, Please remove the

detector and pack it in the packing box, and store it in ventilated and dry place.

9. Transportation and storage

It should be transported and stored according to the provisions of GB/T15464-1995 "general technical conditions" for instrumentation package. We must keep the packaging and seal from original factory be complete and make sure the products won't be attacked strongly. It should be avoided drastic temperature changes.

The stacked packing height should not exceed 6 layers; single piece stacking should not exceed 5 layers in unpacking.