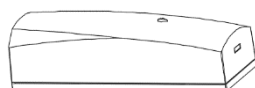


Shock Detector User Manual (V1.0.0)

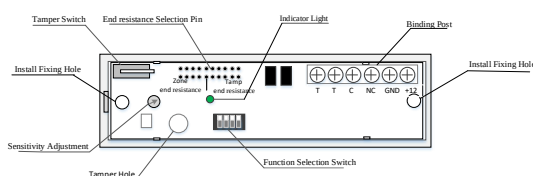
Shock Detector uses ceramic components as energy conversion sensors, which classify vibration waves into three levels based on energy magnitude: light energy, moderate energy, and heavy energy. The system automatically analyzes energy magnitude and employs different alarm algorithms to effectively detect instantaneous explosions, impacts, and drilling or drilling impacts.

Shock Detector can be widely used in the security systems of ATMs, vaults, and cultural and museum institutions.

I. Product Schematic



External Appearance



Internal Functional Schematic

II. Features:

- 1.Can detect vibration signals generated by impacts.
- 2.Can detect vibration signals generated by instantaneous explosions.
- 3.Can detect damage signals generated by drilling or electric drills.
- 4.When the ambient temperature rises by 10°C within 30 seconds, an alarm will be triggered (starting temperature is 35°C).
- 5.Wide range of adjustable sensitivity.
- 6.LED indicator for ambient interference signal strength.
- 7.Dual-color LED lights indicating different working statuses.
- 8.Alarm triggered when the power supply voltage is less than 9V.
- 9.Front anti-tamper and anti-fall design.
- 10.Four different resistive wire tail resistors are built into the anti-tampering and alarm circuits.

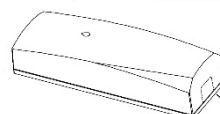
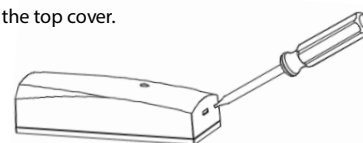
III. Electrical Performance and Specifications

Operating Voltage	9V-15V	Operating Current	12mA
Alarm Current	10mA	Alarm Output Time	Greater than 2 seconds
Operating Temperature	-25°C~+50°C	Operating Humidity	95% non-condensing
Sensor	Piezoelectric Ceramic	Output Relay Load	24V100mA
Size	95*32*25mm	Weight	41g

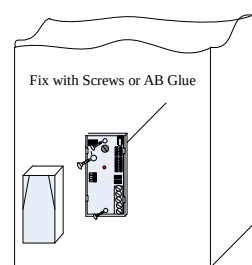
IV. Installation and Usage Method:

4.1 Installation Method:

- 1.Use a Phillips screwdriver to remove the top cover of the detector.
- 2.The Shock detector should be installed on an ATM (or other objects), and can be fixed with AB glue.
- 3.Secure the back anti-loose hole with screws. When the detector is detached (due to human destruction), the detector will trigger an alarm.
- 4.Follow the instructions to connect the wires correctly (see section 4.2).
- 5.Power on the detector and test it, and adjust the sensitivity appropriately (see section 4.3).
- 6.The side of the top cover can be bent open as a lead-out hole, as shown in the figure below.
- 7.Close the top cover.

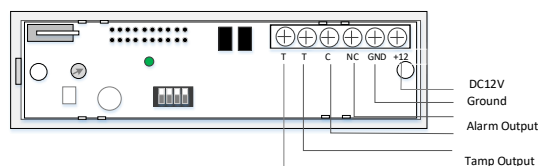


Terminal hole: Bend it open during installation.

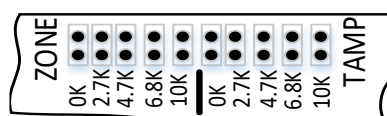


Installation Schematic Diagram

4.2. Wiring Methods



Wiring Diagram



Schematic Diagram of End Resistance

The zone-end resistance and anti-tamper-end resistance can be selected separately, with resistance

values of 0K, 2.7K, 4.7K, 6.8K, and 10K. Choose the end resistance that matches the host and insert the jumper into the appropriate position with a numerical indication. If the built-in end resistance of the detector is not required, insert the jumper into the 0K position.

4.3 Debugging and Settings

4.3.1 DIP switch: Set the number of tap counts

DIP switch 1	DIP switch 2	Tap count	DIP switch 3
on	off	3	On: Shield strong environmental interference Off: Detect weak vibration sources
off	on	4	
off	off	5	

※ DIP switch 4 is reserved

4.3.2 Sensitivity adjustment: Clockwise reduces sensitivity, effective for tap counting and continuous vibration waves, but ineffective for instantaneous explosions.

4.3.3 Meaning of indicator lights:

Green light flashes momentarily (Lasts 0.2 seconds)	Green light flashes (lasts 1 second)	Red light on	Red light flashes 5 times
Normal standby state	Tap is effective	Strong environmental interference	Alarm

V. Testing

Connect the wires according to the above steps and ensure proper settings.

5.1: Strike the detector's perimeter with a large screwdriver or hammer, and it should trigger an alarm.

5.2: Tap the detector's perimeter 5 times (according to the DIP switch setting), and it should trigger an alarm.

5.3: Scratch the detector's perimeter with a screwdriver for about 30 seconds, and it should trigger an alarm. Make sure to scratch continuously and keep the red light on. Also, keep DIP switch 3 in the off position

VI. Operating Distance

Medium	Maximum Sensitivity	Minimum Sensitivity	Note
Metal	7 meters	2 meters	Whole piece of metal medium
Reinforced Concrete	3 meters	0.5 meters	Variations in concrete exist

- Note:**
1. The data in the table represent results from environmental testing conducted in the laboratory. The impact energy was created by dropping a 50g steel ball from a height of 30c
 2. Due to factors such as impact weight, medium, and installation strength, the data in the table is intended for design reference only. The actual operating distance should be based on

engineering measurements.

3. When used in concrete environments, due to additional uncertain factors in installation, the manufacturer recommends a 2-meter radius as a design reference. The actual measured distance should be used as the basis for calculation.

VII. Installation and Usage Precautions

1. Since ATMs are not rigidly installed as a whole and there are many gaps in the middle, and there are also soft materials, priority should be given to the primary protection target of the vibration detector, and it should be placed as close as possible.
2. If there are welding seams on the installation surface, the detector should be installed on both sides of the welding seam.
3. If installed at a corner, the detection range of the detector will be reduced by 25%.
4. The installation surface must be flat, and the installation wiring must be secure.
5. To avoid false alarms, do not install the detector near interference sources that may cause false alarms, such as printers and currency counters.
6. When installing, consider using AB glue at the bottom of the detector to provide a buffering effect.