

SW1801P Tilt & Vibration Sensor Module – 4 Pin

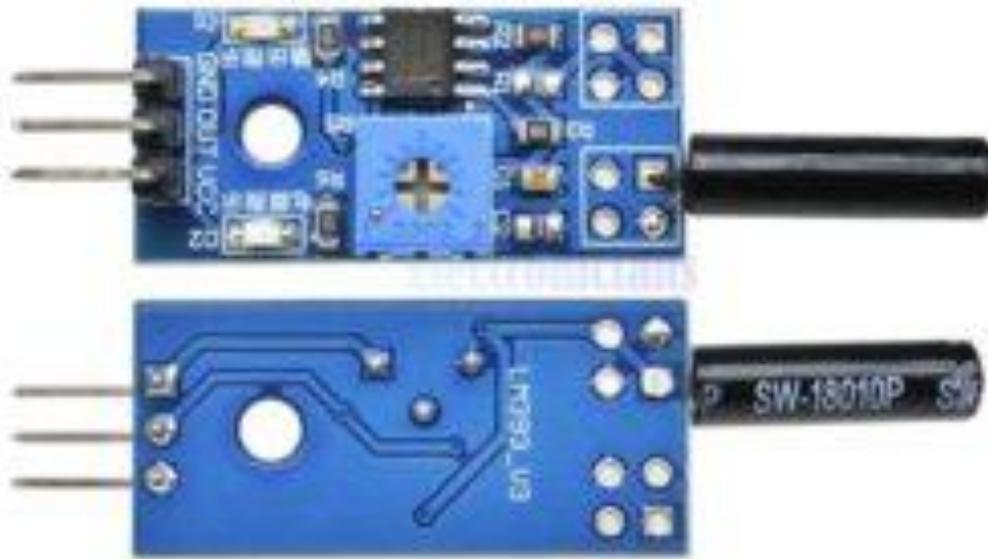
The **SW1801P Tilt & Vibration Sensor Module** is a highly sensitive and versatile sensor designed to detect **tilt, vibration, and motion** in various applications. This 4-pin module is widely used in **security systems, robotics, IoT projects, and DIY electronics**, providing reliable detection for alarms, motion triggers, and interactive devices.

Equipped with the **SW1801P vibration switch**, the module can detect **subtle movements or vibrations** and immediately output a digital signal, making it ideal for **motion-activated devices, anti-theft systems, and industrial monitoring**. Its simple 4-pin interface ensures **easy integration with Arduino, Raspberry Pi, ESP8266, ESP32, and other microcontroller platforms**.



Key Features of SW1801P Tilt & Vibration Sensor Module

- **High Sensitivity:** Detects small vibrations and tilts effectively.
- **Digital Output:** Provides a clean HIGH or LOW signal for easy microcontroller interface.
- **4-Pin Module:** Includes VCC, GND, DO (digital output), and AO (analog output in some versions).
- **Versatile Applications:** Suitable for **motion alarms, anti-theft devices, robotic triggers, and IoT projects.**
- **Compact and Lightweight:** Easy to mount in small enclosures or robotic setups.
- **Low Power Consumption:** Operates efficiently with microcontroller systems.
- **Durable Design:** Built for consistent performance over extended use.
- **Quick Response:** Immediate detection of tilt or vibration events.



Technical Specifications

- **Sensor Type:** SW1801P Tilt & Vibration Switch
- **Operating Voltage:** 3.3V–5V DC
- **Digital Output:** HIGH when vibration/tilt detected, LOW otherwise
- **Current Consumption:** < 15mA
- **Detection Angle:** Sensitive to tilt changes and vibration within a 10–30° range
- **Dimensions:** Compact PCB for easy integration
- **Interface:** 4 pins – VCC, GND, DO, AO (optional)
- **Operating Temperature:** -10°C to +70°C
- **Durability:** Designed for long-term, reliable operation

Why Choose the SW1801P Tilt & Vibration Sensor Module?

1. **Reliable Motion Detection** – Provides accurate tilt and vibration sensing for security and automation systems.
2. **Easy Integration** – Connects directly to **Arduino, Raspberry Pi, ESP32, and ESP8266** using its simple 4-pin interface.
3. **Versatile Use Cases** – Perfect for **DIY projects, robotics, alarm systems, IoT devices, and industrial monitoring.**
4. **Compact and Lightweight** – Ideal for embedding in small devices or enclosures.
5. **Quick Response** – Detects events instantly to trigger alarms, notifications, or automation routines.

Applications of SW1801P Tilt & Vibration Sensor Module

- **Security Systems:** Detect unauthorized movement or tampering.

- **Anti-Theft Devices:** Trigger alarms when objects are moved or tilted.
- **Robotics:** Enable robots to respond to vibration or tilt in their environment.
- **IoT Projects:** Monitor physical interactions and motion events.
- **Industrial Monitoring:** Detect equipment vibration or misalignment in real time.
- **DIY Electronics:** Build interactive devices that respond to tilt or movement.

How to Use the SW1801P Tilt & Vibration Sensor Module

1. **Connect the Module** – Wire **VCC to 3.3V–5V**, **GND to ground**, **DO to digital input** of your microcontroller.
2. **Mount Securely** – Attach the module to the object or surface to be monitored.
3. **Read Output** – When vibration or tilt is detected, the **digital output goes HIGH**, otherwise it stays **LOW**.
4. **Integrate with Project** – Use the digital signal to trigger **alarms, LEDs, buzzers, or IoT notifications**.
5. **Optional Analog Reading** – If AO is available, use it for **sensitivity adjustment and analog signal monitoring**.

With this setup, developers can create **responsive, motion-sensitive applications** for both educational and professional projects.

Package Includes

- **1 × SW1801P Tilt & Vibration Sensor Module – 4 Pin**

Conclusion

The **SW1801P Tilt & Vibration Sensor Module** is a versatile, compact, and reliable sensor for detecting **motion, vibration, and tilt**. Its **digital output, high sensitivity, and easy integration** make it suitable for **DIY electronics, IoT devices, robotics, and security systems**.

Whether you are building an **anti-theft alarm, robotic trigger, or interactive IoT project**, this module delivers **accurate, real-time detection** in a lightweight and durable package.