

Topyond ZNX-01

Topyond Smart Insole Pressure Sensor Detection Mat User Manual

Model: ZNX-01 (Topyonddicbs3hq46)

Brand: Topyond

1. PRODUCT OVERVIEW

The Topyond Smart Insole Pressure Sensor Detection Mat (Model ZNX-01) is an advanced accessory designed for integration into smart wearable devices, particularly smart insoles. This innovative sensor provides essential data for activity tracking and gait analysis, offering a comprehensive understanding of user movement.

Key Features:

- **Wide Application:** Primarily used in smart insoles for capturing and analyzing pressure and movement data, enhancing the functionality of wearable products.
- **Basic Pressure Sensing Functions:** Enables accurate step counting and estimation of calorie consumption, allowing users to monitor their physical activity levels.
- **Real-time Gait Monitoring:** Provides detailed real-time gait information, including running posture, landing method, cadence (step rate), landing time, landing vacancy rate (foot contact time with the ground), knee load index, and more. This comprehensive analysis aids in understanding biomechanics.
- **Customizable and Versatile:** The sensor can be adapted to meet various functional requirements, making it suitable for diverse applications and environments.
- **Durable and Sensitive:** Features a long lifespan, high sensitivity, and a lightweight, thin design. It is bending-resistant, waterproof, and simultaneously provides pressure sensitivity and waterproofing functionality.

2. SETUP AND INSTALLATION

The Topyond ZNX-01 detection mat is designed for integration into smart insoles or other compatible devices. Specific installation steps will depend on the host device it is being integrated into. Generally, the process involves careful placement and connection of the sensor.

General Guidelines:

1. **Preparation:** Ensure the host device (e.g., smart insole) is clean and free from debris.
2. **Placement:** Carefully position the ZNX-01 detection mat within the designated area of the host device, ensuring proper alignment with pressure points.
3. **Connection:** Connect the sensor's output pins to the corresponding input ports on the host device's control unit. Refer to the host device's manual for specific wiring diagrams and connection instructions. The ZNX-01 features a 10-pin connector for data output.
4. **Securing:** Secure the detection mat in place to prevent shifting during use. This may involve adhesives or mechanical fasteners depending on the host device design.
5. **Testing:** After installation, perform initial tests to verify proper functionality and data transmission.

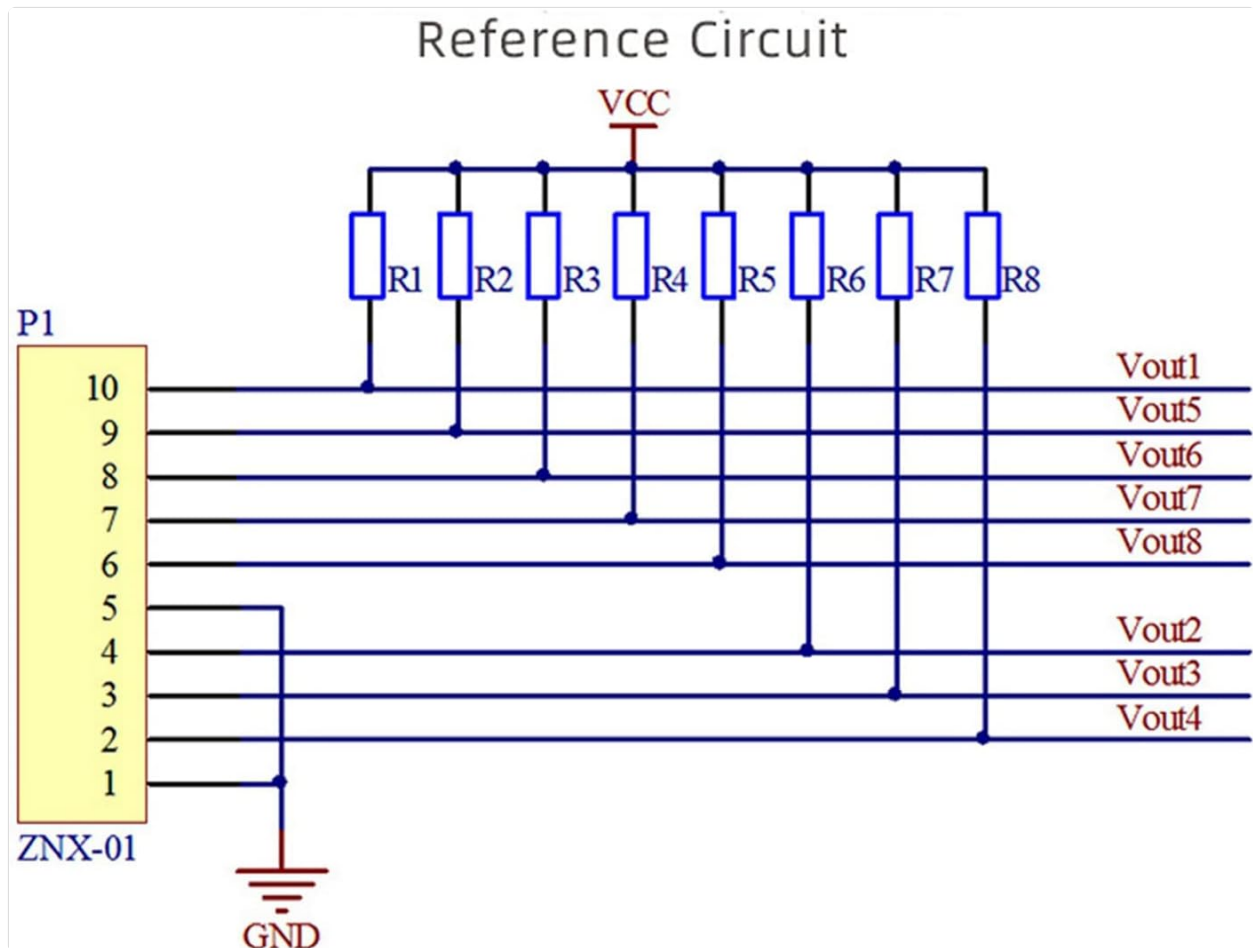


Figure 1: Reference Circuit Diagram for Topyond ZNX-01. This diagram illustrates the typical electrical connections for integrating the sensor into a system, showing VCC, GND, and eight Vout (voltage output) lines.

3. OPERATING INSTRUCTIONS

Once integrated into a smart insole or other compatible device, the Topyond ZNX-01 sensor operates by detecting pressure changes. Its primary function is to provide raw data that can be processed by the host device's software to derive meaningful metrics.

Typical Operation:

1. **Power On:** Ensure the host device is powered on and the sensor is receiving the specified test voltage (typically DC 3.3V).
2. **Data Acquisition:** As pressure is applied to the mat (e.g., during walking or running), the sensor's resistance changes, resulting in varying voltage outputs (Vout1-Vout8).
3. **Software Processing:** The host device's software interprets these voltage signals to calculate metrics such as:
 - Step count
 - Calorie consumption index
 - Gait parameters (posture, landing method, cadence, landing time, etc.)
 - Pressure distribution across the foot
4. **Real-time Monitoring:** Data can be monitored in real-time via the host device's application or display.



Basic functions such as step counting and calorie consumption index.



Figure 2: The Topyond ZNX-01 sensor enables basic functions like step counting and calorie consumption index tracking, as demonstrated by its application in active scenarios.

4. MAINTENANCE AND CARE

To ensure the longevity and optimal performance of your Topyond ZNX-01 detection mat, follow these general maintenance guidelines:

- **Cleaning:** The mat is waterproof. If cleaning is necessary, gently wipe the surface with a damp cloth. Avoid using harsh chemicals or abrasive materials.
- **Storage:** Store the sensor in a cool, dry place away from direct sunlight and extreme temperatures. Avoid folding or creasing the mat excessively, although it is designed to be bending-resistant.
- **Handling:** Handle the sensor by its edges to avoid putting undue stress on the sensitive areas or the connector.
- **Inspection:** Periodically inspect the mat for any signs of physical damage, such as cuts, tears, or frayed connections.

5. TROUBLESHOOTING

If you encounter issues with your Topyond ZNX-01 detection mat, consider the following troubleshooting steps. Note that specific issues related to data interpretation or host device functionality should be addressed using the host device's manual.

Problem	Possible Cause	Solution
No data output / Inaccurate readings	Incorrect connection to host device. Insufficient power supply. Physical damage to the sensor or cable. Software misconfiguration on host device.	Verify all connections are secure and correctly wired according to the reference circuit. Ensure the host device provides the correct voltage (DC 3.3V typical). Inspect the mat for visible damage. If damaged, replacement may be necessary. Consult the host device's software manual for calibration or configuration steps.
Intermittent readings	Loose connection. Environmental interference.	Check and re-secure all connections. Ensure the operating environment is stable and free from strong electromagnetic interference.

6. SPECIFICATIONS

Parameter	Value
Item Type	Detection Mat
Model	ZNX-01
Thickness	Not specified (described as thin)
Range (Single Point)	10kg
Response Point	400g
Durability	>1 million times
Initial Resistance (no load)	>10MΩ
Typical Test Voltage	DC 3.3V
Response Time	Not specified
Dimensions (Approx.)	307mm (12.1in) Length, 250mm (9.8in) Width (at widest point), 28.92mm (1.1in) Connector Width



Figure 3: Approximate dimensions of the Topyond ZNX-01 detection mat.

7. PRODUCT IMAGES



Image 1: Top view of the Topyond ZNX-01 Smart Insole Pressure Sensor Detection Mat, showing its overall shape and sensor points.



Image 2: The Topyond ZNX-01 detection mat positioned next to a person walking, illustrating its intended use and emphasizing its lightweight and bending-resistant design, along with its waterproof and pressure-sensitive dual functionality.



Image 3: The Topyond ZNX-01 detection mat shown with an assortment of shoes, demonstrating its potential for integration into various types of footwear.



Image 4: An angled perspective of the Topyond ZNX-01 detection mat, highlighting its flexible design and the arrangement of its integrated sensor points.



Image 5: A different angled view of the Topyond ZNX-01 detection mat, further illustrating its thin and adaptable profile.



Image 6: A direct top-down view of the Topyond ZNX-01 detection mat, providing a clear perspective of the complete layout of its integrated pressure sensors.

8. OFFICIAL PRODUCT VIDEOS

No official product videos from the seller are available for this product at this time.

9. WARRANTY AND SUPPORT

For warranty information and technical support regarding your Topyond ZNX-01 Smart Insole Pressure Sensor Detection Mat, please refer to the documentation provided with your complete smart insole product or contact the manufacturer, Topyond, directly through their official website or customer service channels. Please note that this manual pertains specifically to the Topyond ZNX-01 detection mat component. For issues related to the overall smart insole system, including software, battery, or connectivity, consult the manual provided by the manufacturer of the complete smart insole product.

Contact Information:

- **Brand:** Topyond
- **Manufacturer Reference:** Topyonddicbs3hq46
- **Online Store:** [Visit the Topyond Store on Amazon](#)
- For further assistance, please check the official Topyond website or contact their customer support.

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