

# User Manual

product name: Tire Pressure Monitoring Sensor  
Model: TPS001

## 一、 product overview

This tire pressure sensor is a core component designed specifically for tire pressure monitoring systems (TPMS). It monitors tire pressure and temperature data in real-time through wireless radio frequency technology and sends it to the receiving device to help users timely grasp tire conditions and prevent safety hazards caused by abnormal tire pressure. Using 433MHz wireless radio frequency bands for data transmission ensures stable signals and efficient transmission.

## 二、 Technical Parameter

| Parameter category  | Detailed information                           |
|---------------------|------------------------------------------------|
| Working frequency   | 433MHz（You can choose according to your needs） |
| Transmission power  | ≤10mW                                          |
| Modulation method   | FSK                                            |
| Working voltage     | 3.0V                                           |
| Working temperature | -40℃ ~ +125℃                                   |
| Storage temperature | -40℃ ~ +150℃                                   |
| Service life        | 7 - 10 年（基于正常使用场景）                             |
| Protection level    | IP67                                           |

## 三、 Working principle

This tire pressure sensor collects real-time tire pressure and temperature data through a built-in pressure sensor and temperature sensor. After processing by a microprocessor, the data is encoded and sent to the supporting receiving device using the 433MHz wireless radio frequency band in FSK modulation mode. After receiving the signal, the receiving device decodes and processes it, and finally displays tire pressure and temperature information on the display screen, achieving real-time monitoring of tire status.



#### **四、Installation instructions**

- . Dismantling tires: Use professional tools to disassemble the tires and separate them from the wheel hub.
- . Install sensor: Install the tire pressure sensor on the inner side of the wheel hub at the valve position, ensuring that the sensor is tightly connected to the valve, and tighten the fixing nut to the specified torque ([4] N · m).
- . Install tires: reassemble the wheel hub and tire with the sensor installed, and use tire inflation equipment to inflate the tire to standard pressure.
- . Activate sensor: Use the matching activation tool to approach the sensor, follow the instructions of the activation tool to activate it. After successful activation, the sensor will start working normally and send data.

#### **五、Precautions for use**

- . This product is only suitable for the matching tire pressure monitoring system and should not be mixed with other non matching equipment.
- . It is strictly prohibited to disassemble or modify this product without authorization, in order to avoid damaging the product or affecting its performance, resulting in abnormal data transmission.
- . If there is abnormal wear or leakage of the tire, the working status of the tire pressure sensor should be checked in a timely manner, and if necessary, professional personnel should be contacted for maintenance.
- . When the ambient temperature exceeds the working temperature range of the product (-40 °C~+125 °C), it may affect the performance and service life of the product. Avoid prolonged use in extreme temperature environments.
- . This product complies with FCC regulations, unauthorized changes or modifications may result in users losing their access to operate the device.

## 六、 Troubleshooting

| Fault phenomenon                                             | Possible reasons                                                    | Solution method                                                                                     |
|--------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| The receiving device is unable to display tire pressure data | Sensor not activated                                                | Use the activation tool to reactivate the sensor                                                    |
|                                                              | The sensor battery is depleted                                      | Replace sensor (built-in battery cannot be replaced)                                                |
|                                                              | The distance between the sensor and the receiving device is too far | Shorten the distance between sensors and receiving devices                                          |
| Abnormal tire pressure data displayed                        | Abnormal tire pressure                                              | Measure the actual tire pressure using a tire pressure gauge and adjust it to the standard pressure |
|                                                              | Sensor malfunction                                                  | Contact after-sales service personnel for testing and replacement                                   |

## 七、 after-sale service

This product provides a [2] year warranty service, calculated from the date of manufacture. During the warranty period, if any malfunction is caused by product quality issues, we will provide free repair or replacement services.

If the product exceeds the warranty period or malfunctions are caused by non quality issues such as human damage or improper use, we will provide paid repair services, and the specific cost will be subject to the actual repair situation.

## **FCC Statement**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.