Tire Pressure Monitoring System

Instruction Manual
M7/SO

Contents

Product Picture

Monitor Display

SO Sensor

1.Product Introduction

1-1. PRODUCT FEATURE

Thanks for choosing our TPMS product. The system is used to monitor the pressure and temperature data of each tire. After the alarming condition is set up by the user, the system will alarm in case of abnormal pressure and temperature and make the driver be alerted of danger driving. The system also enhance fuel efficient, prolong tire life and make the driving more comfortable.
Be sure to read the user guide carefully before installation and keep the manual for future use.

1-2. CAUTION

It is highly recommended to read the instructions below before installing the system:
1. The monitor should be installed inside the vehicle where it does not affect normal driving.
2. The monitor should be well fixed to avoid falling off during driving.
3. The tires' temperature and pressure will increase while driving. The vehicle should be stopped for cooling if there is high temperature alarm and avoid braking problem or tire blowout.
4. Driver should stop the vehicle and get off to check the tire if there is continue high pressure or slow leakage alarm .
5. Be ware of tire blowout when there is high tire pressure, and be ware of fuel consumption and wheel balance while low tire pressure.
6. The system can effectively monitor tire pressure and temperature but cannot avoid traffic accident after tire browout. Using quality tire product and correct tire pressure monitoring is still necessary.
7. Be ware of driving safety while checking tire data on the way of driving.
8. After the system is installed correctly, the driver does not need to stare at the monitor all the time and feel interrupt during driving.

1-3. INSTALLATION TIPS

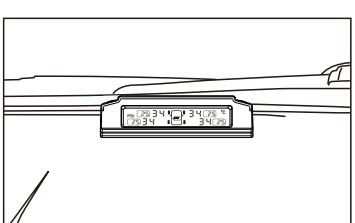
1. The monitor will be in sleeping mode to save battery life if the motion sensor detects the vehicle has stopped for ten minutes. It will turn on again when it detects the vehicle is moving again. If one of the sensor data has not been display on the monitor at the beginning, the data will be displayed later when there is pressure or temperature changes.
2. The signal transmission from the monitor and sensors is wireless, and the transmission distance is long enough for a passenger car due to internal anti -inference circuit design.
3. Due to the air expansion and contraction, the tire pressure and temperature will normally changing all the time while driving.
4. There is normal air leakage in every tire rim, TPMS should have no responsibility to keep the tire pressure unchanged after long time storage or driving.
5. Should you have any question or problem while installation, please contact with your local distributor.

2. Monitor Feature

- •Automatically solar power battery recharger.
- •Pressure and temperature alarm.
- •Visible and audible alarm.
- •Selectable pressure unit (PSI, BAR).
- •Selectable temperature unit (℃, ℉).
- •Configurable high/low pressure and high temperature alarm.
- •Tire position exchange.
- •Automatic awake feature.
- •Automatic backlighting.
- •Built in rechargeable lithium battery.
- •Monitor up to 6 tires.
- •Display temperature or pressure simultaneously.
- •Fast leakage alert.
- •High stability and easy to install.

3.INSTALLATION TIPS

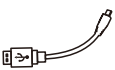
Monitors should be installed in appropriate place using the dash pad or the magic tap. Recharge the monitor by the DC-DC power adaptor for the first time and allow continue recharge by solar power after the first full DC recharge.



4. product Accessories

Receiver accessories

LCD Monitor
(1 pc)



USB cable
(1 pc)

Dash pad
(1 pc)

DC-DC Power
adaptor (1 pc)

Sensor accessories

SO Sensor

Opener Tool
(1pc)

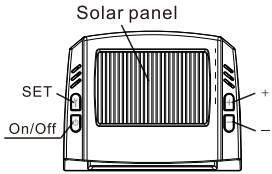
Hex Wrench
(1pc)

Hex Nut
(4pcs)

Ribber O-Ring
(4pcs)

Quantity of Sensor will be shipped in 4 pieces or specified by customer to add one more pieces for spare at extra cost.

4-1. MONITOR COMPONENTS AND ICONS



Pressure Unit : BAR or PSI, user-selectable
Temperature Unit : ℃ or ℉, user-selectable

ICON	Indication
	Tire Position
	Sensor Low Battery
	Monitor Power level
	Tire alam Status
	Solar Power Indictator

5. PARAMETER SETTINGS

In standby mode, press the “SET” button, release after the 1st beep to enter the 1st set up menu. The corresponding icon on the LCD will flash. Press the “SET” button to select the desired setting, press button “+” and ”-” to select the data. After the setting is finished, press the “SET” button to save the setting and exit after a beep. Press the button “+” and ”-” at the same time to exit without saving the setting. The monitor will return to standby mode if there is no operation within 1min in the setting mode.

5-1.Factory default alarm setting

pressure unit	PSI
high pressure	3.0BAR (44PSI)
low pressure	2.0BAR (29PSI)
temperature unit	℃
high temperature	70 ℃

To restore the factory default setting:

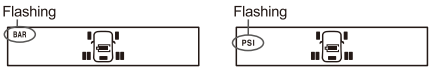
First turn off the monitor by pressing “ ⏻ ” ,then turn on the monitor again until all icon displayed and press the button “SET” within 3 seconds, release after a “bi” sound and red backlight will light to complete factory reset.

Monitor Power on / off

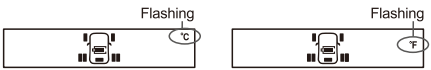
Driver could turn off the monitor manually before long time parking.
When the monitor is power off, press the “ ⏻ ” button, release after the first beep to turn on the monitor. Repeat same step to turn off the monitor.
The monitor will turn off automatically when the power is too low.

5-2.Setting Sequence

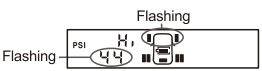
① Pressure Unit
While the PSI or BAR icon is flashing, press the button "+" or "-" to select the desired unit.



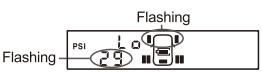
② Temperature Unit
While the ℃ or °F icon is flashing, press the button "+" or "-" to select the desired unit.



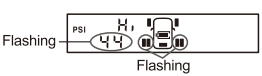
③ High Pressure Setting for Front Tires
While the two front tire icons and the high pressure icons are flashing, press the "button "+" or "-" to select the desired pressure data.



④ Low Pressure Setting for Front Tires
While the two front tire icons and the low pressure icons are flashing , press the button "+" or "-" to select the desired pressure data.



⑤High Pressure Setting for Rear Tires
While the two rear tire icons and the high pressure icons are flashing, press the button "+" or "-" to select the desired pressure data.

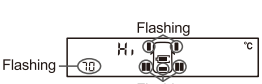


⑥Low Pressure Setting for Rear Tires
While the two rear tire icons and the low pressure icons are flashing, press the button "+" or "-" to select the desired pressure data.

⑦High Pressure Setting for Spare Tire
While the spare tire and the high pressure icons are flashing, press the button "+" or "-" to select the desired pressure data.

⑧Low Pressure Setting for Spare Tire
While the spare tire and the low pressure icons are flashing, press the button "+" or "-" to select the desired pressure data.

⑨High Temperature Setting
While the high temperature data flashing, press the button "+" or "-" to set the desired temperature data.



6. ALARM CONDITION

High / Low Pressure Alert / High Temperature Alert / Fast Leakage Alert / Sensor Low Battery Alert.

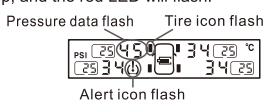
The monitor displays the temperature or the pressure data of four sensors simultaneously. The corresponding alert icon and red LED will flash together with a warning beep when the sensor detects abnormal conditions from the tire. The faulty tire and/or battery alarm (⏻ , 🔧) icons will still flash until the problem has been settled.

Eg.: Factory default setting

high pressure alarm level	3.0BAR (44PSI)
low pressure alarm level	2.0BAR (29PSI)
high temperature alarm level	70 ℃

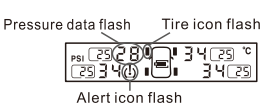
6-1.High Pressure Alert

e.g. While the front left tire pressure is 45psi , the monitor will alert together with a warning beep, and the red LED will flash.



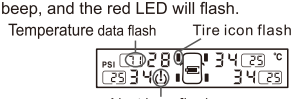
6-2.Low Pressure Alert

e.g. While the front left tire pressure is 28psi , the monitor will alert together with a warning beep, and the red LED will flash.



6-3.High Temperature Alert

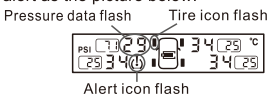
e.g. While the front left tire temperature is 71℃, the monitor will alert together with a warning beep, and the red LED will flash.



6-4.Fast Leakage Alert

The sensor will send alert data to the monitor immediately if it detects fast leakage in a tire. The alert icon and the pressure data will flash together with the tire icon. The flashing red LED and a warning beep will be issued by the monitor simultaneously. Press any button to turn off the beep warning. But the alert tire icon and the pressure data will still flash together with the red LED till the problem has been solved.

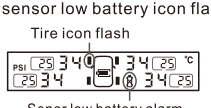
e.g. While the front left tire pressure drops from 34psi to 29psi immediately, the monitor will alert as the picture below:



6-5.Sensor Low Battery Alert

While the sensor battery voltage is low, the sensor will send the alert to the monitor. The corresponding tire icon and the low battery icon will flash together with the red LED, the warning beep will be issued by the monitor. Press any button to turn off the warning beep, but the tire icon and the low battery icon will still flash together with the red LED till the a new sensor battery has been replaced.

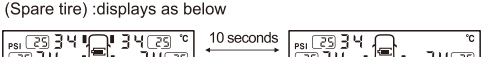
e.g. While the battery in the front left tire sensor is low, the monitor will alert as the picture as below sensor low battery icon flash.



7.OTHER FUNCTIONS

7-1.Monitor Displays 7 Tires

7 Sensors (Spare tire) :displays as below



7-2.Monitor Battery Saving Mode

The monitor will be in sleeping mode when the vehicle is not in motion for 10 minutes and when external DC power is not connected. The monitor will not receive any data from the sensors when it's in sleeping mode. Press any button to wake up the monitor to standby mode.

7-3.Charging the Monitor

The solar power battery was built inside the monitor, it can power the monitor for long hours once fully charged. But the solar battery will not recharge itself when insufficient sunshine. In such case, when the battery level indicator is low as show by the icon ( ), please recharge with factory provided DC charger for 2.5hours and continually recharg by sufficient sunlight when the icon ( ) is displayed.

7-4 Tire ID interchange

During standby mode, hold and press"-" until "Bi" sound, one tire will flash and use "+,-" to swap to a new tire position and confirm by pressing " ↕ " key. Repeat using "-" to choose another tire and follow by using "+,-" key to swap another new tire and finished by pressing " ↕ " key again. (during ID interchange mode if no action for one minute, system will resume to normal mode operation.)

8. Recode Sensors

The factory has already coded 4 sensors to the monitor, and the sensors can be re -coded accordingly to actual tires' position after exchanging the tires. There is Inflate Code Learning for re-code the sensors:

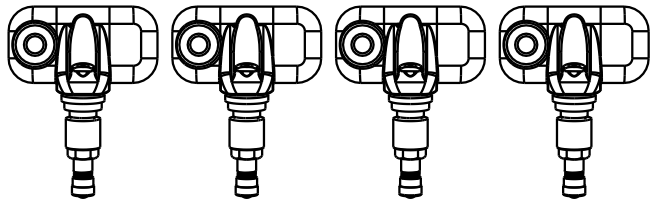
8-1 Inflate Code Learnings

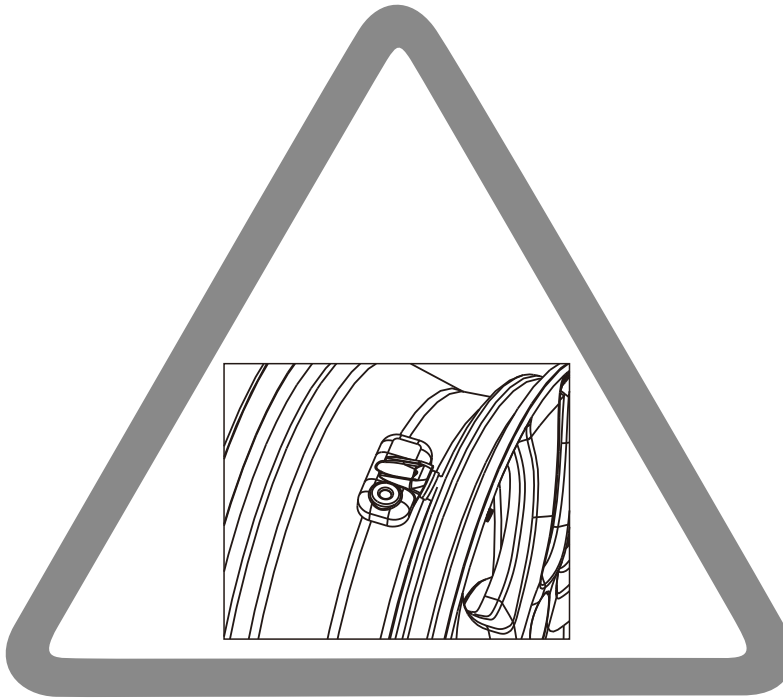
In standby mode, press and hold"+" button and release it after the beep sound to enter learning mode, the tire icon will flash on the LCD with "*Id*" Letter showing the beginning letter of the tire ID code. Press "-" or "+" to scroll tire position needed to re-code. Once ready, then mount the sensor on to the tire valve, once the sensor sensed the inflator, the sensor will send its own ID code to the monitor and the monitor will display he sensor code after the beep. Repeat above step to re-code others sensor if needed . Press "SET" until Beep sound to ensure new code completed stored into the monitor. If press "-" & "+" buttons together will not store any new ID.

Left Front Tire ID as 83A512

Tire Pressure Monitoring System

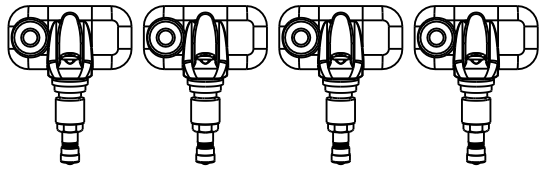
——Internal sensor



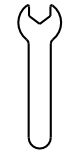


Installation Guide

TPMS



Sensors



Spanner

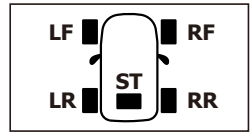
1. FEATURES

- Internal valve sensor, adjustable sensor mounting angle.
- Water resistant.
- Sensors batteries will last up to five years.
- Sensors transmit pressure and temperature data every 5 minutes.
- Fast leakage alert.
- Individually coded sensors.

2. INSTALLATION

2-1. Sensor Location

The factory has already set up the codes for the 4~5 sensors which are provided and matched with the monitor, and each sensor is marked with the corresponding tire position(LF,RF,LR,RR,ST; LF=Left Front Tire, RF=Right Front Tire, LR=Left Rear Tire, RR=Right Rear Tire, ST=Spare Tire), Please install each sensor in the correct tire position as per the diagram.



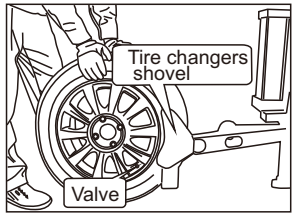
Note: Please ensure to turn on the monitor firstly before install the sensor in order to the monitor can receive the sensor data on time.

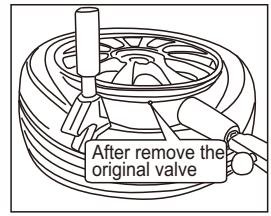
2-2. Sensor Installation Steps:

Unload the tire from the vehicle. Deflate and take the rubber tire out of the rim. Take out the valve on the rim and replace with the sensor.

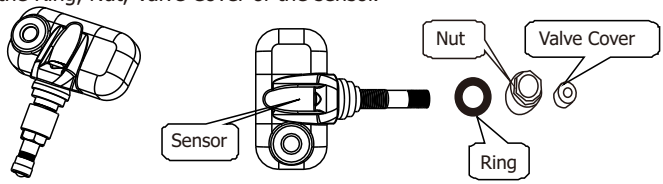
1. Unload the tire from the vehicle and deflate the tire.

2. Use tire changers to demount the tire and remove the original valve.

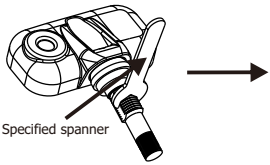




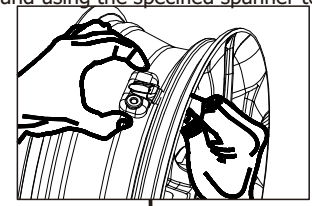
3. Take out the Ring, Nut, Valve Cover of the sensor.

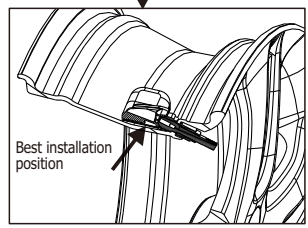


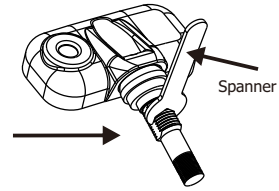
4. Use the specified spanner to loose the sensor 's valve firstly, put the sensor to the wheel hub and using hand to adjust the best installation position and tighten the sensor valve, and then take out the sensor and using the specified spanner to tighten the sensor again.



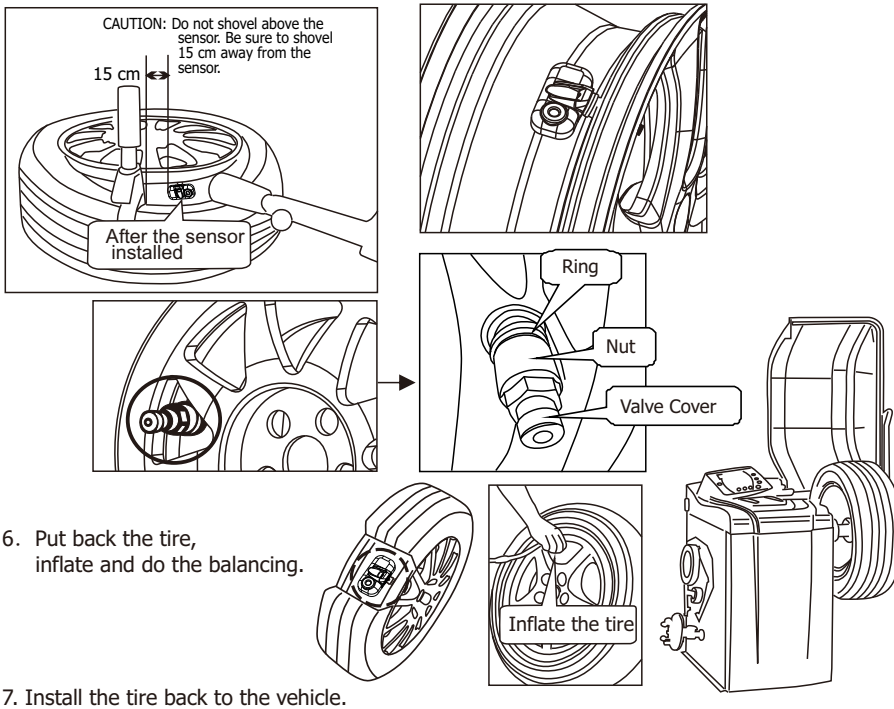
*Please keep the **specified spanner**for future usage because you have to use it when you uninstall or reinstall the sensor.







5. Install the sensor to the tire 's valve position and put back the ring, nut and valve cover to sensor valve and tighten the nut and valve cover.



6. Put back the tire, inflate and do the balancing.

7. Install the tire back to the vehicle.

3. SPECIFICATIONS

Operation Temperature	-30 °C to 80 °C
Storage Temperature	-40 °C to 85 °C
Pressure Range	0 to 116 psi (0 to 8 bar)
Pressure Accuracy	± 1.5 psi (±0.1bar)
Temperature Accuracy	± 3°C
Transmission Power	<10dBm
Transmission Frequency	433.92MHz
Battery Life	Up to 5years(based on the driving time is 2 hours per day)
Size	60(L) x 31(W) x 21(H) mm
Weight	48g

**Information in this manual is subject to change without notice.*

10. Technical Specification

10.1 Monitor Specification

Pressure setting range	1.0–9.9BAR(16–99PSI)
Working temperature	–20℃～80℃
Storage temperature	–30℃～85℃
Input Voltage	DC 5V
Temperature setting range	–25℃～93℃
Frequency	433.92 MHz
Size	84 (L) * 66 (W) * 23 (H)mm
Weight	82 g

10.2 Sensor Specification

Working temperature	–40 °C ~ +80 °C
Storage temperature	–40 °C ~ +85 °C
Pressure range	0~8 bar (0~116 psi)
Pressure Accuracy	± 1.5 psi (± 0.1 bar)
Temperature Accuracy	± 3 ℃
Transmission Power	<10dBm
Transmission	433.92MHz
Battery life	⩾2 Yrs
Dimenson	21 (Φ)X17.5 (H) mm
Weight	9 g

11. Friendly Reminder

(1) Please use the system correctly in the right condition. The distributor is not liable for damages from the miss-use.
(2) Installation should follow the instruction guide, if any damage occurs due to the wrong installation, the distributor is not liable for it.
(3) the content and specification are subject to change without prior notice. Pictures in the article are just for illustration. Please take the actual product for reference.
(4) Please be careful not to damage the sensor during tire removal.