

Tire Pressure Monitoring System

TPM-Q104

User's Manual

Congratulations to your purchase of **TPMS**, which will be a valuable addition to your vehicle for helping you to drive safer. **TPMS** automatically monitors your vehicle tires, and will immediately alert you of abnormal tire pressure and/or temperature, thereby providing timely warnings to you to take corrective actions. In addition, **TPMS**'s digital display makes tire pressure maintenance easy, and you no longer need to manually checking tires with a pressure gauge. Consequently, your tires can easily be kept in an optimal operating condition. The resulting benefits are obvious: reduced uneven tire wear, reduced severe tire damages, reduced air loss related tire failures, increased tire lives, improved fuel efficiency, improved vehicle braking and handling. Best of all, **TPMS** can help you to drive with enhanced vehicle safety on the road, and with less worry of flat tires and blowouts.

Parts List

Qty.	Description	Image
1	Display Unit (TPM-RDS)	
4	Sensor Unit (TPM-Q104)	
1	SPANNER (TPM-ST)	

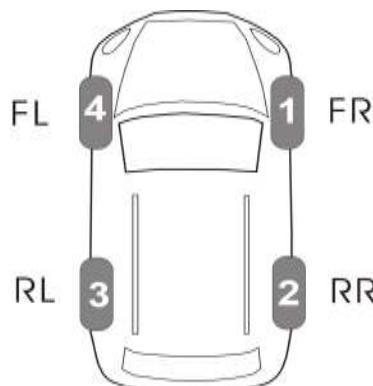
Display Installation

Put the display unit (TPM-RDS) power plug into the cigar lighter in the driving room.



Sensor Installation

- a) Clean up the tire valve first.
- b) Screw the sensor on the valve stems.
- c) Match sensor number with the wheel location as showed below.
- d) Tighten the fixing screws on the sensor with the spanner.



Operation

After installation, the system operates automatically and continuously. When vehicle power turns on, the display will show the current tire pressure continuously. Press the Control key the Display will show each individual tire pressure and alarms by each key-push. Press the Setup key, the Display will switch to show the pressure and temperature alternate. Every showing will be 8 seconds. Press the Setup key again, the Display will switch back to show the pressure continuously.

When the tire pressure and temperature is abnormal, the corresponding tire indicator(s) flash and the warning icon(s) are illuminated with 4 seconds alarm.



Pressure Showing

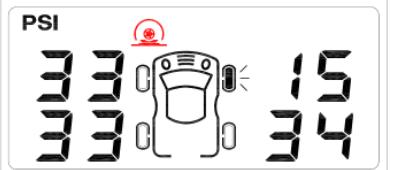
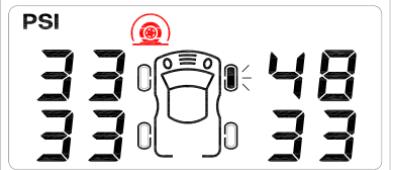
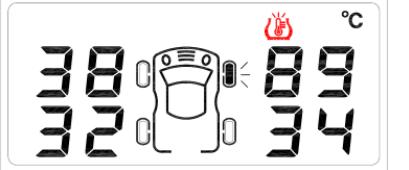
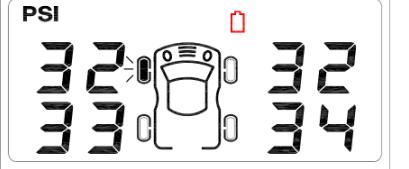
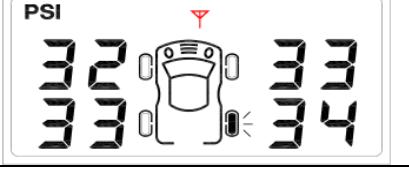


Temp. Showing



Warnings

Upon detection of abnormal tire pressure and/or temperature, the system will display one of the following warnings.

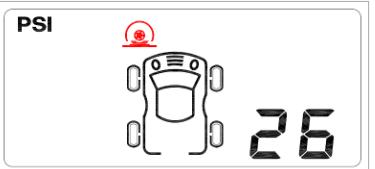
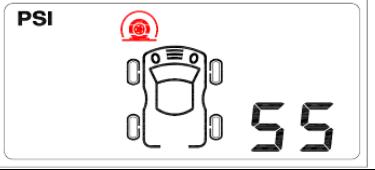
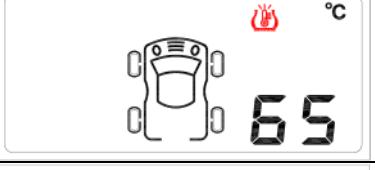
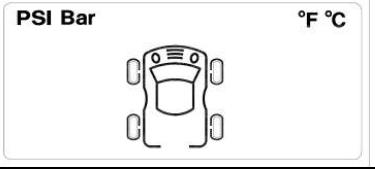
Low tire pressure The tire icon is hollow; indicating tire pressure is low or tire is rapidly losing air.	
Slow air leak The tire icon flash between 2/3 full to 1/3 full ; indicating tire pressure depletion of 2 Bar within 2 to 10 minutes.	
High tire pressure The tire icon is full with an outer shell; indicating the tire pressure is too high.	
High temperature The high-temp icon is visible; indicating tire temperature is too high.	
Low Battery The power in Sensor's battery is insufficient.	
No Sensor Signal Can not receive the signal from the Sensor.	

Warning Setup Interface

The user may adjust the warning threshold for tire pressure and temperature, as follows:

- Press and hold the control button and connect the vehicle power. After 3 seconds the system enters Warning Setup Interface. Release the setup button.
- The first screen is for setting up the Low Pressure warning threshold. You may traverse the different setup screens by pressing the setup button again.
- When in a certain setup screen, press the control button changes the threshold setting showed on the screen.
- Press the setup button exits the setup for that particular screen.
- Press the setup button again exits Warning Setup mode.
- Turning vehicle power off before finish cancels the setup.

The last screen is the Unit Selection, there are PSI Bar C and F available.

Low Pressure Warning threshold can be set to in-between 1.2 Bar to 9.0 Bar. Default is 26PSI.	
High Pressure Warning threshold can be set to the sum of Low Pressure warning threshold plus 1 to 13.7 Bar. Default is 55PSI.	
High Temperature Warning threshold can be set to in-between 70°C to 110°C.	
Unit selection There are PSI Bar C and F available. (1) PSI BAR (2) F C	

Display Control

- A warning will continue be displayed until the cause of warning went away.
- When multiple warnings occurred, all warning will be displayed..
- Pressing the control button for 3 seconds will clear the warning display.
- If the abnormal situation persists, warnings will come back even if it was cleared.

Retrain System after Tire Rotation

After tire rotation the system must be retrained for displaying the correct tire locations, the steps are as follows:

- Press and hold the control button of the display and connect the vehicle power. After 6 seconds (and passed by the Warning Setup mode) the system enters Tire Setup mode. The No. 1 (FR) tire indicator starts blinking.
- Loosen the sensor and release 0.2 Bar of air from the No.1 tire, which triggers its sensor to send out a signal. Upon receiving the signal, the system sets up No.1 tire location mapping and then moves on to the No. 2 (RR) tire (No. 2 indicator blinks).
- Repeat above step for the remaining tires. The setup order must always be tire No. 1, No. 2, No. 3, and lastly No. 4. After successfully retraining the No. 4 (FL) tire the system exits the Tire Setup mode automatically.
- Refill tires to the proper air pressure.
- During vehicle power off before finish cancels the setup.

Specification

SENSOR

Battery Voltage	3V
Battery Shelf Life	10 Years (25 °C)
Battery Capacity	120mAh
Transmit Power	≤ -35dBm
Modulated Mode	OOK
Static Current:	1.6uA ~ 2uA
Transmitting Current	0.7mA ~ 1mA
Storage Temperature Range	-45 °C ~ 135 °C
Operating Temperature Range	-40 °C ~ 125 °C
Operating Humidity	100 %
Operating Frequency	433.92 MHz
Pressure Monitoring Range	0 ~ 6Bar
Pressure Reading Accuracy	

Temperature(°C)	Pressure Reading Accuracy (Bar)
125	±0.3
25	±0.1
0	±0.1
-10	±0.1
-40	±0.3

Temperature Reading Accuracy $\pm 4^{\circ}\text{C}$

Sensor Weight 12g

DISPLAY

Power Voltage	12VDC
Operating Current	≤ 20mA
Operating Temperature	-20 °C ~ 85 °C
Humidity	Up to 95%
Dimension	67mm×55mm×13mm
Weight	55g

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.

Caution

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Labeling

FCC ID: F2OTPMQ104

Model: TPM Q104

Applicant: Nae Woi Korea.,ltd.