

### User manual

EN	Tire Pressure Monitoring System		
FR	R Système de contrôle de la pression des pneus		
RU	Система контроля давления в шинах	31	
DE	Reifendruck-Überwachungssystem	46	
ES	ES Sistema de control de presión de neumáticos		
IT	Sistema di monitoraggio della pressione dei pneumatici	76	

PT Sistema de monitorização da 91 pressão dos pneus



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- Internal sensor installation should be carried out by a specialist workshop.
- Every sensor has its dedicated tire position, please carry out the installation accordingly.



- 1. Tire position indicator ( Front Left = F.L. )
- 2. Tire temperature data
- 3. Solar energy charging indicator
- 4. Display battery indicator
- 5. Tire pressure data
- 6. Tire position indicator ( Rear Left = R.L. )
- 7. Tire position indicator ( Front Right = F.R. )
- 8. Temperature unit
- 9. Warning indicator
- 10. Pressure unit
- 11. Tire position indicator ( Rear Right = R.R. )

The icon " ", "  $\blacksquare$  "and the corresponding tire data will flicker if any warning show up.



- This product is equipped with vibration detection function, the vibration caused by closing the door before driving, triggers the display into the driving mode.
- The display backlight can be increased by manually pressing the buttons on board the display.
- In case of the emergency, the alarm will go off and the display backlighting will be increased immediately.

#### 3.1 Turn on/off display

1. Press any button for 3 seconds to turn on the display. Then release the buttons and the LCD screen shows up as below:



#### 3.2 Install display in vehicle

1. Choose a suitable and well-lit position that can easily be seen.





- To get best wireless signal transition, do not place display close to the transmission system in the car.
- Try to place the device on a flat surface.
- Do not place the display device on airbag.
- Peel off the protection film of the tape at the bottom of the display and mount the display on the chosen place.

#### 3.3 Install sensors in tires

1. Loosen the wheels following standard tire dismantling procedure.

2. Remove the original valve from vehicle, separate tire and hub with the help of a shovel to up to 10-15 cm gap.



Replace original valve with Philips LT50i internal sensors according to tire position identified on sensors.



Attention: Please pay attention to the valve stem direction of seensors.

 Install the metal washer and hexagonal nut in turn on the outside of the wheel hub. Then tighten up the valve cap to the sensor.



- 5. Reassemble and inflate the tire to standard pressure.
- 6. Calibrate tire overall balance on dynamic balance detector to ensure best tire balance and driving experience. And assemble tires back into the vehicle. And assemble tires back into the vehicle after adjust the counterweight by putting the weight bar.







Every sensor has its dedicated tire position, please carry out the installation accordingly to ensure correct data display

- The display device should show the pressure and temperature value of the tires after sensor installation is completed. If not, please refer to Q4, Chapter 7 of this manual.
- \* Please visit a professional service centre/garage to install the internal sensors

#### 4.1 Alarm function

1. Low pressure alarm mode - Tire pressure lower than 1.7 Bar.



2. High pressure alarm mode - Tire pressure higher than 3.3 Bar.



3. Leakage alarm mode



 Sensor signal lost alarm mode - Display device can not receive sensor signal



5. High temperature alarm mode - Tire temperature higher than 80°C.



 Sensor low battery alarm mode - The pressure value will be shown "L 0".



7. Display low battery alarm mode - Battery empty icon



#### 4.2 Safety warnings

Low pressure / High pressure / High temperature:

- Warning sound stops after 30 seconds, alternatively it can be manually stopped by pressing any button.
- Warning sound lasts for 5 seconds every minute until the situation is resolved.

Sensor signal lost/Sensor low battery:

- Warning sound will not remind driver after warning two times.
- The icon " (U) ", " I " and the corresponding tire data will be flashing until the situation is resolved.

Leakage:

- Warning sound stops after 30 seconds, alternatively it can be manually stopped by pressing any button.
- Warning sound will not remind driver after beeping for 5 times.
- The icon "  ${}^{<\!\!\!\!\!U}$  ", "  $\blacksquare$  " and the corresponding tire data will be flashing until the situation is resolved.

#### 5.1 Sensor programming setting

Each sensor of the product has been programmed with display device according to the sensor position.

In case of tire position is changed, please re-program the sensors manually, by following the step by step process given below:

 Press """ button for 5 times continuously, the display will beep once and enter the programming mode.



 Press " 
 " or " 
 " button to select the corresponding tire ( Tire position sequence: F.L.>F.R.>R.R.>R.L.).



- 3. Deflated the corresponding tire, until the display receives. the data.
- 4. Press "𝗡" button once, the display will beep to save the data.



5. Press " ➤ " button to program the next sensor.



- 6. Repeat step #3 ~ #5 to program other sensors.





Please make sure the sensors are correctly programmed to ensure the correct information is displayed.

#### 6.1 Solar Charging

Display device is equipped with built-in battery powered by a solar panel. The battery has a back-up time of up to 50 hours in the driving mode.

Please do not cover the solar panel or place the display device in a place that do not have sunlight.

In addition, there is a micro-USB port is available for charging. It is recommended that the device is charged using a micro-USB cable before the first time use.



Do not cover solar panel

#### 6.2 5 year internal sensor battery life

The sensor battery life is over 5 years for average use of 2 hours daily.

#### 6.3 Heat-resistant battery

The display is equipped with a built - in LFP battery designed to provide resistance against high ambient temperature environment.

#### 6.4 High quality sensor

Using IATF 16949:2016 certified production line and tested in accordance with OE quality test plan, the sensor has reliable performance and long life time even in extreme environment.

#### 6.5 Intelligent sleeping mode for power saving

This display device is equipped with vibration switch. When you start the car, the display immediately starts to function and Gsensor inside tire sensor will be activated. When your car's ignition off, the TPMS will go into the sleeping mode after sometime.

# 7 Q&A

- Q1 Why regular check on tire is still needed after installation of the product ?
- A: This product monitors the pressure and temperature of your tires, by determining whether the value is in Pre-set safety range or not. However, it cannot prevent or avoid any accident caused by abnormal tire pressure or temperature.

Users should understand the condition of tire with the assistance of the product, and make sure to drive with normal tire condition.

#### Q2 Why display device cannot be turned on ?

A: Usually due to low battery level. Please charge the display by using USB cable.

This product is designed to work with minimum power consumption, yet when the low battery signal is on, please charge the device either by putting it under the sunlight or by USB cable.

# Q3 Why the background color of the display changes sometime ?

A: This usually happen after car being exposed in sunshine for a long time and the temperature inside the car is very high. The working temperature of the LCD display is -20~70°C. When the temperature is too high, the background of the LCD may become bluish, but the LCD is not damaged. When temperature goes down, the display will be back to normal.

#### Q4 Why there is no data displayed after sensor installation ?

A: Please make sure display is power ON. If this still happens. Please re-program the sensors and activate the sensors by driving up to 25 km / h for at least 3 minutes to restore the connection between display and sensors.

## 8 Technical Specification

Internal sensor				
Working temperature	[°C]	<del>-</del> 40~105		
Water/dust proof	IP	6k 7k		
Battery life span*	[yr]	5		
Tire pressure monitoring range	[bar]	0~8		
Tire pressure monitoring accuracy	[bar]	±0.1		
Tire temperature monitoring range	[°C]	-40 ~ 99		
Tire temperature monitoring accuracy	[°C]	± 3		
Sensor dimensions	[mm]	41.5 x 71.5		
Sensor weight	[g/pc]	$26 \pm 0.5$		

Display						
Charging voltage	[V]	5				
Battery type	n.a.	LFP				
Charging port	n.a.	Micro-USB				
Working temperature	[°C]	-20~70				
Storage temperature	[°C]	-40~80				
Battery charging time	[hr]	4				
Battery autonomy**	[day]	21				
LCD size	[mm]	71.4 x 15				
LCD display technology	n.a.	FFSTN				
Display content	n.a.	Pressure / temperature for				
		4 tires simultaneously				
Display dimensions	[mm]	103 x 73 x 27				
Display weight	[g]	81.5±2				

\* Based on 2 hours driving per day.

\*\* After battery fully charged.

Tolerance not included for all specification related to timing. Air pressure unit: 1 Bar=14.5 PSI=100K Pa=1.02 Kgf/cm<sup>2</sup>

## 9 Disclaimer

- 1. Please read this user manual carefully before installation.
- This product can be used for vehicles with tire pressure below
   3.5 Bar including sedan, sports car, SUV, BPV and pickup truck.
- This product monitors the pressure and temperature of your tires, by determining whether the value is in Pre-set safety range or not, However it cannot prevent or avoid any accident caused by tire pressure or temperature abnormality.

Drivers should be aware of the condition of tire with the assistance of this product, and ensure driving with normal tire condition.

Badly abrased tires should not be used.

- Drivers should check tires immediately when there is an alarm or warning flash light on the display.
- The product cannot provide warning in case of a sudden accident such as a collision.
- 6. Do not change the settings while driving.
- To avoid wireless signal interference and receiver malfunction, please do not use wireless devices that are not certified by standard in car.
- Please strictly follow the instructions for the sensor installation given in this manual.

- Do not open, fix or modify any components of this product. Internal sensors can only be installed by professionals or technicians.
- 10. Sensors battery life is related to actual driving mileage.
- 11. It is normal that tire pressure increased by 0.1-0.3 Bar when driving after a while then parking, due to temperature increase by the friction.
- 12. This system cannot replace regular tire check-up. User should still do regular tire examination to ensure safe driving.
- 13. Do not expose the battery to high temperature or direct flame.
- 14. Discharge and recharge the battery to the full capacity, every six months to preserve the battery life.



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