

### User manual 用户手册



EN 简体中文 Tire Pressure Monitoring System 轮胎压力监测系统

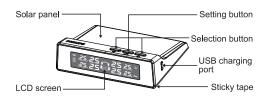
Get information and support for your product at www.philips.com/automotive

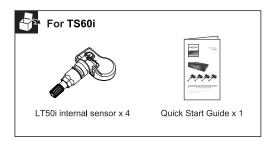
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# 1

### **Product Overview - Display device**

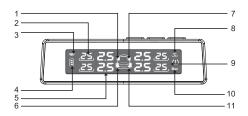






- Internal sensor installation should be carried out by a specialist workshop.
- Every sensor has its dedicated tire position, please carry out the installation accordingly.

### **User Interface**



- 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 "⊕", "∎"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 Quick Start

### 3.1 Turn on/off display

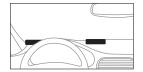
 Press any button for 3 seconds to turn on the display. Then release the buttons and the LCD screen shows up as below:



 Press "◀" and "▶" at the same time for 4 seconds to turn off the display.

#### 3.2 Install display in vehicle

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



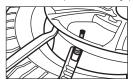


- To get best wireless signal transition, do not place display close to the transmission system in the car.
- Try to place the device on a flat surface.
- . Do not place the display device on airbag.
- Peel off the protection film of the tape at the bottom of the display and mount the display on the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

#### 3.3 Install sensors in tires

1. Loosen the wheels following standard tire dismantling procedure.

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 sensor direction.

- 4. Reassemble and inflate the tire to standard pressure.
- 5. 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 Function Description

#### 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□".



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 " ω ", " **1** " 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 " W ", " I " and the corresponding tire data will be flashing until the situation is resolved.

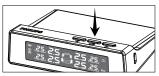
# 5 System Setting

#### 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.



2. 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 "" 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.
- 7. After all sensors are programmed, hold " " " button for 4 seconds, the display will beep to save the tire data and exit the programming mode.





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

### **Main Features**

### 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 G-sensor inside tire sensor will be activated. When your car's ignition off, the TPMS will go into the sleeping mode after sometime.

### 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 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.

### Technical Specification

Internal sensor		
Working temperature	[°C]	-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]	<del>-4</del> 0 ~ 99
Tire temperature monitoring accuracy	[°C]	± 3
Sensor dimensions	[mm]	41.5 x 71.5
Sensor weight	[g/pc]	26 ± 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	[9]	81.5 ± 2	

<sup>\*</sup> Based on 2 hours driving per day.

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>

<sup>\*\*</sup> After battery fully charged.

### g 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
- 3. 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.

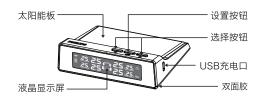
- Do not open, fix or modify any components of this product. Internal sensors can only be installed by professionals or technicians.
- 10. Sensors battery life is related to actual driving mileage.
- 11. It is normal that tire pressure increased by 0.1-0.3 Bar when driving after a while then parking,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



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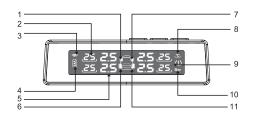
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- 内置式传感器需由专业人员安装
- 安装时请注意传感器位置



- 1. 轮胎位置指示灯(左前)
- 2. 轮胎温度数据
- 3. 太阳能充电指示
- 4. 电池电量指示
- 5. 轮胎压力数据
- 6. 轮胎位置指示灯(左后)
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- 11轮胎位置指示灯(右后)

当有警报出现时,图标 "ω" 、"■" 和相应的轮胎压力将以闪烁警示驾驶者

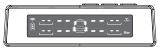


- 本产品显示器内装有震动触发装置,正常关车门时 对车体产生的震动会触发显示器点亮工作。
- 车辆行驶时、按任意键可提升背光亮度。
- 如轮胎气压或温度异常发生报警,显示器将提升背 光亮度。

## 3 快速入门

### 3.1 显示器开机/关机

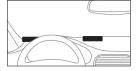
1. 按任意键3秒来打开显示器,随即松开按键,此时显示屏显示如下:



2. 同时按"◀"和"▶"键4秒关闭显示屏。

### 3.2 在车内安装显示器

依据个人习惯在仪表板上选择合适位置,并清洁此处以便下步安装。





- 为达到最好接收效果,请将显示器固定位置尽量远 离车内导航系统主机,并且将显示器安放在仪表板 平整处,避免安装在凹陷区域。
- 请勿将显示器放在安全气囊上。
- 2. 撕下显示器底部双面胶上的保护膜,将显示器粘在仪表板上。

### 3.3 内置式传感器安装

1. 按照轮胎拆卸标准流程将轮胎卸下。

客轮胎放气并放置在拆胎机上,用分离铲将轮胎与轮毂分离出10-15厘米





注意: 请注意传感器与轮毂的贴合方向

- 4. 将轮胎重新安装好并充气到标准压力值。
- 将轮胎放置在动平衡机上完成动平衡处理。 再将轮胎重新 安装回车体。







为保证显示正确,请务必按显示器上标注的位置指示 安装在对应轮胎。

- 6. 当传感器安装完毕,显示器即显示出轮胎压力和温度值。 如未显示,请参阅本手册第7章Q4。
- \* 内置式传感器请到专业服务点进行安装

# 4 功能描述

### 4.1 报警功能

1. 低气压报警-当轮胎压力值低于1.7Bar



2. 高气压报警- 当轮胎压力值高于3.3 Bar



3. 漏气报警



4. 信号丢失报警 - 行驶状态下显示器无法正常接收传感器信号



5. 高温报警-当轮胎温度值高于 80℃.



6. 传感器低电量报警-相应低电量的轮胎位置显示 " L 🛭 " .



7. 显示器低电量报警-电池图标显示空格



### 4.2 警报解除

低气压 / 高气压 / 高温:

- 报警蜂鸣器30秒后自动静音, 或按任意键静音。
- 在报警问题解决前,蜂鸣器每间隔一分钟响五秒来提醒用户。

### 信号丢失 / 传感器低电量:

- 报警蜂鸣器响两次之后不再响起。
- 在报警问题解决前,图标"""、"■"和相应的轮胎压力 将以闪烁警示驾驶者。

#### Leakage

- 报警蜂鸣器30秒后自动静音,或按任意键静音。
- 报警蜂鸣器响五次之后不再响起。
- 在报警问题解决前,图标"○","■"和相应的轮胎压力将以闪烁警示驾驶者

## 5 系统设置

### 5.1 传感器重新匹配设置

本胎压监测系统在出厂前已根据传感器上标注的位置与显示 器配对。

当安装了内置式传感器的轮胎位置发生改变时,请根据以下 设置手动在显示器中重新配对传感器位置。

1. 连按 "✔" 键五次,显示屏将发出 "Bi "声进入匹配状态。



 短按 "◄" 或 "▶" 键来选择需匹配的轮胎 (轮胎位置顺序: 左前>右前>右后>左后)。



3. 将显示器靠近装有传感器的轮胎,然后选定匹配的轮胎进 行放气, 直到显示屏显示数据。 4. 按"设置"**プ**"键,显示屏将发出"Bi"即可保存信息。



5. 按 "▶"键匹配下一个传感器。



- 6. 重复步骤 #3-#5 匹配所有传感器。
- 6. 所有传感器匹配完毕后,长按 "**৵**" 键4秒,显示屏发出 "Bi" 声,保存并退出匹配模式。





为保证显示器正确显示轮胎压力和温度值,请确保传感器和位置在显示器中正确设置。

### 6.1 太阳能供电

显示器内置由太阳能板充电的电池,在电池满电情况下可保证显示器行驶状态下使用长达50小时,在停车状态下连续使用一个月。

请勿遮挡太阳能板,或将显示器置于影响接收阳光的地方。 显示器也配有Micro USB插口,可用任何5V USB充电设备 充电。

建议在第一次使用前用充电设备将显示器充满电。



请勿覆盖太阳能板

### 6.2 长达5年的内置式传感器寿命

以每天开车2小时计算、传感器寿命可长达5年。

#### 6.3 耐高温电池

飞利浦胎压监测系统为车载环境设计,显示器特别内置耐高 温磷酸铁锂电池。

### 6.4 车规级传感器

以IATF 16949:2016 质量标准认证的生产线生产,通过车规级严苛测试以保证传感器即使在极端环境下仍保持高可靠性。

### 6.5 智能休眠模式

飞利浦胎压监测系统能够自动检测您爱车的状态, 启动汽车 时,接收器自动工作,停止汽车后接收器自动进入休眠模式。

# 7 常见问题

### Q1 为什么安装了飞利浦胎压检测系统后仍需定期检查轮胎?

A:本系统可对汽车轮胎进行监测和报警,但不能保证避免因 轮胎气压不足引起的突发事故的发生,用户应该借助本系 统了解汽车轮胎的压力状况,并确保汽车在正常的轮胎压 力状况下行驶,并避免使用质量不好或磨损严重的轮胎。

### Q2 为什么显示器无法开机?

A: 通常是由于显示器电量过低自动关机。请使用USB充电设备给显示器充电。

飞利浦胎压监测系统以低功耗工作,但是当电池图标显示 空格时,请立即将显示器连接到充电设备充电。

### Q3 为什么有时候液晶显示器底色变蓝?

A:通常是由于车辆长时间暴晒和车内温度升高导致。液晶显示屏的正常工作温度为-20~70℃,当车内温度过高时,显示器背光颜色会略变蓝,此现象不影响所有显示数字的正确性,当温度降低显示器颜色恢复正常。

### Q4 为什么传感器安装完毕后显示器无数字显示?

A: 请按第2章步骤先将显示器开机。如果显示器仍然无显示, 请重新匹配传感器, 再将车辆以大于25公里的时速行驶3分钟以上, 以重新激活传感器和显示器的连接。

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内置式传感器			
工作温度	[°C]	-40~105	
防尘/防水等级	IP	6k 7k	
使用寿命*	[yr]	5	
轮胎压力检测范围	[bar]	0~8	
轮胎压力检测精度	[bar]	± 0.1	
轮胎温度检测范围	[°C]	<b>-</b> 40 ~ 99	
轮胎温度检测精度	[°C]	± 3	
传感器尺寸	[mm]	41.5 x 71.5	
传感器重量	[g/pc]	26 ± 0.5	

显示器		
USB充电电压	[V]	5
电池种类	n.a.	LFP
USB充电口	n.a.	Micro-USB
工作温度	[°C]	-20~70
存储温度	[°C]	-40~80
USB充满电时间	[hr]	4
使用时间**	[day]	21
液晶屏尺寸	[mm]	71.4 x 15
液晶屏显示技术	n.a.	FFSTN
显示内容	n.a.	温度/压力 4轮同显
显示器尺寸	[mm]	103 x 73 x 27
显示器重量	[g]	81.5 ± 2
	1	

- \* 基于每天开车2小时
- \*\* 当电池充满电后

所有时间参数均有一定误差。

压力单位: 1 Bar=14.5 PSI=100K Pa=1.02 Kgf/cm<sup>2</sup>

## 9 免责申明

- 1. 使用本产品前请务必阅读本用户手册。
- 2. 本产品仅适用于轮胎气压在3.5Bar以内的车辆,包括轿车、跑车、越野车、商务车和皮卡车。
- 3. 本系统可对汽车轮胎进行监测,但不能保证避免因轮胎气压不足引起的突发事故的发生,用户应该借助本系统了解汽车轮胎的压力情况,并确保汽车在这正常的轮胎压力状况下行驶。

用户应避免使用质量不好或磨损严重的轮胎。

- 4. 当产品发出声音或光学警报时, 用户应尽快检查。
- 5. 本产品无法预报外力造成的突然性轮胎损坏。
- 6. 切勿在行驶过程操作本产品。
- 请勿在车内使用不满足国家无线电设备标准的无线设备, 以避免对本产品产生信号干扰,导致接收器无法正常接收。
- 请严格遵守此手册说明的传感器安装方式,由用户自行安 装传感器错误导致的产品失效和由此产生的后果本公司将 不予承担。
- 使用者不得自行打开,修理或改装本产品。內置式传感器需由 专业人员安装。
- 10. 传感器电池寿命与汽车的行驶里程有关。
- 11. 由于摩擦轮胎温度会升高,长时间行驶后轮胎气压也将会较停车时或行驶时间较短时升高0.1-0.3Bar,并非故障。

- 12. 用户在购买本产品后,务必正确填写保修卡并寄回经销商处,以便维护您的合法权益。
- 13. 安装本产品不能替代用户对汽车轮胎进行的定期检查, 以确保安全行驶。
- 14. 请勿将电池靠近火焰或暴露在高温环境下。
- 15. 建议将本产品每6个月完全放电再充电,以延长电池寿命。



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