



Solar powered commercial vehicle (adjustable wheel position) tire pressure monitoring system

(This product is available in two different pressure values: maximum pressure of 8bar /116Psi and 15bar/217Psi, depending on the pressure of the vehicle model.)

Product User Manual

Thank you for choosing our company's commercial vehicle tire pressure monitoring system. Please read the product manual carefully before using this product.
Wishing you a safe driving experience!

1.Kind Reminder

1. Please read this instruction manual before installing and using this product to avoid the system not working properly after installation. If there is anything unclear, please contact the seller's unit or call customer service for more information. Thank you!
2. This product can effectively monitor tires to prevent tire blowouts, but it cannot guarantee the prevention of any sudden accidents. Users should use this system to ensure that the vehicle is under normal tire pressure conditions and avoid using low-quality or severely worn tires.
3. Users are not allowed to open, repair, or modify this product on their own to avoid internal circuit damage and malfunction.
4. When the tire pressure and temperature are abnormal, this system can emit sound and light alarms through the receiver, and users do not need to constantly observe the system display to avoid affecting driving safety.
5. After equipping the system, we still strongly recommend that users regularly check the vehicle tires to ensure driving safety.

2.Product Introduction

(1) Introduction to Working Principle

The tire pressure monitoring system, abbreviated as TPMS, works by monitoring the internal pressure and temperature of the tire through sensors installed on the tire, and using wireless radio frequency technology to transmit the collected data information to a receiver installed in the cab. When the pressure or temperature inside the tire is higher or lower than the preset alarm threshold, the receiver will automatically issue a corresponding alarm to remind the user to pay attention to the tire status and handle it in a timely manner, thereby avoiding accidents such as tire blowouts and tire damage. Through the operation of this system, it can help drivers maintain the normal pressure of the vehicle. It can also improve the comfort and power performance of the vehicle; Effective prevention of tire blowouts and reduction of tire safety hazards; Reduce fuel consumption, minimize tire wear, and extend tire lifespan; Thus effectively reducing operating costs.

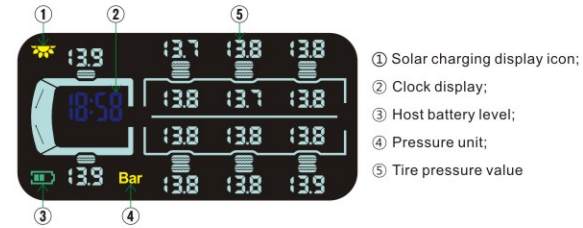
(2) Special instructions for using the product

1. During driving, due to the thermal expansion and contraction of the gas inside the tire caused by friction, there may be changes in air pressure and temperature, which are normal phenomena.
2. When the tire pressure is too high or too low, attention should be paid to preventing tire blowouts; It is recommended to maintain the standard tire pressure value for vehicle identification.
3. This product will monitor tires in real time and alert for abnormal situations. Drivers do not need to pay attention frequently while driving to avoid distraction and affecting driving safety.
4. Generally, tires will have normal natural air leakage, and the tire pressure value will decrease over time. This is a normal phenomenon and has no direct relationship with the installation of this product.
5. The sensor and display are wirelessly connected and have a sufficiently long transmission distance. The product design has multiple anti-interference functions, and the possibility of interference is extremely low, but it does not rule out the possibility of abnormal product use due to interference.
6. Please use this product correctly and within its permitted scope. If it exceeds its scope of use, our company will not be responsible for any consequences arising therefrom!
7. This product can monitor, display, and remind of abnormal tire pressure, but it cannot prevent tire blowouts from occurring.
8. If there are any modifications to the text content or product information in this manual, no further notice will be given.

(3) Product composition

The main page of the host is divided into three pages. The first page is a constant display page that only shows tire pressure, the second page displays tire temperature, and the third page displays sensor button battery level. The three pages require manual cycling with the right arrow key on the host to switch between displays. When the quantity is abnormal, it will jump to the corresponding page, and the corresponding tire icon will flash an alarm.

Page 1 (Tire Pressure Display Interface)



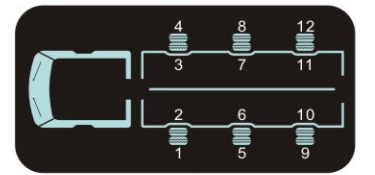
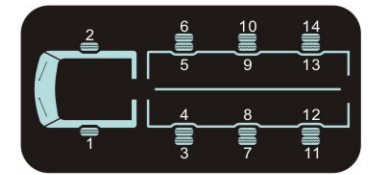
Page 2 (Tire Temperature Display Interface)



Page 3 (Sensor Battery Level Display Interface)



(4) Tire serial number corresponds to tire installation legend



Installation legend for adjusting the number of wheel positions

3.Installation instructions

(1) Receiver installation

1. Remove the receiving host and fix the bracket in a suitable position on the center console or windshield, and stick the bottom with 3M adhesive.
2. When using this product for the first time, first check if there is power. If there is no power or it does not turn on, please remove the USB cable and connect it to the USB port in the car for charging. The host adopts solar assisted charging. When the battery level of the host is found to be too low, a USB interface is needed to replenish the battery.

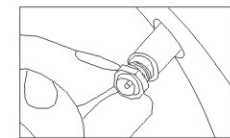
Precautions

- ① The receiver should be installed in a position that does not affect the line of sight;
- ② The receiver should be reinforced to avoid dropping during driving;
- ③ Please turn on the receiver before installing the sensor;
- ④ This product will automatically monitor tire pressure, temperature, and sensor battery level, and has a beep alarm. Drivers do not need to constantly pay attention to avoid being distracted while driving;

Sensor models and repeater accessories are subject to actual purchase by the user. The content of the manual is for reference only and is not included as standard equipment at the factory (needs to be purchased by oneself)

(2)Sensor installation

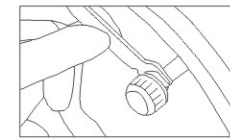
Installation of external sensors



① Tighten the anti-theft nut onto the intake valve nozzle



② Install the sensor onto the valve and tighten it



③ Use a metal wrench to reverse tighten the anti-theft nut



④ Installation completed, check for air leaks

Notes:

1. After installing the sensor, it is necessary to check whether the tire is leaking, and if necessary, apply soapy water to the air nozzle to confirm.
2. If air leakage occurs during installation and causes malfunctions, our company does not assume joint and several liability or direct or indirect liability.

4. System functions

Turn on/off the receiver

1. Left directional key (power on/off key)

- ① In the shutdown state, press and hold the left button for 5 seconds to turn on the device;
- ② Press and hold the left button for 5 seconds while the device is turned on to shut it down;
- ③ The brightness adjustment function button is displayed on the startup screen, with three levels of screen brightness that can be switched in a loop;
- ④ This button is used to press the "Select" and "Reduce" functions in the menu settings. The decrease rate of short press is 1, and the decrease rate of continuous short press is 3.

2. M key (menu key)

In the normal working state of the receiving host, long press the M key to enter the "menu settings", which also has the "confirm" function during the setting process.

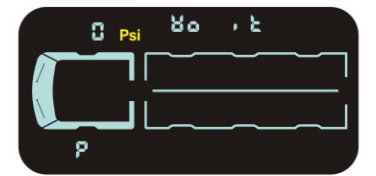
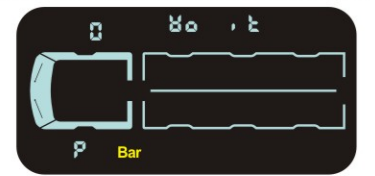
3. Right arrow key

- ① In the normal working state of the receiving host, switch the screen display function button for the main page, which is divided into three pages: the first page is the tire pressure value display page, the second page is the tire temperature display page, and the third page is the button battery power display page inside the sensor;
- ② This button is the "Select" and "Add" function keys in the menu settings. The short press reduction rate is 1 unit per press, and the continuous short press rate is 3 units per press.

5.System menu settings

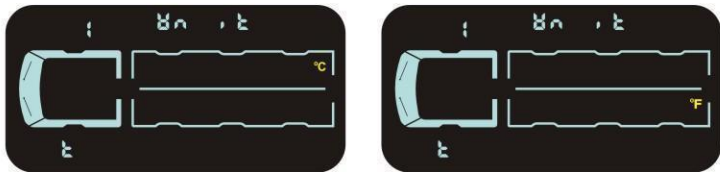
(1) Menu '0': Pressure Unit Setting

The host is in normal startup state. Press and hold the M key to enter the menu, and the '0' page will be displayed in the upper left corner of the menu bar. Short press the M key to set, and the pressure unit will flash. Press the left and right keys to switch to the appropriate pressure unit. The menu settings provide two pressure unit options, Bar and Psi. After selecting, press the M key to confirm, and the pressure unit will no longer flash. Long press the M key to exit the menu settings and return to the main page.



(2) Menu '1': Temperature Unit Setting

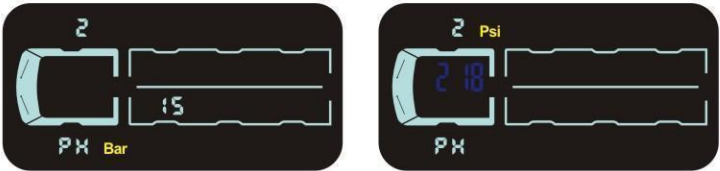
The host is in normal startup state. Long press the M key to enter the menu, right-click to switch to this menu, and the '1' page is displayed in the upper left corner of the menu bar. Short press the M key once to set, and the temperature unit will flash. Press the left and right keys to switch to the appropriate temperature unit. The menu settings provide two temperature units to choose from: °C and °F. After selecting, press the M key briefly to confirm, and the temperature unit will no longer flash. Long press the M key to exit the menu settings and return to the main page.



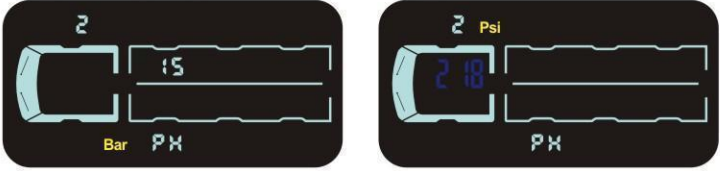
(3) Menu '2': High voltage alarm value setting

The host is in normal startup state. Long press the M key to enter the menu, right-click to switch to this menu, and the '2' page will be displayed in the upper left corner of the menu bar, while the 'PH' page will be displayed in the lower left corner. This page is the menu for setting the high voltage alarm threshold. The system defaults the high voltage alarm threshold to 15Bar/218Psi, and the adjustable range of the high voltage alarm threshold is 3.6Bar -18Bar (51Psi-262Psi). Select the menu and press the M key once to set it. At this time, the "PH" will flash at the front of the car (as shown in Figure 1), which sets the alarm threshold for the front two wheels. Continue to press the M key briefly once, and "PH" will jump to the body position and flash (as shown in Figure 2). "PH" will flash on the body to set the alarm threshold for the 12 wheels of the body. When the pH is flashing, press the left and right buttons to adjust the high voltage alarm threshold size. After selecting, press the M key briefly once to confirm, and press and hold the M key to exit the menu settings and return to the main page.

(a) Diagram of High Pressure Alarm Threshold Setting for Left and Right Front Wheels ①



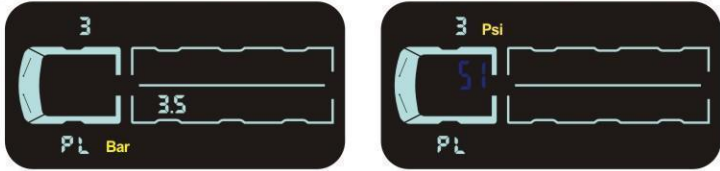
(b) Diagram of High Voltage Alarm Threshold Setting for Rear 12 Wheels of the Vehicle ②



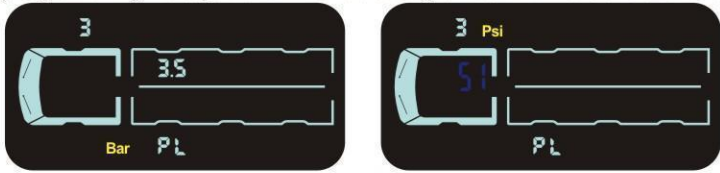
(4) Menu '3': Low voltage alarm value setting

When the host is in normal startup state, long press the M key to enter the menu, right-click to switch to this menu, and the '3' page will be displayed in the upper left corner of the menu bar, with 'PL' displayed in the lower left corner. This page is the menu for setting the high voltage alarm threshold. The system defaults the high voltage alarm threshold to 3.5Bar/51Psi, and the adjustable range of the high voltage alarm threshold is 2.0Bar-13.8Bar (29Psi-200Psi). Short press the M key once to set the menu, and the "PL" will flash at the front of the car (as shown in Figure 1 below), which sets the alarm threshold for the front two wheels. Repeatedly press the M key once, and the "PL" will jump and the body position will flash (as shown in Figure 2). The "PL" flashing on the body will set the alarm threshold for the rear 12 wheels of the body. Set when PL flashes, press the left and right buttons to adjust the high voltage alarm threshold size.

(a) Diagram of Low Pressure Alarm Threshold Setting for Left and Right Front Wheels ①

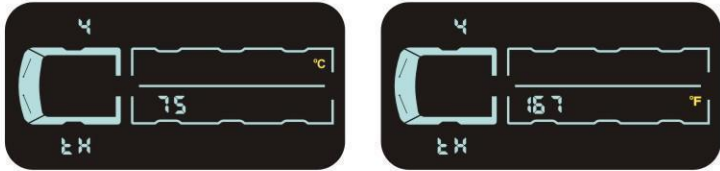


(b) Diagram of High Voltage Alarm Threshold Setting for Rear 12 Wheels of the Vehicle ②



(5) Menu '4': Temperature Alarm Value Setting

In the normal startup state of the host, long press the M key to enter the menu, and right-click to switch to this corresponding menu. The system defaults to a high voltage alarm threshold of 75°C/167°F, and the temperature threshold can be adjusted within the range of 60°C -90°C (140°F -194°F). The '4' page is displayed in the upper left corner of the menu bar, and 'tH' is displayed in the lower left corner. Short press the M key once to set, and the low voltage alarm threshold will flash. Press the left and right keys to adjust the temperature alarm threshold. After selecting, short press the M key to confirm. Long press the M key to exit the menu settings and return to the main page.



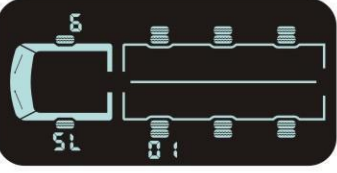
(6) Menu '5': Sensor Independent Pairing Settings

In the normal startup state of the host, long press the M key to enter the menu, and press the right key to switch to this corresponding menu. The '5' page is displayed in the upper left corner of the menu bar, and the wheel position number '1' is displayed in the lower right corner. Short press the M key once to set, and the wheel position number and corresponding wheel icon will flash at the same time. Press the left and right keys to switch between the '1-14' numbers (sensor numbers correspond to 1-14). Repeat the short press of the M key once, and the eight position sensor ID in the middle will start flashing. At this time, screw the new sensor corresponding to the wheel position number onto the air nozzle, and repeat the pairing operation of deflation until the flashing original sensor ID is replaced with the new sensor ID and stops flashing. At the same time, the corresponding wheel position number will start flashing, indicating Sensor pairing successful. Pair other wheel position sensors separately and repeat the above operation. After pairing is complete, long press the M key to return to the main page.



(7) Menu '6': Wheel Position Switching Settings

When the host is turned on normally, the factory default settings correspond to the wheel position settings, and the number of wheel positions for other vehicle models needs to be adjusted in this menu setting. Long press the M key to enter the menu, press the left/right keys to switch to this corresponding menu. The '6' page is displayed in the upper left corner of the menu bar, and the wheel position number 'SL' is displayed in the lower left corner. Short press the M key once to set, and the wheel position number will start flashing. The corresponding tire icon will also start flashing. Repeat the short press of the M key once, and the tire icon will disappear, indicating that this wheel position will be cancelled and the wheel position number will be transferred to the next wheel position (for example, if the left front wheel is the first wheel, after canceling this wheel, the first wheel will be replaced by the original second right front wheel, and so on for other wheels). Repeat the above settings for other wheel switching settings. After completing the settings, long press the M key to return to the main page.



(8) Menu '7': Time Setting

When the host is in normal power on state, long press the M key to enter the menu, press the left/right key to switch to this corresponding menu, and the '7' page will be displayed in the upper left corner of the menu bar, with the time displayed in the front of the car icon. Short press the M key once to set the time. The first short press of the M key is the "clock" for setting the time, and the two digits of the clock will flash. Press the left/right keys to increase or decrease the setting. The second short press of the M key is the "minute" for setting the time, and the two digits of the minute will flash. Press the left/right keys to increase or decrease the setting. After setting the corresponding time, long press the M key to return to the main page.



(9) Menu '8': Restore factory settings (this setting should be operated with caution)

When the host is in the special working state, long press the M key to enter the menu, press the left/right key to switch to this corresponding menu, and the '8' page will be displayed in the upper left corner of the menu bar. Press the M key twice in a row, and the host will turn black. After the display is restored, the main page will all display '00', indicating that the factory settings have been successfully restored. (Note: This recovery setting will restore all settings of the host to their default settings, including pressure units, temperature units, alarm thresholds, and original factory paired data. This operation should be performed with caution.)



Display page after recovery

(10) Menu '9': Sensor pairing data recovery setting (this setting needs to be operated with caution)

When the host is in Baote working state, long press the M key to enter the menu, press the left/right key to switch to this menu, and the '9' page will be displayed in the upper left corner of the menu bar. Press the M key twice in a row, and the host will display a black screen. After normal display, the main page will show "00", indicating that the sensor data has been restored to factory settings. After all new sensors are reinstalled on the corresponding wheel positions, the host automatically receives the pairing ID. Displaying the air pressure value indicates successful pairing.



Display page after recovery

6. Product Technical Parameters

Number	Project	Specifications
1	Input voltage	4.5 V~5V (USB)
2	Operating Temperature	-30°C ~ 80°C
3	High frequency demodulation method	FSK
4	Operating frequency	433.92 MHz±30KHZ
5	Battery capacity	Built in 1000mAh lithium-ion battery

FCC Caution:

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.

Any 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.

To maintain compliance with FCC 's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.