

Manual

User's instruction

TPMS

Tire Pressure Monitor System

Article 5032-serial



DESCRIPTION

The system consists of 1 monitor and up to 22 sensors. 1 sensor at each wheel, easy to fit, replace or change to another location. Sensor codes can be loaded automatically.

Alt 1) The monitor can be used hand held or be fitted permanent close to the garage or parking where it will read tyre pressure from all wheels used.



Alt 2 The monitor can also be fitted close to the driver's seat and read tyre pressure continuously during run.



SPECIFIKATION

Sensor spec 5102

- Operating temperature -40...80°C
- Storage temperature -40...85°C
- Operating area: 0-13bar
- Pressure accuracy: +/- 0.1bar
- Temp. accuracy: +/- 3°C
- Fast alert >0,2bar change within 60s
- Transmit frequency: 433.92MHz
- Battery life / type: >2year, CR2032
- Transmit distance: 30m
- Height :23mm, diam:25mm
- Weight: 15,4 gram
- Car valve (even EM-valve exist)

Monitor spec 5032

- Operating temperature -20...70°C
- Storage temperature -30...85°C
- Operating voltage: 5-24V. USB –type C
- Size: 103*77*24 mm **New**
- Weight: (incl. lithium battery) 116g
- Operating time on battery: > 7days
- Battery charge shown in 4 steps
- Current consumption: About 2W
- Run time on battery: >1week
- Pressure sort : Bar, PSI, kPa or kg/kvcm
- Choose temp sort: Fahrenheit or °C
- Sleeping mode when not in use
- Alert limits separate on 6 axles **New**
- Alert limit max temp: -50...125°C **New**

ALERT appear when:

1:Low pressure, **2:**high pressure, **3:**Sudden pressure drop,
4:high tyre temp **New**, **5:**Monitor low battery, **6:**sensor low battery, **7:**Lost sensor signal

INSTALLATION / PROGRAMMING

1. Check package, all devices are included
2. Fill up with correct pressure in all tires.

Wireless programming sensor ID codes. (recommended)

3. Fit all sensors, or read in all codes unfitted according to correct position on the vehicle. If codes already programmed from supplier go to point 16
4. Start up the monitor with knob on bottom side.
5. Push "CODE" during 3 sec until you hear a long beep and you see a wheel blinking.
6. Step forward to actual wheel position, bho, "+" or "-".
7. Put the monitor close to actual sensor.
8. Push "CODE" short again, the red light comes up, the sensor transmit its ID and you will hear a short beep. If you hear 2 beep the reading is not successful. (You can also delete code by Push ing "-" during 3 sec)
9. Step forward to next position bho, +,- and put the monitor close to next sensor.
10. Push "CODE" again, the red light comes up and the sensor will transmit the ID.
11. Repeat the same procedure on all sensors.
12. Finish the reading by Push ing "CODE" during 3 sec ID's will be stored.

OBS No other sensor has to be within 1 m distance when reading the ID's. If 2 beep comes up the reading is not successful, if so, repeat reading again.

Code reading of sensors bho air pressure. (an alternative method)

- 12 Push "CODE" during 3 sec until you hear a long beep and you see a wheel blinking.
- 13 Step forward to wanted wheel position, bho, "+" or "-".
- 14 Fit sensor close to valve, when pressure reach the sensor it's ID will be transmitted. Repeat the procedure on other wheel.
- 15 Finish the reading by Pushing "CODE" during 3sec. ID's will be stored.

Delete one sensor ID

Push "CODE" during 3s until 1 beep occur.
Choose position, Push "-" until a single beep occur.
Continue or Push "CODE" during 3s.

Delete all sensor ID

Push "CODE" during 3s until 1 beep occur.
Push "-" until a double beep occur.
Push "SET" shortly to delete all.

Set pressure and temp limits

- 16 Push "SET" during 3s until 1 beep appear. Push "+" and select pressure sort. Push short "SET" again and select temperature sort. (1bar=14,5 PSI)
- 17 Continue with short pushing "SET" once again and adjust nominal pressure on each axle. Knob "+" och "-" is used for adjusting nominal pressure. Continue pushing "SET" for each axle. Save all parameters when pushing "SET" during 3s. (Alert appear at +-25% difference from nominal set.)

Fitting Sensors

Check air cone valve o be free from dirt and scratches where it should be tight to the sensor. If an extender is used be extra careful, otherwise you can have a leakage. Important! Don't use a metal cap covering the sensor because it will stop the RF transmitting from sensor.
Some air cone valves can be too short and will not open up for pressure sensing.

- 18 Fit all sensors on the wheels according to picture page 10. Ensure sensor beak connect to all cone valves. Use attached tool, tighten strong but be also carefully for no damage.

Install sensors, one at a time and observe pressure at monitors screen. When a sensor has got pressure it will send data within 6s. If you have a repeater installed ensure it is powered up and make a "blink" for each transmission.

When ready with all assembly, check pressure at all positions "+" or "-" knobs

Check air cone valve long enough.



Montering Monitor

Fitting Monitor

- 19 Fit the monitor on a suitable place, dashboard or similar. Use supplied fixture or use it hand held. Connect to power supply active only when vehicle is in use. Voltage 5-24VDC.

Fitting Repeater

- 20 If truck train is very long (>15m) we recommend to install a Repeater in front of the trailer to extend the radio signal distance. The repeater to be supplied by 12-24VDC. (+ on red wire) and placed well protected from humidity, dirt and mechanical damage. Repeater 5101 is made for trucks that change trailers regularly and should be easy to reach. Model 5102 is a general repeater who makes service for all sensors around. A red diode indicates when transmission is going on.

REPEATER 5101. (Modell 5102 don't need any programming) When data arrive via repeater, a special symbol is shown on the display.

TELEMATIC

Receivers and other parts for central reading of vehicle data is available as extra components to the monitor.

COPY ID codes and system paameters.

It is possible to copy and transfer ID codes and parameter settings from one monitor, repeater to another monitor. See separate instruction.

SYSTEM IN OPERATION

Start system. Switch on monitor. Within 6min should all sensors transmitted data regarding pressure and temperature shown on the display.

Hide or show truck or towing vehicle tyres

Push "+" during 3s and truck tyres disappear. Reset with a new push during 3s at "+"

Push "-" during 3s and trailer tyres disappear. Reset with a new push during 3s at "-"

Illumination monitor

The illumination is regulated depending of surrounding light.

Lost sensor signal

If no data has been received from any sensor within 1h an alert with 6 signs appear on the display as a warning.

Stop and investigate!

Reset of any alert

Audio signal can be reset by pushing any knob. Light alert continue.

Audio signal is reset when pressure and temperature is within limits again.

Function pressure and temp alert

Sensors read pressure and temperature each 6 second and transmit normally the data each 5 minutes to the monitor. If test result is out of limit, ie less than 0,75 or higher than 1,25 of nominal settings a sound and light alarm appear. Reset sound alarm by push any of the knobs, light alarm will continue until failure is identified and corrected

Fast leakage / puncture

If a sensor indicate a big loss of pressure / leakage ($\geq 0,2$ bar within 60 sec) the result and alarm will appear immediately on the monitor.

CLIMATE TRANSPORTS

On or more of the sensors can be used for monitoring temperature in different kind of locations. In such cases the sensors must be under pressure.

MAINTENANCE

Monitors battery is charged when connected to the power supply connection in the vehicle. No other maintenance is required.

Repeaters antenna and **sensors** can withstand a lot of dirt but we do recommend cleaning up from ice, snow, mud and salt for best radio communication to the monitor. Rinse with ordinary water when needed. Otherwise no maintenance is required.

Battery change. If monitor gives an alarm showing the battery symbol below to the left, it is time to change battery in sensor.

The alarm can be silenced by pushing any knob. Battery type sensor 5102 = CR2032 and 5112 = CR2450 A fresh battery show >2.9V loaded by a 2700 ohm resistor.

- Open the cap, inspect for no voids or moisture inside
- If moisture exist, sensor can be dried without battery in an oven max 80degC during 1h see fig 4
- Take away old rest of gasket from bottom of cap
- Replace battery, + pole up. (We prefer Panasonic brand)
- Put a small amount of silicon gasket on caps threads.
- Put bottom and top together and screw by hand for safe enclosure

IMPORTANT

This system can effectively monitor air pressure and temperature inside the tire, but it cannot prevent traffic accidents. With an assistance of this system, the user should ensure the vehicle is in proper operating condition before travel including verifying tires condition before travel.

This system is a safety tool to help drivers understand when their tires are approaching an unsafe condition. This system is not a substitute for regular tire inspection and needed maintenance.

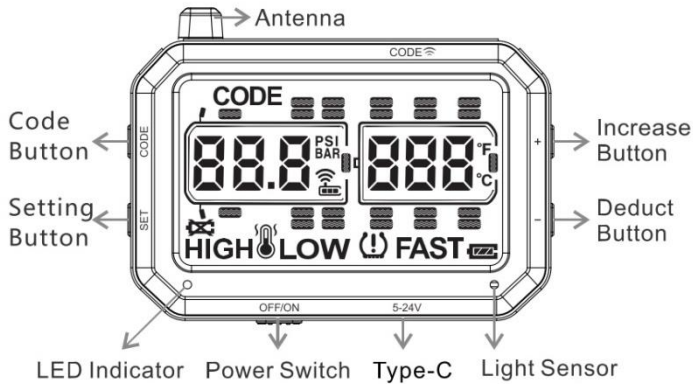
We do recommend owner and operator to learn about installation, programming and replace a part in the system.

Troubleshooting All alarms can be identified with a symbol on the screen. Read them and take action as described in the table below.

System alarm or no reading of pressure and temp.

	Course	Explanation	Action
1	Pressure too high or too low	Identify which wheel	Adjust pressure in wheel
2	Wrong limits in Monitor	Check limits and adjust if necessary	Push "SET" until 2 beep then
3	Temperature too high	Check limits and adjust if necessary	Push "SET" until 2 beep then
4	No communication sensor-monitor	Check all sensors are fitted	Fit a new one if missing
		Check all sensors are under pressure	Check cone in the valve, long enough
		Sensor hidden in too much mud or ice	Clean up
		Repeater not supplied by voltage or broken, LED is not blinking intermittent	Replace repeater or repair power line
		Repeater type 5101 wrong programmed	Reprogram or change to universal model 5102
		Wrong ID-code because of mistake in handling	Push "Code" until 1 beep and then...
		Radio interference on 434MHz band from very strong transmitter	Switch off all suspicious equipment in the neighbor
5	Battery symbol left side shown	Low voltage sensor battery Battery sensor low voltage Or extreme Cold	Check battery >2,9V@2700ohm load Change battery to Panasonic 2032 Change to newest generation of sensor
6	Battery symbol right side in Monitor	Battery in monitor not charged	Charge battery

2. Button and Icon Description



	Tyre Icon		Sensor Low Battery Indicator
	Temperature Unit (select-able)		Monitor Battery Voltage Indicator
	Pressure Unit (select-able)		High Temperature Alert
	Pressure Alert Icon		Repeater Indicator

Fig 3

Put the sensor to the right of screen when reading sensor ID



Fig 4

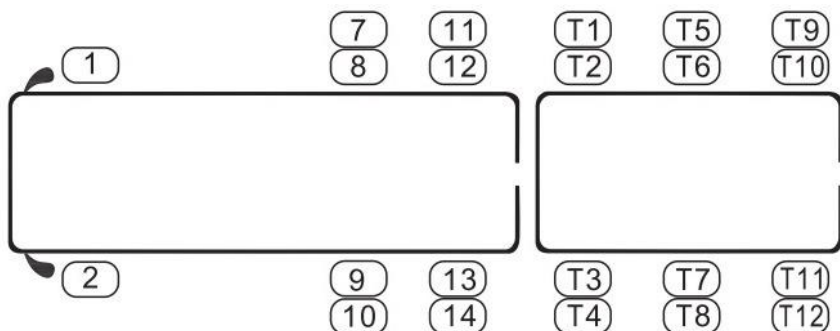
Clean and put grease, vaseline or soft silicon on the threaded foot before closing the cabinet after replacing battery.



Fig 5

Observe there is one and only one rubber sealing in the bottom of sensor before assembly on valves.





FINAL CHECK

A professional installation must be verified bho a function test according to the procedure below. Radio transmitters, tachographs, com-radio, burglar alarm or other internal electronics can in seldom conditions produce electromagnetic noise or interfere with our system. Be good and check this will not happened. As an installer you are responsible to verify system function before finish the installation.

Function Test

1. Switch off monitor and go away 30m from the vehicle. Switch on the monitor again and after 6minutes you should be able to read pressure from all wheels installed.
2. Switch of monitor and repeat same procedure with vehicles engine running, tachograph, com-radio light a.s.o active. Even now you should be able to read all data after 6 minutes.

INSTALLATION ended and checked.

Date: _____ Sign: _____

Sensors manufactured before 2022 is not recommended together with this new monitor. See sensor stamp (mmyy)

Return

Both monitor and sensor are equipped with batteries and electronics which shall be sorted out before scrapping.



There is a possibility to sign a service agreement which will give you as a customer a guarantee in a no of years. If there is any questions call our support.

Notes

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