BH SENS

IntelliSens

A SIMPLE GUIDE TO TPMS SERVICE

INSTALLATION INSTRUCTION FOR INTELLISENS TIRE PRESSURE SENSORS

TPMS – IT‘S IN OUR DNA

WHO WE ARE

BH SENS is a pioneer in the development and evolution of TPMS and is one of the leading TPMS manufacturers worldwide. German vehicle manufacturers such as Audi, BMW, Mercedes-Benz, Porsche, VW, but also international manufacturers have trusted the innovative and reliable TPMS solutions of BH SENS for **more than 20 years**.

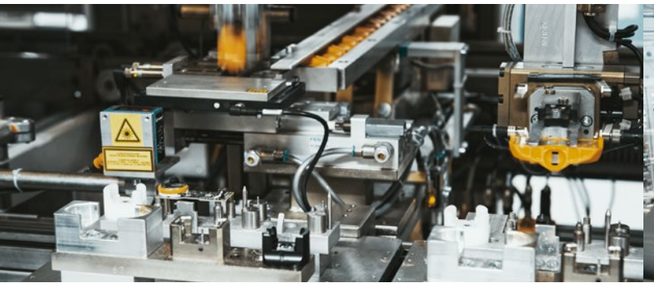
BH SENS stands for quality and outstanding functionality according to vehicle manufacturer specifications and provides a complete offering of IntelliSens tire pressure sensors with RDE direct fit solutions and programmable universal sensor solutions. Both product lines are based on the longstanding expertise of automotive experience in TPMS and are tailored to the needs and requirements in the independent aftermarket. BH SENS IntelliSens **– It Just Makes SENS.**

OUR CORE VALUES

Quality **Made in Germany**. BH SENS has been developing and producing tire pressure monitoring systems in Bretten Germany for renowned car and truck manufacturers around the world. The production takes place according to latest development standards and on highly automated manufacturing equipment.

With efficient and innovative power management and the use of patented technologies, BH SENS IntelliSens tire pressure sensors are more durable than ever before. Therefore, BH SENS offers a 3-year warranty on IntelliSens tire pressure sensors.

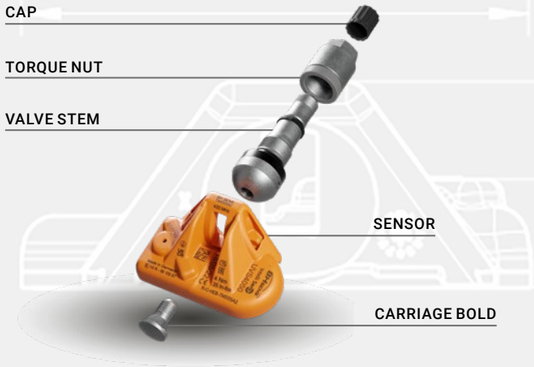
The BH SENS service team helps quickly, unbureaucratically and competently for questions about the product or challenging situations in the workshop.



INSTALLATION INSTRUCTION FOR INTELLISENS TIRE PRESSURE SENSORS

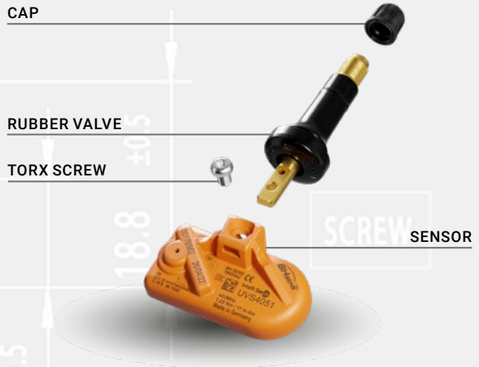
The following are needed for the installation of the IntelliSens tire pressure sensor with **clamp-in metal valve**:

1. A suitable valve
2. Torque wrench set to 4 Nm
3. TPMS diagnostic tool



The following are needed for the installation of the IntelliSens tire pressure sensor with **snap-in rubber valve**:

1. A suitable valve
2. Torque wrench set to 1.25 Nm for torx screw
3. Mounting paste
4. TPMS rubber valve mounting tool
5. TPMS diagnostic tool



This instruction for servicing tire pressure monitoring systems (TPMS) is divided into four steps.

Only use approved and recommended BH SENS products

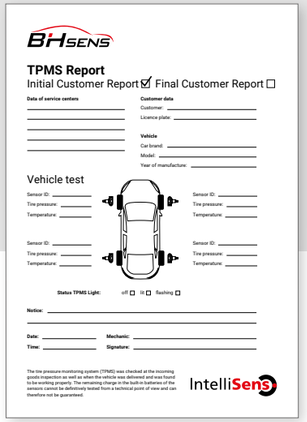
For workshops, there are two standard situations that arise in relation to tire pressure monitoring systems (TPMS).

- TPMS light is lit or flashes
- Customer wants an additional set of tires (winter or summer tires)

Please see also our training videos on www.intellisens.com

The IntelliSens Universal Sensor must be programmed with a TPMS diagnostic tool before use.

HOW TO CREATE AN INITIAL TPMS CUSTOMER REPORT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TPMS Report

Initial Customer Report ☑ Final Customer Report ☐

Data of service centers

Customer data

Customer

Licence plate:

Vehicle

Car brand:

Model:

Year of manufacture:

Vehicle test

Sensor ID: Tire pressure: Temperature:

Sensor ID: Tire pressure: Temperature:

Sensor ID: Tire pressure: Temperature:

Sensor ID: Tire pressure: Temperature:

Status TPMS Light: off ☐ lit ☐ flashing ☐

Notice:

Date: Mechanic:

Time: Signature:

The tire pressure monitoring system (TPMS) was checked at the incoming (paid) inspection as well as when the vehicle was delivered and was found to be working properly. The remaining charge in the built-in batteries of the sensors cannot be definitively tested from a technical point of view and can therefore not be guaranteed.

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The TPMS initial customer report is needed to document the data for your customer. By using a TPMS diagnostic tool, complete a TPMS initial customer report with the determined values pertaining to

- Sensor ID (assigned number, consisting of letters and/or numbers as a unique identifier for a sensor)
- Tire pressure
- Status TPMS light

Download: TPMS initial customer report: www.intellisens.com

To create an initial customer report a TPMS diagnostic tool is needed.

CHECKING TPMS SENSORS

Hold the TPMS diagnostic tool against the valve of each wheel and follow the instructions of the tool for “testing” or “check”.

Please list the results in the TPMS initial customer report.

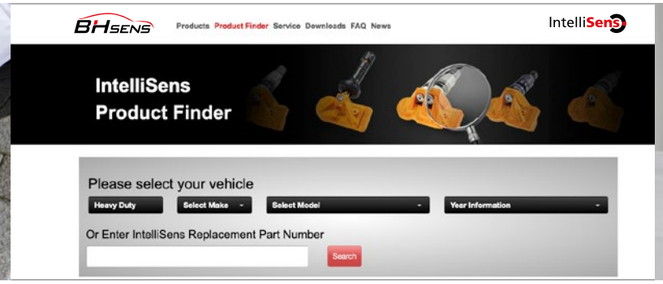
If the TPMS diagnostic tool does not get a response

- the vehicle is not equipped with TPMS
- or the sensors are broken

Check whether the valves show any signs of corrosion or damage.

Please check whether the TPMS light is blinking or the light in the dashboard is permanently on. This should also be reported on the TPMS initial customer report.

SELECTING THE CORRECT INTELLISENS TIRE PRESSURE SENSOR



You can find a suitable IntelliSens tire pressure sensor:

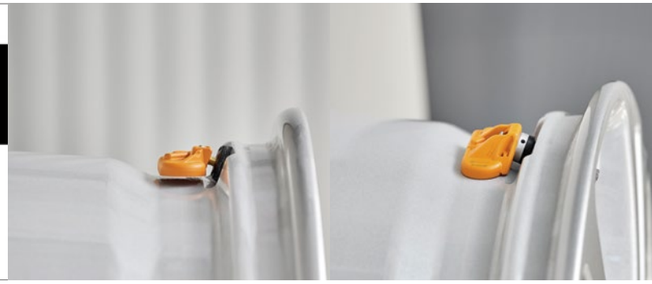
- In the Product Finder on our website **www.intellisens.com**
- In your TPMS diagnostic tool
- In the TecDoc catalog

For the selection, you will require the following vehicle data:

- Manufacturer
- Model
- Year of manufacture (date of production)

The IntelliSens Universal Sensor needs to be programmed with a TPMS diagnostic tool before use.

SELECTING THE MATCHING VALVE



A matching TPMS valve is supplied with every IntelliSens tire pressure sensor. Suitable TPMS valves in special colors or special lengths are available in the marketplace.

The valve must be replaced during every tire change!

Please notice that the speed maximum for sensors with a rubber valve is 210 km/h.

Only use approved and recommended BH SENS products.

HOW TO PROGRAM AN INTELLISENS UNIVERSAL SENSOR

This step is omitted if you use a BH SENS RDE DIRECT FIT - OE Replacement Sensor.

There are two possibilities to program the IntelliSens Universal Sensor:

a. Copy or clone a sensor:
Select the manufacturer, model and year of manufacture in the menu of the TPMS diagnostic tool and program the IntelliSens Universal Sensor with a new ID. Transfer the ID of the respective sensor to the IntelliSens Universal Sensor with your TPMS diagnostic tool. Please ensure that the wheel positions (e.g. front left) of the old and new sensors match. As a rule, the relearn process is not required when cloning the sensor.

b. Creating a new sensor:
Select the manufacturer, model and year of manufacture in the menu of the TPMS diagnostic tool and program the IntelliSens Universal Sensor with a new ID.

Once the IntelliSens Universal Sensor has been programmed, it must be relearned to the vehicle!

BREAKING THE TIRE'S BEAD

The valve must be positioned at a distance of between 90 and 270 degrees relative to the bead breaker blade.

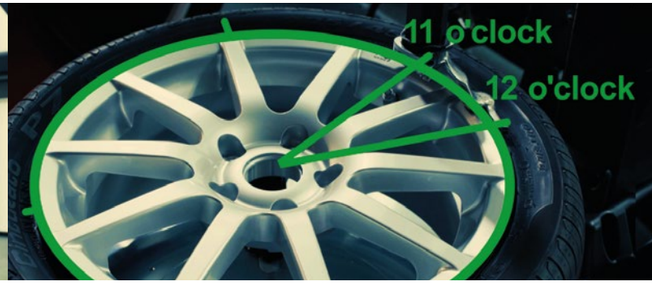
Break the tires bead several times on the outside.

In the process, the bead must not touch the well of the rim in the proximity of the sensor.

Finally, break the tires bead several times on the inside and adhere to the same instructions that apply to breaking the bead on the outside.

The IntelliSens tire pressure sensor is always bolted with the valve and located at the height of the valve.

EXPOSING THE SENSOR BY PULLING OFF THE TIRE



Position the tire so that the valve is in the 11 o'clock position (when viewed from the mounting head). Start by releasing the upper tire bead. Release the lower tire bead with the valve in the same position.

Loosen valve stem from the inside of the valve hole.

MOUNTING THE INTELLISENS TIRE PRESSURE SENSOR WITH **CLAMP-IN METAL VALVE**

By using the carriage bolt, mount the valve and sensor fingertight together (about two turns). Both, valve and sensor, should still be flexible.

Put the valve with the mounted sensor through the hole from the inside of the rim. Press the sensor onto the rim and mount the torque nut by hand.

Adjust the torque wrench to 4 Nm or 35 in-lbs and tighten the valve without interruption. Around 3Nm / 30 in-lbs you will notice a sluggish movement until the shear collar breaks free. Turn further until the final torque moment of 4 Nm or 35 in-lbs is reached. Then you have mounted the sensor and valve correctly.

Make sure that you tighten the torque nut in one movement without any interruption. Our sensors are tailored to rims in accordance with the ETRTO. Please note the information provided by the rim manufacturers. The valve must be replaced every time the tire is changed.

WITH **SNAP-IN RUBBER VALVE**

Lubricate the rubber valve with mounting paste. Ensure that the sensor is not coated with mounting paste.

Insert the rubber valve through the hole from the inside of the rim and pull the rubber valve in by using an appropriate rubber valve mounting tool.

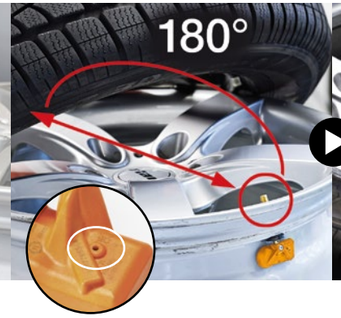
When inserting the rubber valve, ensure that the valve is pulled vertically through the valve hole of the rim and that the sensor is not tilted. After installation, check that the rubber valve is positioned correctly.

After the rubber valve is mounted, the sensor must not touch the rim at any point.

The valve must be replaced every time the tire is changed.

Please notice the speed maximum for sensors with a rubber valve is 210 km/h.

FITTING THE TIRE TO THE RIM



Ensure that the bead engages with the well of the rim at the opposite of the sensor. Start mounting the lower bead by turning the rotary disc clockwise.

Mount the upper bead at the same starting position of the valve.

Please make sure that the sensor is not pinched between the bead and the rim.

Please make sure that the tire lubricant does not cover the sensor's pressure port.

CONDUCTING THE RELEARN PROCEDURE

Conduct the specified relearn process according to the instructions of the vehicle manufacturers.

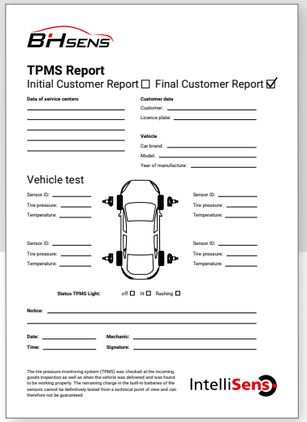
Possible relearn processes:

- Automatic relearn
- Manual relearn
- Relearn via OBDII interface

Please follow the instruction manual of the car manufacturer. The complete procedure is finished after the relearn procedure is done and the TPMS light turns off.

Depending on the vehicle, it may be necessary to save the new tire pressure as the standard pressure.

CREATE A FINAL TPMS CUSTOMER REPORT



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TPMS Report

Initial Customer Report ☐ Final Customer Report ☑

Data of service centers

Customer data
Customer:
Licence plate:

Vehicle
Car brand:
Model:
Year of manufacture:

Vehicle test

Sensor ID:
Tire pressure:
Temperature:

Status TPMS Light: off ☐ lit ☐ flashing ☐

Notice:

Date:
Time:
Mechanic:
Signature:

The tire pressure monitoring system (TPMS) was checked at the incoming goods inspection as well as when the vehicle was delivered and was found to be working properly. The remaining charge in the built-in batteries of the sensors cannot be definitively tested from a technical point of view and can therefore not be guaranteed.

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Check and note following data on the final TPMS customer report:

- Sensor-ID
  (assigned number, consisting of letters and/or numbers as a unique identifier for a sensor)
- Tire pressure
- Status TPMS light
  (please check the information in your car manual instruction)
- Hand the car over to the customer

Download TPMS final customer report:
www.intellisens.com

Important Notes:

The instructions described below may not be suitable for Runflat tires, UHP tires, and Michelin Pax®-tires.

Carefully read the installation instructions and safety notes before installing the sensor. Reproduction mistakes, errors, and changes reserved. Illustrations may differ from the products.

For safety reasons and to ensure optimal functionality, BH SENS recommends to have all maintenance and repair work carried out exclusively by trained specialists and according to the guidelines of the respective vehicle manufacturer and/or ETRTO and DIN. Tire valves are safety-relevant parts and must only be installed by trained specialists. BH SENS does not assume any liability in case of faulty or improper installation of the product.

In case of failure to comply with the safety and installation indications and improper installation, the sensor may not be functional or limited in its function, which can lead to accidents resulting in bodily injury and/or death.

The sensor must only be installed with the matching valves and appropriate accessories and installation tools in order to ensure optimal functionality.

Do not use the sensor if it is damaged and/or other visible defects are present. In this case, use a new sensor and contact your supplier's customer service. Mounting machines, valves, tools and processes might vary.

In any case, the regulations of the respective vehicle manufacturer have to be obtained!

"The tire pressure monitoring system (TPMS) was checked at the incoming goods inspection as well as when the vehicle was delivered and was found to be working properly. The remaining charge in the built-in batteries of the sensors cannot be definitively tested from a technical point of view and can therefore not be guaranteed."*

**Source: Bundesverband Reifenhandel und Vulkaniseur-Handwerk e.V.*

Version: May 2022

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Product Finder

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