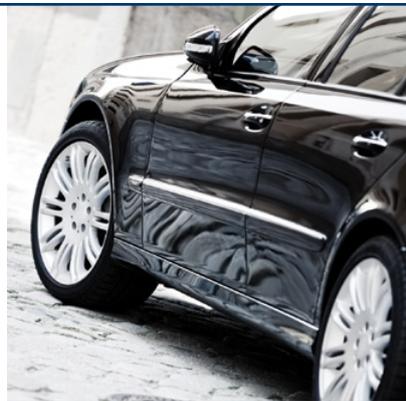


# EZ-sensor®

▶▶ TPMS FROM SCHRADER - SAFETY THROUGH INNOVATION.





## **TYRE PRESSURE MONITORING SYSTEMS (TPMS)** *THE FUTURE IS NOW.*

Safety guaranteed – and soon by law. Tyre pressure monitoring systems, or TPMS for short, are at the cutting edge of technology, manufactured for the automotive industry according to the most stringent criteria. Direct TPM systems use sensors to measure the pressure and temperature of a vehicle's tyres and then radio transmit the data to a control unit inside the vehicle. Depending on the type of vehicle, the driver will then see these figures shown in their display. If the tyre pressure falls below a particular level, a signal will warn the driver.



***If your vehicle is fitted with a tyre pressure monitoring system, you will see this symbol in the instrument panel. If the symbol is permanently lit, you must have your tyre pressure checked as soon as possible.***

### **GLOBAL PERSPECTIVE**

#### **LAWS ON TYRE PRESSURE MONITORING**

It is an undisputed fact that correct tyre pressure levels play a crucial role in ensuring the safety of all vehicle passengers and other road users. There is no need to discuss this further.

In the USA, tyre pressure monitoring systems have been required by law since 2007.

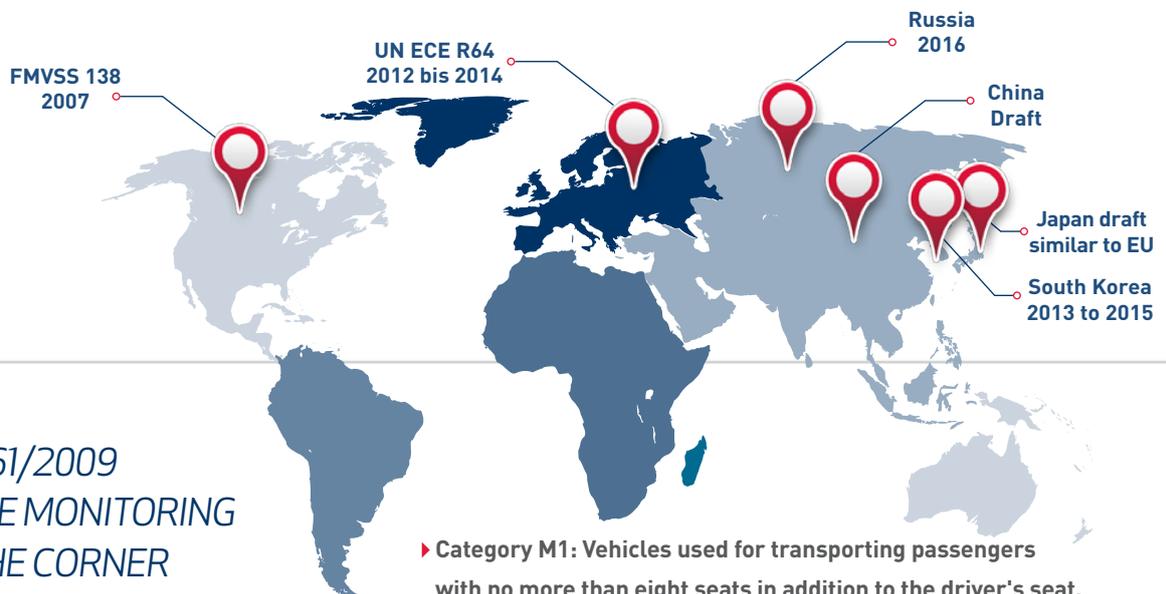
Countries such as South Korea, China, Japan and India have recently introduced or are currently drawing up their own laws on tyre pressure monitoring.

## THE ADVANTAGES OF TPMS

- ✓ Tyre pressure monitoring systems improve the safety of your vehicle on the road
- ✓ By warning you about a sudden loss in tyre pressure, TPMS helps to prevent serious accidents
- ✓ Correct tyre pressures guarantee optimum vehicle handling
- ✓ It has been proven that the correct tyre pressure reduces fuel consumption and therefore CO<sub>2</sub> emission levels
- ✓ Having the correct pressure increases a tyre's service life as there is less wear on the tyre.



*It is difficult to spot whether a tyre has low pressure with just the naked eye.*



## EU REGULATION 661/2009 ON TYRE PRESSURE MONITORING IS JUST AROUND THE CORNER

- ▶ As of 1<sup>st</sup> November 2012, all new M1-category models homologated must be equipped with a system for monitoring tyre pressure in accordance with ECE R64.
- ▶ As of 1<sup>st</sup> November 2014, all new M1-category models registered must be equipped with a system for monitoring tyre pressure in accordance with ECE R64.

- ▶ **Category M1:** Vehicles used for transporting passengers with no more than eight seats in addition to the driver's seat, weighing up to 3.5 tons (passenger vehicles, off-road vehicles and mobile homes).
- ▶ Currently registered vehicles without TPMS do not have to be retrofitted.
- ▶ The German Association for Tyre Retailers and Vulcanization (BRV) has stated that a TPM system may not be deactivated.



## NEW LEGISLATION BRINGS NEW CHALLENGES TO WORKSHOPS.

The new EU regulation means that the tyre business and workshops are having to prepare themselves for some significant changes. **From 2014 onwards, the aftermarket will experience an enormous increase in the number of sensors needed for winter tyres.** When conducting a tyre service, technicians will have to check whether a sensor needs to be fitted and what type is needed.

### THE PROBLEM

- Large amount of storage space required
- High capital commitments
- Various sets of instructions needed (rubber, metal, different torques)
- Several different service kits required
- High risk of error
- Dissatisfied customers
- Loss of customers
- Loss of revenue

► **A new problem for workshops:**  
**Always having the right sensor for each and every vehicle.**

There are currently over 150 different sensors on the market.



Save on storage space. Minimize the risk of error. Avoid having dissatisfied customers. Prevent loss of revenue.

Approximately three million new vehicles will be released in Germany, Austria and Switzerland by the end of 2015, all of them equipped with a direct TPMS.

## EZ-SENSOR® FROM SCHRADER

THE UNIVERSAL SENSOR SOLUTION.

Schrader has developed and patented a new sensor that can be used in nearly every single vehicle on the market. Once it has been programmed to the individual vehicle using a programming device, the sensor works just like an original sensor.

The EZ-Sensor® from Schrader is the perfect solution for your workshop. As the world's number one producer of TPMS, Schrader also provides premium aftermarket services.



*The EZ-Sensor® comes with either a metal or a rubber valve. Launched in the USA in 2009, it has become the world's best-selling programmable sensor!*

## THE ONE-SENSOR-FITS-ALL SOLUTION.

You are also able to clone the identification number from the original sensor to the EZ-Sensor®, meaning you can forgo the relearn process. Winter tyre sets can come pre-fitted with sensors that are programmed through the tyres, saving you both time and money.

The EZ-Sensor® is a product with OE quality guaranteed. Schrader's EZ-Sensor® range is complemented by a variety of service kits and assembly equipment.

## MARKET COVERAGE WITH THE EZ-SENSOR®

- ▶ **As the market leader with over 50% of OE,**  
Schrader has the largest coverage of OE systems on the market.
- ▶ **For winter tyre requirements, you will always need**  
the most up-to-date coverage in order to provide services for customers with new vehicles.
- ▶ **Schrader is also ready for the future,**  
thanks to new software updates which enable the EZ-Sensor® to be programmed to the latest vehicle models.
- ▶ **The most up-to-date sensor technology**  
guarantees the best market coverage
- ▶ **The latest list of products covered is**  
**available online at [www.tpmseuroshop.com](http://www.tpmseuroshop.com)**

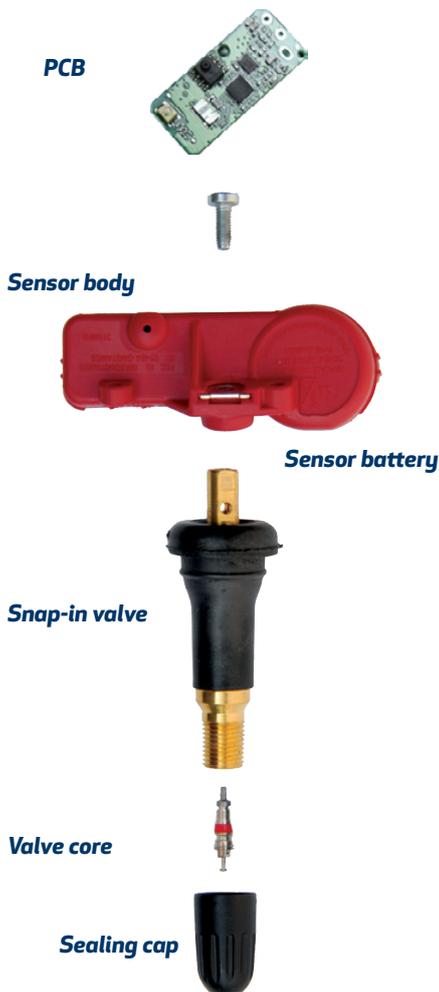
## THE SOLUTION

- ✓ OE quality from the market leader
- ✓ Rubber and metal valves approved to OE standards
- ✓ Zero tolerance for errors on the production line
- ✓ Correct data: Which sensor is suitable for which vehicle
- ✓ Quick customer service: Customer hotline available in several languages, OE engineers on site and on site customer training
- ✓ Schrader produced and delivered over 260 million sensors by the end of 2013!



## DEFINITIONS:

### PROGRAMMING / CLONING / RELEARNING PROCESS



#### WHAT IS MEANT BY PROGRAMMING THE EZ-SENSOR®?

The term "programming" refers to the process of programming the EZ-Sensor® for a particular vehicle. Every sensor has its own identification (ID) number, a bit like your passport number. The EZ-Sensor® therefore receives its own ID for the particular vehicle. After programming, the EZ-Sensor® needs to be registered or "relearned" to the vehicle's TPMS ECU. This process is also necessary when an OE sensor is fitted.

#### WHAT IS MEANT BY CLONING THE EZ-SENSOR®?

The cloning process refers to programming an EZ-Sensor® using an OE ID number from an existing OE sensor. In other words, the OE sensor is cloned. Because the TPMS ECU already knows the OE sensor's ID, the EZ-Sensor® does not need to be relearned to the vehicle.

#### WHAT IS MEANT BY RELEARNING?

To put it simply, the process of relearning the sensor to the vehicle means marrying the sensor to the vehicle's TPMS ECU. Each sensor's individual ID is therefore "relearned" to the vehicle.

**These manufacturers offer devices that can program, clone and relearn the EZ-Sensor® to the vehicle**



Each vehicle manufacturer has their own relearn method. Depending on the vehicle, one of the following processes can be used:

▶ **AUTO - LEARNING - SYSTEMS**

Following a test drive, (e.g. driving for five minutes at over 20km/h), the sensors automatically relearn to the vehicle.

▶ **MANUAL SYSTEMS**

The sensors are relearned manually using the vehicle menu.

▶ **OBD SYSTEMS**

The sensors are relearned using a diagnostic tool via an OBD connection.

**Always refer to the instructions from the vehicle manufacturer when changing your tyres (summer or winter tyres).**



TYPE OF SENSOR	RELEARN REQUIRED?
New OE Sensor	YES
Newly programmed EZ-Sensor®	YES
Cloned EZ-Sensor	NO



## SCHRADER INTERNATIONAL GMBH

Millions of customers around the world know and trust Schrader's high-quality products for original automotive equipment, original industrial equipment and aftermarket replacement products.

Schrader International GmbH is a wholly owned subsidiary of Schrader International Inc. and is the number one provider of TPMS worldwide. Schrader supplies various vehicle manufacturers around the world, including Citroen, Daimler, Fiat, Hyundai, Ford, Kia, Nissan, Opel, Peugeot, Renault, and many more.

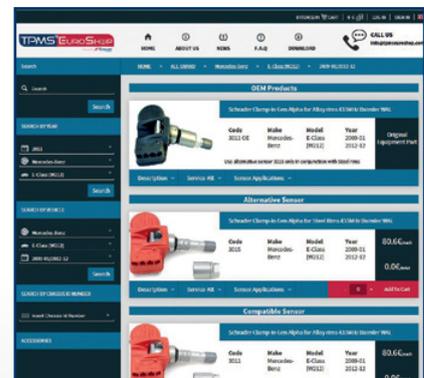
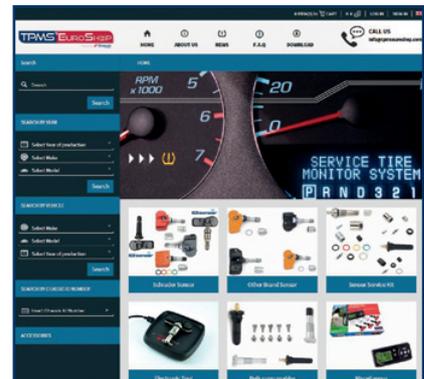
Schrader International GmbH in Altomünster, Germany, is the home of the European aftermarket. It also offers a wide range of support services, such as a training center, workshop and consultancy services.



TPMEuroshop is a web-based platform created with the aim of compiling comprehensive information relating to tyre pressure monitoring systems (TPMS) for the network of service experts and retailers in the European aftermarket. TPMEuroshop contains information on the various TPMS components used in European vehicles and all the technical data relevant to these products. You can also download various catalogs and brochures, such as the TPMSEuroguide, containing information on the technology.

TPMEuroshop was developed by Schrader International GmbH as an electronic means of communicating with the Schrader Aftermarket Service network. It is used for placing orders, checking stock levels and tracking deliveries.

[www.tpmseuroshop.com](http://www.tpmseuroshop.com)



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