

ELPARTS



herthundbuss.com/AirGuard

AirGuard - Fit for TPMS!



Passt immer!

 **HERTH+BUSS**

2015: 257.5 million TPM sensors fitted worldwide



TPMS – A must!

Requirements and regulations

Legal requirements and market potential

Stipulations of EU regulation ECE-R 64

All vehicles in model classes M1 and N1 registered for the first time since 1st November 2014 must be equipped as standard with a tyre pressure monitoring system (TPMS). This relates specifically to passenger cars, mobile homes and commercial vehicles with a total weight of less than 3.5 t and licensed to carry up to 8 occupants. Road safety is one of the reasons for the new directive – tyre leaks are recognised quickly and automatically by the sensor. Another reason is that correctly inflated tyres reduce fuel consumption and hence CO2 emissions. With effect from 20 May 2018, according to current legislation, a tyre-pressure monitoring system which is found to be obviously defective during a general inspection in Germany will now be classed as a major fault rather than a minor one.

What are the minimum requirements to be observed?

ECE-R 64 stipulates the following minimum requirements for TPM systems:

- A warning must be provided as of a pressure loss of 20 per cent or a tyre pressure of less than 1.5 bar.
- A defective tyre must be detected within 10 minutes. If all four tyres are affected, the time must not exceed 60 minutes.
- A defective system component must be displayed within 10 minutes.
- The TPMS must function as of an average speed of 40 km/h.

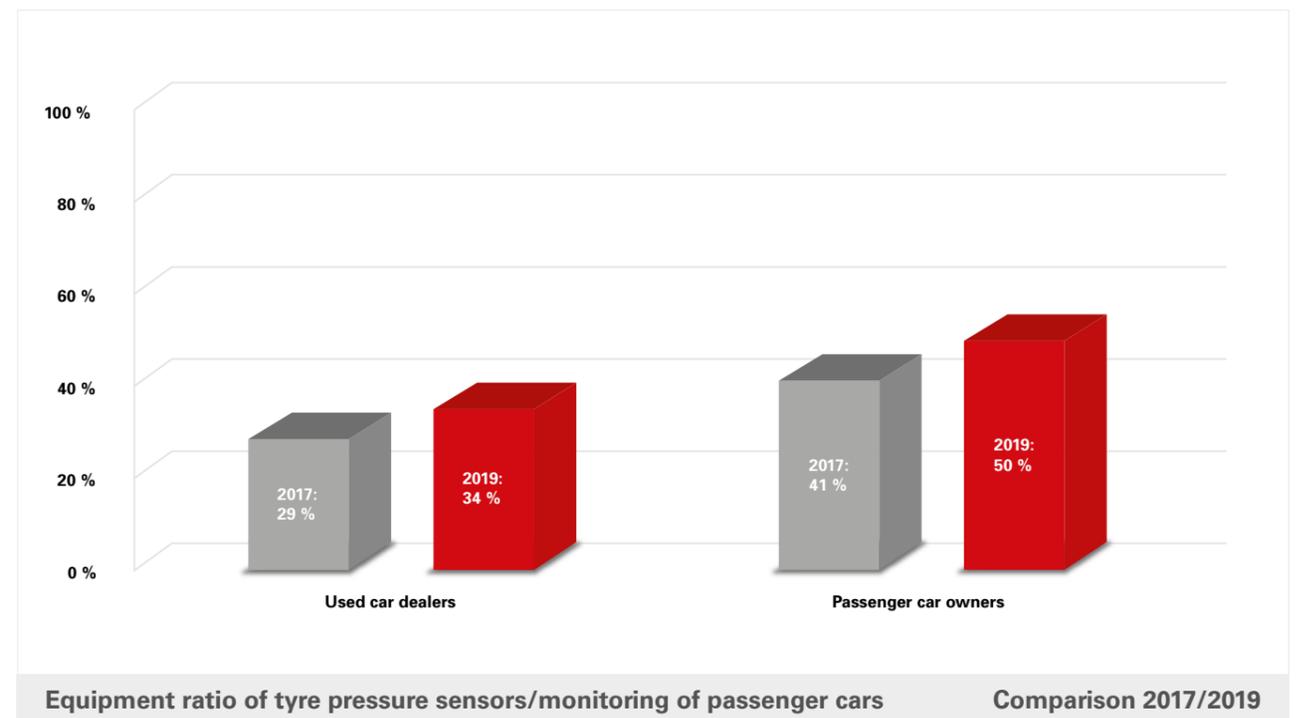
What are the consequences for workshops?

The replacement of TPMS wheel sensors is a source of additional business and greater customer loyalty for independent workshops and tyre services. The share of new vehicles with TPMS in Germany is between three and four percent per year. Since 2015, this has resulted in a total new car share of around 29%. This also includes the demand for winter tyres for these vehicles, which need to be refitted with TPMS. According to surveys

from the 2019 DAT report, 34% of all used car owners also have a TPMS. This yields a market potential of 62.5% of TPMS over the entire passenger car stock. Workshops and tyre services therefore have to adapt to this new situation.

The advantages for motorists

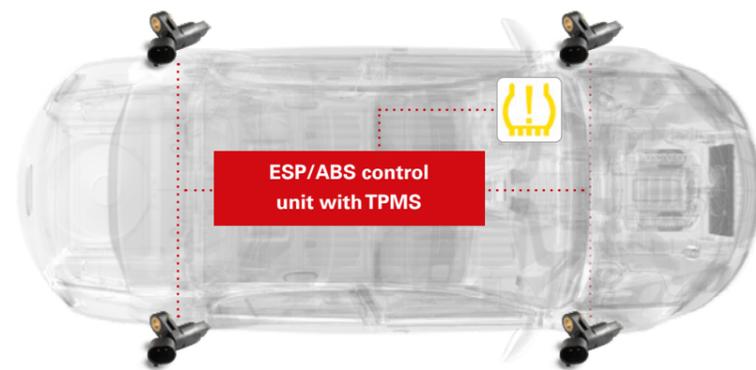
Tyre pressure monitoring systems make a significant contribution to road safety as it is not unusual for accidents to be caused by defective tyres. Thanks to the TPM system, drivers can be safe in the knowledge that the system will reliably monitor tyre pressure and promptly recognise defective tyres. However, it is not just a matter of safety. Motorists also benefit from optimised vehicle dynamics and a higher level of ride comfort thanks to reduced tyre noise. At the same time, TPM systems also save drivers money by reducing tyre wear and cutting fuel consumption.



TPM systems

Which methods are available for measuring tyre pressure?

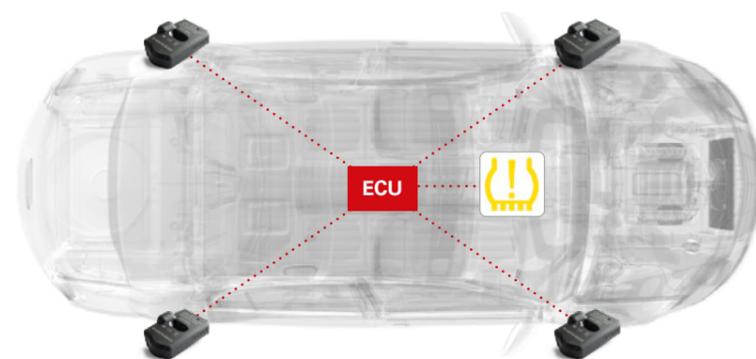
Modern vehicles must be fitted with an integrated direct or indirect TPMS. The purpose of such systems is to constantly monitor the tyre pressure on motor vehicles and thus make motoring safer. A warning signal immediately informs motorists of a pressure loss in one or more tyres. What are the differences between the two types of system?



Indirect system

The indirect measurement TPMS system using ABS/ESP fulfils all the specifications of ECE-R 64. In comparison to the active measurement system using radio sensors, however, it is currently slower and less specific. The costs for the vehicle owner are likely to be lower in this case, but diagnosis or resetting is necessary on changing tyres. Ask your specialist dealer.

- slow, imprecise method
- no additional components needed
- no specialist knowledge required
- low-cost alternative



Direct system

The direct measurement system using radio sensors fulfils all the specifications of ECE-R 64. Compared to the passive measurement system, it is currently faster and more specific. The wheel sensors fitted should be read out by your specialist dealer with a TPMS diagnostic device every time a tyre is changed. System adaption is required on replacing the sensors or changing the tyres. Ask your specialist dealer.

- fast, accurate method
- detection of gradual and sudden pressure loss
- additional tyre service expense
- expert knowledge required on changing tyres



TPMS check list

We have checked your tyres!

Tread depth		Inflation pressure set		Sensor ID	
Left front	Right front	Left front	Right front	Left front	Right front
mm	mm	bar	bar		
Left rear	Right rear	Left rear	Right rear	Left rear	Right rear
mm	mm	bar	bar		

Tyre change necessary soon

Your Herth+Bus partner:

AirGuard Fit for TPMS!

- We offer a complete range for all aspects of TPMS. It all revolves around our AirGuard 3.0 best-value items and the new AirGuard 4.0. Our AirGuard devices are rounded off with numerous accessories.
- One special bonus is that all data available can be updated on our website free of charge.

Our AirGuard 3.0 was launched in 2013 and has really proved its worth since then. It is designed for low-budget users, who are still able to perform all basic functions necessary. The AirGuard is a programming/diagnostic device for all tasks involving TPMS. It allows work to be carried out directly on the vehicle while offline. It can read out all sensor

types on the market in the 433 - 434 MHz frequency range and then duplicate the read-out data on the Herth+Buss wheel sensors automatically or manually. Programming a new sensor ID is also possible, as well as wireless reprogramming of the sensor ID of activated Herth+Buss wheel sensors while fitted. All available vehicle data are installed on the device. A USB cable can be used to connect the AirGuard directly to a PC and our print software used to give the data read out to the customer.

In conjunction with our OBD II adapter, the AirGuard 3.0 is able to read out and overwrite the sensor IDs stored in the vehicle control unit and select summer or winter wheels. This is a standard teaching-in method on many vehicle

models, provided the sensors have not been automatically duplicated.

Even more functions with the AirGuard 4.0

Our new AirGuard 4.0 stands for four times the power. It has all the functions of the AirGuard 3.0 as well as other special features. Firstly, the AirGuard 4.0 comes with OBD cables as the functions of the OBD II adapter are already integrated. This means there is no need to connect an additional adapter. Secondly, when used with our OBD II Bluetooth module, fault memories can be read out and deleted (DTCs). The AirGuard 4.0 also shows where exactly the OBD II socket is located in the vehicle. Another special feature is the built-in tread depth gauge. The measurements can then be stored on the

Overview of AirGuard devices

- ✓ Read out own and third-party TPMS sensor
- ✓ Over 93 percent of vehicles covered
- ✓ Programme Herth+Buss TPMS sensors in accordance with own database
- ✓ Copy OE and third-party sensors
- ✓ Store up to 100 customer/vehicle data records

Only with AirGuard 4.0

- ✓ Integrated OBD-II teach-in function
- ✓ Built-in camera for recording customer and vehicle data
- ✓ Built-in tread depth gauge
- ✓ Note on OBD II socket (vehicle-specific)
- ✓ Magnet for activating OE sensors
- ✓ Vehicle data stored in the device itself
- ✓ Update software updates via WiFi® or cable



AirGuard 4.0. The built-in camera can be used to take pictures of damage or numberplates and store them in the individual customer file. Up to 100 data records can be saved on the AirGuard 4.0. The documented data can then be transferred to a computer using the USB interface, stored there and retrieved as required.

Our universal TPMS range is rounded off with our wheel sensors. They can be used in all vehicles with an active tyre pressure monitoring system installed as standard. The sensors are universally programmable. Either our AirGuard 3.0 or AirGuard 4.0 is required for programming. The sensors can be ordered individually and are supplied with a complete valve. Programming

only takes between five and fifteen seconds per sensor. One benefit of our wheel sensors: The original ID number can be copied from the old sensor to the new one or re-assigned. The wheel sensors can also be rewritten.

Programming/diagnostic device, tyre pressure monitoring system AirGuard 3.0
Article number: 95990001

Programming/diagnostic device, tyre pressure monitoring system AirGuard 4.0
Article number: 95990021

OBD adapter, tyre pressure monitoring system AirGuard
Article number: 95990003

OBD II Bluetooth module, tyre pressure monitoring system AirGuard
Article number: 95990022



	AirGuard 3.0	AirGuard 4.0
	95990001	95990021
	Scope of supply, case: Programming/diagnostic unit Power pack Mini USB cable	Scope of supply, case: Programming/diagnostic unit Power pack Micro USB cable OBD II adapter cable Activation solenoid
Read OE sensors (ID, pressure, temperature)	■	■
Copy OE and third-party sensor ID	■	■
Programme/create Herth+Buss wheel sensors from device database	■	■
Activate sensors	■	■
Vehicle-specific teaching-in function		■
OBD II teaching-in function	Only via add-on module 95990003	Integrated
Software update	Via cable/PC	Via WiFi® or cable/PC
Store data records (customer/vehicle data)	■	■
Vehicle coverage	93%	93%
Languages	German, English, French, Spanish, Dutch, Italian, Finnish (Suomen Kieli), Danish, Norwegian, Polish, Romanian, Russian, Swedish, Slovakian, Slovenian, Czech, Hungarian	German, English, French, Spanish, Dutch, Italian, Finnish (Suomen Kieli), Slovenian
Screen	2.5" LCD b/w	3.5" LCD colour display
Built-in camera for recording customer/vehicle data		■
Charging function	Mains plug	USB (230 V, 12 V)
Print function	Via cable/PC	Via WiFi® or cable/PC
Tread depth gauge		■
Software updates	Free	Free
Storage case	■	■
Accessories		
OBD II Bluetooth module		Read out and delete fault memories Article number: 95990022



Workshop tip: OBD II Bluetooth add-on module for TPMS tasks

» KNOW+HOW



The problem: Teaching-in vehicles with newly programmed sensor IDs
Almost every garage knows this situation: A customer comes in with an activated TPMS control light and asks for help. A garage that wants to be a competent partner now has to check the sensors and read out the fault code.

The cause:
Since November 2012, all newly type-approved vehicles (class M1/N1) must be fitted as standard with a tyre-pressure monitoring system (TPMS) according to EU directives. Since November 2014, this has applied to all vehicles registered for the first time from this date. As a result, garages are seeing more vehicles with TPMS. In addition, the TPM systems on vehicles have become more complex. Workshops must be able to not only programme or replace sensors, but also read out and unlock control units.

The solution: The OBD II Bluetooth add-on module for TPMS from Herth+Buss

You first of all need the AirGuard 4.0 from Herth+Buss, as the OBD II Bluetooth module is an optional extra to the AirGuard 4.0 and can only be used in conjunction with it. The OBD II Bluetooth module reads the fault codes (DTCs) for all supported vehicles and can delete them. It currently covers eleven percent of vehicles and caters for models from BMW, Ford, Mercedes and Toyota. First, the AirGuard has to be started and the relevant vehicle specified. Next, select the OBD II option so the OBD II Bluetooth module can connect to the vehicle. Another bonus: The AirGuard visualises the OBD socket with an image on the display. If connection is successful, a green control light is seen. The fault memory can now be deleted. Tip: The OBD II Bluetooth module also requires regular updates. Either our update software can be used here or an update performed using the WiFi® connection.

	Programming/diagnostics Device, tyre pressure checking sys. AirGuard 4.0 Article no.: 95990021
	OBD Adapter, tyre pressure control system AirGuard Article no.: 95990022



AirGuard – Fit for TPMS!

Universal solution for problems with TPMS

The situation is clear: since November 2012, all new homologated vehicle models (class M1/N1) must be fitted as standard with a tyre pressure monitoring system (TPMS) according to EU directives. Since November 2014, this has applied to all vehicles registered for the first time as of the effective date. With our AirGuard, you are optimally equipped for the new situation. In our training, you will find out how you can use this market potential most effectively. We will present the technology and function of the device.

Information:

Target group:	Workshops
Duration:	1.5 hours
Training location:	Customer premises

Seminar content:

- market potential and legal requirements
- TPM systems, products on the market and their functions
- What are the benefits of TPMS?
- technology, function, benefits of the AirGuard
- installing the sensors
- Printer function, what are the benefits?
- Teach-in types; do I require access via OBD-II?

Any other questions?



Frequently Asked Questions – FAQs
We have compiled answers to some FAQs for you below.

Which system do vehicle manufacturers tend to opt for?

Vehicle manufacturers tend to opt for the active measuring system using radio sensors. This is relatively faster and more precise than the passive measuring system using ABS/ESP.

Is the Herth+Buss wheel sensor available as a retrofit solution for vehicles without TPMS?

No. Herth+Buss wheel sensors are only to be used for vehicles fitted with TPMS by the manufacturer.

Which languages are programmed on the AirGuard?

The following languages are currently available: German, Danish, English, Finnish, French, Italian, Dutch, Norwegian, Polish, Romanian, Swedish, Slovene, Spanish, Czech and Hungarian. If there is a demand for the addition of further languages, these will be provided via an update on the website.

How long is the service life of a battery installed in the sensor? Can the battery be replaced?

The service life of the batteries in the sensor is three to seven years. This depends in particular on the annual mileage and the temperature. The battery is permanently encapsulated in the sensor and can therefore not be replaced.

Can sensors from other manufacturers also be adapted with the AirGuard?

The AirGuard concept is a self-contained system. Other manufacturers can only be read out and duplicated. Programming third-party sensors is not possible.

Can the vehicle data in the sensor be deleted?

No. The data can be overwritten any number of times.

Can the sensor be adapted to any rim?

Yes, the sensor angle adjustment can be set as required. For steel rims, we recommend the sensors with the end number *434. For aluminium rims larger than 14 inches, we recommend the sensors with the end number *443.

What happens if the desired vehicle model cannot be displayed?

If the vehicle model is not present, reference can be made to an older model. Please always refer to herthundbuss.com/AirGuard to check that you have installed the latest update. However, it is also possible that the model has an indirect measuring TPMS installed (e.g. SEAT).



Herth+Buss Fahrzeugteile GmbH & Co. KG
Dieselstraße 2-4 | DE-63150 Heusenstamm

Herth+Buss France SAS
ZA Portes du Vercors, 270 Rue Col de La Chau
FR-26300 Châteauneuf-sur-Isère

Herth+Buss Belgium Sprl
Rue de Fisine 9 | BE-5590 Achêne

Herth+Buss UK Ltd.
Unit 1 Andyfreight Business Pk
Folkes Road, Lye | GB-DY9 8RB Stourbridge

Herth+Buss Iberica
C/A 45 Poligono de Areta
31620 Huarte Navarra | España

