What is TPMS?

European legislation requires that from 1st November 2014, all vehicles destined for the transport of passengers must be equipped as standard with TPMS (Tyre Pressure Monitoring System).

TPMS systems vary in sophistication. Some simply illuminate a warning light if low tyre pressure is detected; others are capable of displaying the pressure of each tyre on the instrument panel. More recent systems even interact with other vehicle control systems like the suspension control system.

With a few rare exceptions, tyre pressure is monitored by sensors fitted to the tyre inflation valves. Each sensor can measure tyre pressure, temperature and movement. The sensors are powered by a small lithium battery and
dialogue with the control unit over a radio link.

Working with TPMS systems can be particularly challenging because there is not yet any standard governing their form, positioning and radio frequency. A technically evolved tool is therefore essential to tackle TPMS maintenance work effectively.

Interaction with the TPMS system is necessary not only to remedy malfunctions or reset warning lights, but for all the routine operations that tyre fitters and fast-fit centres have to handle on a daily basis, including fitting new tyres, switching between summer and winter tread patterns and tyre rotation to limit wear.

While these tasks were once entirely manual, now they also involve dealing with the electronic systems introduced to improve road safety and reduce the number of accidents caused by tyre problems.

Today’s tyre fitters therefore need to complement their normal equipment (tyre changing machines, balancing and wheel alignment systems) with a diagnostic tool able to dialogue with TPMS control units.

TEXA has been world leader in vehicle diagnostic tools for over twenty years and offers two excellent solutions for making your work more effective and maximising customer satisfaction: TPS, the “standard” solution, and AXONE S TPS the “plus” solution.
TEXA TPS
The tyre specialist

TPS (Tyre Pressure Service) is TEXA’s standard solution for tyre-related service operations. TPS boasts an exceptional coverage of makes and models as well as TEXA’s traditionally robust design and build quality.

Once you have selected the make and model of vehicle, TPS can dialogue with the valve sensors on each wheel. Placing the tool near the sensors allows you to activate them and check their efficiency even if they are in stand-by mode at the time. The tool’s own display reads out pressure, temperature and battery charge level (where available), as well as the relevant identification codes and all other diagnostic information provided by the vehicle manufacturer.

The procedure is made simple by a highly intuitive menu that guides you through all options step by step. TPS lets you check the condition of sensors and replace them if necessary. The tool’s own built-in database provides a list of compatible spare parts for each selected vehicle. TEXA’s vast database also provides other items of valuable information, including correct procedures for rotating tyres.

If a sensor is replaced by a universal spare part, the standard TPS tool can even program the new sensor to assign it the same identification code as the old one and link it to the receiver or vehicle control unit.

Subscriptions are available for users wishing to receive the latest make and model updates from TEXA.

TPS also uses its radio link capabilities to provide a valuable additional function. The tool can dialogue with remote door opening control systems and even check the battery charge level.
In addition to serving as a stand-alone tool, TPS can also be fully integrated with the garage networks of existing TEXA customers.

Thanks to the free “TPMS Repair” app, which guides users step by step through every operation, and thanks to an integrated Bluetooth module, TPS can interface with any Windows PC running TEXA IDC4 software, or with AXONE 4 and AXONE 4 Mini. Thanks to the versatility of TPS, a Personal Computer or an AXONE 4 or AXONE 4 Mini interface can serve as display unit to provide greater monitor resolution. And more importantly, with a VCI interface, the mechanic is even able to dialogue with the vehicle’s control units, and in particular with those involved in the tyre pressure monitoring system.

This dramatically extends TPS’ ability to interact with the vehicle and even allows the tool to reprogram the TPMS control unit after work has been completed. TPS therefore acquires a level of performance equivalent to that of far more expensive diagnostic tools.

Exploiting this ability to interact with other devices, mechanics can use TPS as a practical, lightweight, portable and stand-alone tool or as a component in a wider and more sophisticated network of TEXA tools, interconnected by Bluetooth.

TEXA was the first to offer garages a range of tools capable of interaction and dialogue with each other, improving the image of their professional services and simplifying the mechanic’s life by providing software with the same look, feel and user interface.
THE “PLUS” SOLUTION
that does far more than check tyre sensors

In many modern vehicles, the tyre control unit has to be reprogrammed whenever any work is done on the tyres. To do this, you need a tool that can dialogue with the TPMS valve sensors, like TEXA’s standard TPS tool and connect to the vehicle's OBD socket to dialogue with the tyre control unit and reset active warning lights.

AXONE S TPS is the best solution currently available. It lets you perform all TPMS-related operations, whatever system configuration the vehicle manufacturer has adopted.

Simplicity is guaranteed by the Android™ operating system, which offers an intuitively easy user experience and provides clear support at every step in the process. All you need to do is select the make and model of the vehicle you are working on, and the software automatically lists what functions are available for the valve sensors (the same functions provided by TPS) and what other functions you can select to program the control unit.

A Bluetooth module connects AXONE S to the Navigator nano S. You can therefore remain connected to the ECU while moving around the vehicle without the annoyance of trailing cables.

Among the many advantages of this great tool are its robust design and solid build and a superb 5 inch capacitive colour touch screen that clearly displays all available functions and data.
AXONE S TPS
is also a multi-utility tool

In addition to subscribing to receive TPMS software updates and added make and model coverage, you can also extend the functionality of your AXONE S thanks to its multi-utility design concept.

Until now, there was no diagnostic solution specifically designed to satisfy the needs of tyre fitters, who were therefore obliged to purchase complete diagnostic tools designed for mechanics. These sophisticated tools, however, are costly to purchase, and the average tyre fitter will never use most of their functions. The ingenious multi-utility solution embodied by AXONE S fills this gap in the market. On sale at an extremely accessible price, AXONE S represents the perfect solution for tyre fitters, who can finally purchase a tool tailored to their specific needs.

On top of this, just a small increase in price permits you to download software for the FAST-FIT utility and access a whole range of additional functions. The FAST-FIT utility allows you to work on electronic suspension systems, replace brake pads on vehicles with electronic pad control, perform jobs on air conditioning, starting, instrument and lighting systems, and even adjust certain engine control parameters. It even lets you perform service resets — an extremely useful function.

If you then add the Diagnosis utility, your AXONE S becomes a superb diagnostic tool, able to work effectively on all vehicle electronic systems thanks to TEXA’s extraordinary coverage of makes and models.

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TEXA TPS KEY
for existing TEXA customers

Following introduction of legislation that makes TPMS systems obligatory, TEXA set about developing a specific solution for workshops who already own an AXONE 4 or AXONE 4 Mini diagnostic tool and who need to extend its scope.

TEXA’s engineers have now created TPS KEY. This ultra-compact tool (only 37 x 72 x 16.5 mm in size, and only 36 g in weight) incorporates a USB port and all the advanced technology needed to connect to AXONE 4 (optional mini-docking unit available) or to AXONE 4 Mini, and effectively render them able to work on TPMS systems.

Thanks to TPS KEY and its own, latest generation Cortex processor, mechanics can perform all tyre-related jobs, interrogate TPMS sensors, interact with IDC4 software and TEXA VCIs to dialogue with a vehicle’s electronic control units, clone sensor ID on to universal replacements and access detailed diagnostic resources.

TPS KEY is quick and easy to install thanks to a built-in USB port. The TPMS Repair app guides users through all procedures step by step. TPMS Repair can be downloaded free of charge from the TEXA APP virtual store, and is available in AXONE 4, AXONE 4 Mini and PC versions.

The generous colour touch screens, latest generation hardware and IDC4 software of AXONE 4 and AXONE 4 Mini make TPMS jobs easy, fast and intuitive.
TPMS BRAND COVERAGE:

TEXA’s TPMS solutions cover an extremely long list of makes and models, and new vehicles can be added by subscribing to regular updates. To see the latest coverage, visit www.texa.com/coverage.

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TPS

**Processor:** Cortex M0+, 48 MHz

**Coprocessor:** Custom on FPGA (sensor communications)

**RAM:** 16 MB

**Display:** Dimensions: 1.5”, Type: backlit monochrome LCD, Resolution: 64x128

**Transmission frequency:** 125 kHz

**Reception frequency:** 315 MHz - 433 MHz - 434 MHz

**Cable communications:** USB

**Wireless communications:** Bluetooth class 2 with integrated antenna

**Battery:** Type: Li-ion, Capacity: 1100 mAh, Voltage: 3.7 V

**Autonomy:** approx. 8 hours

**Consumption:** 500 mA from USB port

**Recharge:** via USB, approx. 3 hours

**Operating temperature:** - 10 °C to 40 °C

**Storage temperature:** - 20 °C to 60 °C

**Battery charging temperature:** 0 °C to 45 °C

**Relative humidity, storage and functioning:** 10% to 80%, non-condensing

**Dimensions and weight:** 63 x 142 x 30 mm, 136 g

**Standards:**

- Directives: 1999/5/EC R&TTE, 2011/65/EU ROHS
- Electromagnetic Compatibility:
  - ETSI EN 301-489-1:2011
  - ETSI EN 301-489-17:2012
- Radio systems:
  - ETSI EN 300 328:2012-06
- Safety:

AXONE S

**Processor:** ARM Cortex A8 800 MHz

**RAM:** 1 GB DDR3

**Flash memory:** 4 GB iNAND

**Memory expansion:** SD Card

**Operating system:** Android™ JB 4.2.2

**Display:** Dimensions: 5 inches, 32 M colours, Type: LCD-TFT, Resolution: 800x480 pixels, Touchscreen: capacitive

**Visual signalling:** RGB LEDs

**Acoustic signalling:** speaker

**Power supply connector:** USB connector with proprietary cable

**Communication connector:** USB connector with proprietary cable

**Wireless connectivity:** Bluetooth class 2, Wi-Fi 802.11 b / g / n, supports WPA / WPA2, internal antenna

**External power supply:** 5 V, 1.2 A

**Operating temperature:** 0 to 45 °C

**Dimensions:** 158x83.5x17.5 mm

**Weight:** 215 g

TPS KEY

**Processor:** Cortex M0+, 48 MHz

**Coprocessor:** FPGA based custom coprocessor (communication with sensors)

**RAM:** 16 MB

**Transmission frequency:** 125 kHz

**Reception frequency:** 315 MHz - 433 MHz - 434 MHz

**Consumption:** 350 mA via USB port

**Dimensions:** 37 x 72 x 16.5 mm

**Weight:** 36 g

To check out the extensive coverage of TEXA products, go to: www.texa.com/coverage

To check on IDC4 compatibility and minimum system requirements, go to: www.texa.com/system

**WARNING**

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