



TMS AP-01

User manual



Product information

Product type: Tire Mounted Sensor
Product model: TMS AP-01
Trademark: Michelin

The TMS AP-01 is an autonomous bluetooth sensor. The features and specifications are subject to change without notification. The TMS AP-01 must be installed by a qualified professional.

Manufacturer information

Manufacturer name: Manufacture Française des Pneumatiques Michelin
Address: 23 Place des Carmes Déchaux
63040 Clermont-Ferrand
France

Product Specification

Operating Conditions

The TMS AP-01 must not be used in operating conditions different than those listed below:

Temperature: -40°C to 125°C (-40°F to 257°F)

Pressure: up to 9.3 Bar (130.5 PSI) above atmospheric pressure

Altitude: up to 10,000m (32,000 ft) above sea level

Measures

Type	Accuracy	Range
Temperature	+/- 5 °C between -40°C < T < 105°C +/- 10°C between 105°C < T < 125°C	-40°C to +125°C
Pressure	+/- 5kPa between -40°C < T < 105°C +/- 20kPa between 105°C < T < 125°C	90 kPa to 930 kPa (absolute)
Battery voltage	+/- 50mV between -40°C < T < 105°C +/- 100mV between 105°C < T < 125°C	1.9V to 3.2V

Radio frequency

Band: 2,400 MHz to 2,483.5 MHz

Power: up to +9dBm (7.95mW)

Battery

3.2V  This marking indicates that the product is powered by a direct current from a coin cell with a maximum voltage of +3.2V.

Warning



The TMS AP-01 is powered by an internal battery. This battery cannot be replaced.

The TMS AP-01 must not be installed in an explosive environment.

Check the TMS AP-01 casing for any damage before installing it and do not use the TMS AP-01 if it is damaged.

Do not disassemble or attempt to service the TMS AP-01.

Do not heat the TMS AP-01 above 125°C (257°F).

Disposing a battery into fire or a hot oven mechanically crushing or cutting a battery can result in an explosion.

Leaving a battery in an extremely high temperature surrounding, or an extremely low air pressure environment may result in an explosion or leakage of flammable liquid or gas.

Disposal of waste batteries



The product complies with the DEEE/WEEE Directive (2012/19/UE French version, 2012/19/EU English version) on waste electrical and electronic equipment.

Do not dispose it with other household waste. Instead, hand it over the appropriate collection point for recycling.



Certificates

Administration	ID (if applicable)	Regulatory Information
OC/CB Scheme		In progress
CE		 The Manufacture Française des Pneumatiques Michelin declares that the radio equipment type TMS AL-01 is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: https://iot.michelin.com/ The TMS AP-01 has been tested in accordance with the EN 61326-1 standard of 2020 following the immunity levels corresponding to the ordinary environment. Product class: B.
FCC/IC	FCC ID: F15TMSAP01 IC: 5056A-TMSAP01	 This device complies with part 15 of the FCC Rules and with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by Michelin may void the user's authority to operate the equipment. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct interference by one or more of the following measures: - Reorient or relocate the receiving antenna. - Increase the separation between the equipment and receiver. - Connect the equipment into an outlet on circuit different from that to which the receiver is connected. - Consult the dealer or an experienced radio/TV technician for help. This device complies with FCC and ISSED radiation exposure limits set forth for general population. This device must not be co-located or operating in conjunction with any other antenna or transmitter. Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication. Le Présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement. Le présent appareil est conforme aux niveaux limites d'exigences d'exposition RF aux personnes définies par FCC et ISDE. L'appareil ne doit pas être installé à proximité ou être utilisé en conjonction avec une autre antenne ou un autre émetteur. Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente

		(p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.
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DOCUMENT REVISION

revision number	Autor	Changes	Date
1	Julien Guichon	Initial Release	06/05/2024
2	Julien Guichon	Add - Battery DC level marking - Measure specification - photo	31/05/2024
3	Julien Guichon	Add - EN 61326-1 text	03/06/2024
4	Julien Guichon	Change - Max pressure at 9.3Bar(130.5 psi) - Pressure measurement limit Add - FCC ID - IC	11/07/2024