

Continental 
The Future in Motion



ContiConnect Valve Cap Sensor

  Installation Manual

ContiConnect Valve Cap Sensor

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1 General

1.1 Version note

In case of doubt, the English original version of the “Installation manual” applies.

1.2 Information on this Installation Manual

This Installation Manual is intended for qualified technicians with technical know-how in tire fitting.

Knowledge of its contents enables the product to be installed on commercial vehicles.

This Installation Manual is a crucial aid to the successful and safe installation of the product. It contains important instructions on installing the product correctly and safely. Observation of its contents helps avoid dangers, increase the reliability and service life of the product and maintain the product warranty.

The current version of the installation manual is available for everyone online (www.continental-tires.com/products/b2b/services-and-solutions/ContiConnect/downloads/). It must be read and observed by everyone who is involved with

- Installation
 - Activation
 - and/or Diagnosis
- of the product.

Observe the instructions contained - in particular the safety instructions.






1.3 Liability disclaimer

The manufacturer assumes no liability for damage and operational faults resulting from:

- Failure to observe this Installation Manual
- Used for other than the intended purpose
- Installation by unqualified or insufficiently qualified personnel
- Faulty installation
- Use of parts other than original spare parts and accessories
- Technical changes and modifications

1.4 Explanation of symbols

Warnings are additionally identified in this Installation Manual by warning symbols. The following warning symbols are used in this Installation Manual:

Symbol	Meaning
	General warning
	Special instructions on safe working
	General instructions and useful suggestions on handling
	Note on observing environmental regulations for disposal
	Electric/electronic components with this symbol may not be disposed of in the normal household waste.





1.4.1 Abbreviations

The following abbreviations are used in this Installation Manual:

Abbr.	Meaning
ATO	A ssemble- t o- o rd e r
CAN	(C ontroller A rea N etwork) Data bus system for communication between vehicle systems
FMS	F leet M anagement S ystem
HHT	H and- H eld T ool
LF	L ow F requency
OBD	O n B oard D iagnosis
TPMS	T ire P ressure M onitoring S ystem
Truck/UV	Heavy Goods Vehicles/ U tility v ehicle
RF	R adio F requency
VCS	V alve C ap S ensor
YYDD	Year and day of the year

1.5 Warnings

The following warnings are used in this Installation Manual:

	<p style="text-align: center;">⚠ CAUTION</p> <p>Minor injuries! A warning of this hazard level indicates a possible situation that could lead to reversible injuries.</p> <p>▶ Follow the instructions in this warning.</p>
	<p style="text-align: center;">ATTENTION</p> <p>Damage to property. A warning of this hazard level indicates a situation that could lead to damage to the equipment.</p> <p>▶ Follow the instructions in this warning.</p>
	<p style="text-align: center;">SAFETY INSTRUCTIONS</p> <p>Instructions on safe working These instructions include important information and instructions on safe working during the following actions.</p> <p>▶ Follow the instructions in this warning to avoid accidents and injury.</p>
	<p style="text-align: center;">NOTE</p> <p>A note contains additional information that is important for further processing or for simplifying the procedure step explained.</p>

1.6 Copyright

This Installation Manual and all documents supplied with this product are protected by copyright.

These documents may not be duplicated either wholly or in part without the express permission of Continental Reifen Deutschland GmbH.

1.7 Warranty terms

The respective relevant “Continental AG terms and conditions” apply with the exception of possible different contractual agreements.

The latest version can be obtained via your ContiConnect Valve Cap Sensor supplier.

1.8 Manufacturer’s address

Continental Reifen Deutschland GmbH

Continental-Plaza 1

30175 Hannover

Germany

www.continental-tires.com

1.9 After-sales service

In the case of technical questions on the product, please contact your ContiConnect Valve Cap Sensor supplier or the authorized garage that installed the product.

2 Safety

2.1 General

In addition to the safety instructions specified in these installation instructions, the “General Safety Notes” (article no.: 17342240000) belonging to the product must be observed.

Hazards that could occur during a particular action are described before the instructions for each step.

Failure to observe the “General Safety Notes” and procedural instructions specified in these installation instructions can lead to considerable hazards.

2.2 Prohibited modifications

All modifications and changes to the product are prohibited.

The manufacturer assumes no liability for any resulting damage.

In the event that conversions or modifications to the product should become necessary, contact the manufacturer.

2.3 Intended use


This ContiConnect™ Valve Cap Sensor is only intended to,

- determine the tire pressure and/or the tire temperature of each tire
- This product may only be used for its intended purpose within the limits stipulated in the technical data.

Use for any other purpose is not considered as intended use. Operation of the product in a faulty condition is prohibited.

No claims of any kind will be accepted for damage resulting from usage other than the intended purpose.

The risks associated with such improper use shall be borne solely by the user.

	NOTE
	After installation, Sensor or Sensor + adapter/extension should not protrude outside the rim.

2.3.1 Use of the valve cap sensors

Even if technical monitoring is ensured, the operator must make sure that the condition of the valve cap sensor is checked regularly.

In the case of continued use of the tires on other vehicles where monitoring is not ensured, the valve cap sensors do not have to be removed from the tires.



2.4 Qualifications for installation

The following qualifications are specified in this Installation Manual:

- **Qualified staff**
is deemed capable of independently carrying out the work assigned to them and of recognizing and avoiding possible dangers due to their technical training, know-how and experience and their knowledge of the relevant regulations.

The product may only be installed by persons who have been trained for this work.

2.5 Personal protective equipment

Symbol	Meaning
	Wear protective goggles.
	Wear safety shoes.

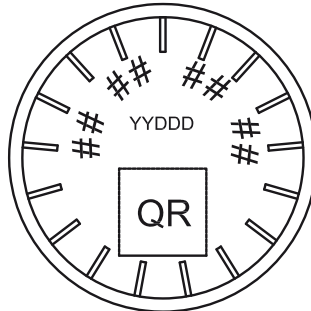
Technical data

3 Technical data

3.1 Valve Cap Sensor

Dimensions:		
- Height	32.5 1.28	mm inches
- \varnothing	19.5 0,77	mm inches
Weight		
- with battery	23.5 0,83	g oz
Typical service life* of the permanently installed battery approx.	2.5	years
RF frequency	433.92	MHz
LF frequency	125	kHz
Telegram	Standard Frame TTM1	
Standard telegram frequency	every 128	s
Pressure range	0 - 12 0 - 173	bar psi
Temperature range	-40 to 120 -40 to 248	°C °F
Measured temperature	temperature at valve stem	
IP class	IP69K	
Battery indicator	Low battery indication	
Mounting	Valve stem outside the tire	
Sensor modes	only Shipping and Parking Mode	

3.1.1 Valve Cap Sensor housing



The following information are shown on the Valve Cap Sensor:

- Serial number (Sensor ID) printed in hexadecimal code
- Date of production (YYDDD)
- QR code which includes the ID
- Example “88010101”

3.1.2 Additional label on Valve Cap Sensor




The following informations are printed on the additional label:

- Continental logo
- ANATEL ID mark
- IC ID mark
- FCC ID mark
- CE mark
- WEEE logo
- Product number
- Date of production (YYDDD)
- QR code which leads to landing page with further information including manuals and certifications:
www.continental-tires.com/products/b2b/services-and-solutions/ContiConnect/downloads/

4 Installation

4.1 Scope of supply

	NOTE
	<ul style="list-style-type: none">▶ Check the entire delivery for completeness and visual damage.▶ On delivery of the product, note any damage due to improper packaging or transport damage on the delivery note and report it to your sales contact immediately.

4.2 Disposal of the packaging materials



The packaging protects the product against transport damage. The packaging materials have been selected in line with environmental and disposal aspects and are therefore recyclable.

Recycling the packaging saves raw materials and reduces the production of waste. Packaging materials which are no longer needed should be disposed of in accordance with the local regulations.

4.3 General notes on damage prevention

To avoid damage to the vehicle, the trailer or the product, please refer to the “General Safety Notes” (article no.: 17342540000).

4.4 Preliminary work prior to installation

For a successful installation of the product it is recommended to perform these steps prior to the installation in the following order:

- 1) Remove all valve caps from the tires.
- 2) Check that all tires have the correct tire pressure. If necessary, adjust all tires to their correct tire pressure.

4.5 Installation of the Valve Cap Sensor

4.5.1 General notes on installation

The product must be installed in such a way that

- it does not cause injury, damage or failure.
- it becomes an integral part of the vehicle.
- its mounting does not generate vibrations or the product can come loose due to vibrations and shocks.
- that it and its adapter/extension do not protrude outside the rim, to avoid sensor damages and because of safety reasons.

4.5.2 Installation location

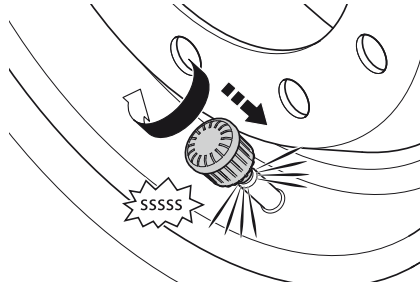
The Valve Cap Sensor must be installed on the valve stem of each vehicle tire.

Installation

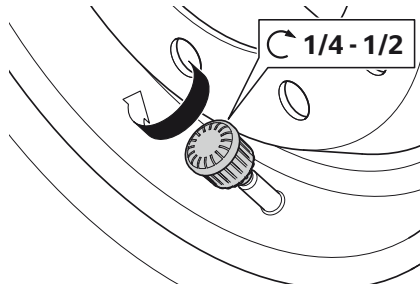
4.5.3 Mounting

i	NOTE
	The sequence of mounting the Valve Cap Sensor on the tire is based on the sequence of reading the corresponding tire as specified by the Hand-Held Tool.

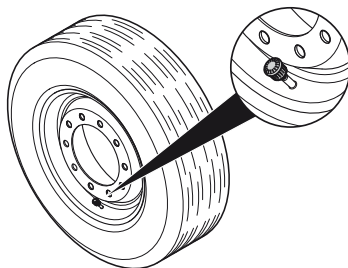
- The Valve Cap Sensor must be screwed onto the valve stem until a brief “hiss” of air indicated the correct seat of the sensor.



- Turn the Valve Cap Sensor an additional quarter to half turn to seal the valve stem correctly.



The Valve Cap Sensor is now activated and can be configured to the ContiConnect™ system.



- Please read the Valve Cap Sensor as described in chapter “**4.6 Read Valve Cap Sensor using Hand-Held Tool**”.

4.5.4 Installation with extensions or adapters

If it is not possible to install the Valve Cap Sensor directly to the valve stem as recommended, then valve extensions which allow fixation to the rim should be used for safety reasons.

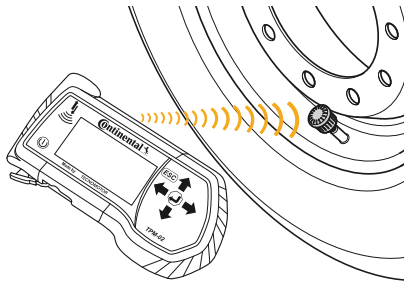
- The valve extension/adapter must be screwed onto the valve stem and the fixation attached to the rim. This is to ensure that the Valve Cap Sensor cannot vibrate and swing while driving and damage to the valve, tire, rim or the sensor itself is avoided.
- The Valve Cap Sensor must be screwed onto the valve extension/adapter until a brief “hiss” of air indicated the correct seat of the sensor.
- Turn the Valve Cap Sensor an additional quarter to half turn to seal the valve stem extension/adapter correctly.

The Valve Cap Sensor is now activated and can be configured to the ContiConnect™ system.

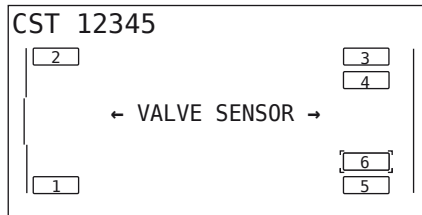
4.6 Read Valve Cap Sensor using Hand-Held Tool

i	NOTE
	▶ Obtain all information and handling instructions on the Hand-Held Tool (HHT) from the “Hand-Held Tool user manual” .

- Choose **“New/Resume/Modify Installation/Check all Tires - Fetching sensors”** with the HHT.

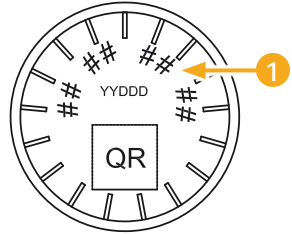
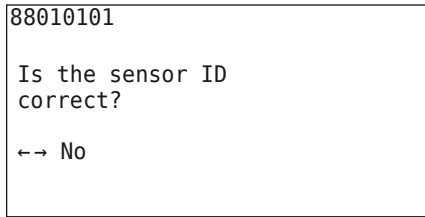


- Switch from the user setting **“← TIRE SENSOR →”** using the left or right arrow key to **“← VALVE SENSOR →”**. Proceed with this selection for each tire based on sensor type. **“← VALVE SENSOR →”**, **“← TIRE SENSOR →”**, or a mix of both is possible.

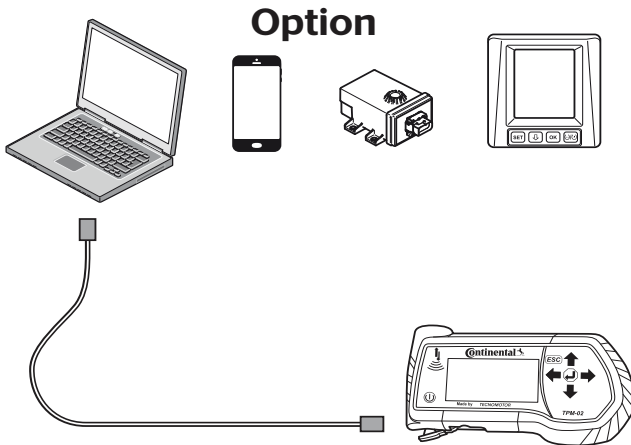


Installation

- For outer twin tire, a confirmation will be asked for the sensor ID (1). Please check it with the label printed on the sensor and confirm.



- Follow the on-screen instructions to configure the Valve Cap sensors.
- When the configuration process for all Valve Cap Sensors including the last is complete, the configuration is then ready to be transmitted to the system.



5 Information on the product

5.1 General

- ContiConnect Valve Cap Sensor supports the monitoring of the condition of the tire, e.g. tire pressure. The responsibility for the correct pressure lies with the driver.
- Correct the tire pressure only when the tire temperature corresponds to the ambient temperature.

6 Troubleshooting

6.1 Valve Cap Sensor not found

If the message “**Valve Cap Sensor not found**” appears on the Hand-Held Tool display, check that the correct sensor type has been selected. If not, use the left or right arrow keys to toggle between the user setting “← **TIRE SENSOR** →” and “← **VALVE SENSOR** →”.

6.2 Twin tires fetched wrong

If the Valve Cap Sensors of the twin tires are fetched wrong, the following steps must be taken:

- Demount the Valve Cap Sensor of the outer tire.
- Take the sensor in the hand and read it in again.
- If the reading process was successful, mount the Valve Cap Sensor back on the outer tire.
- Read the Valve Cap Sensor of the inner tire.

6.3 “LIVE” installation recommendation

In the case of a “LIVE” installation, it is recommended to do tire maintenance with the vehicle ignition off to avoid a “very low pressure” alert upon sensor removal.

6.4 Change between different sensor types

In case of a sensor type change, different functions are available:


Functionality	Valve Cap Sensor	Tire sensor Gen 1	Tire sensor Gen 2
Typical service life* of the permanently installed battery, approx. (in years)	2.5	6	4
Pressure measuring range (bar)	0-12		
Temperature measuring range (°C)	-40 to 120		
Temperature measuring (Interior tire temperature)	-	x	x
Temperature measuring (Temperature at valve stem)	x	-	-
Low battery indicator	x	x	x
Loose/Flip sensor	-	x	x
Bluetooth	-	-	x
Motion detection	-	x	x

* Constantly high tire inside temperatures (caused for example by high ambient temperature, low tire pressure, etc.) can decrease the battery service life.

i	NOTE
	For the detailed information of the different sensor types see the corresponding technical data.

7 Dismantling and Disposal

7.1 Dismantling

	⚠ CAUTION
	<p>Minor injuries! A warning of this hazard level indicates a possible situation that could lead to reversible injuries.</p> <p>▶ Follow the instructions in this warning.</p>

The product may only be dismantled by appropriately qualified staff in observance of local safety regulations.

- ◆ Remove all valve cap sensors.
- ◆ Dispose of all components as described in chapter ***“7.2 Disposal”***

7.2 Disposal

The manufacturer is committed to the protection of the environment. As with other old devices, the product can be returned to Continental via the normal channels. For details of disposal, please contact your authorized sales partner.

- ◆ Sort metals and plastics carefully for recycling or scrapping.
- ◆ Dispose of all other components such as cleaning agents or electrical components according to legal regulations.

7.2.1 Valve Cap Sensor

i	NOTE
	<p>▶ The valve cap sensor must be removed before demounting and disposing of a tire. If the valve cap sensor shall be used further after demounting, pay attention to the service life of the valve cap sensor as described in chapter “3.1 Valve Cap Sensor”.</p>

The valve cap sensor contains a lithium battery that is cast into the housing and cannot be replaced.

After reaching the end of its service life, the valve cap sensor must be disposed of in accordance with all current local, regional and national laws and regulations. For this, a return to an authorized sales partner or the return to the central collection point is possible (address, see chapter **“7.2.3 Collection point”**).

7.2.2 Electrical/electronic components



EU

All other electrical/electronic components except valve cap sensor and Hand-Held Tool must be disposed of as used electric and electronic devices in accordance with Directive 2012/19/EU.

In case of any questions, please contact your local authority responsible for waste disposal.

US

All other electrical/electronic components except valve cap sensor and Hand-Held Tool, must be disposed of as used electric and electronic devices. In case of any questions, please contact your local authority responsible for e-waste disposal or visit the Environmental Protection Agency website (www.epa.gov/recycle/electronics-donation-and-recycling) for recycling drop-of locations.

7.2.3 Collection point

EU address:

Georg Ebeling Spedition GmbH

An der Autobahn 9-11

30900 Wedemark

Germany

US address:

Continental Tire the Americas, LLC

ESH Department

11525 N. Illinois Hwy 142

Mt. Vernon, IL 62864

8 Declaration of Conformity

The ContiConnect Valve Cap Sensor solution meets the basic requirements and relevant regulations of the European Union (EU) and the USA as well as other countries listed at

www.continental-tires.com/products/b2b/services-and-solutions/ContiConnect/downloads/.

The complete original declaration of conformity is at

www.continental-tires.com/products/b2b/services-and-solutions/ContiConnect/downloads/.

9 Certifications

The individual certificates are included with the product documents and/or at www.continental-tires.com/products/b2b/services-and-solutions/ContiConnect/downloads/.

In accordance to ANATEL certification see below statement:

Este equipamento não tem direito a proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.

Para mais informações, consulte o site da ANATEL - www.gov.br/anatel

9.1 Radio permit

A radio permit was issued for the ContiConnect Valve Cap Sensor.

9.2 General Operating Permit

A general operating permit (Allgemeine Betriebserlaubnis - ABE) from the Kraftfahrt-Bundesamt (KBA) (German Federal Motor Vehicle Transport Authority) was issued for the ContiConnect Valve Cap Sensor.

The general operating permit is available at:

www.continental-tires.com/products/b2b/services-and-solutions/ContiConnect/downloads/

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Continental-Plaza 1
30175 Hannover
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www.conticonnect.com

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