

# **ContiConnect**<sup>™</sup> **Live**

The truck and trailer telematic solution for live tire monitoring





# **ContiConnect™ Live**

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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 vehicle electrics and tire fitting.

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

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

The current version of the installation manual is available for everyone online (https://www.continental-tires.com/transport/tire-monitoring/conticonnect/downloads). It must be read and observed by everyone who is involved with

- Installation,
- Activation.
- Operation
- and/or Diagnosis

of the system.

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 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
<u>^</u>	General warning
4	Electric shock hazard
4	Special instructions on safe working
i	General instructions and useful sug- gestions 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.

5



### 1.4.1 Abbreviations

The following abbreviations are used in this Installation Manual:

Abbreviation	Meaning
ATO	Assemble-to-order
ВТ	Bluetooth
CAN	(Controller Area Network) Data bus system for communication between vehicle systems
DTCO	<b>D</b> igital <b>T</b> achograph
FMS	Fleet Management System
GND	Ground Battery voltage (negative pole / chassis)
GPS	Global Positioning System
GSM	Global System for Mobile Communications
ННТ	Hand-Held Tool
IGN	<b>Ign</b> ition
TPMS	Tire Pressure Monitoring System
Truck/ UV	Heavy Goods Vehicles/ Utility vehicle
OBD	On Board Diagnosis
RF	Radio Frequency
RSSI	Transmission power of the tire sensors (Received Signal Strength Indicator)
Sensor ID	Sensor identification number
SIM	Subscriber Identity Module
+ VDC	Battery voltage (positive pole)

# 1.5 Warnings

The following warnings are used in this Installation Manual:



#### **A** WARNING

#### Severe injuries!

A warning of this hazard level indicates a possible situation that could lead to death or irreversible injuries.

► Follow the instructions in this warning.



#### **A** CAUTION

### Minor injuries!

A warning of this hazard level indicates a possible situation that could lead to reversible injuries.

► Follow the instructions in this warning.



### **ATTENTION**

### Damage to property.

A warning of this hazard level indicates a situation that could lead to damage to the equipment.

► Follow the instructions in this warning.



#### SAFETY INSTRUCTIONS

#### Instructions on safe working

These instructions include important information and instructions on safe working during the following actions.

► Follow the instructions in this warning to avoid accidents and injury.



#### NOTE

A note contains additional information that is important for further processing or for simplifying the procedure step explained.



# 1.6 Copyright

This Installation Manual and all documents supplied with this system 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™ Live supplier.

### 1.8 Manufacturer's address

#### Continental Reifen Deutschland GmbH

Vahrenwalder Strasse 9

30165 Hannover

Germany

www.conticonnect.com

### 1.9 After-sales service

In the case of technical questions on the system, please contact your ContiConnect™ Live supplier or the authorized garage that installed the system.

# 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 system are prohibited.

The manufacturer assumes no liability for any resulting damage.

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

### 2.3 Intended use

This ContiConnect<sup>™</sup> Live solution is only intended to,

- determine the condition of each tire (e.g. tire pressure or tire inner temperature),
- determine the vehicle position and current state,
- transmit the collected data to an external evaluation unit via GSM.



This solution 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 solution in a faulty condition is prohibited.

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

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

#### 2.3.1 Use of the tire sensors

Even if continuous technical monitoring is ensured, the operator must make sure that the condition of the tire sensor is checked regularly, at the latest after 20 000 km (12 425 miles) or after 6 months.

In the case of continued use of the tires on other vehicles where monitoring is not ensured, the tire sensors must first 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 (tire mounting and repair, mechanical and electrical automotive experience) and their knowledge of the relevant regulations.

The solution may only be installed by persons who have been trained for this work and who have technical know-how of vehicle electronics and tire fitting.

# 2.5 Personal protective equipment

Wear the following protective equipment during installation:

Symbol	Meaning
	Wear protective goggles.
	Wear protective gloves.
	Wear safety shoes.



# 3 Technical data



#### NOT

► All components to be installed on the vehicle are designed for an operating temperature range of -20 °C to 55 °C (-4 °F to 131 °F). When other temperature ranges are applicable, it is mentioned in the below tables.

### 3.1 Tire sensor

### 3.1.1 Generation 1

Dimensions (L x W x H)	38 x 28 x 22	mm
Difficusions (E X W X II)	1.5 x 1.1 x 0.87	inches
Woight	26	g
Weight	0.92	OZ
Cover color	black	
Transmission frequency	433.92	MHz
Reception frequency	125	kHz
	6	years
Typical service life* of the		
permanently installed battery	or	
approx.	600 000	km
	372 820	miles
Tomporature managining range	-40 to 120	°C
Temperature measuring range	-40 to 248	°F
Pressure measuring range	0 to 12	bar
(rel.)	0 to 173	psi

<sup>\*</sup> Constantly high tire inside temperatures (caused for example by high ambient temperature, low tire pressure, etc.) can lead to a decrease of the battery service life.

### 3.1.2 Generation 2

Dimensions (L x W x H)	38 x 28 x 22 1.5 x 1.1 x 0.87	mm inches
Weight	26 0.92	g oz
Cover color	orange	
Transmission frequency	433.92	MHz
Reception frequency	125	kHz
Bluetooth (Active only at standstill)	2,4	GHz
Typical service life* of the permanently installed battery approx.	4 or 600 000 372 820	years km miles
Measuring ranges		
- Temperature	-40 to 120 -40 to 248	°C °F
- Pressure (rel.)	0 to 12 0 to 173	bar psi
Temperature ranges		
- Tire sensor	-40 to 120 -40 to 248	°C °F
- Bluetooth	-10 to 120 +14 to 221	°C °F

<sup>\*</sup> The typical service life applies to a long-distance vehicle operated at moderate outside temperatures and with correct tire pressure.

Deviations from these general conditions can lead to a shortening of the typical service life.

Exemplary variations, but not exhaustively limited, are:

- high internal tire temperatures (Caused by e.g. high ambient temperatures, lower tire pressure, overload, etc.)
- regular connections via Bluetooth
- high proportion of standstill phases/low speed
- high proportion of Stop-and-Go phases (urban traffic)

It is assumed that the user does not connect to the tire sensor via Bluetooth (pairing).



# 3.2 In-Cabin Unit (Main control unit)

Dimensions (L x W x H)	111 x 64 x 31 4.4 x 2.5 x 1,22	mm inches
Weights		
- with battery	132 4.66	g oz
- with battery and bracket	164 5.78	g oz
Supply voltage	9 to 32	VDC
Supply current (Sleep mode)	7.5	mA
Power consumption		
<ul> <li>Operation (average at 24 V DC)</li> </ul>	50	mA
RF frequency	433	MHz
Temperature ranges		
- Operation	-20 to 60 -4 to 140	°C °F
- Storage	-20 to 85 -4 to 185	°C °F
- Charging	0 to 45 32 to 113	°C °F
Backup battery	Li-lon	

### 3.2.1 In-Cabin Unit connectors



# 3.2.2 Pin assignment Power Connector J4 (2x3 Pin)



Pin	Signal name	Description	Wire color
1	+ VDC	Main power supply	red
2	Ignition	Ignition sense input	green
3	Analog In3	Analog input 3 (optional)	orange
4	CAN 0 (H)	CAN Bus 0 High signal	orange/white
5	CAN 0 (L)	CAN bus 0 Low signal	yellow/white
6	GND	Battery negative 0V	black

# 3.2.3 Blinking code of the In-Cabin Unit status LED's

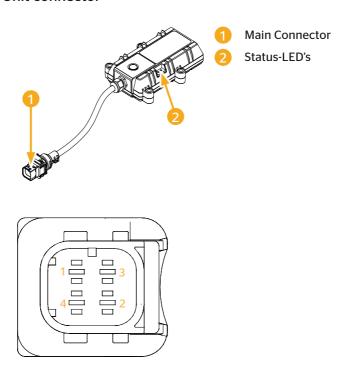
- \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*
- \* 1 Sec \* 1 Sec \* 1 Sec \* 4
- Searching GPS signal
- GPS position established
- Searching GSM signal
- GSM connection established



# 3.3 Enabler Unit (Receiver unit)

Dimensions (L x W x H)	155.4 x 110 x 39 6.1 x 4.33 x 1.54	mm inches
Weight	296 10.44	g oz
Supply voltage	9 to 32	VDC
Supply current (Sleep mode)	5	mA
Supply current (Operation)	50	mA
RF frequency	433	MHz
Temperature ranges		
- Operation	-40 to 70 -40 to 158	°C °F
- Storage	-40 to 85 -40 to 185	°C °F

# 3.3.1 Enabler Unit connector



# 3.3.2 Pin assignment Main connector (2x2 Pin)

Pin	Signal name	Description	Wire color
1	+ VDC	Main power supply	red
2	RS232 RX	OPTIONAL (RS232 Data In)	light blue
3	GND	Battery Negative 0V	black
4	RS232 TX	OPTIONAL (RS232 Data Out)	pink

# 3.3.3 Blinking code of the Enabler Unit status LED's



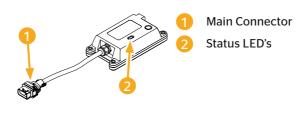
- Searching for In-Cabin Unit
- Connect unit established
- 3 TPMS sensors indication

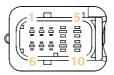


# 3.4 Trailer Unit (Unit at the trailer)

Dimensions (L x W x H)	199 x 104 x 44 7.83 x 4.09 x 1.73	mm inches		
Weight				
- with battery	680 23.99	g oz		
Supply voltage	7 to 52	VDC		
Supply current (Sleep mode)	5	mA		
Power consumption				
<ul> <li>Operation         <ul> <li>(average at 24 V DC)</li> </ul> </li> </ul>	50	mA		
RF frequency	433	MHz		
Temperature ranges				
- Operation	-20 to 60 -4 to 140	°C °F		
- Storage	-20 to 85 -4 to 185	°C °F		
- Sleep mode	-10 to 60 14 to 140	°C °F		
- Battery charging	0 to 45 32 to 113	°C °F		
Backup battery	Li-lon			

# 3.4.1 Trailer Unit connector





# 3.4.2 Pin assignment Main connector (2x5 Pin)

Pin	Signal name	Description	Wire color
1	CAN 0 (H)	CAN bus 0 High signal	orange/white
2	OUT	Open collector output	white/black
3	RS232 Tx	RS232 Data out	pink
4	Ignition/In	Ignition sense input	green
5	+ VDC	Main power supply	red
6	CAN 0 (L)	CAN bus 0 Low signal	yellow/white
7	n.c.	Not connected	
8	RS232 Rx	RS232 Data in	light blue
9	GND	Battery negative 0V	black
10	GND	Battery negative 0V	black

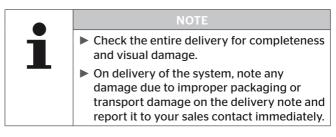


# 3.4.3 Blinking code of the Trailer Unit status LED's

- \* 1 Sec \* 1 Sec \* 1 Sec \* 2
- \* 1 Sec \* 1 Sec \* 1 Sec \* 1 Sec \* 4
- Searching GPS signal
- GPS position established
- Searching GSM signal
- GSM connection established

### 4 Installation

# 4.1 Scope of supply



# 4.2 Disposal of the packaging materials



The packaging protects the system 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 system, please refer to the "General Safety Notes" (article no.: 17342240000).



# 4.4 Recommended installation sequence

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

1) Installation of tire sensor.

tact your sales partner).

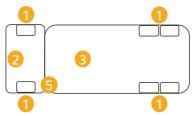
- Perform "Check all Tire" and create report file with the Hand-Held Tool (For detailed instructions refer to http://www.contipressurecheck.com/downloads or contact your sales partner).
- Configure vehicle in ContiConnect™ including serial numbers for external ID (For detailed instructions refer to http://www.contipressurecheck.com/downloads or con-
- 4) Mounting and wiring of all units in a temporary manner in proper installation locations.
- 5) Activate and verify the system with the Installers App. Relocate units, if required.
- 6) Perform a test drive.
- 7) Fix units in a permanent manner.

## 4.5 Installation of the tire sensors

For the installation of the tire sensors please refer to the manuals "Installation instructions tire sensor container with REMA Tip-Top" and "Installation instructions tire sensor container with Cyberbond", respectively.

# 4.6 Typical configurations

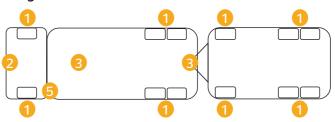
### Straight truck



One Enabler Unit, all components installed on the truck

- Tire sensors
- In-Cabin Unit (Main Control Unit)
- Enabler Unit (Receiver Unit)
- Trailer Unit (Unit at the trailer)
- Power supply (Battery)

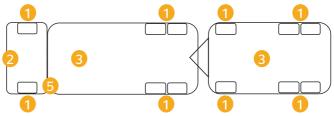
### Straight truck with trailer (A)



Two Enabler Units, no extra components installed on the trailer

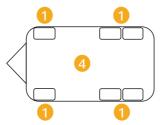


#### Straight truck with trailer (B)



One Enabler Unit installed on the truck and one on the trailer

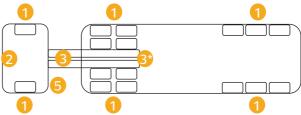
#### **Trailer standalone**



Trailer Unit installed on the trailer powered by internal battery

- Tire sensors
- In-Cabin Unit (Main Control Unit)
- Enabler Unit (Receiver Unit)
- Trailer Unit (Unit at the trailer)
- Power supply (Battery)

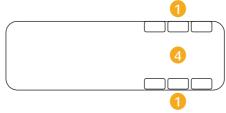
#### Semitrailer truck



One Enabler Unit, all components installed on the semitrailer tractor

\* This Enabler Unit is only used when the Trailer should be monitored without a Trailer Unit.

#### Semitrailer standalone



Trailer Unit installed on the semitrailer powered by internal battery

# 4.7 Initialization using Hand-Held Tool



For configuration and initialization of the system with the Hand-Held Tool proceed as follows:

- Select the appropriate vehicle layout.
- Initialize and activate all tire sensors.
- Upload the "Check-all-tires-report" from the HHT into the ContiConnect™ portal.



### 4.8 Installation of the In-Cabin Unit

#### 4.8.1 General notes on installation

Keep the sticker with Unit Serial number and IMEA in a place easy to access for future maintenance.

The device must be installed in such a way that

- it does not cause injury, damage or failure.
- it becomes an integral part of the vehicle, but is still easily accessible for maintenance work.
- its mounting does not generate vibrations or the device can come loose due to vibrations and shocks.
- the position of the device is selected in such a way that optimum data traffic to the paired devices is ensured.
- sufficient distance to metal parts or electrical lines is ensured in the direct vicinity of the installation location.
- the harnesses must be well tide to the vehicle body in order to avoid vibration and damage for the device connector.
- the harness between the plug and filter must also be well fixed with zip ties in order to avoid vibration and damage for the device connector.

### 4.8.2 Required parts and tools

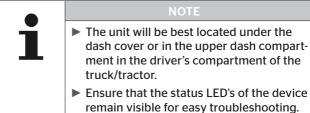
The following parts and tools are needed for proper installation of the device:

- In-Cabin Unit (Main Control Unit)
- Bracket for the In-Cabin Unit (optional)
- Mounting screws for the bracket (not included)
- Cable ties long and short (not included)
- Suitable screwdriver
- Side cutter
- Soldering iron, solder or crimp connectors and suitable crimping tool
- Heat shrink tubing/insulating tape (not included)

### 4.8.3 Installation location

For proper operation, the installation location of the unit must meet the following requirements:

- The device must be installed in a dry environment and must not be exposed to extreme temperatures.
- The device must be installed in a place where the radio signals for GPS, GSM and RF are not weakened by metal parts or cables.
- The antennas on the top of the device must be directed to the open sky.



### 4.8.4 Mounting

Use the special bracket for the In-Cabin Unit.
 For fixing the bracket use screws or double side sticker.
 Use at least 2 of the suitable holes provided.



Alternatively, the unit can be attached without the bracket to solid frame parts inside the driver's compartment using cable ties.



### 4.8.5 Cable harnesses and adapter-cables

There are several pre-assembled cable harnesses available for easy installation of the system:

In-Cabin-Harnesses for the In-Cabin Unit (Main Control Unit):

J4 Connector with open ends on the other side for connecting power, ignition and CAN bus.

The typical wiring scheme for a truck/bus with Enabler Units and a Trailer Unit (will only be installed on trailers) is shown in the following illustration:



- 1n-Cabin Unit (Main Control Unit)
- Power supply (Battery, fuse-box)
- ATO fuse exchangeable
- Adapter for additional signals from/to vehicle

#### Special Adapters

For connection of the In-Cabin Unit (Main Control Unit) there are several special adapter cables available:

No.		
1	US Dutch 9 Pin Connector 500 kbit/s (green)	
2	US OBD II Connector	
3	EU FMS Connector	
4	EU FMS Splitter Connector	
5	EU DTCO Connector	



#### **ATTENTION**

When connecting to Tachograph insert Workshop Card into Tachograph before starting with the installation.

# 4.8.6 Wiring

The electrical connection of the In-Cabin Unit is made via the J4 connectors with the matching cable harnesses.

## **Minimal wiring**



The following table shows how the wires must be connected to the vehicle:

Pin	Signal name	Connect to	Wire color
1	+ VDC	Battery over separate fuse	red
2	Ignition	Ignition signal over separate fuse	green
3	Analog In3	Not used. Isolate open end.	orange
4	CAN 0 (H)	CAN bus High (optional)	orange/ white
5	CAN 0 (L)	CAN bus Low (optional)	yellow/ white
6	GND	Battery negative 0V or chassis	black

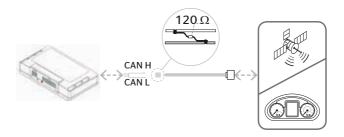


#### CAN bus connection

The CAN bus is a two-wire bus that is typically equipped with 120  $\Omega$  terminating resistors at both ends of the bus line. These terminating resistors serve to ensure the transmission quality on the bus line.

In a system with two 120  $\Omega$  terminating resistors, an impedance of 60  $\Omega$  can be measured with a multimeter between the two CAN bus wires (Ignition set to off). In this case, no further terminating resistor should be installed.

However, if the measured impedance is 120  $\Omega$  or higher, an additional terminating resistor must be installed on the CAN bus line at the In-Cabin Unit.



Adding a terminating resistor between CAN H and CAN L

### 4.9 Installation of the Enabler Unit

#### 4.9.1 General notes on installation

The device must be installed in such a way that

- it does not cause injury, damage or failure.
- it is accessible for maintenance work.
- it is fixed in such a way that it cannot come loose due to vibrations or shocks.
- the position of the device is selected in such a way that optimum data traffic to the paired devices is ensured.
- sufficient distance to metal parts or electrical lines is ensured in the direct vicinity of the installation location.
- the harnesses must be well tide to the vehicle body, in order to avoid vibration damages to the connectors.

### 4.9.2 Required parts and tools

The following parts and tools are needed for proper installation of the device:

- Enabler Unit (Receiver Unit)
- Bracket for the Enabler Unit
- Mounting screws for the bracket and unit
- Cable ties long and short (not included)
- Suitable screwdriver
- Side cutter
- Soldering iron, solder or crimp connectors and suitable crimping tool
- Heat shrink tubing/insulating tape (not included)



### 4.9.3 Installation location



#### **ATTENTION**

#### Possible damage to the Enabler Unit!

When selecting a suitable installation location, observe the following points to avoid damage to the Enabler Unit:

Avoid proximity to high temperature sources (e.g., exhaust system), rotating, moving or tilting parts.

For proper operation, the installation location of the unit must meet the following requirements:

- The device should be installed in a place where the RF radio signals are not weakened by metal parts or cables.
- Ensure that the radio link to the In-Cabin Unit operates without interruption. If the distance to the In-Cabin Unit is too long, use additional Enabler Units as repeaters.

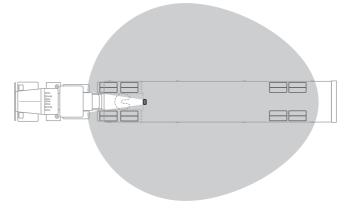


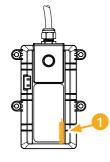
#### NOTE

► The Enabler Unit will be best located at the frame end on a semitrailer tractor or in the middle of the frame on a truck.

### 4.9.4 Requirements for optimum reception

The reception area of the Enabler Unit is similar to that of a sphere, whereby the reception quality decreases as the distance to the tire sensors increases. Reception is restricted in the area behind the Bracket (see illustration below).





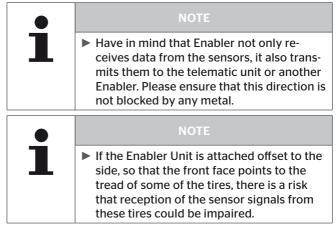
The optimum position of the Enabler Unit is

 in the middle of the vehicle's rear end to cover trailer tires (ATL) and in the middle of the truck for truck tires

#### and

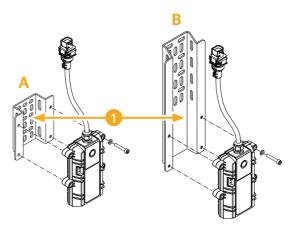
 with the smallest possible gap to the floor (observing safety gaps, e.g. to the road).

Ideally, this allows a direct line of sight between the Enabler Unit and the side walls of all tires to be monitored.

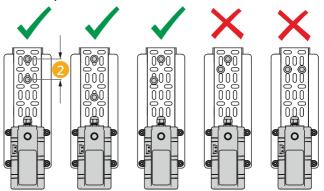




### 4.9.5 Mounting



- Use the special bracket A or B for the Enabler Unit. In most cases bracket B is recommended but for special cases bracket A is required and can be ordered separately. For fixing the bracket use screws. Use at least 2 of the suitable holes provided.
- ◆ For fixing the Enabler Unit on to the bracket use the provided holes. Ensure that the chosen holes will be in a distance between them of at least 5cm 2 like in the description.



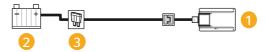
- Additionally, secure the device to the bracket with cable ties.
- ◆ Tie the harnesses to the body with cable ties.
- The enabler should always be mounted in the vertical position.

### 4.9.6 Cable harnesses

There are several pre-assembled cable harnesses available for easy installation of the system:

Enabler-Harness for the Enabler Unit (Receiver Unit): Connector with open ends on the other side for connecting power.

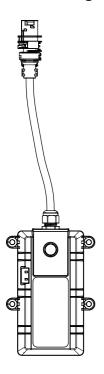
The typical wiring scheme for a truck/bus with Enabler Units and a Trailer Unit (will only be installed on trailers) is shown in the following illustration:



- Enabler Unit (Receiver Unit)
- Power supply (Battery, fuse-box)
- 3 ATO fuse exchangeable



### 4.9.7 Wiring



The electrical connection of the Enabler Unit is made via the main connector with the matching cable harness.

Install the connection cable in a way that water cannot run along the cable into the plug (see figure on the left).

### **Typical wiring**



The following table shows how the wires must be connected to the vehicle:

Pin	Signal name	Connect to	Wire color
1	+ VDC	Battery over separate fuse	red
2	GND	Battery negative 0V or chassis	black

#### **Power supply**

The power supply to the unit can be established via the following connections:

- Directly to the vehicle battery
- Via the fuse box
- Via the bodybuilder connector

#### Separate fuse for +VDC wire

To avoid damage to the device, the + VDC wire must be protected by a separate fuse.



### 4.10 Installation of the Trailer Unit

#### 4.10.1 General notes on installation

Keep the sticker with Unit Serial number and IMEA in a place easy to access for future maintenance.

The device must be installed in such a way that

- it does not cause injury, damage or failure.
- it is accessible for maintenance work.
- it is fixed in such a way that it cannot come loose due to vibrations or shocks.
- the position of the device is selected in such a way that optimum data traffic to the paired devices is ensured,
- sufficient distance to metal parts or electrical lines is ensured in the direct vicinity of the installation location.
- the harnesses must be well tied to the trailer body, to avoid vibration damages.

### 4.10.2 Required parts and tools

The following parts and tools are needed for proper installation of the device:

- Trailer Unit (Unit at the trailer)
- Mounting screws
- Cable ties long and short (not included)
- Suitable screwdriver
- Side cutter
- Soldering iron, solder or crimp connectors and suitable crimping tool
- Heat shrink tubing/insulating tape (not included)



#### 4.10.3 Installation location

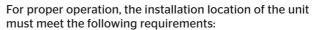


#### **ATTENTION**

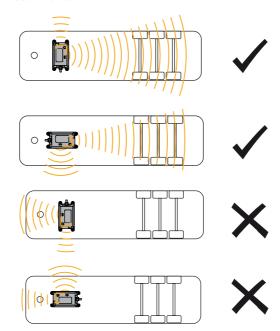
#### Possible damage to the Trailer Unit!

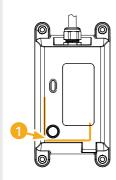
When selecting a suitable installation location, observe the following points to avoid damage to the Trailer Unit:

Avoid proximity to high temperature sources (e.g., exhaust system), rotating, moving or tilting parts.

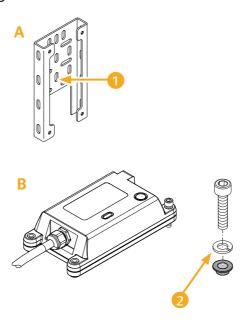


- The device should be installed in a place where the radio signals for GPS, GSM and RF are not weakened by metal parts or cables.
- The antennas on the top of the device 1 should be directed so, that the communication with the tire sensors is possible and a good radio link for GSM and GPS can be established.





# 4.10.4 Mounting



- Use the special bracket (A) for the Trailer Unit.
   For fixing the bracket use drilling screws or lock
   screws. Use at least 2 of the suitable holes 1 provided.
- ◆ For fixing the Trailer Unit (B) on to the bracket use the provided holes. Use all 4 holes provided. Use the lock washers provided for avoiding loose of screws.
- Additionally, secure the device to the bracket with cable ties.
- ◆ Tie the harnesses to the bracket with cable ties.



#### 4.10.5 Cable harnesses

There are several pre-assembled cable harnesses available for easy installation of the system:

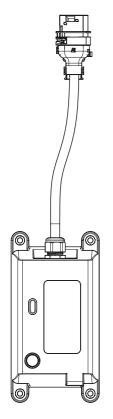
Trailer-Harness for the Trailer Unit (Unit at the trailer): Connector with open ends on the other side for connecting power.

The typical wiring scheme for a truck/bus with Enabler Units and a Trailer Unit (will only be installed on trailers) is shown in the following illustration:



- Trailer Unit (Unit at the trailer)
- Power supply (Battery, fuse-box)
- ATO fuse exchangeable

### 4.10.6 Wiring



The electrical connection of the Trailer Unit is made via the main connector with the matching cable harness.

Install the connection cable in a way that water cannot run along the cable into the plug (see figure on the left).

### **Typical wiring**



The following table shows how the wires must be connected to the vehicle:

Pin	Signal name	Connect to	Wire color
1	+ VDC	Battery over separate fuse	red
2	GND	Battery negative 0V or chassis	black



#### Separate fuse for +VDC wire

To avoid damage to the device, the + VDC wire must be protected by a separate fuse.



#### Low resistance ground connection

To ensure the proper function of the device and to avoid damage, a low-resistance ground connection is mandatory. Connect the GND-wire directly to the chassis of the vehicle use a ring terminal.

#### 4.11 Checks after installation

After completing the installation:

 Check all functions and safety equipment of the vehicle (e.g. brake and lighting system) for proper function.

The In-Cabin Unit and Trailer Unit includes 2 LED's used for fast analysis of the GSM-connection and GPS-recognition.

The relevant LED's indications are shown in chapter "3.2.3 Blinking code of the In-Cabin Unit status LED's" for the In-Cabin Unit and in chapter "3.4.3 Blinking code of the Trailer Unit status LED's".

The Enabler Unit includes 2 LED's for fast analysis of the In-Cabin Unit connection and the TPMS sensors indication (see chapter "3.3.3 Blinking code of the Enabler Unit status LED's").

# 5 Activation of the system configuration

There is a special app available for download for vehicle verification and activation.

Download the app from your app store. Start the app then choose "Installation" and follow the instructions within the app.



# 6 Information on the system

### 6.1 General

- ContiConnect<sup>™</sup> Live 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.

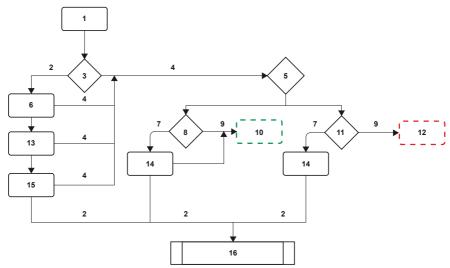
# 6.2 Operation

During operation of the system, carry out the following measures:

Keep the Enabler Unit and the Trailer Units free of dirt and debris such as snow or slush in order not to impair the reception.

# 7 Troubleshooting

Troubleshooting is provided for the Enabler Unit.



Number	Description
1	First power connection
2	No
3	LED Flash
4	Yes
5	Wait for the slow flashing at least 10 Min
6	Check wire connection
7	Fast flashing
8	GREEN Flash
9	Slow flashing
10	GPS Ok
11	RED Flash
12	GSM Ok
13	Check power voltage for at least 12 V
14	Change the location of the vehicle in case of non coverage area
15	Check safe fuse
16	Call Continental support



# 8 Dismantling and Disposal

# 8.1 Dismantling



#### **A** CAUTION

#### Danger of short-circuit!

Danger of short-circuits when working on the vehicle electrical system.

- Observe the vehicle manufacturer's safety instructions.
- Switch off all electrical equipment before disconnecting the battery terminals.
- ► Disconnect the minus terminal **before** the plus terminal.

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

- Disconnect all plugs of the wiring harnesses.
- Remove the cable straps.
- Remove the wiring harnesses.

# **Dismantling and Disposal**

#### In-Cabin Unit (Main Control Unit):

- Remove the In-Cabin Unit from the bracket.
- Loosen the fixing bolts on the bracket and remove it.
- Open the In-Cabin Unit and remove the built in backup battery. Dispose of it separately.

#### **Enabler Unit (Receiver Unit):**

- Loosen the fixing bolts on the bracket and remove it together with the Enabler Unit.
- Remove the Enabler Unit from the bracket.

#### Trailer Unit (Unit at the trailer):

- Loosen the fixing bolts on the bracket and remove it together with the Trailer Unit.
- Remove the Trailer Unit from the bracket.
- Open the Trailer Unit and remove the built in backup battery. Dispose of it separately.

#### Complete system:

Dispose of all system components as described in chapter "8.2 Disposal".



#### NOTE

If unprotected bores are left in the vehicle frame after removal of the system, these must be sealed with zinc spray.



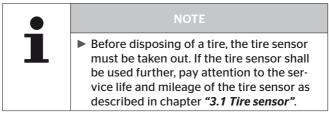
## 8.2 Disposal

The manufacturer is committed to the protection of the environment. As with other old devices, the system 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.

#### 8.2.1 Tire sensor

The tire sensor container remain in the tire.



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

After reaching the end of its service life, the tire 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 "8.2.3 Collection point").

### 8.2.2 Electrical/electronic components



All other electrical/electronic components except tire 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.

# 8.2.3 Collection point

#### Address:

Continental Trading GmbH
"Abteilung Entsorgung"
VDO-Straße 1
Gebäude B14
64832 Babenhausen
Germany



# 9 Declaration of Conformity

The ContiConnect™ Live solution meets the basic requirements and relevant regulations of the European Union (EU) and the USA as well as other countries listed at www.conticonnect.com.

The complete original declaration of conformity is at www.conticonnect.com.

### 10 Certifications

The individual certificates are included with the system documents and/or at www.continental-tires.com/transport/products/overview-product-lines/contipressurecheck/regions/downloads.

# 10.1 Radio permit

A radio permit was issued for the ContiConnect™ Live solution.

# 10.2 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™ Live solution.

The general operating permit is availabble at:

www.continental-tires.com/transport/products/overview-product-lines/contipressurecheck/regions/downloads

#### **Continental Reifen Deutschland GmbH**

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