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SUMMARY

INSTALLATION MANUAL OF THE TMD2 ACCESSORIES

Introduction

Dear Installer,

Please read through the instructions in this manual carefully and keep it for future reference.

Reading and understanding the following manual will help you to avoid damage or personal injury caused by improper use of the product to which it refers.

TEXA S.p.A reserves the right to make any changes deemed necessary to improve the manual for any technical or marketing requirement; the company may do so at any time without prior notice.

This manual should be considered an integral part of the product to which it refers. In the case it is resold the original buyer is therefore required to forward the manual to the new owner.

Reproduction, whole or in part, of this manual in any form whatsoever without written authorization from the producer is strictly forbidden.

1 OPERATION OF THE TOOL'S RADIO DEVICES

Wireless connection with Bluetooth, WiFi and HSUPA technology

Wireless connectivity through Bluetooth, WiFi and HSUPA is a technology that supplies a standard, reliable method for exchanging information between different devices using radio waves. Many other products besides those built by TEXA use this technology, such as mobile phones, portable devices, Computers, printers, cameras, Pocket PCs etc.

The Bluetooth, WiFi and HSUPA interfaces search for compatible electronic devices based on the radio signals they emit and establish a connection. TEXA tools only select and prompt compatible TEXA devices. This does not exclude the presence of other sources of communication or disturbance.

THE EFFICIENCY AND QUALITY OF BLUETOOTH, WiFi AND HSUPA COMMUNICATION MAY BE AFFECTED BY THE PRESENCE OF RADIO DISTURBANCE. THE COMMUNICATION PROTOCOL IS DESIGNED TO MANAGE THESE TYPES OF ERRORS; HOWEVER, IN SUCH CASES COMMUNICATION MAY BE DIFFICULT AND CONNECTION MAY REQUIRE SEVERAL ATTEMPTS.

SHOULD THE WIRELESS CONNECTION ENCOUNTER SERIOUS PROBLEMS AND COMPROMISE REGULAR COMMUNICATION, THE SOURCE OF THE ENVIRONMENTAL ELECTROMAGNETIC DISTURBANCE MUST BE IDENTIFIED AND ITS INTENSITY REDUCED.

Position the tool so that the radio devices it is equipped with can work properly. In particular, do not cover it with any shielding or metallic materials in general.

2 ENVIRONMENTAL INFORMATION

 **For information regarding the disposal of this product please see the pamphlet supplied.**

3 ACCESSORIES FOR TMD2

This manual illustrates the installation of the accessories available for **TMD2**.

4 GENERAL INFORMATION REGARDING THE INSTALLATION OF THE ACCESSORIES

The installation of some accessories may require you to remove the protection tabs in front of the connectors.

Proceed as follows:

1. Use a screwdriver to fold outwards the tab that must be removed.

Be careful not to damage the connector behind the tab.

2. Remove the tab.

5 EXTERNAL GPS ANTENNA

The external GPS antenna helps improve the reception of the GPS signal.
It is necessary when the **TMD2** is not sky-facing.

5.1 Normative Information

Declaration of conformity

CE	TEXA S.p.A hereby declares that this **GPS ANTENNA** unit complies with the essential requirements and provisions of the Directive 1999/5/EC.

A complete copy of the Declaration of Conformity can be obtained from

TEXA S.p.A., Via 1 Maggio 9, 31050 Monastier di Treviso (TV), Italy

5.2 Positioning the Device

The ideal location for the GPS antenna is on the vehicle's roof, however it may also be attached in other suitable positions.

When installing the antenna, remember that the higher the position with respect to the ground, the better the efficiency of the signal reception.

If you are installing the device inside the vehicle, the GPS antenna must be placed where it is not covered by metallic parts or by other materials that would screen the radio waves. Furthermore make sure you position it with its top side up, possibly sky-facing.

If the cable provided is long enough, the best place to install the GPS antenna is near the windshield.

If you intend to position the GPS antenna inside the passenger's compartment, make sure the vehicle's windows are not screened. Otherwise, you should find a spot of non-screened glass identifiable by a different transparency.

5.3 Fixing the Device

The GPS antenna can be fastened:

- *by using glues,*
- *with double-sided tape,*
- *with the magnet it is supplied with, by setting it on a metallic surface.*

Do not fasten the GPS antenna near other antennas or other radio devices (ex.: CBs, Radars, mobile phones, etc.).

Always make sure the antenna is firmly attached to the chosen fixing points.

5.4 Connection

The instructions for the connection of the GPS antenna are provided below.

You must connect the GPS antenna before positioning the **TMD2**, in order to be sure that the antenna and the device are close enough.

The GPS antenna must be connected to the device only with the provided connection cable.

Do not shorten the coaxial cable of the GPS antenna.

Do not run the antenna cable near moving gear and mechanisms, in order to prevent the cable from being damaged.

Do not cover the GPS antenna with shielding or metallic materials.

Proceed as follows:

1. Remove the rubber cap that protects the connector.

2. Insert the connector of the external GPS antenna into the device's connector by slightly pressing it until you hear a "click".
3. Fix the antenna so that the upper plastic part is sky-facing.

6 TMF

TMF is a device that has the following functions:

- *it recognises the driver through a specific electronic identification card (Smart Card),*
- *it sends a rescue call,*
- *it sends audible warnings through the buzzer located inside it.*

TMF is equipped with:

- *a* **SOS** *button (red),*
- *a sensor for Smart Cards,*
- *an* **AUX** *button (green),*
- *a cable with a 4-Pin connector for the connection to the* **TMD2***.*

6.1 *Technical Features*

Power supply:	12 / 24 V
Operating temperature:	- 20 ÷ 55 °C
Storage temperature:	- 40 ÷ 85 °C
Dimensions:	76x33x21 mm
Weight:	35 g

6.2 *Normative Information*

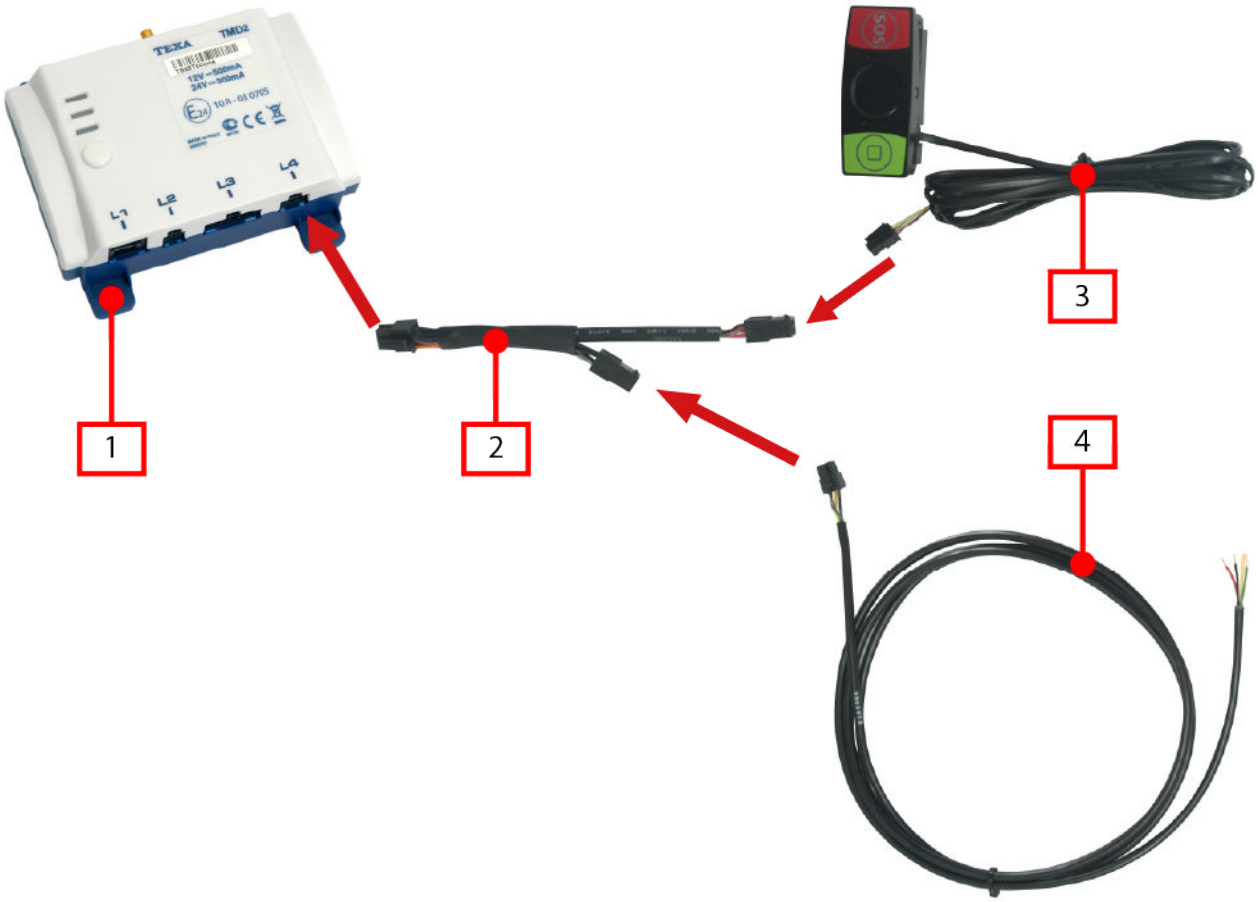
Declaration of conformity

CE	TEXA S.p.A hereby declares that this **TMF** unit complies with the essential requirements and provisions of the Directive 1999/5/EC.

A complete copy of the Declaration of Conformity can be obtained from
TEXA S.p.A., Via 1 Maggio 9, 31050 Monastier di Treviso (TV), Italy

6.3 Installation

The installation of **TMF** requires some additional cables.



1. *TMD2*
2. *splitter cable*
3. *TMF*
4. *power supply cable*

Proceed as follows:

1. *Fix* **TMF** *in the most appropriate position*.*
2. *Connect* **TMF's cable** *to the* **4-Pin** *connector of the* **splitter cable***.*
3. *Connect the* **power supply cable** *to the* **4-Pin** *connector of the* **splitter cable***.*
4. *Insert the connector of the* **splitter cable** *into input* **L4** *of* **TMD2.**

(*) Consult the specific installation file for the vehicle you are working on.

6.4 User Instructions

The use of the various functions of **TMF** is illustrated below.

6.4.1 Driver Recognition

The procedure for the recognition of the driver is described below.

Proceed as follows:

1. *Turn the vehicle's ignition key on ON and start the engine.*
2. *Wait for* **TMF** *to activate the backlight of the buttons and send an intermittent audible warning (1 beep per second).*
3. *Put the Smart Card near the central part of* **TMF** *at a distance of at least 1 cm.*

TMF reads the data contained within the Smart Card and sends them to **TMD2**.

TMD2 verifies that they correspond to the data of a qualified driver.

POSSIBILE SITUATIONS

Qualified driver	**TMF** sends an audible signal composed of **3 close beeps with an ascending tone** and then stops.
Non-qualified driver	**TMF** sends an audible signal composed of **3 close beeps with a descending tone** and then stops.
The Smart Card was not brought close	**TMF** sends an audible request signal (1 beep per second) for **15 consecutive minutes**. **TMF** sends an audible warning composed of **3 close beeps with a descending tone** than stops after 15 minutes.
The Smart Card was not recognised	The Smart Card must be recognised within **40 seconds** from when it is brought close to **TMF**. **TMF** sends an **alarm for missing driver recognition** if this does not occur.
Smart Card reading error or repeated reading	**TMF** sends an audible signal composed of **2 close beeps with a descending tone**.

NOTE

If, after a successful recognition, the vehicle stops and you restart it within **20 seconds** you do not have to repeat the recognition procedure.

6.4.2 SOS alarm

The procedure for the use of the driver SOS alarm is described below.

Use these functions only if they are really needed.

The SOS button must be used **only** if:

1. *the vehicle's driver is ill,*
2. *there is a vehicle malfunction.*

Proceed as follows:

1. *Press the* **SOS button** *for* **more than 1,5 seconds**.

The pressure of the button equals:

- *a flashing backlight of the button,*
- *an audible warning through the buzzer.*

TMF sends a signal to **TMD2**.

TMD2 performs a series of checks and sends a signal to the **operations centre**.

The **operations centre** is able to distinguish between a rescue call due to an illness of the driver and a request for technical assistance due to a vehicle malfunction.

The **operations centre** intervenes in the most appropriate way according to the type of request.

The backlight of the button remains active until the vehicle is shut off.

When the vehicle is restarted there will be no memory of the previous status of the button's backlight.

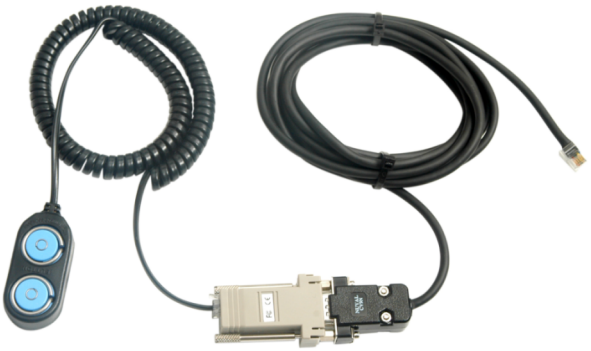
6.4.3 Function Related to the AUX Button

The pressure of the AUX button sends to TEXA's Data Center, a generic signal that is managed differently according to the indications of the single customer.

The utilisation and signalling modes are similar to those described for the SOS alarm.

7 DRIVER RECOGNITION KIT iBUTTON

The **DRIVER RECOGNITION KIT iBUTTON** is a device that helps recognise the driver through an special magnetic key.

DRIVER RECOGNITION KIT iBUTTON	
Driver Recognition Key	

7.1 Normative Information

Declaration of conformity

CE	TEXA S.p.A hereby declares that this **DRIVER RECOGNITION KIT iBUTTON** complies with the essential requirements and provisions of the Directive 1999/5/EC.

A complete copy of the Declaration of Conformity can be obtained from

TEXA S.p.A., Via 1 Maggio 9, 31050 Monastier di Treviso (TV), Italy

7.2 Installation

Proceed as follows:

1. *Fix the* **DRIVER RECOGNITION KIT iBUTTON** *in the most appropriate position*.*
2. *Insert the connector of the cable of the* **DRIVER RECOGNITION KIT iBUTTON** *into input* **L1** *of* **TMD2.**

(*) Consult the specific installation file for the vehicle you are working on.

7.3 *Operation*

The **Driver Recognition Key** has a magnetic surface and is made so that it can be fit on the **DRIVER RECOGNITION KIT iBUTTON**.

Proceed as follows:

1. *Press the key's metallic disc against one of the blue discs of the* **DRIVER RECOGNITION KIT iBUTTON** *until you hear a "click".*

The **DRIVER RECOGNITION KIT iBUTTON** automatically reads the code contained in the key.

The code is reported to the **TMD2** through a serial connection and afterwards sent to the **TMD** server.

8 SOS / PRIVACY SWITCH

The **SOS / PRIVACY** switch is a device that can be configured the following ways:

- **SOS:** *a rescue call is sent to a specific switchboard,*
- **PRIVACY:** *the software inhibits the display of the GPS points.*

The configuration of the operating modes takes place through the web on the **TMD** portal.

Simply press the switch to activate **SOS / PRIVACY** .

The activation of the device is signalled by a red LED located on the inside of the switch.

SOS / PRIVACY is equipped with:

- *a 2-position switch,*
- *a built-in red LED,*
- *a connection cable.*

8.1 *Technical Features*

Power supply:	12 / 24 V
Operating temperature:	- 20 ÷ 55 °C
Storage temperature:	- 40 ÷ 85 °C
Dimensions:	5000 mm

8.2 *Normative Information*

Declaration of conformity

CE	TEXA S.p.A hereby declares that this **SOS / PRIVACY SWITCH** unit complies with the essential requirements and provisions of the Directive 1999/5/EC.

A complete copy of the Declaration of Conformity can be obtained from

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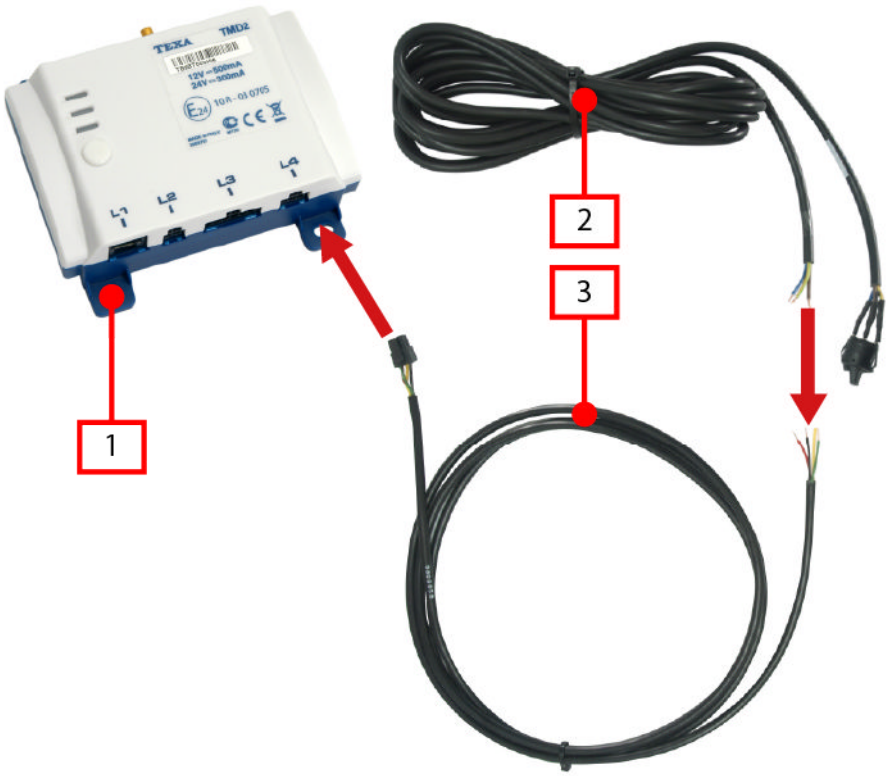
8.3 Installation

The installation of **SOS / PRIVACY** requires the use of an additional cable.



1. *TMD2*
2. *SOS / PRIVACY*
3. *power supply cable*

Proceed as follows:

1. Fix **SOS / PRIVACY** in the most appropriate position*.

2. Connect the **power supply cable** and **SOS / PRIVACY** following the diagram shown in the chart below:

Wire of the power supply cable	Wire of the SOS / PRIVACY cable
green	brown
black	green / yellow
red	blue

3. Connect the **RED** wire of the **power supply cable** to **VBatt+**.

4. Connect the **BLACK** wire of the **power supply cable** to **VBatt-**.

5. Insert the connector of the **power supply cable** into input **L4** of **TMD2.**

(*) Consult the specific installation file for the vehicle you are working on.

9 BUZZER

The **BUZZER** is a device through which **TMD2** can send audible warnings to the vehicle's driver.

The signals that can be used are, for example:

- *requests for interactions between the vehicle's driver and* **TMD2***,*
- *warnings,*
- *error signals.*

BUZZER is equipped with:

- *a "T" splitter that allows the connection between* **TMD2** *and the power supply cable.*

9.1 *Technical Features*

Power supply:	12 / 24 V
Operating temperature:	- 20 ÷ 55 °C
Storage temperature:	- 40 ÷ 85 °C
Dimensions:	2000 mm

9.2 *Normative Information*

Declaration of conformity

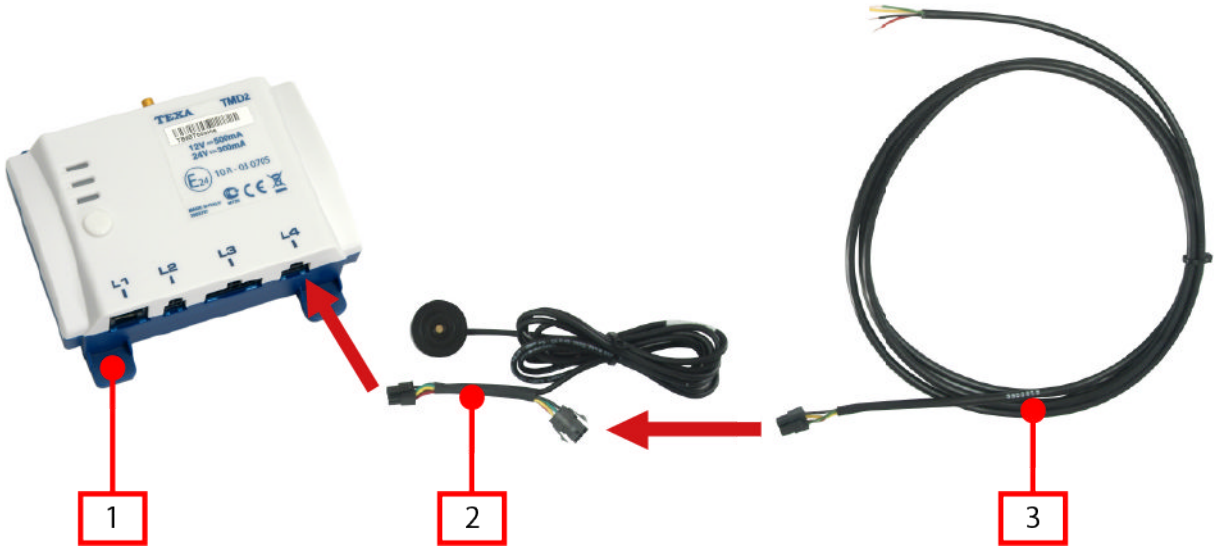
CE	TEXA S.p.A hereby declares that this **BUZZER** unit complies with the essential requirements and provisions of the Directive 1999/5/EC.

A complete copy of the Declaration of Conformity can be obtained from

TEXA S.p.A., Via 1 Maggio 9, 31050 Monastier di Treviso (TV), Italy

9.3 Installation

The installation of the **BUZZER** requires an additional cable.



1. *TMD2*
2. *BUZZER*
3. *power supply cable*

Proceed as follows:

1. *Fix the* **BUZZER** *in the most appropriate position*.*
2. *Insert the connector of the* **BUZZER***'s cable into input* **L4***of* **TMD2***.*
3. *Insert the connector of the* **power supply cable** *into the* **BUZZER***'s "T" splitter.*
4. *Connect the* **RED** *wire if the* **power supply cable** *to* **VBatt+***.*
5. *Connect the* **BLACK** *wire of the* **power supply cable** *to* **VBatt-***.*

(*) Consult the specific installation file for the vehicle you are working on.

10 ENGINE LOCK

ENGINE LOCK is a device activated remotely through a command sent by TEXA's server.

The device activates only if two safety conditions occur simultaneously:

- *the vehicle is in an area covered by GPS,*
- *the vehicle is stationary for at least 3 seconds.*

10.1 Normative Information

Declaration of conformity

CE	TEXA S.p.A hereby declares that the **ENGINE LOCK** unit complies with the essential requirements and provisions of the Directive 1999/5/EC.

A complete copy of the Declaration of Conformity can be obtained from

TEXA S.p.A., Via 1 Maggio 9, 31050 Monastier di Treviso (TV), Italy

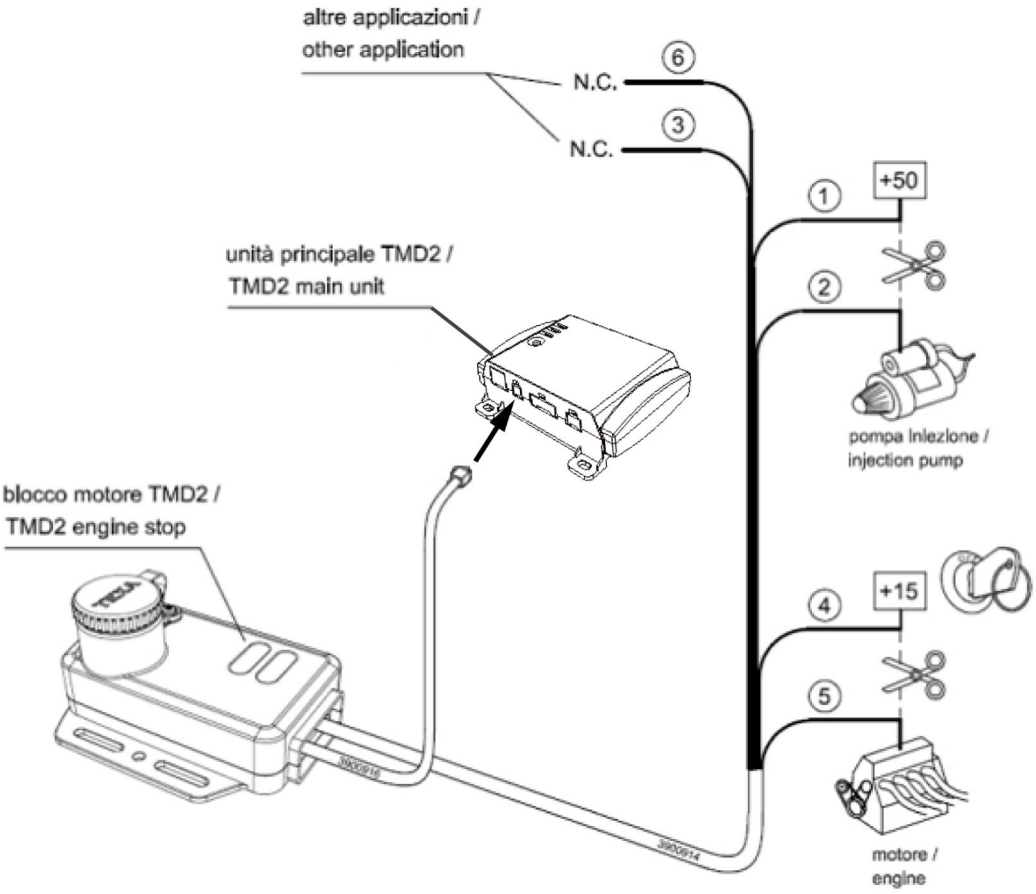
10.2 Installation

The procedure for the installation of the **ENGINE LOCK** is described below.

Proceed as follows:

1. *Fix the* **ENGINE LOCK** *in the most appropriate position.*
2. *Insert the connector of the cable of the* **ENGINE LOCK** *into input* **L2** *of* **TMD2.**

⚠	**Assemble the ENGINE LOCK inside the engine compartment and far from heat sources.** **The ENGINE LOCK main unit must be easy to reach in case of an emergency deactivation.** **The system relay has a maximum range of 10 A.** **If you connect to a cable with a higher power absorption, we recommend you use an external, additional relay with a higher power capacity.**



1. *Relay 1 common*
2. *Relay 1 Normally Closed*
3. *Relay 1 Normally Open*
4. *Relay 2 common*
5. *Relay 2 Normally Closed*
6. *Relay 2 Normally Open*

NOTE

The central unit of the **ENGINE LOCK** is equipped with a **security key block**.

Keep the keys that have been provided with the device with care and at hand in case the device is deactivated.

The procedure for the disconncetion of the **ENGINE LOCK** is described below. Proceed as follows:

1. Open the lid on the device.

2. Insert the key and turn it counter-clockwise.

11 ADDITIONAL INPUT CABLE

The **ADDITIONAL INPUT CABLE** connects the optional accessories to **TMD2**.

The **ADDITIONAL INPUT CABLE** is equipped with:

A) a 12-Pin connector,

B) loose wires to connect the accessories.

11.1 Technical Features

Power supply:	12 / 24 V
Operating temperature:	- 20 ÷ 55 °C
Storage temperature:	- 40 ÷ 85 °C
Dimensions:	3000 mm

11.2 Installation

1. *TMD2*
2. *ADDITIONAL INPUT CABLE*

Proceed as follows:

1. *Insert the connector of the* **ADDITIONAL INPUT CABLE** *into input* **L3** *of* **TMD2***.*

The **grey**, **violet** and **green** wires correspond to auxiliary connections needed to connect optional accessories and alarm systems.

The indications on the wires are organised as follows:

Wire	Recognition by TMD2
grey	IN 1
violet	IN 2
green	IN 3

These input lines can be configured independently one from the other and indifferently as high active with a 12/24V voltage level or low active with a ground voltage level.

12 ADAPTER CABLE

The **adapter cable** takes advantage of the existing power supply wiring of the installations of the previous versions of the device, for example:

- *TMD2 SafeCar*
- *TMD2 SafeTruck Diagnostic*

Proceed as follows:

1. *Connect the Adapter cable to the power supply cable.*
2. *Insert the adapter cable into input* **L4** *of* **TMD2***.*

13 TEMPERATURE CHECK KIT

The **TMD TEXA TEMPERATURE SENSOR (TMD TS)** is a device that allows you to monitor the temperature within the refrigerated box of a vehicle.

The **TMD TS** is equipped with:

- *a temperature sensor,*
- *a cable that connects to the* **TMD2***,*
- *holes for fastening.*

The communication between several **TMD TS** devices can occur based on one of the following protocols:

- *TBUS*
- *RS485*

The communication to and from **TMD2** always occurs thanks to a connection that uses the TBUS protocol.

The installation of **TMD TS** requires some additional cables.

Contact your local dealer to determine the most appropriate connection for your needs.

13.1 *Technical Characteristics*

Manufacturer:	TEXA S.p.A.
Model:	TMD TEMPERATURE SENSOR
Power supply:	12 / 24 V
Current consumption:	max 10 mA
Temperature sensor:	NTC, - 40 ÷ 50 °C
Communication:	Protocols: • *TBUS on multipoint bus* • *RS485*
Operating temperature:	- 20 ÷ 55 °C
Storing temperature:	- 40 ÷ 85 °C
Humidity for operating and storing:	10 % ÷ 80 %
Dimensions:	88x39x98(117) mm 2800 mm (sensor cable)
Weight:	250 g

13.2 *Regulatory Information*

Declaration of conformity

TEXA S.p.A hereby declares that the **TMD TEMPERATURE SENSOR** complies with the essential requirements and provisions of the UNECE R10 regulation.

A complete copy of the Declaration of Conformity can be obtained at

TEXA S.p.A., Via 1 Maggio 9, 31050 Monastier di Treviso (TV), Italy

13.3 Preliminary operations prior to installation

There are two types of installation:

- *single*
- *multiple*

For each of these modes you may choose the communication protocol:

- *TBUS*
- *RS485*

With regards to the multiple installation, you may install a maximum of 8 **TMD TS** devices in sequence.

Each **TMD TS** must be associated to a distinct number code in order for it to be recognized by the **TMD2**.

The number code is assigned via the **Dip-Switch** within the electronic board in the **TMD TS**.

The operation requires you to open each **TMD TS** you intend to install.

Once you have assigned the number codes to each **TMD TS** and closed the devices, you can proceed with the installation.

13.3.1 How to open the TMD TS

Carry out the following instructions as carefully as possible to avoid damaging the device.

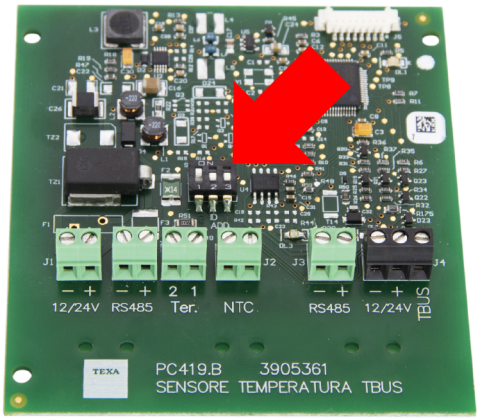
Do not touch other components on the board.

Proceed as follows:

1. *Untie the cable tie completely.*
2. *Unscrew the two screws that fasten the cover.*
3. *Remove the cover.*
4. *Pull the electronic board out of the metal case; push the cables forward at the same time to make it easier for the board to come out.*
5. *Connect the cable and the probes as required by the type of installation selected.*
6. *Use the specific cap to close the fairlead if not used.*

13.3.2 Assigning the number code

Once you have removed the electronic board from the metal case you must locate the **Dip-Switch**.



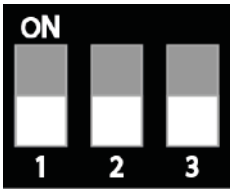
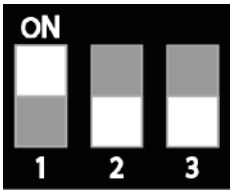
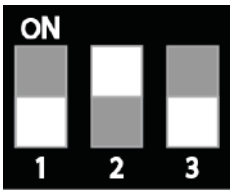
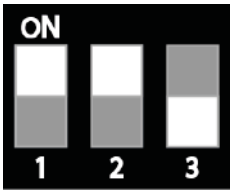
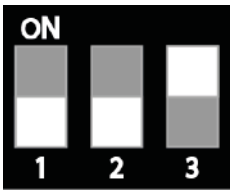
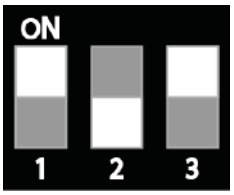
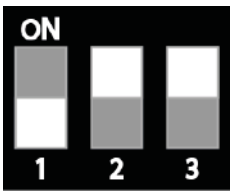
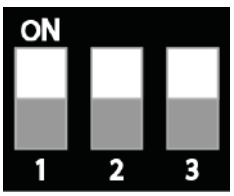
The **Dip-Switch** is made up of 3 mini switches which, depending on the various ON (1) - OFF (0) combinations, allow you to assign the desired number code to each **TMD TS** .

In order to set the number code, turn the mini switches ON or OFF as required to obtain the right combination.

For instance, if you wish to install 3 **TMD TS**'s, the number codes must be added in ascending order starting from number **1**:

- *First device: number code* **1** *(Default).*
- *Second device: number code* **2***.*
- *Third device: number code* **3***.*

The table below indicates the various combinations that can be obtained and the relative number codes that can be assigned.

NUMBER CODE	DIP(1)	DIP(2)	DIP(3)	DIAGRAM
1 (Default)	0	0	0	
2	1	0	0	
3	0	1	0	
4	1	1	0	
5	0	0	1	
6	1	0	1	
7	0	1	1	
8	1	1	1	

13.4 *Indications for the wiring*

Based on the type of communication selected, you must wire the various devices specifically.

The cables must be connected to the dedicated terminal blocks based on specific wiring diagrams illustrated in the following chapters.

The cables must be fastened to the electronic board using plastic ties and the specific holes located in front of the terminal blocks.

Carry out the following instructions as carefully as possible to avoid damaging the device.

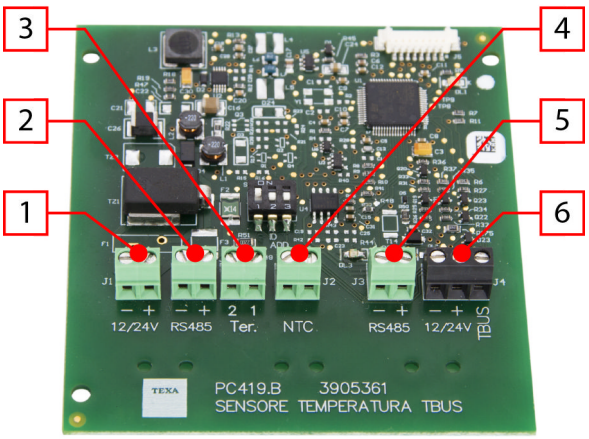
Avoid contacts between the wires of different cables.

Make sure each terminal is closed tightly.

Do not touch other components on the board.

Follow the indications regarding the wiring thoroughly.

Always make sure the wires correspond (red - red; black - black, etc.) while connecting a device to the following one.



1. *12/24 - OUT power supply*
2. *RS485 - OUT data line*
3. *Ter. - Short circuit*
4. *NTC - Temperature probe*
5. *RS485 - IN data line*
6. *12/24 TBUS - IN and TBUS power supply*

13.5 Installation with communication via TBUS

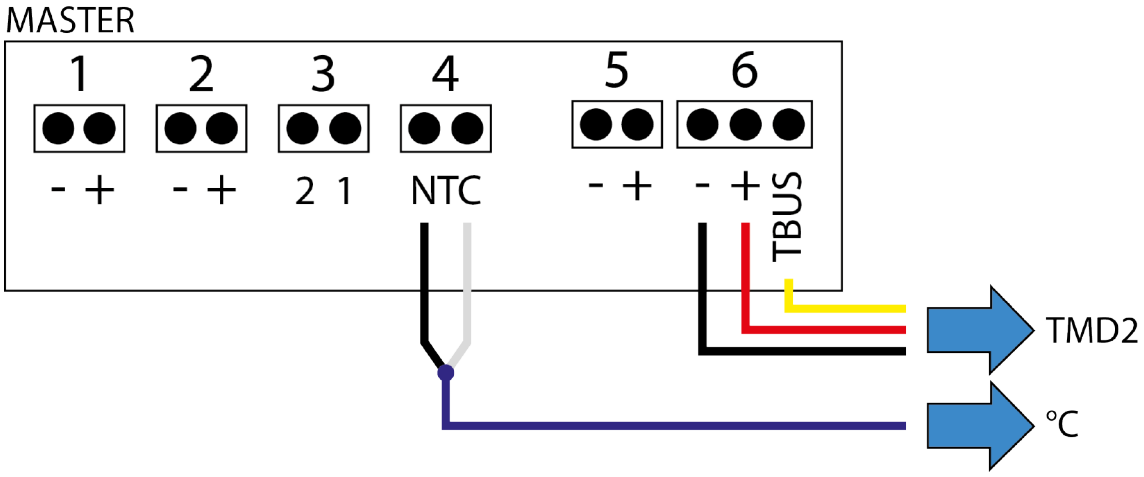
In the TBUS communication mode, all the **TMD TS** devices that compose the sequence are wired the same way.

The **TMD TS** devices are connected together through specific splitter cables.

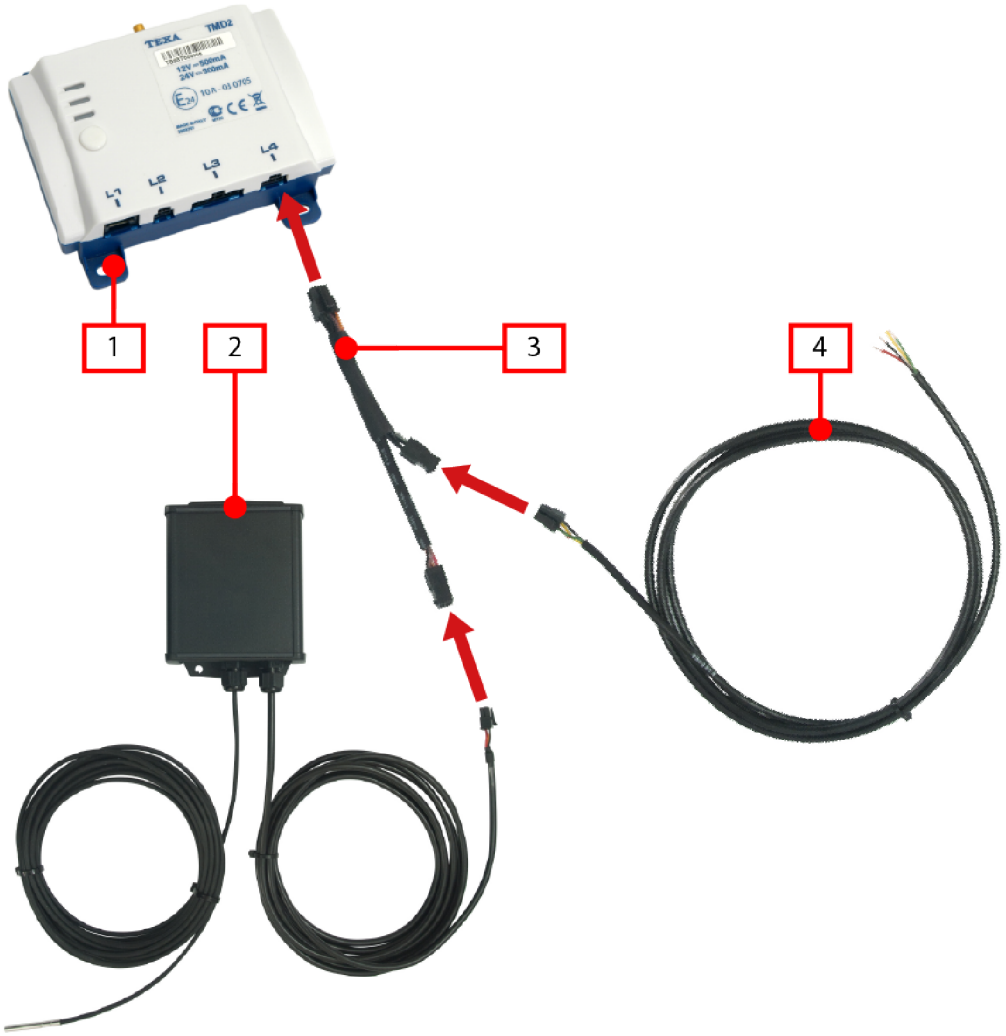
13.5.1 Single Installation

PHASE 1 - WIRING

1. *Open the* **TMD TS***.*
2. *Assign the correct number code to the device.*
3. *Follow the wiring diagram indicated below.*
4. *Close the* **TMD TS***.*



PHASE 2 - CONNECTING TO TMD2



1. *TMD2*
2. *TMD TS*
3. *splitter cable*
4. *power supply cable*

Proceed as follows:

1. *Secure* **TMD TS** *in the most appropriate position*.*
2. *Plug the connector of the* **splitter cable** *into input* **L4** *of* **TMD2.**
3. *Plug the connector of the* **TMD TS connection cable** *into the* **4-pin connector of the splitter cable**.
4. *Connect the* **power supply cable** *to the* **6-pin connector of the splitter cable**.
5. *Connect the* **RED** *wire of the* **power supply cable** *to* **VBatt+**.
6. *Connect the* **BLACK** *wire of the* **power supply cable** *to* **VBatt-**.
7. *Secure the temperature sensor in the most appropriate position.*

(*) Consult the specific installation file for the vehicle you are working on.

13.5.2 Multiple Installation

Make sure you assigned the correct number code to each **TMD TS** before following the procedure indicated below.

Proceed as follows:

1. *Secure* **TMD TS** *in the most appropriate position*.*
2. *Plug the connector of the* **splitter cable** *into input* **L4** *of* **TMD2.**
3. *Plug the second splitter cable into the* **6-pin connector of the splitter cable** *that is connected to the input* **L4***.*
4. *Repeat this procedure for each* **TMD TS** *you wish to install.*
5. *Plug the* **power supply cable** *into the* **6-pin connector of the last splitter cable** *connected.*
6. *Connect the* **RED** *wire of the* **power supply cable** *to* **VBatt+***.*
7. *Connect the* **BLACK** *wire of the* **power supply cable** *to* **VBatt-***.*
8. *Secure the temperature sensors in the most appropriate place.*

(*) Consult the specific installation file for the vehicle you are working on.

13.6 Installation with communication via RS485

In the RS485 communication mode, the first **TMD TS** of the sequence works as a bridge between **TMD2** and the sequence itself and is called **MASTER**; all the devices that follow it are called **SLAVEs**.

The connection between the **MASTER** and **TMD2** is done using the TBUS protocol, while the connection between the various **SLAVEs** and the **MASTER** is carried out using the RS485 protocol.

The **TMD TS** devices connected to **TMD2** are always 8, but the ones that are actually equipped with a temperature probe are only 7, that is the **SLAVEs**, as the **MASTER** works exclusively as a bridge and it must not be connected to any temperature probe.

NOTE: Number code

The **MASTER** must always have the **highest** number code (e.g.: in case of 3 devices, the **MASTER** must have the number code 3).

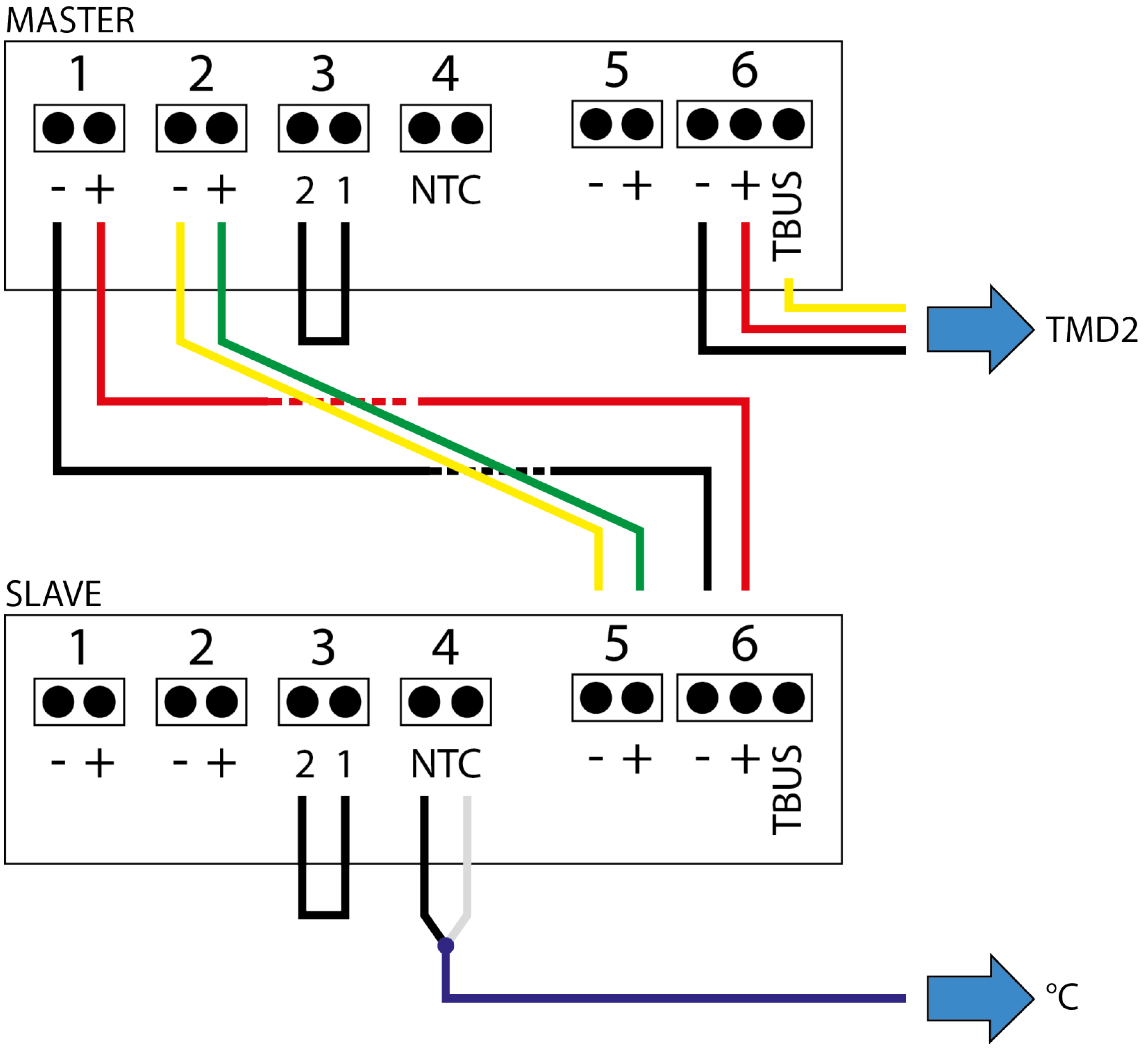
NOTE: Installation on a tractor plus a trailer

In the cases in which the installation is on a vehicle composed of a tractor plus a trailer, you must connect the **MASTER** and the first **SLAVE** using the specific spiral cable.

13.6.1 Single Installation

PHASE 1 - WIRING

1. *Open the* **TMD TS** *devices.*
2. *Assign the correct number codes to the devices.*
3. *Follow the wiring diagram indicated below.*
4. *Close the* **TMD TS** *devices.*



PHASE 2 - CONNECTING TO TMD2

Proceed as follows:

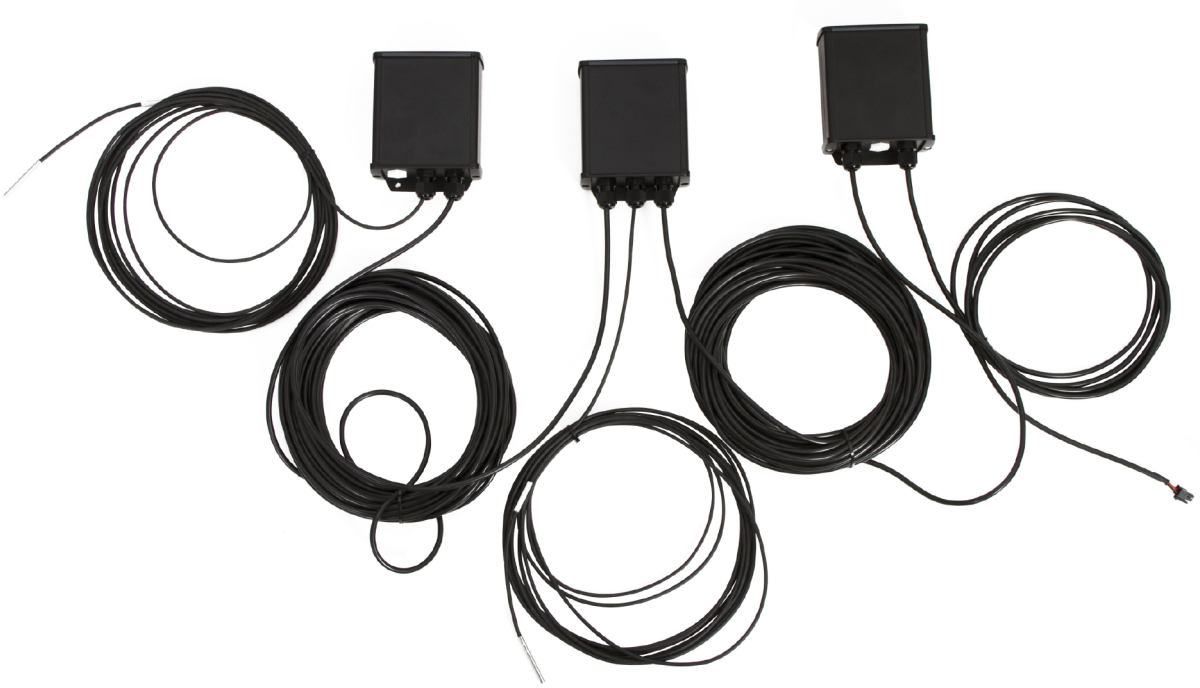
1. *Secure the* **TMD TS** *devices in the most appropriate position*.*
2. *Connect the* **MASTER** *to* **TMD2** *as indicated in the procedure described for the communication via TBUS.*

(*) Consult the specific installation file for the vehicle you are working on.

13.6.2 Multiple Installation

The wiring diagram of a sequence composed of one **MASTER** and two **SLAVEs** (SLAVE1 and SLAVE2) is illustrated as an example.

For connecting other **SLAVEs** you only have to reproduce the wiring diagram of the SLAVE2 device.

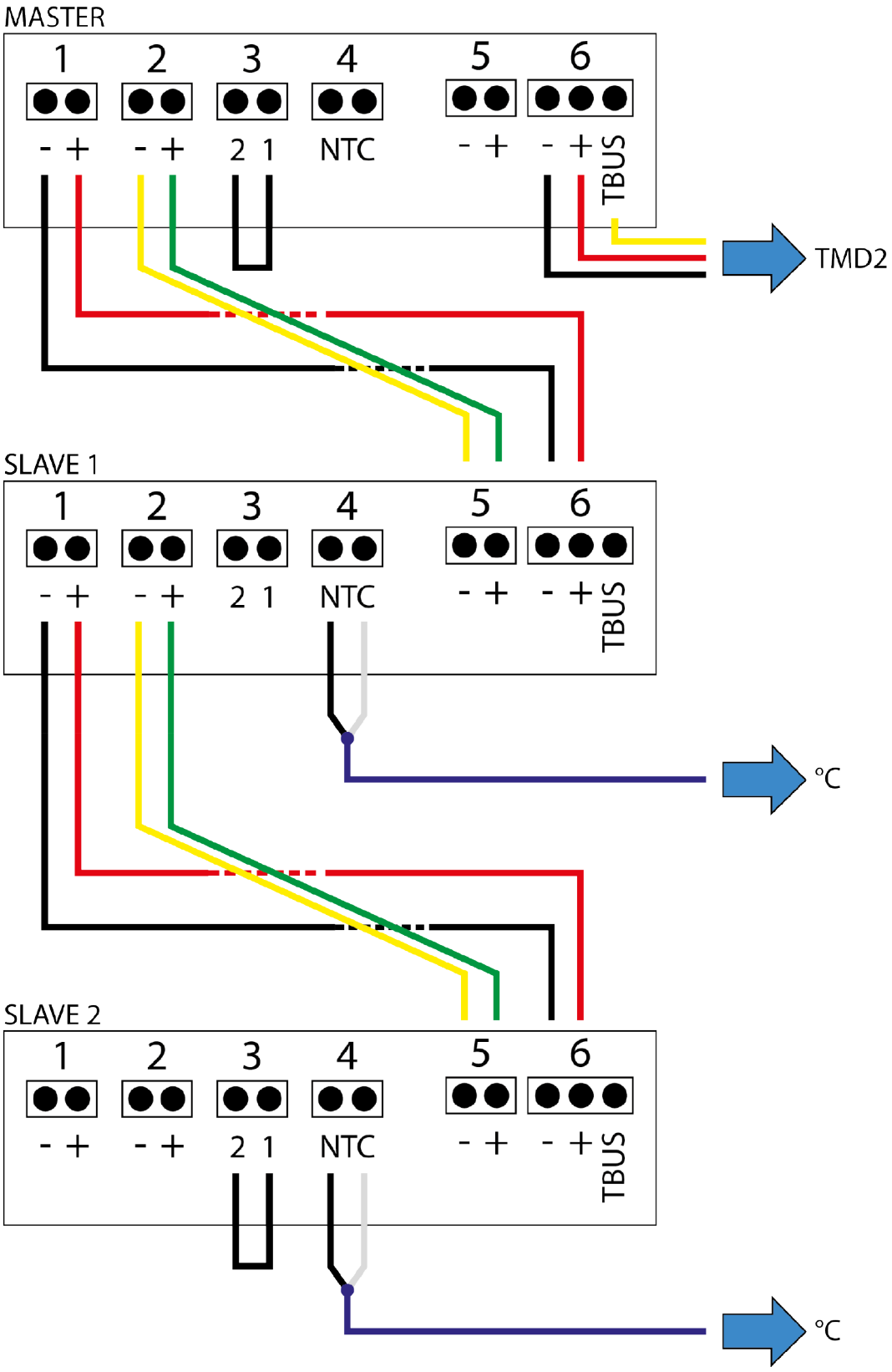


The MASTER must always have the highest number code

The Ter. terminal block must be short circuited only on the MASTER and on the last SLAVE of the sequence.

PHASE 1 - WIRING

1. *Open the* **TMD TS** *devices.*
2. *Assign the correct number codes to the devices.*
3. *Follow the wiring diagram indicated below.*
4. *Close the* **TMD TS** *devices.*



PHASE 2 - CONNECTING TO TMD2

Proceed as follows:

1. *Secure the* **TMD TS** *devices in the most appropriate position*.*
2. *Connect the* **MASTER** *to* **TMD2** *as indicated in the procedure described for the communication via TBUS.*

(*) Consult the specific installation file for the vehicle you are working on.

13.7 Configuration

In order for the **TMD2** / **TMD TS** system to work properly, a configuration must be carried out via the **TMDStarter** or via the **TMD** website page.

The configuration allows:

- *the* **TMD2** *to identify the number of* **TMD TS***'s connected.**
- *you to set how often the data will be sent to the server.*
- *you to set the minimum and maximum temperature thresholds.*
- *the TMD to send warnings if temperature thresholds are exceeded.*

(*) In the case of communication via RS485, the **MASTER** must not be counted.

13.8 Operation

All you have to do to activate the **TMD TS** is turn on the vehicle.

Once activated, the **TMD TS** will read the temperature value periodically and send it to the **TMD2**, only when the latter specifically requests to do so.

14 MAINTENANCE

The accessories for **TMD2** do not require particular maintenance operations.

For a longer life, keep the devices clean and carefully follow the instructions provided in this manual.

For further help, contact your Retailer or the Technical Assistance Service.

15 LEGAL NOTICES

TEXA S.p.A.

Via 1 Maggio, 9 - 31050 Monastier di Treviso - ITALY

Cod. Fisc. - No. of Companies' Register of Treviso - Part. IVA: 02413550266

Single member company and subject to management and co-ordination of Opera Holding S.r.l.

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For information regarding the legal notices, please refer to **International Warranty Booklet** provided with the product in your possession.