INSTALLATION CERTIFICATE

The undersigned qualified installer attests to have personally fitted the here described vehicle security system following the manufacturer instructions.

By :

Sold on : .....

Type of device : ☐ **933MH**

Vehicle : .....

GEMINI Technologies S.r.l.

Via Luigi Galvani 12 - 21020 Bodio Lomnago (VA) - Italia

Tel. +39 0332 943211 - Fax +39 0332 948080

www.gemini-alarm.com

ISO 9001Certified Company

GEMINI® ALARM SYSTEMS

933MH

INSTALLATION AND USE MANUAL

UK

CE

Made in Italy

AC2908/UK Rev.03 - 09/22

UK

TABLE OF CONTENTS

1.0 - INTRODUCTORY NOTE

Dear customer, thank you for choosing a GEMINI product.This 933MH CAN BUS alarm system has been specifically designed and manufactured in Italy for recreational vehicles.
Please read the present manual carefully to familiarize yourself fully with the operation of your alarm system and do keep it for future reference.

The following signs are used throughout the manual to emphasize important instructions or special information:

For the user.
This sign highlights useful information.

For the installer.
This sign indicates that the system will work according to the connections and the programming selected or it simply provides useful installation tips.

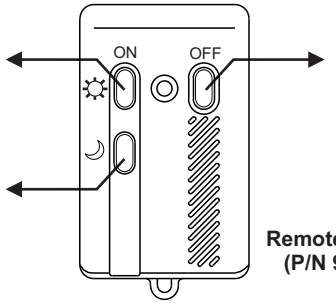
2.0 - GEMINI REMOTE CONTROL

If the requested connections have been made, the vehicle doors will lock/unlock when pressing the arming/disarming buttons.

BUTTON 1:
SYSTEM TOTAL ARMING
(+ doors lock)

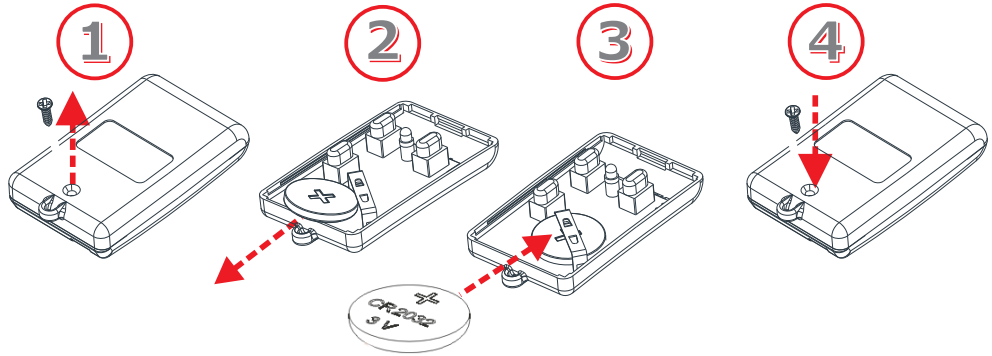
BUTTON 2:
SYSTEM DISARMING
+ door unlock)

BUTTON 3:
SYSTEM PARTIAL ARMING
(door lock + sensor exclusion)



Remote control (P/N 938N)

If the LED blinks when you press a button, the battery is weak; to replace proceed as follows:



Use only CR2032 batteries. Risk of explosion if battery is replaced by an incorrect type.
Discard used batteries properly in special dedicated containers.

3.0 - OPERATING INSTRUCTIONS

3.1 - SYSTEM TOTAL ARMING

Press the lock button on the vehicle remote control or button "**1**" on the Gemini remote control. System arming is confirmed by a Beep (selectable feature).
NB: The system has a 30 sec. arming delay during which the LED is ON steady.

3.2 - SYSTEM PARTIAL ARMING

To arm the system without arming interior protection and the external sensors (wirless infrared or wireless hyper-frequency), press button "**3**" on the Gemini remote control or proceed as follows:
- Touch the override key to its receptacle; the LED will give a quick flash.
- Close all doors and press the lock button on the vehicle original remote control.
- System arming is confirmed by a Beep (selectable feature).

For the following alarm systems, the above sensors can be excluded via the vehicle original remote control:
- **933MHD and 933MHR starting from revision Rev.06 (see barcode label).**
- **933MHT starting from revision Rev.01 (see barcode label) but only for FORD TRANSIT 2014 to 06/2016.**

Proceed as follows:
- Lock the vehicle via the vehicle original remote control.
- Wait at least 5 sec., **but before the end of the arming delay**, and press the lock button again.
- Exclusion is confirmed by a Bop (this confirmation tone cannot be excluded).

Exclusion via remote control is only available for the following vehicles:
- FIAT DUCATO '11›
- FORD TRANSIT '14›
- RENAULT MASTER '10›

Exclusion is bound to each single arming cycle, the sensors will be reset upon next arming.

3.3 - PASSIVE ARMING

If passive arming mode is enabled, the system automatically arms approx. 60 sec. after ignition is switched OFF and the last door is opened and closed. System arming is confirmed by a Beep (selectable feature).

When the system passively arms, interior protection is excluded.
Opening a door during the 60 sec. arming countdown will cause the procedure to interrupt, it will resume once the door is closed.

3.4 - ARMING DELAY

There is a 30 sec. activation delay from the time the system is armed to allow you to exit the vehicle without setting off an alarm. The arming delay is signaled by the LED ON steady.

3.5 - SYSTEM ARMED

After the arming delay, the system is fully armed and ready to detect any alarm condition. The LED will start flashing to confirm the armed status.

3.6 - ALARM, INHIBIT TIME BETWEEN ALARMS AND ALARM CYCLES

Alarm events are signaled by acoustic signals. After an alarm event, there is a 5 sec. pause period before another alarm can be triggered.
Each alarm event can generate up to ten 30-sec. cycles for each input and for each arming cycle.

3.7 - SYSTEM DISARMING

Press the unlock button on the vehicle original remote or button "**2**" on the Gemini remote. Disarming is confirmed by 2 Beeps (selectable feature).
An alarm event detected while the system is armed will be signaled upon disarming by 5 Beeps (selectable feature).

3.8 - EMERGENCY DISARMING BY OVERRIDE KEY

In case of emergency (remote control is lost or inoperative), the system can be disarmed by touching the override key to its receptable. This procedure disarms and switches off the system which will not rearm via remote control.

To restore normal operation, touch the override key to its receptacle.
A Beep and a flash of the status LED will confirm that the system is back to the normal operating mode.

3.9 - ALARM MEMORY

The LED memory allows to identify the last alarm event signaled by 5 Beeps upon disarming. Turn ignition key ON, the status LED will flash according to the last alarm detected prior to disarming (see table below).
The flash sequence is repeated 3 times; to interrupt simply turn ignition key "OFF".

LED FLASHES	ALARM CAUSES	ALARM CYCLES
✷✷●✷✷	Ignition attempt (+15/54)	10
✷✷✷●✷✷✷	Door tampering	10
✷✷✷✷●✷✷✷✷	Bonnet tampering	10
✷✷✷✷✷●✷✷✷✷✷	Boot tampering	10
✷✷✷✷✷✷●✷✷✷✷✷✷	Volumetric or external sensor	10
✷✷✷✷✷✷✷✷●✷✷✷✷✷✷✷✷	Wireless magnetic contacts or opening detectors	10
✷✷✷✷✷✷✷✷✷●✷✷✷✷✷✷✷✷✷	Wireless infrared sensors (PIR) hyper-frequency sensors	10
✷✷✷✷✷✷✷✷✷✷✷●✷✷✷✷✷✷✷✷✷✷✷	Wire tampering	10

● LED OFF (2 seconds) ✷ LED ON (1 second)

4.0 - CONNECTOR PINOUTS

4.1 - 20-PIN CONNECTOR

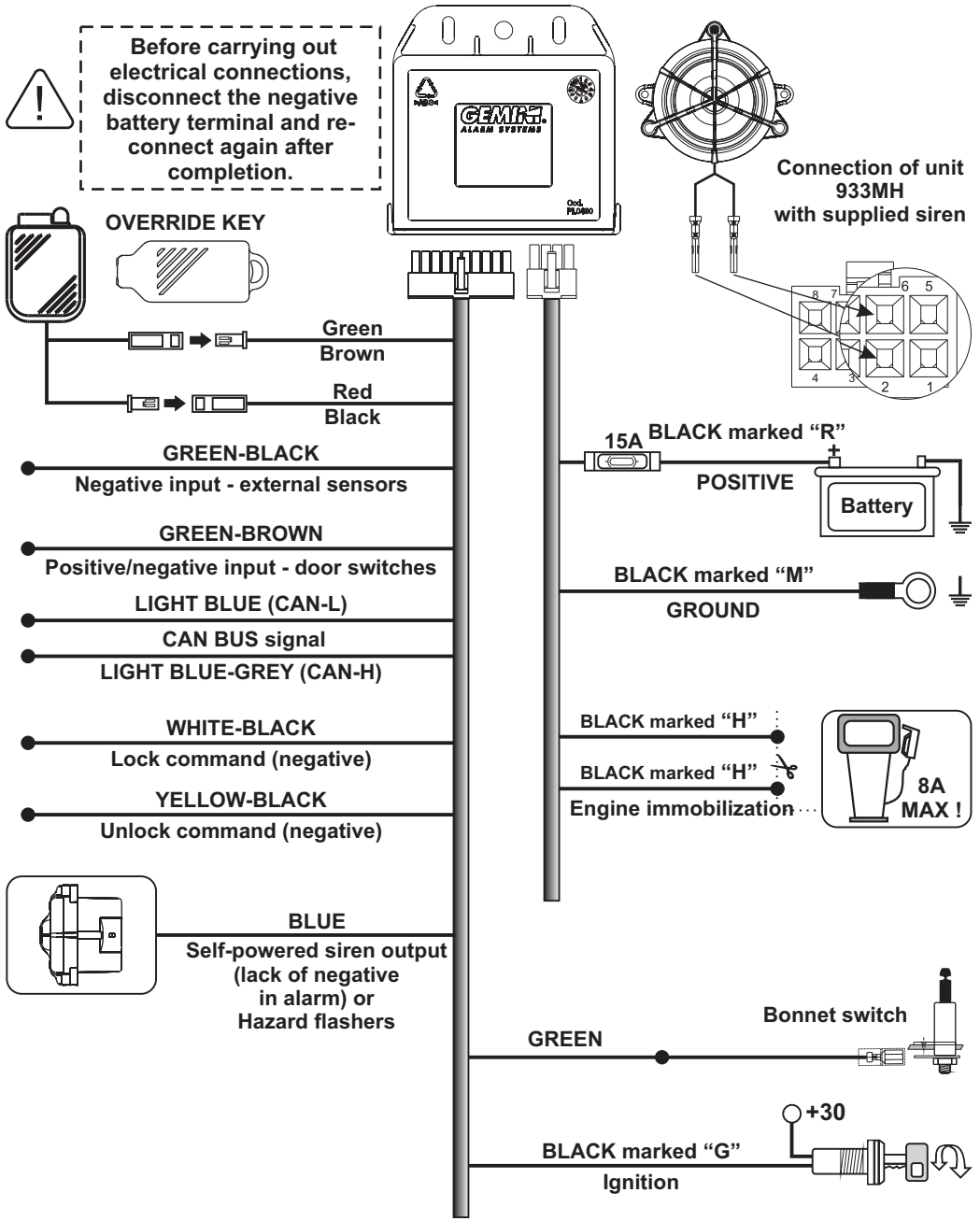
POSITION	WIRE FUNCTION	WIRE COLOUR
- 1 -	-----	-----
- 2 -	-----	-----
- 3 -	-----	-----
- 4 -	-----	-----
- 5 -	Positive/negative input - door switches	GREEN-BROWN
- 6 -	Input - override key receptacle	GREEN
- 7 -	Ground - override key receptacle	BROWN
- 8 -	LED negative output	BLACK
- 9 -	LED positive output	RED
- 10 -	Ignition	BLACK marked “G”
- 11 -	CAN BUS (CAN-H) signal	LIGHT BLUE-GREY
- 12 -	CAN BUS (CAN-L) signal	LIGHT BLUE
- 13 -	-----	-----
- 14 -	Negative input - external sensors	GREEN-BLACK
- 15 -	Negative input - bonnet switch	GREEN
- 16 -	Output for self-powered siren (lack of negative during alarm) or Hazard flashers	BLUE
- 17 -	Lock command (1,5 sec. negative pulse when pressing remote control button “1” or “3”)	WHITE-BLACK
- 18 -	Unlock command (1,5 sec. negative pulse when pressing remote control button “2”)	YELLOW-BLACK
- 19 -	-----	-----
- 20 -	-----	-----

4.2 - 8-PIN CONNECTOR

POSITION	WIRE FUNCTION	WIRE COLOUR
- 1 -	Ground	BLACK marked “M”
- 2 -	Siren output	-----
- 3 -	Positive supply	BLACK marked “R”
- 4 -	-----	-----
- 5 -	Engine immobilization	BLACK marked “H”
- 6 -	Siren output	-----
- 7 -	Engine immobilization	BLACK marked “H”
- 8 -	-----	-----

For complete information regarding connections, please refer to the vehicle specific wiring diagram available in the restricted area of our website: www.gemini-alarm.com

5.0 - COMPLETE WIRING DIAGRAM



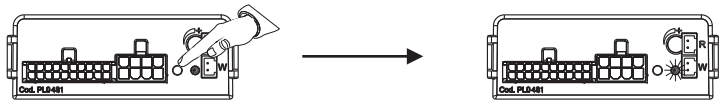
6.0 - VEHICLE CODE PROGRAMMING

The system must be configured according to the specific vehicle on which it is to be installed.
To help you understand the coding procedure, the following example shows how to configure a vehicle with code **1**-**0**-**3** (which hypothetically corresponds to a "FIAT XXXXX").

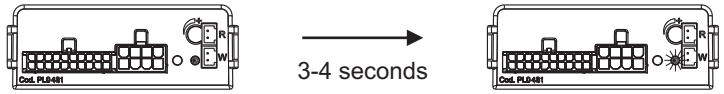
The list of available vehicles and corresponding codes is included in the alarm packaging.
Up-to-date information is available in the restricted area of our website.

The vehicle code must range between 100 and 235 otherwise the LED on the unit blinks repeatedly and the procedure is interrupted. The previously entered code remains stored.
The procedure is also invalidated if the LED blinks more than 10 times. In this case there is no optical warning, the procedure is simply interrupted.
In either case, repeat the entire procedure.

Plug the harness connectors into the alarm corresponding sockets.
Press and hold the button shown below until the LED lights up.

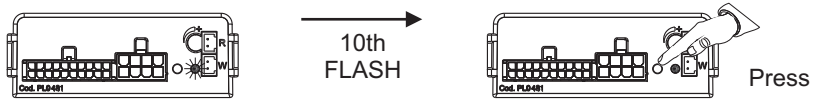


Release the button, the LED will switch OFF.



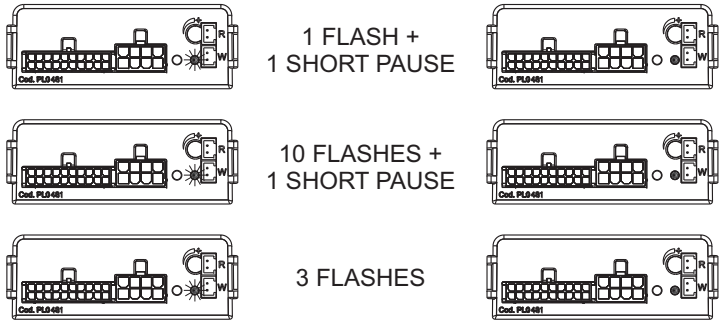
After 3 to 4 seconds, the LED will start flashing; count the flashes.
In this case, press the button at the 1st flash which corresponds to the code 1st digit "**1**".

After a short pause, the LED will start flashing again.
Press the button at the 10th flash which corresponds to the code 2nd digit "**0**".



After another 4 seconds, the LED will flash for the third and last time.
Press the button at the 3rd flash which corresponds to the code 3rd digit "**3**".

When the last digit is entered, the alarm system "repeats" the entered code.



Press the vehicle remote control lock/unlock buttons to make sure the alarm system works properly.
If needed, disconnect the 8-pin connector and reconnect it after a few seconds.

7.0 - CONNECTIONS TO ARM/DISARM THE SYSTEM

The alarm system can work via CAN BUS (with the vehicle original remote control) and via the Gemini remote control (P/N 938N).

During an alarm event, the system cannot be disarmed via the Gemini remote but only with the vehicle original remote control.

7.1 - OPERATION VIA CAN BUS

Since arming/disarming and alarms are managed via the CAN BUS line, only the alarm CAN wires need to be connected to the vehicle CAN wiring (see available diagrams in the restricted area of our website).

7.2 - OPERATION VIA GEMINI REMOTE CONTROL

This connection allows to arm/disarm the system and lock/unlock the vehicle doors via the Gemini remote control (see wiring diagram).
For vehicle specific information, see available installation guidelines in the restricted area of our website.

8.0 - SYSTEM PROGRAMMING

The table below applies to the factory settings. Accessing the programming procedure willl reset the features to their initial settings.

	FUNCTION	DEFAULT SETTING	LED FLASHES
1	*For Gemini only*	*Key OFF/ON*	✷
2	**"Exclusion"of arming/disarming acoustic signals**	**Disabled**	✷✷
3	**System passive arming**	**Disabled**	✷✷✷
4	*For Gemini only*	*Key OFF/ON*	✷✷✷✷
5	**Door input - positive**	**Disabled**	✷✷✷✷✷
6	**Optical pulse signals (Hazard flashers)**	**Enabled**	✷✷✷✷✷✷
7	**Double pulse unlock***	**Disabled**	✷✷✷✷✷✷✷

*** Applicable only to control units labeled 13 or higher (see par. 8.5).**

The procedure must be carried out entirely by scrolling from one feature to the other via the ignition key or the override touch key.
A lack of power during electrical system maintenance, will not affect the settings.

8.1 - ACOUSTIC SIGNALS

Acoustic signals (siren Beeps) to confirm arming/disarming.(Default setting: acoustic signals ON).

8.2 - PASSIVE ARMING

If passive arming mode is enabled, the system automatically arms 60 sec. after ignition is switched OFF and the last door is opened and closed. Opening a door during the 60-sec. passive arming countdown will cause the procedure to interrupt; it will resume once the door is closed.

8.3 - DOOR SWITCH POLARITY SELECTION

This feature modifies the alarm input signal (positive or negative) according to the signal generated by the door switch.

8.4 - HAZARD FLASHERS / SELF-POWERED SIREN

Selectable output to either enable the optical signals (according to the connection made and only for vehicles where hook-up is to the Hazard switch) or to manage a self-powered siren. (Default setting: Hazard flashers).

Optical signals activated by connection to the Hazard button ONLY turn ON during an alarm condition.
The alarm BLUE wire MUST be connected to the Hazard switch.

If this feature is disabled, the BLUE wire carries a negative signal under normal operating conditions and, during an alarm cycle, there is a lack of negative.

8.5 - DOUBLE PULSE UNLOCK

If this feature is enabled, 2 unlocking pulses will be supplied to unlock all doors at the same time. This is useful in case separate actions are required to open the driver door and then the other doors.
When this feature is enabled, the lock/unlock pulse time is 0,5 sec. instead of 1,5 sec.

DOUBLE PULSE UNLOCK QUICK ACTIVATION

- Disconnect the alarm power supply and ground the green/black wire.
- Connect the alarm power supply; 3 Beeps will confirm operation.
- Remove the green/black wire from ground.

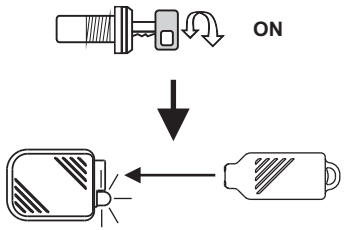
NB: To reset the feature to the default setting, repeat the above steps; a Bop will confirm the operation.

ATTENTION:
Applicable only to control units labeled 13 or higher

9.0 - SYSTEM PROGRAMMING EXAMPLE

Here below is an example that illustrates the various steps to modify the programmable features.
NB: Cycling ignition key OFF/ON disables the features while using the override touch key enables them. A Beep or a Bop will confirm the operation and the LED will flash as indicated (par. 8.0).

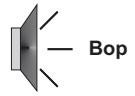
With the alarm system disarmed, turn ignition key ON and touch the override key to its receptacle.



A Beep and a Bop will confirm that the system is in programming mode.

DISABLE

To disable the feature cycle ignition key OFF and then back ON.
A Bop will confirm the operation.
The LED will flash according to feature being configured (from 1 to 7).



OR

ENABLE

To enable the feature touch the override key once to its receptacle.
A Beep will confirm the operation.
The LED will flash according to the feature being configured (from 1 to 7).

In both cases the system moves on to the next feature.
Repeat the above steps to enable or disable other features.
When the last feature is configured, in addition to the confirmation tone, 2 Bops and 1 Beep will confirm the end of the programming procedure.

10.0 - PROGRAM NEW DEVICES

To carry out the operation successfully, make sure the required electrical connections (bonnet switch and ignition) are properly connected.
If there is no bonnet switch, ground the GREEN wire (20-pin connector, pos. 15).

Storing memory is for 55 devices. Adding an extra device will automatically delete the first device stored in the alarm memory.

To enter in programming mode proceed as follows:

- With the system disarmed, open the vehicle bonnet and keep it open or ground the GREEN wire.

The following “ON-OFF” operations must be carried out within 15 seconds otherwise the procedure is invalidated.

- Cycle ignition key 4 times within 15 sec. (“**ON-OFF**”-“**ON-OFF**”-“**ON-OFF**”-“**ON**”) ending the cycle with the key in the “**ON**” position.
- A Beep and a Bop will confirm the system is in learn mode. The LED will also power ON steady.

Do not close the bonnet otherwise all previously programmed devices will be deleted as described in the next paragraph.

The system is ready to receive the device codes. Depending on which device is to be learned:

› Press one of the remote control buttons;
› Touch the override key to its receptacle;
› Make the magnetic contact transmit (bring contact and magnet together and then move apart);
› Press the button on the opening detector;
› Make the infrared sensor transmit (see sensor instructions).

- A Beep will confirm the device has been learned.
- Repeat this same procedure to learn other devices.
- Turn ignition key OFF.
- A Bop will confirm the end of the procedure. The status LED powers OFF.
- Close the bonnet or remove the GREEN wire from ground (bonnet switch).

11.0 - DELETE PROGRAMMED DEVICES

To carry out the operation successfully, make sure the required electrical connections (bonnet switch and ignition) are complete.
If there is no bonnet switch, ground the GREEN wire (20-pin connector, pos. 15).

To clear memory proceed as follows:

- With the system disarmed, open the bonnet and keep it opened or ground the GREEN wire.

The following “ON-OFF” operations must be carried out within 15 seconds otherwise the procedure is invalidated.

- Cycle ignition key 4 times within 15 sec. (“**ON-OFF**”-“**ON-OFF**”-“**ON-OFF**”-“**ON**”) ending the cycle with the key in the “**ON**” position.
- A Beep and a Bop will confirm the system is in delete mode. The LED will also power ON steady.
- Close the bonnet or remove the GREEN wire from ground (bonnet switch).
- To clear the memory, leave the bonnet closed for at least 8 seconds.

If the bonnet is opened before 8 seconds, the devices will not be deleted.

- The status LED turns OFF to confirm the memory has been cleared.
- Turn ignition key OFF.
- A long Bop will confirm the end of the procedure.

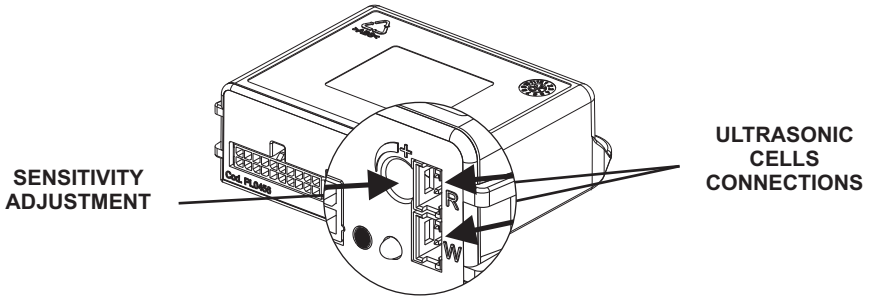
12.0 - ULTRASONIC VOLUMETRIC PROTECTION

12.1 - CONNECTIONS AND POSITIONING

Insert the WHITE connector in the “W” marked socket and the RED connector in the “R” marked socket (see figure below).
Install the ultrasonic sensors, inside the cabin, on the top corners of the front window pillars, away from the air vents and point them towards the center of the rear window.

12.2 - SENSITIVITY ADJUSTMENT

To check the sensors sensitivity level proceed as follows:
- With the alarm system disarmed, roll down the front window about 20 cm.
- Set the trimmer to an intermediate position (medium sensitivity).
- Close all doors, bonnet and boot and arm the system.
- During the arming delay introduce an object in the cabin through the window and move it around; the status LED will turn off to signal a presence.
- If the sensitivity level is too high or too low, readjust the trimmer and repeat the above procedure.



13.0 - SYSTEM RESET

A system reset will return the device to the factory default settings.
This procedure must therefore only be used in case of need.

To reset the system proceed as follows:
- Disconnect the alarm.
- Short-circuit the RED and BLACK wires of the 2-pin LED connector.
- Power the system; 4 Beeps will sconfirm the operation
- Remove the previously created short-circuit; the status LED will light up steady.
- Turn ignition key ON; reset is confirmed by a Beep and the wailing of the siren for approx. 3 sec.
- Turn ignition key OFF.
- The LED will power OFF to confirm the end of the procedure.

14.0 - TECHNICAL SPECIFICATIONS

Power supply	**12 Vdc**
Current absorption @ 12Vdc with system armed and LED flashing	**15 mA**
Working temperature range	**-30°C to +70°C**
Engine immobilizer relay contact capacity	**8 A to 20°C**
Alarm cycle duration	**30 sec.**
Maximum load of siren output	**1 A**

15.0 - WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT DIRECTIVE (WEEE)

The present device falls within the field of application of the current WEEE Directive. The crossed-out wheeled bin symbol on the equipment or on its packaging indicates that the product, at the end of its useful life, must be discarded separately from other waste to allow adequate treatment and recycling.