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 : ☐ **933MHW**

Vehicle : .....

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GEMINI® ALARM SYSTEMS

933MHW ALARM SYSTEM

INSTALLER AND USER MANUAL

UK

CE

Made in Italy

Rev.00 - 01/18

UK

TABLE OF CONTENTS

1.0 - INTRODUCTORY NOTE

Dear customer, thank you for choosing this GEMINI product designed and manufactured in Italy specifically for recreational vehicles.
This new generation 933MHW CAN BUS alarm system has been implemented with a 2.45GHz transceiver and ZigBee wireless technology with anti-jamming reliability.

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.

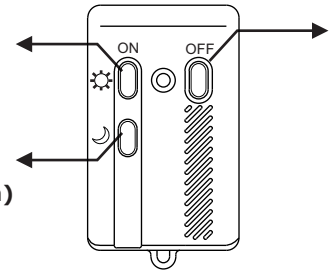
For the installer.
This sign indicates that the system will operate according to the selected connections and programming or it simply provides useful setup instructions.

2.0 - REMOTE CONTROL 738W AND BATTERY REPLACEMENT

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

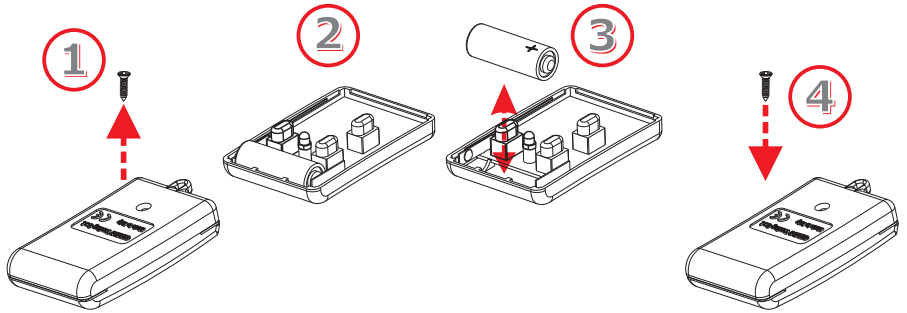
BUTTON 1:
TOTAL SYSTEM ARMING
(and door lock)

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



BUTTON 2:
SYSTEM DISARMING
(and door unlock)

If the LED blinks 3 times at the press of a button, the battery is weak and must be replaced as follows:



Use only 23AE batteries.
ATTENTION: 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 - COMPLETE SYSTEM ARMING

Press the lock button on the vehicle remote control or button “1” on the Gemini remote control (P/N 738W); system arming is confirmed by a siren chirp and a flash of the turn indicators (if optical/acoustic signals are enabled).
The system has a 30 sec. arming delay during which the LED is ON steady.

3.2 - SYSTEM ARMING WITH SENSORS EXCLUSION

To arm the system without arming interior protection press button “3” on the Gemini remote control. System arming is confirmed by a quick low-pitched chirp and a flash of the turn indicators (if signals are enabled).

Sensors can be excluded via the vehicle original remote control on the following vehicles:

- FIAT DUCATO ‘11 ›
- FORD TRANSIT ‘14 ›
- RENAULT MASTER ‘10 ›

To exclude interior protection via the vehicle original remote control, 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 1 low-pitched chirp.

NB: THIS CONFIRMATION TONE CANNOT BE EXCLUDED.

Exclusion of sensors is bound to each single arming cycle. They will be reset upon next arming.

3.3 - PASSIVE ARMING

If programmed for passive arming, the system will automatically arm approximately 60 sec. after ignition is switched OFF and the last door is opened and closed.
Arming is confirmed by a siren chirp and a flash of the turn indicators (if signals are enabled).

If programmed for passive arming, interior protection is excluded.
Opening a door during the 60-second passive-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. delay from the time the system is armed to allow you to leave the vehicle without triggering an alarm: it will be signaled by the LED turned ON steady.

3.5 - SYSTEM ARMED

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

3.6 - ALARM, NEUTRAL TIME BETWEEN ALARMS AND ALARM CYCLES

Alarm events are signaled by optical/acoustic signals. Once the alarm ceases, there is a 5 sec. time-interval before another alarm can be triggered.
Each alarm event can generate up to 10 cycles for each input and for each arming cycle. One alarm cycle lasts for 30 sec.

3.7 - SYSTEM DISARMING

Press the unlock button on the vehicle original remote control or button “2” on the Gemini remote control (P/N 738W); system disarming is confirmed by 2 siren chirps and 2 flashes of the turn indicators (if signals are enabled).
If an alarm event has occurred while you were away from your vehicle, it will be signaled, when you disarm the sytem, by 5 siren chirps and 5 flashes of the turn indicators.
Alarm causes and relative LED signals are listed in the next paragraph.

3.8 - ALARM MEMORY

The LED memory allows to identify the last alarm event signaled by 5 siren chirps and 5 turn indicator flashes when the system is disarmed.
Turn ignition key “ON”and count the number of flashes. 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 turn ignition key “OFF”.
The table below lists the various alarm causes and relative number of LED flashes.

LED FLASHES	ALARM CAUSES	ALARM CYCLES
✷✷●✷✷	Ignition attempt (+15/54)	10
✷✷✷●✷✷✷	Door tamper	10
✷✷✷✷●✷✷✷✷	Bonnet tamper	10
✷✷✷✷✷●✷✷✷✷✷	Boot tamper	10
✷✷✷✷✷✷●✷✷✷✷✷✷	Volumetric or external sensor	10
✷✷✷✷✷✷✷✷●✷✷✷✷✷✷✷✷	Wireless magnetic contacts or opening detectors	10
✷✷✷✷✷✷✷✷✷●✷✷✷✷✷✷✷✷✷	Wireless infrared sensors (PIR)	10
✷✷✷✷✷✷✷✷✷✷✷●✷✷✷✷✷✷✷✷✷✷✷	Wire tampering	10
● LED OFF (2 seconds) ✷ LED ON (1 second)		

4.0 - PINOUT TABLES

20-PIN CONNECTOR

POSITION	WIRE FUNCTION	WIRE COLOUR
- 1 -	-----	-----
- 2 -	-----	-----
- 3 -	-----	-----
- 4 -	-----	-----
- 5 -	Positive/negative input - door switches	GREEN-BROWN
- 6 -	DO NOT CONNECT	GREEN
- 7 -	DO NOT CONNECT	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 -	Positive output - system armed (+A)	PINK
- 14 -	Negative input - external sensors	GREEN-BLACK
- 15 -	Negative input - bonnet switch (for pairing purposes)	GREEN
- 16 -	Optical pulse signals (Hazard)	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 -	-----	-----

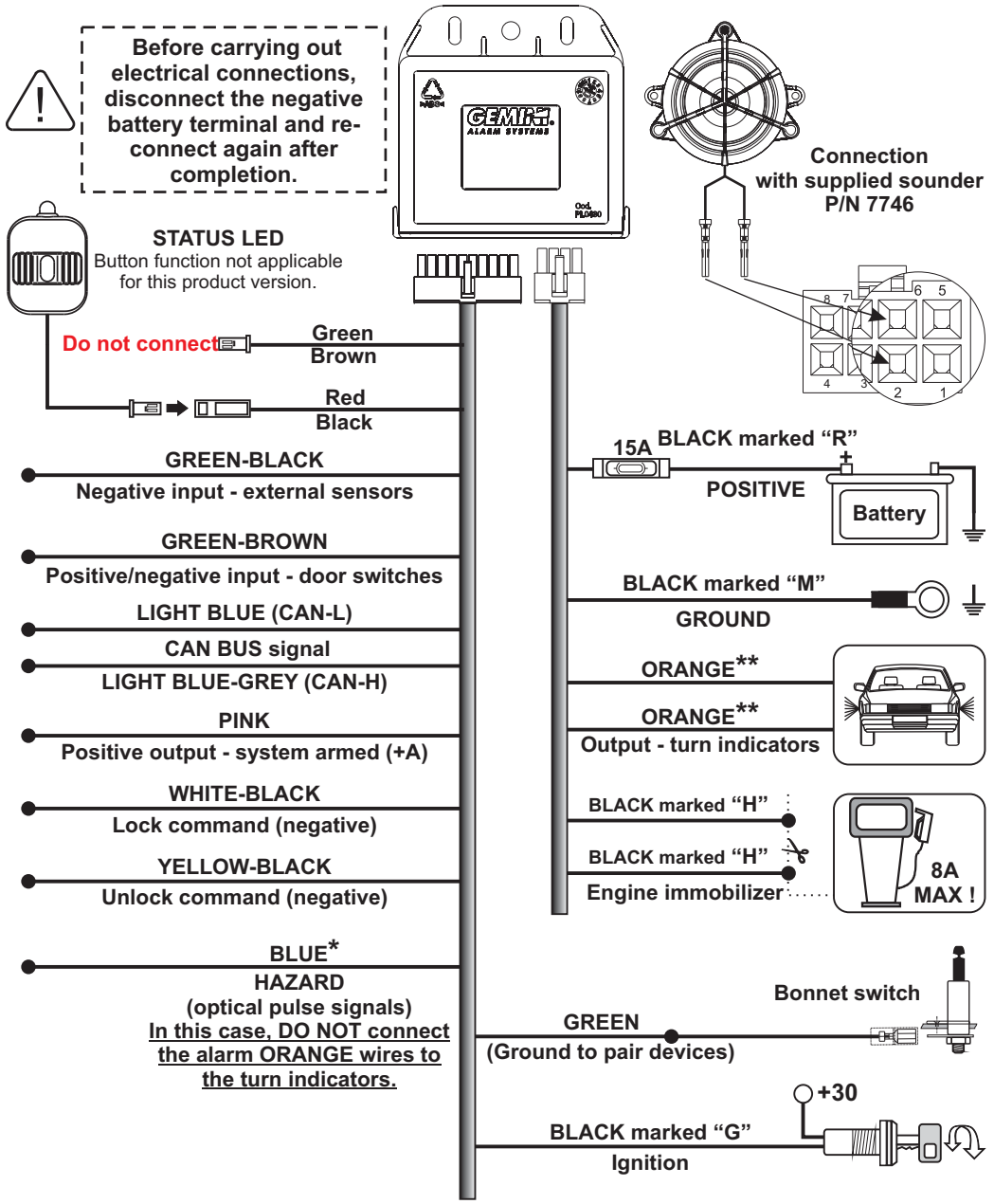
*** If “Double pulse unlock” feature is enabled (par. 8.0), lock/unlock pulse time will be 0.5 sec. instead of 1.5 sec.**

8-PIN CONNECTOR

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

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

5.0 - WIRING DIAGRAM



Turn indicators connections: Select ONLY one of the following connections :
***BLUE wire:** Optical signals activated by connection to the Hazard switch will **ONLY** turn ON during an alarm condition.
****ORANGE wires:** turn indicator flashes for all optical signaling functions (factory enabled).

6.0 - VEHICLE CODE PROGRAMMING

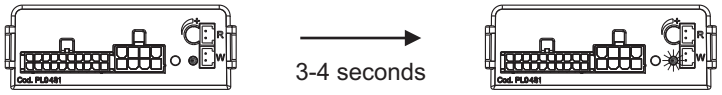
The system must be configured according to the specific vehicle model on which it is to be installed.
To help you understand the coding procedure, here below is an example illustrating the configuration procedure.
In this case the code used is 1-0-3 which hypothetically corresponds to a "FIAT XXXXX".

A separate leaflet, included in the alarm packaging, lists all the available vehicles (codes are updated at packaging time).
Up-to-date information on supported vehicle models can be found in the restricted area of our website: www.gemini-alarm.com.

The alarm has an indicator LED that signals any wrong vehicle code inserted.
The code must range between 100 and 235 otherwise the LED on the unit blinks repeatedly and the procedure is interrupted.
The previously inserted 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 whole procedure.

Connect the wiring harness connectors to the corresponding alarm connectors.
Press and hold the button shown below until the LED lights up.

Release the button, the LED switches OFF.

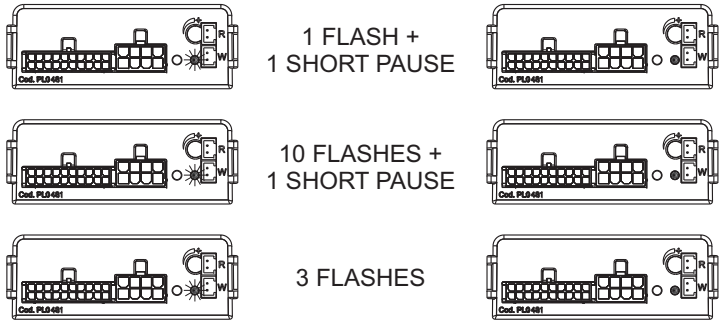


The LED will start flashing after 3 to 4 seconds; count the flashes.
In this case press the button at the 1st flash which corresponds to number "1".

After 4 seconds, the LED will flash for the 2nd time.
Press the button at the 10th flash which corresponds to "0".

After 4 more seconds, the LED will flash for the 3rd and last time.
Press the button at the 3rd flash which corresponds to number "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

Alarm system 932MHW can work either via CAN BUS or via the Gemini remote control (P/N 738W) as described hereunder.

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

7.1 - OPERATION VIA CAN BUS

In this case, arming/disarming and alarms are managed via the CAN BUS line. Only the alarm system CAN BUS wires need to be connected to the vehicle CAN BUS wiring (see available diagrams in the restricted area of our website: www.gemini-alarm.com).

7.2 - OPERATION VIA GEMINI REMOTE CONTROL

This type of connection allows to arm/disarm the system and lock/unlock the vehicle doors via the Gemini remote control (P/N 738W).

For vehicle specific information, see available installation guidelines in the restricted area of our website: www.gemini-alarm.com).

8.0 - SYSTEM PROGRAMMING

The table below applies to the system programmed in “standard configuration”.
Every time you enter in programming mode, the alarm system resets to the default settings.

A lack of power during electrical system maintenance, will not affect the programming.

FUNCTION	STATUS	LED FLASHES
Arming/disarming optical signals	Enabled	✷
Arming/disarming acoustic signals	Enabled	✷✷
System passive arming	Disabled	✷✷✷
Door input - positive	Disabled	✷✷✷✷
Double pulse unlock	Disabled	✷✷✷✷✷

8.1 - OPTICAL SIGNALS

This function activates the optical signals (turn indicator flashes) to confirm system arming/disarming operations.

If the vehicle already has optical lock/unlock signals, the turn indicators alarm flashes should be disabled.

8.2 - ACOUSTIC SIGNALS

This function activates the acoustic signals (siren chirps) to confirm system arming/disarming operations.

8.3 - PASSIVE ARMING

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

8.4 - DOOR SWITCH POLARITY SELECTION

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

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.

DOUBLE PULSE UNLOCK QUICK ACTIVATION:

- Disconnect the alarm system power supply and ground the Green/Black wire.
- Connect the alarm power supply; 3 quick high-pitched chirps will confirm operation.
- Remove the Green/Black wire from ground.

NB: To reset the default setting, repeat the above steps; 1 low-pitched chirp will confirm the operation.

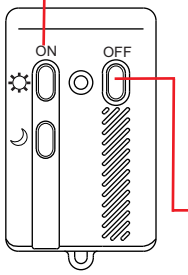
9.0 - SYSTEM PROGRAMMING EXAMPLE

Press Gemini remote control button “ON” to enable a programmable function and button “OFF” to disable it.

To enter in programming mode proceed as follows:

- With the alarm system disarmed, turn ignition key “ON”.
- Wait approx. 2 sec. for the LED to light up.
- While the LED is ON, press remote control button “1”.

A quick high-pitched chirp, a long low pitched chirp and 2 flashes of the turn indicators will confirm the system is in programming mode.



Press once **BUTTON “ON”** to enable the function.
A quick high-pitched chirp will confirm operation.
The LED will flash according to the selected

Beep

OR

Press once **BUTTON “OFF”** to disable the function.
A long low-pitched chirp will confirm operation.
The LED will flash according to the selected

Boop

In both cases, the system will move on to the next function.
Repeat the above steps to enable or disable other functions.
When the last function is programmed, in addition to the confirmation tone, to indicate the end of the programming procedure, the system gives 2 low-pitched chirps, 1 high-pitched chirp and the turn indicators flash twice.

10.0 - LEARNING 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 60 devices.
If an extra device is added, it automatically deletes the first device stored in memory.

To activate the code-learning mode proceed as follows:
• With the system disarmed, open the vehicle bonnet and keep it opened or ground the GREEN wire.

The “ON-OFF” cycles must be carried out within 4 sec. otherwise the procedure is invalidated.

• Cycle ignition key **“**ON-OFF**”**-**“**ON-OFF**”**-**“**ON-OFF**”**-**“**ON**”**.
• At the 4th cycle leave ignition key “ON”.
• A quick high-pitched chirp, a long low-pitched chirp and 2 flashes of the turn indicators will confirm the system is in learn mode. The LED will turn ON steady.

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

The system is ready to receive the device codes.

1. Depending on which device is to be paired:
• Press twice one of the buttons on the remote control;
• Make the magnetic contact transmit twice (bring contact and magnet together and then move apart);
• Press the opening detector button twice.

2. A short acoustic signal will then confirm the device has been learned.

3. Repeat this same procedure to learn other devices.

4. Turn ignition key “OFF”.

5. A long low-pitched chirp and a flash of the turn indicators will confirm the end of the procedure. The status LED will turn OFF.

6. Close the bonnet or remove the GREEN wire from ground (bonnet switch).

11.0 - DELETING PROGRAMMED 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).

All devices previously programmed can be deleted. To clear memory proceed as follows:
• With the system disarmed, open the vehicle bonnet and keep it opened or ground the GREEN wire.

The “ON-OFF” cycles must be carried out within 4 sec. otherwise the procedure is invalidated.

• Cycle ignition key **“**ON-OFF**”**-**“**ON-OFF**”**-**“**ON-OFF**”**-**“**ON**”**.
• At the 4th cycle leave ignition key “ON”.
• A quick high-pitched chirp, a long low-pitched chirp and 2 flashes of the turn indicators will confirm the system is in delete mode. The LED will turn 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 LED will switch OFF when the devices have been deleted.
• Turn ignition key “OFF”.
• A long low-pitched chirp and a flash of the turn indicators will confirm the end of the procedure.

12.0 - ULTRASONIC VOLUMETRIC PROTECTION

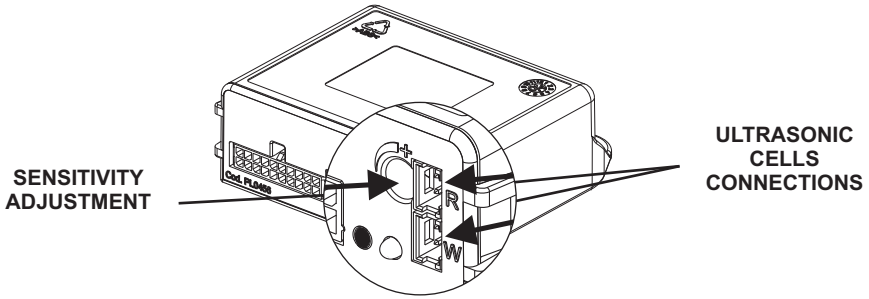
12.1 - CONNECTIONS AND POSITIONING

Insert the WHITE connector in the “W” marked socket.
Insert the RED connector in the “R” marked socket.
Install the ultrasonic sensor cells on the top part of the windshield internal pillars, away from the air vents and point them towards the center of the rear window.

12.2 - SENSOR ADJUSTMENT

To check the sensor sensitivity level proceed as follows:

- With the alarm system disarmed, roll down the front window approx. 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

By activating the following procedure, the system returns to the factory default state. This procedure must therefore only be used in case of need, before programming the system or auto-learning the turn indicator flashes.

To reset the system proceed as follows:

- Disconnect the system.
- Short-circuit the RED and BLACK wires of the 2-pin LED connector.
- Connect the system; once the alarm system is powered, 4 acoustic signals will sound and the turn indicators will flash 4 times.
- Remove the previously created short-circuit; the status LED will light up steady.
- Turn ignition key “ON”; reset is confirmed by an acoustic signal and the wailing of the siren for approx. 3 seconds.
- Turn ignition key “OFF”. The LED turns OFF and there are no acoustic signals.

14.0 - TECHNICAL SPECIFICATIONS

Power supply	12Vdc
Current draw (system armed and LED flashing)	15mA @ 12Vdc
Operating temperature range	-30°C => +70°C
Turn indicators relay contact capacity	8A @ 20°C
Engine immobilizer relay contact capacity	8A @ 20°C
Alarm cycle duration	30 sec.
Maximum positive current output when armed (+A)	700mA

15.0 - WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT DIRECTIVE (WEEE)

The present device does not fall within the scope of Directive 2002/96EC on Waste Electrical and Electronic Equipment (WEEE) as specified in art. 2.1 of L. D. No. 151 of 25/07/2005.