**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 Product: ☐ **S36**

Vehicle:

Scorpion Automotive permanently fitted aftermarket equipment must be installed by qualified and authorised installers. Thatcham recommends to its insurer members that the installations of certified products within the aftermarket are registered with an independent installation registration system which can be accessed by insurance companies.

**S-Series**
A brand of the Scorpion Automotive Group
Scorpion House,
Drumhead Rd,
Chorley, Lancashire, UK,
PR6 7DE

SCORPION AUTOMOTIVE
S-SERIES

# S36

# INSTALLATION GUIDE

UK

CE UKCA

Rev. 02 – 03/22

## TABLE OF CONENTS

## 1.0 – INTRODUCTORY NOTE

The following symbols are included in the present manual to emphasize important instructions or particular functions or connections:

> ⚠️ **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.
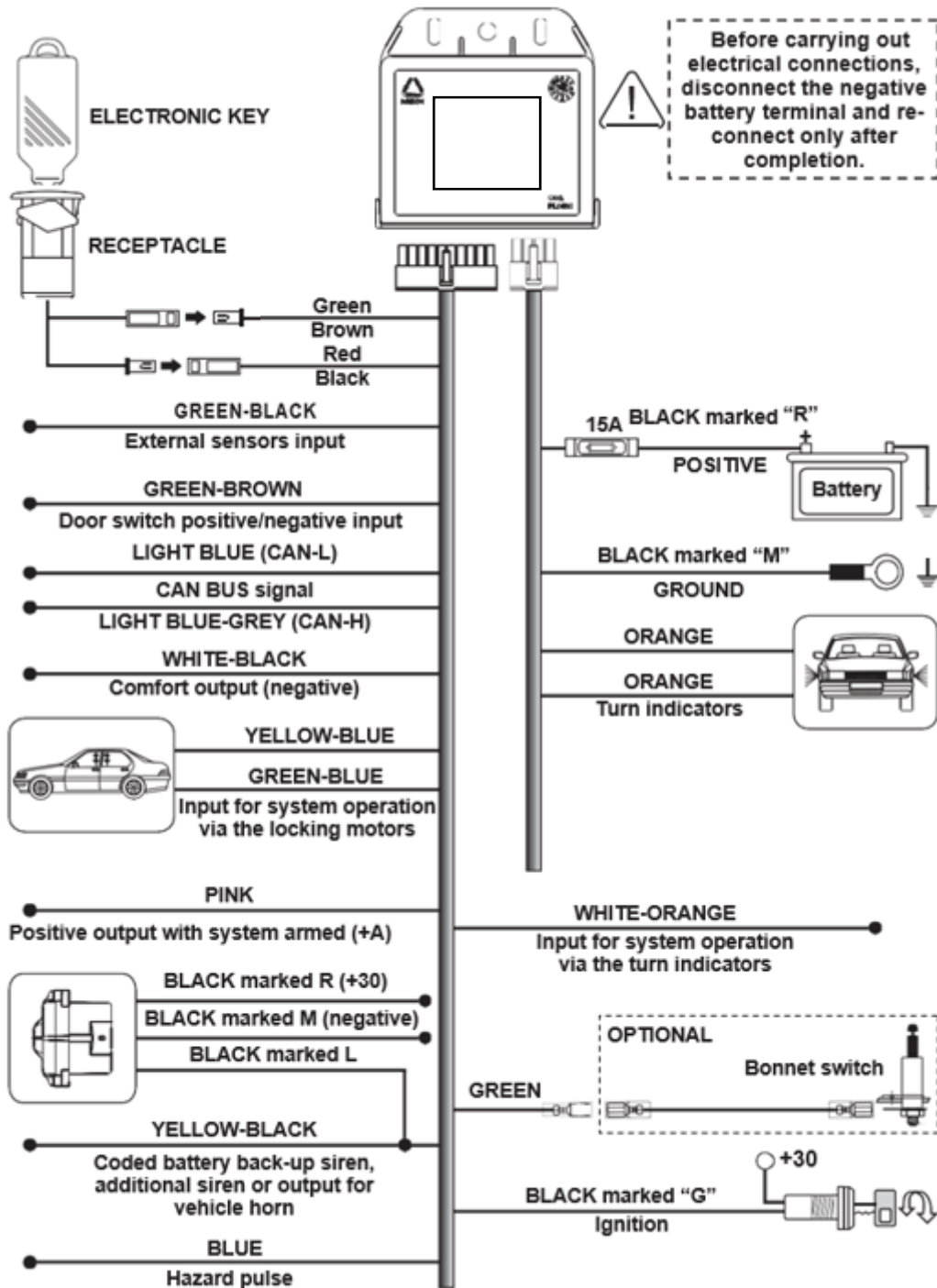
## 2.0 – PINOUT TABLES

### 2.1 – 20-PIN CONNECTOR

| POSITION | WIRE FUNCTION | WIRE COLOUR |
|---|---|---|
| - 1 - | ----- | ----- |
| - 2 - | System arming signal | YELLOW-BLUE |
| - 3 - | System disarming signal | GREEN-BLUE |
| - 4 - | ----- | ----- |
| - 5 - | Door switch positive/negative input | GREEN-BROWN |
| - 6 - | Electronic key receptacle input | GREEN |
| - 7 - | Electronic key receptacle ground | BROWN |
| - 8 - | LED negative output | BLACK |
| - 9 - | LED positive output | RED |
| - 10 - | Ignition | BLACK marked "G" |
| - 11 - | CAN BUS signal (CAN-H) | LIGHT BLUE-GREY |
| - 12 - | CAN BUS signal (CAN-L) | LIGHT BLUE |
| - 13 - | Positive output with system armed (+A) | PINK |
| - 14 - | External sensors input | GREEN-BLACK |
| - 15 - | Bonnet switch negative input | GREEN |
| - 16 - | Hazard pulse | BLUE |
| - 17 - | Comfort negative output | WHITE-BLACK |
| - 18 - | Coded battery back-up siren or horn output | YELLOW-BLACK |
| - 19 - | Antenna | BLACK |
| - 20 - | Learning input and system arming/disarming via turn indicators | WHITE-ORANGE |

> ⚠️ WHITE-ORANGE wire must ALWAYS be connected if system is to operate through the turn indicators.

### 2.2 – 8-PIN CONNECTOR

| POSITION | WIRE FUNCTION | WIRE COLOUR |
|---|---|---|
| - 1 - | Ground | BLACK marked "M" |
| - 2 - | ----- | ----- |
| - 3 - | Positive | BLACK marked "R" |
| - 4 - | Turn indicators positive output | ORANGE |
| - 5 - | ----- | ----- |
| - 6 - | ----- | ----- |
| - 7 - | ----- | ----- |
| - 8 - | Turn indicators positive output | ORANGE |

ELECTRONIC KEY

RECEPTACLE

Green
Brown
Red
Black

**GREEN-BLACK**
External sensors input

**GREEN-BROWN**
Door switch positive/negative input

**LIGHT BLUE (CAN-L)**
CAN BUS signal
**LIGHT BLUE-GREY (CAN-H)**

**WHITE-BLACK**
Comfort output (negative)

**YELLOW-BLUE**
**GREEN-BLUE**
Input for system operation via the locking motors

**PINK**
Positive output with system armed (+A)

**BLACK marked R (+30)**
**BLACK marked M (negative)**
**BLACK marked L**

**YELLOW-BLACK**
Coded battery back-up siren, additional siren or output for vehicle horn

**BLUE**
Hazard pulse

Before carrying out electrical connections, disconnect the negative battery terminal and re-connect only after completion.

**15A  BLACK marked "R"**
**POSITIVE**
Battery

**BLACK marked "M"**
**GROUND**

**ORANGE**
**ORANGE**
Turn indicators

**WHITE-ORANGE**
Input for system operation via the turn indicators

OPTIONAL
Bonnet switch
**GREEN**

**BLACK marked "G"**  +30
Ignition

### 4.1 – STANDARD CONNECTIONS

LEFT TURN INDICATORS

RIGHT TURN INDICATORS

**S36 SYSTEM**

ORANGE
ORANGE
WHITE-ORANGE

WHITE-ORANGE wire must ONLY be connected if the system is to operate via the turn indicators.
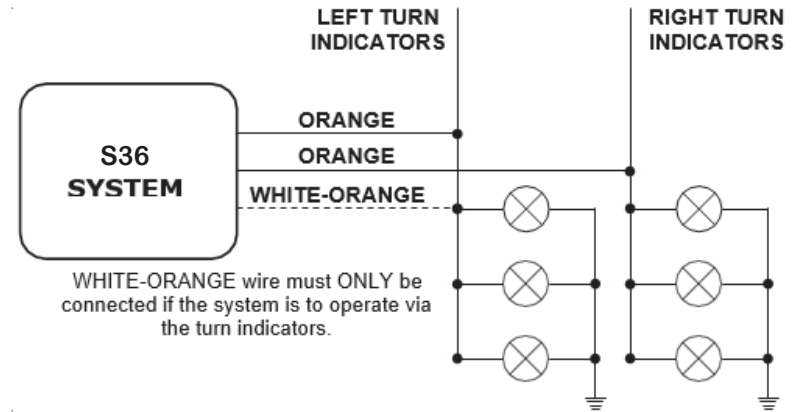
### 4.2 – CONNECTIONS FOR VEHICLES WITH SEPARATE LINES

WHITE-ORANGE wire must ONLY be connected if the system is to operate via the turn indicators.

**TURN INDICATORS CONTROL UNIT**

Front Side Rear Rear Side Front
LH    LH    LH   RH   RH   RH

**S36 SYSTEM**

WHITE-ORANGE
ORANGE

ORANGE

Insert six 2 Amp diodes
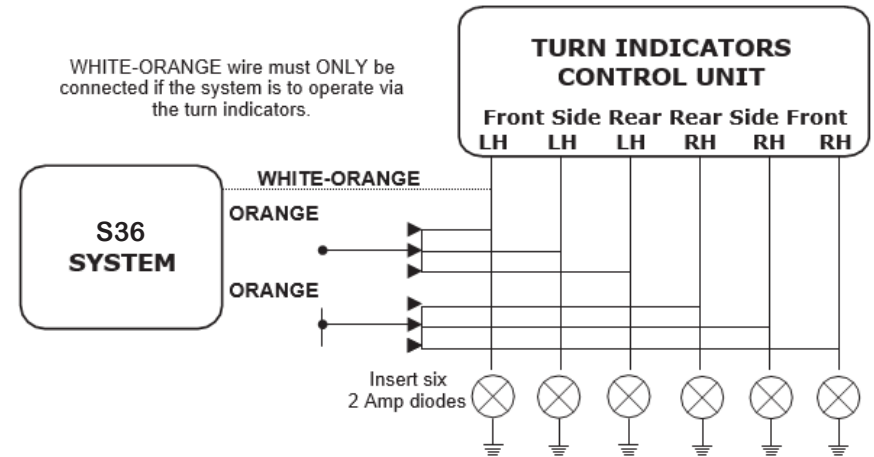
### 4.3 – CONNECTION TO HAZARD SWITCH

Select Hazard pulse (SYSTEM PROGRAMMING menu).
Do not make this connection if the system is to operate via the turn indicators.

**S36 SYSTEM**

BLUE

VEHICLE WIRING CIRCUIT
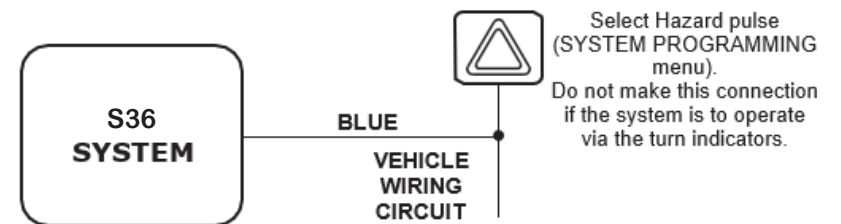
The S36 system can operate in various modes according to the vehicle on which it is installed and the available connections (refer to the vehicle installation specifications).

The alarm system can be managed via the vehicle CAN BUS line and operate in combination with the turn indicator flashes and/or the door locking motors. The system automatically manages the different arming/disarming signals.

The various arming modes are listed below with the connections indicated in the following paragraphs.

- Arming via CAN BUS line.
- Arming via locking motors.
- Arming via turn indicator flashes.
- Arming via turn indicator flashes and locking motors.
- Arming via turn indicator flashes, locking motors and CAN BUS line.

### 5.1 - CONNECTIONS AND MANAGEMENT VIA CAN BUS LINE

System arming/disarming and alarms being managed via CAN, only connect the alarm CAN BUS wires to the vehicle CAN line.

### 5.2- CONNECTIONS TO LOCKING MOTORS

System arming/disarming connections must be made to the vehicle locking motors (polarity inversion).

### 5.3- CONNECTIONS TO TURN INDICATORS

⚠️ If the turn indicators lock/unlock flashes are identical, connect the door lock motors.

⚠️ If the turn indicators flash when unlocking with the car mechanical key, do not make this connection.

To arm/disarm the system, connect the WHITE-ORANGE wire to a wire of the turn indicators.

### 5.4 – COMBINATION CONNECTION

This type of connection allows the system to operate via the CAN BUS line with the turn indicators or the door lock motors or both.

The system will automatically manage the different lock/unlock signals according to the selected configuration and connections.

If the system is to be managed via CAN BUS line, it must be configured according to the vehicle on which it is to be installed.

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 available vehicles (codes are updated at packaging time).

⚠️ The system 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 are no optical warnings, the procedure is simply interrupted.
In either case, repeat the entire procedure.

Connect the harness 20-way connector to the alarm 20-way connector.
Press and hold the button shown below until the LED lights up.



Release the button, the LED switches off.
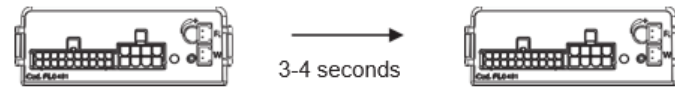


3-4 seconds

After 3/4 seconds, the LED starts flashing.
Press the button at the 1st flash which corresponds to number "1".



FIRST FLASH — Press

After 4 seconds, the LED starts flashing again.
Press the button at the 10th flash which corresponds to "0".



TENTH FLASH — Press

After another 4 seconds, the LED flashes one last time.
Press the button at the 3rd flash which corresponds to number "3".



THIRD FLASH — Press

When the last digit is entered, the alarm system "repeats" the entered code (1-0-3).



1 FLASH AND A SHORT PAUSE

10 FLASHES AND A SHORT PAUSE
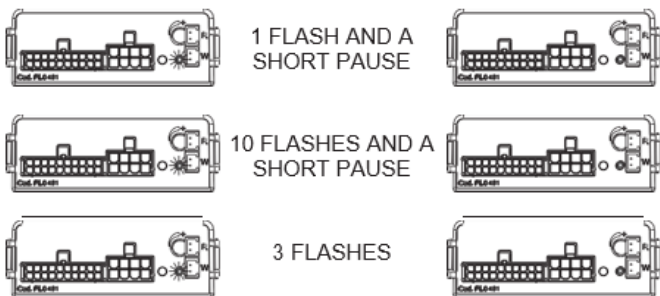
3 FLASHES

## 7.0 – LEARNING OF TURN INDICATORS FLASHES

In order to arm/disarm through the turn indicators, the system must learn the vehicle lock (arm) and unlock (disarm) flashes.

Connect the WHITE-ORANGE wire to the turn indicators and proceed as follows:

• Disconnect the 8-way harness connector from the 8-way alarm connector.
• Turn ignition key "ON".
• Connect the 8-way harness connector to the 8-way alarm connector; the LED turns ON steady.
• Turn ignition key OFF.
• Close all doors and press the lock button on the original remote control.
• When the turn indicators stop flashing, a high-pitch acoustic signal confirms the arming flashes have been learnt.
• Press the unlock button on the original remote control.
• When the turn indicators stop flashing, 2 high-pitch audio signals confirm the disarming flashes have been learnt.

⚠️ To cancel the programming of the turn indicators reset the system (see chapter 13.0).

## 8.0 – SYSTEM PROGRAMMING

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

| FEATURES | DEFAULT STATUS | LED FLASHES |
|---|---|---|
| 'Exclusion' of arm/disarm optical signals | Disabled | ✳ |
| 'Exclusion' of arm/disarm acoustic signals | Enabled | ✳✳ |
| System passive arming | Disabled | ✳✳✳ |
| Battery back-up coded siren | Enabled | ✳✳✳✳ |
| Door input - positive | Disabled | ✳✳✳✳✳ |
| Negative output during alarm cycle | Disabled | ✳✳✳✳✳✳ |
| For Sigma only - Turn ignition key | Disabled | ✳✳✳✳✳✳✳ |

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

Be aware that every key turn disables the selected feature and moves to the next one until the programming procedure is completed. The procedure must be carried out entirely.

Programmable features are briefly described below while the programming instructions are illustrated in the next paragraph.

### 8.1 – OPTICAL SIGNALS
Arming/disarming with optical signals (default setting => optical signals ON)

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

### 8.2 – ACOUSTIC SIGNALS
Arming/disarming with acoustic signals (default setting => acoustic signals OFF).

### 8.3 – PASSIVE ARMING
The system will automatically arm 60" after ignition is switched off and the last door is opened and closed.

If a door is opened during this lapse of time, the procedure is interrupted and it resumes when the door is closed.

### 8.4 - ENABLING OF SIREN (ART. 7725T) OUTPUT
This feature enables communication between the alarm system and the coded siren (ref. 7725T).

### 8.5 - DOOR SWITCH POLARITY SELECTION
This feature modifies the alarm input signal (positive or negative) according to the signal generated by the door switch.

### 8.6 - NEGATIVE OUTPUT SELECTION (DURING ALARM) FOR HORN OR ADDITIONAL SIREN
If configured, this feature arms the output for the siren (continuous tone) or for the horn (intermittent tone). (Default setting => siren).

⚠️ Cannot be selected if the feature relative to the coded auxiliary siren (7725T) is activated.

## 9.0 – SYSTEM PROGRAMMING EXAMPLE

Here below is an example that illustrates the steps to follow to modify the programmable features. As mentioned before, **every key rotation disables** the features, while the electronic key enables them. When ignition is turned ON or OFF or the electronic key is touched to its receptacle, a high or low pitch signal sounds and the LED flashes according to table 12.0.

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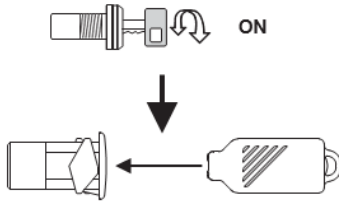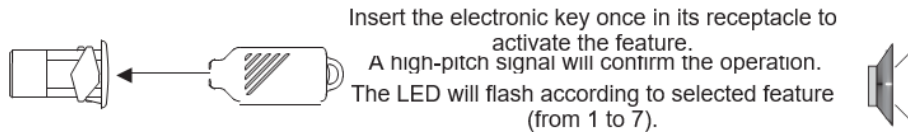


Two acoustic signals (a high and a low-pitch sound) and two flashes of the turn indicators confirm that the system is in programming mode.
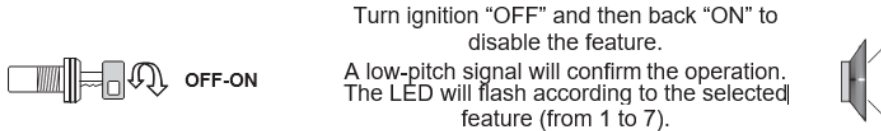
Turn ignition "OFF" and then back "ON" to disable the feature.
A low-pitch signal will confirm the operation. The LED will flash according to the selected feature (from 1 to 7).
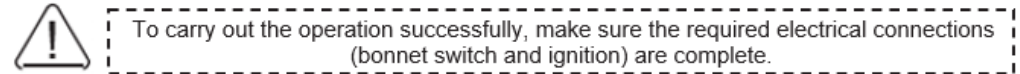


### OR

Insert the electronic key once in its receptacle to activate the feature.
A high-pitch signal will confirm the operation. The LED will flash according to selected feature (from 1 to 7).



In both cases, the system moves on to the next feature. Repeat steps above to enable or disable other features.

When the last feature is programmed (either with the electronic key or the ignition key), in addition to the confirmation tone, the system gives 2 low-pitch and 1 high-pitch acoustic signals and the turn indicators flash twice.
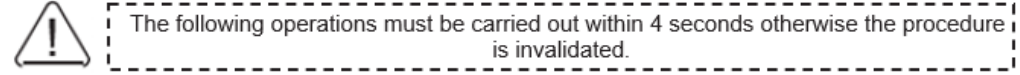
These last 2 signals indicate the end of the programming procedure.
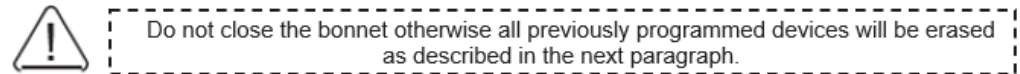
## 10.0 – ADDING NEW DEVICES

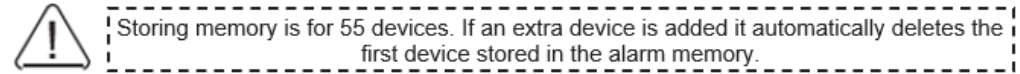⚠ To carry out the operation successfully, make sure the required electrical connections (bonnet switch and ignition) are complete.

To activate the procedure, proceed as followed:
• With the system disarmed, open the bonnet and leave it open.

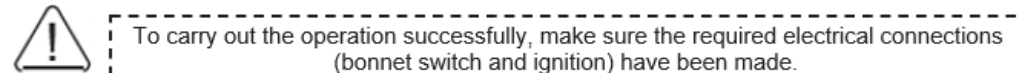⚠ The following operations must be carried out within 4 seconds otherwise the procedure is invalidated.

• Turn ignition key "ON-OFF"-"ON-OFF"-"ON-OFF"-"ON"; on the 4th turn, leave it "ON".
• To confirm it has entered in learn mode, the system gives 2 acoustic signals (1 high and 1 low-pitch signal), the turn indicators flash once and the LED turns ON.

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

• Insert the electronic key into the receptacle; each time a device is learned a high-pitched signal sounds and the status LED turns OFF briefly.
• Repeat this procedure to learn other devices.
• Turn ignition key "OFF"; the end of the procedure is confirmed by a low-pitch signal, the turn indicators flash once and the status LED turns OFF.
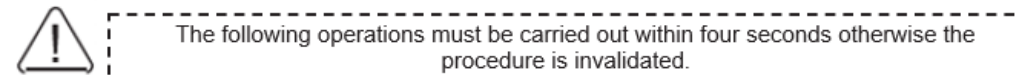
⚠ Storing memory is for 55 devices. If an extra device is added it automatically deletes the first device stored in the alarm memory.

## 11.0 – DELETING PROGRAMMED DEVICES

⚠ To carry out the operation successfully, make sure the required electrical connections (bonnet switch and ignition) have been made.

All devices stored in the system memory can be erased; to clear memory proceed as follows:
• With the system disarmed, open and keep opened the vehicle bonnet.

⚠ The following operations must be carried out within four seconds otherwise the procedure is invalidated.

• Turn ignition key "ON-OFF"-"ON-OFF"-"ON-OFF"-"ON"; on the 4th turn, leave it "ON".
• To confirm it has entered in delete mode, the system gives 2 acoustic signals (a high and a low-pitched signal), the turn indicators flash once and the LED turns ON.
• Close the bonnet and keep it closed (approx. 8 sec.) until the devices are completely deleted.

⚠ If the bonnet is opened before 8 seconds, the devices will not be deleted.
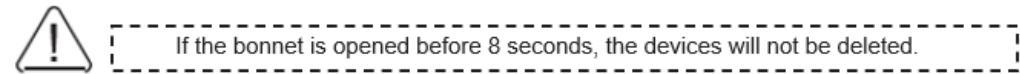
• The status LED turns OFF when the devices have been deleted; turn ignition key "OFF".
• The end of the procedure is confirmed by 1 long low-pitched acoustic signal.

## 12.0 – ULTRASONIC VOLUMETRIC PROTECTION

### 12.1 - CONNECTION 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 transducers of the ultrasonic sensors 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 sensitivity level, proceed as follows:
- With the alarm system disarmed, roll down the front window approx. 20 cm.
- Adjust the trimmer at a medium setting.
- Close all doors, bonnet and boot and arm the system.
- During the arming inhibit time 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.
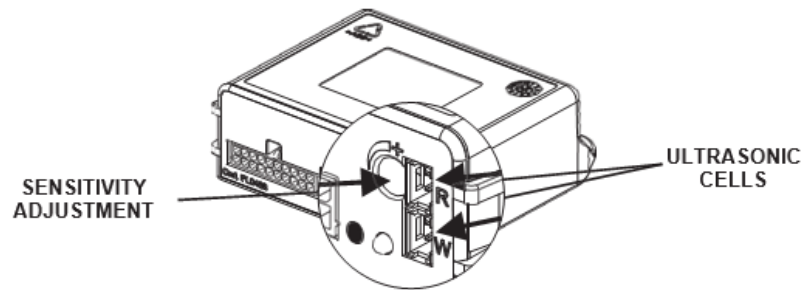


## 13.0 – SYSTEM RESET

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

To reset the system, proceed as followed:
- Disconnect the alarm power supply.
- Short-circuit the RED and BLACK wires of the 2-pin LED connector.
- Power the system; 4 acoustic signals and 4 flashes of the turn indicators will confirm the operation.
- Remove the previously created short-circuit; the status LED lights 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 will turn off. There are no acoustic signals.

## 14.0 – WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) DIRECTIVE

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

## 15.0 – 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 |
| Turn indicators relay contact capacity | 8 A at 20°C |
| Alarm cycle duration | 30 sec. |
| Maximum positive current output when armed (+A) | 700 mA |
| Maximum load of siren output | 1A |