

INSTALLATION CERTIFICATE

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

By :

Sold on :

Type of product : 814FWH

Car :

GEMINI Technologies S.p.A.
Via Luigi Galvani 12 - 21020 Bodio Lomnago (VA) - Italia
Tel. +39 0332 943211 - Fax +39 0332 948080
Web site: www.gemini-alarm.com

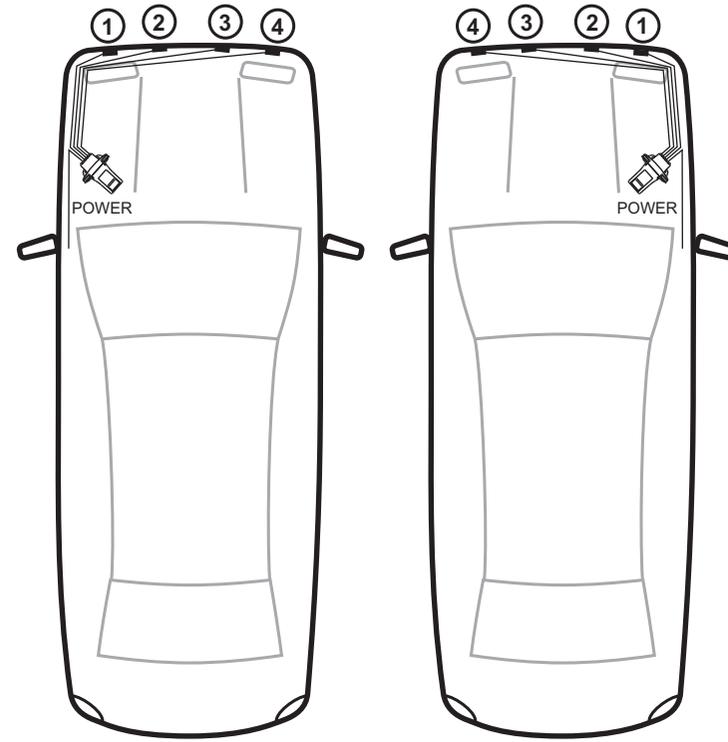
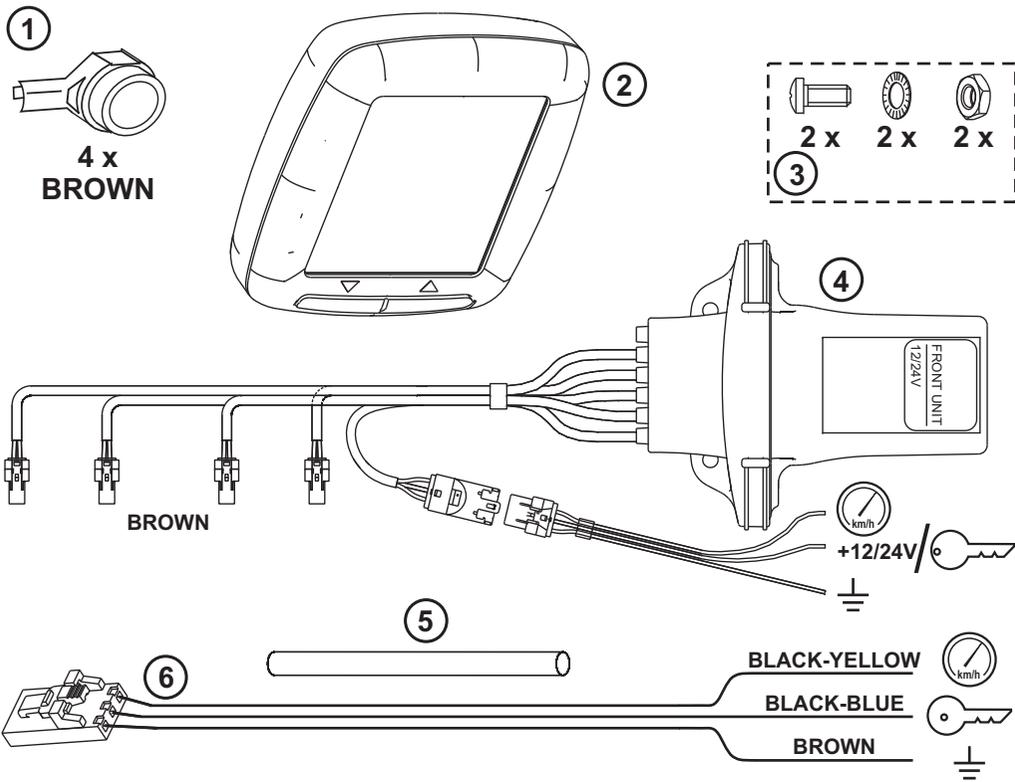


KIT Parking Sensor 814FWH

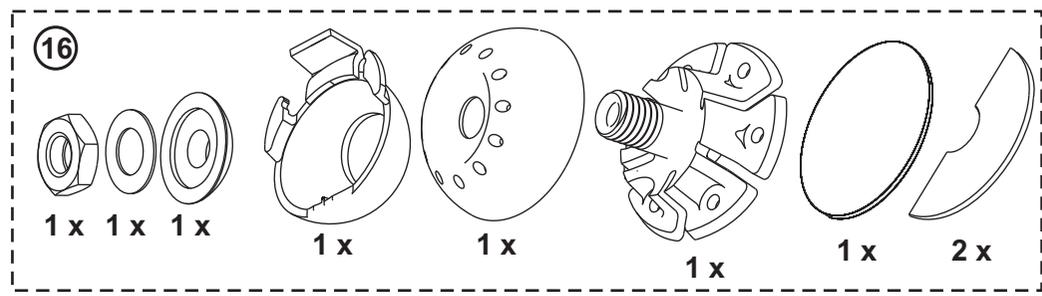
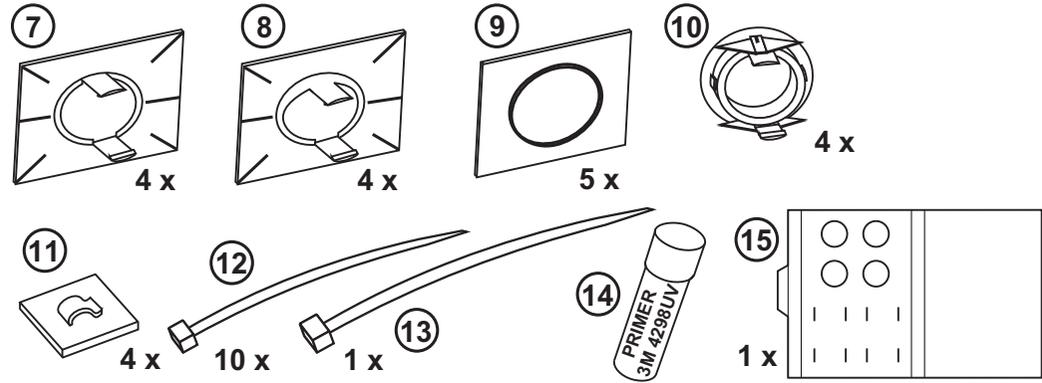
INSTALLATION AND USE MANUAL

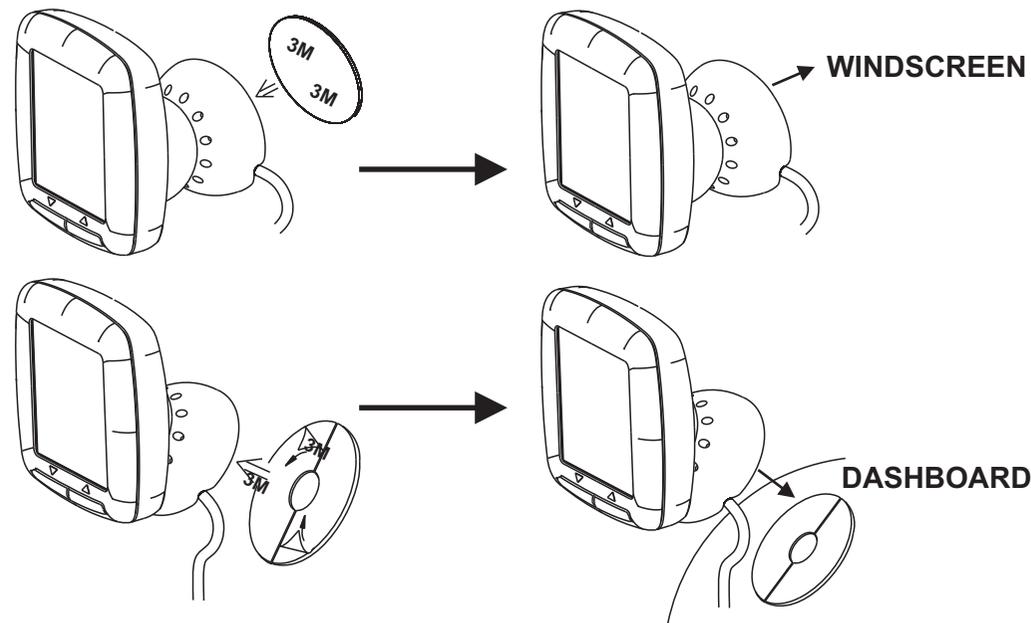
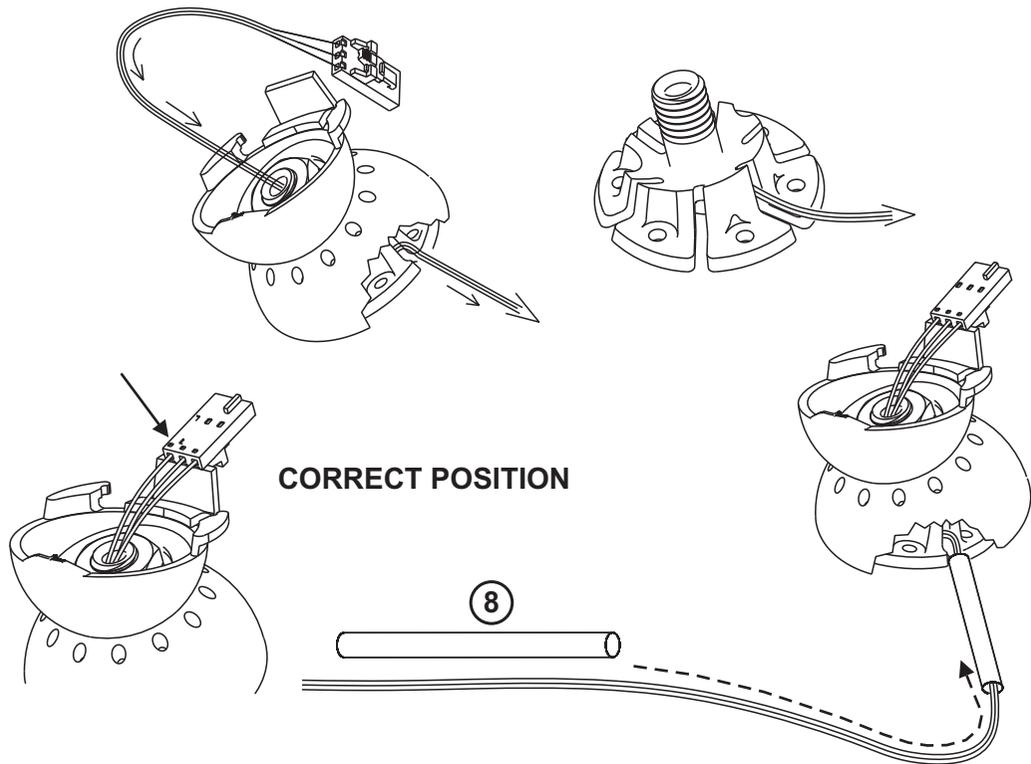


AC 2876/UK Rev. 00 - 01/12

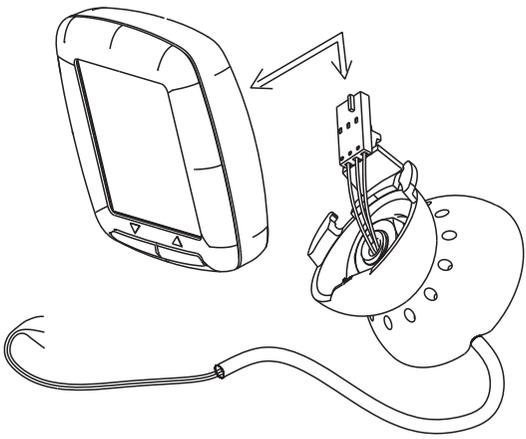
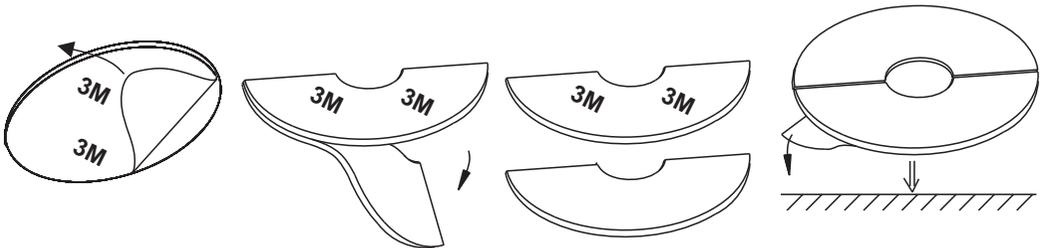
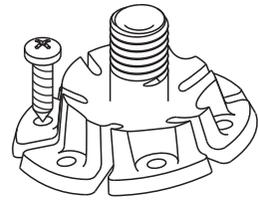


Sensor 1: front with shortest cable.
Sensor 4: front with longest cable.





ALTERNATIVE MOUNTING



TECHNICAL SPECIFICATIONS

Supply voltage	From 9 to 30 Vdc
Current consumption when system working	100mA max.
Service temperature range	From -20°C to +70°C
Ultrasound frequency	40Khz
Control units and display communication frequency	434Mhz
Software version reference (reported on control unit and display)	SW07

1.0 - PRELIMINARY ADVICE..... PAGE 02
 2.0 - WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) DIRECTIVE.... PAGE 02

USER MANUAL

3.0 - SYSTEM OPERATION..... PAGE 03
 3.1 - Detection Zones..... PAG. 03
 3.2 - Automatic activation of sensors (odometer signal)..... PAGE 04
 3.3 - Timer-activated sensors (odometer not connected)..... PAGE 04
 4.0 - TROUBLESHOOTING GUIDE..... PAGE 05
 4.1 - Low power supply signal..... PAGE 05
 4.2 - Sensors anomaly indication..... PAGE 05
 4.3 - Others..... PAGE 05
 5.0 - DISPLAY..... PAGE 06
 6.0 - SETTING OF OVERSPEED AUDIBLE ALERT..... PAGE 06

INSTALLER MANUAL

7.0 - INSTALLATION OF SENSORS..... PAGE 07
 8.0 - CONNECTIONS..... PAGE 09
 9.0 - PAIRING OF CONTROL UNIT WITH DISPLAY..... PAGE 10
 10.0 - LEARNING OF ODOMETER PULSES (optional, only with display wire)..... PAGE 10
 11.0 - TESTING..... PAGE 11
 12.0 - PROGRAMMING..... PAGE 12
 13.0 - SETTING OF PARAMETERS..... PAGE 13
 14.0 - WARRANTY CONDITIONS..... PAGE 13

1.0 - PRELIMINARY ADVICE

Dear customer,
 Before installing, identify your kit and refer to it for the correct instructions.
 The Caution and Warning signs in this manual provide important notices for installing and using this product.
 Be sure to follow them in order to ensure a safe and reliable use:

 **For the user.**
 This sign highlights useful information or indications regarding the use of the parking system.

 **For the installer.**
 This sign indicates various operating modes according to connections and programming of the system or it simply provides useful indications for the installation.

2.0 - 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.

USER MANUAL

3.0 - SYSTEM OPERATION

 Remember to always look around the vehicle while parking.
 Small obstacles or objects with low reflectance might not be detected.

 The parking system is designed only as a parking aid, it should not be considered to replace care and attentiveness while manoeuvring.

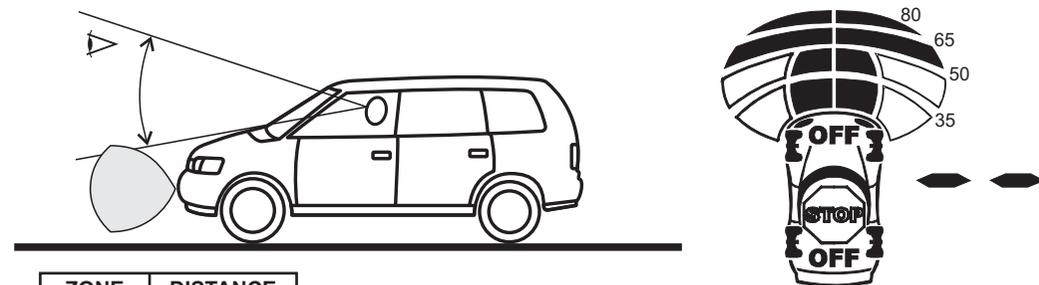
3.1 - DETECTION ZONES

 Detection zones are indicated as “F” (front).
 Detection zones closest to the obstacle are indicated as “FC”.
 The STOP zone is the minimum distance detected between an obstacle and the sensor.
 In this case the warning tone is solid.

 The detection range and the volume of the buzzer can be adjusted (see setting of parameters) according to the needs of the user and the vehicle on which the system is installed.

The stage-by-stage sound alert will vary according to the detection zone.

 For the overall functionality of the parking system, check the programming of the sensors.



ZONE	DISTANCE
FC	35 cm
F1	50 cm
F2	65 cm
F3	80 cm

CENTRAL SENSORS: black zones.
LATERAL SENSORS: black contoured zones.
CLOSEST DETECTION ZONE: the STOP sign and the two symbols next to the vehicle diagram turn on. The distance indication turns off.

3.2 - AUTOMATIC ACTIVATION OF SENSORS (odometer signal)

Front sensors are activated whenever ignition is turned ON and are automatically deactivated when speed exceeds about 15Km/h.



On some vehicles, when speed exceeds 15Km/h, no icon could be displayed even though the system is active.
The sensors can still be deactivated with the push-button.

In case of need (vehicles in queue), press the push-button with the upward arrow to deactivate the sensors.

In this case the "OFF" sign will light up on the displayed vehicle.

3.3 - TIME-ACTIVATED SENSORS (odometer not connected)



To time-activate the sensors, the parameter 13 must be modified (see chapter "setting of parameters").
When the setting is modified, the OFF sign is not displayed when the left hand side push-button is pressed because the sensors will automatically activate when ignition is turned on again.

The front sensors are activated by turning on ignition; an upward arrow icon will light up on the display to indicate activation.

Functioning is directly related to the setting of the parameters.

To deactivate the sensors, simply press the display left-hand side push-button; the upward arrow icon on the display will turn off.

By modifying the time setting of the front sensors (function 13, preset time delay "0"), the front sensors will work as follows:

- If, within the preset time, no obstacle is detected in front of the vehicle, the sensors will automatically be deactivated.
- If, within the preset time, the obstacle is still detected, the sensors will remain active as long as the obstacle is detected and will deactivate 3" after detecting the last obstacle.
- If you need to use the front sensors again after the automatic deactivation, simply press the left push-button.
The sensors will automatically deactivate 3" after detecting the last obstacle.

4.0 - TROUBLESHOOTING GUIDE

4.1 - LOW POWER SUPPLY SIGNAL

If, when the system is turned on, the battery level is too low to guarantee the accuracy of the system, after a few seconds, the following icons will be displayed: vehicle, front sensors arrow icon and four front detection zones closest to the bumper.

The arrow and the detection zones icons will flash.

This will inform the driver that ALL sensors are deactivated and that he will have to carry out reversing and parking manoeuvres without the help of the sensors.

When nominal tension is restored, the rear sensors will start working normally.

To activate the front sensors, cut and restore supply to the display (turn ignition off and on).

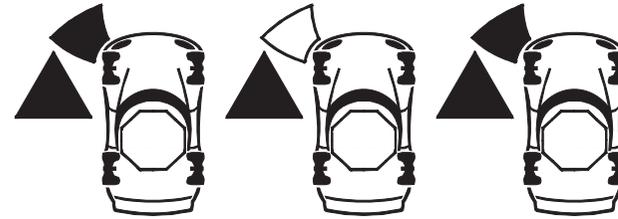
4.2 - SENSORS ANOMALY INDICATION

If one of the sensors turns out to be inoperative or disconnected, a few seconds after the control unit is turned on, the following icons will be displayed: vehicle, arrow and inoperative sensor (or sensors).

If parameter 13 has not been modified and is set to "0", the front sensors arrow and detection zones will flash as long as the control unit remains active.

If, on the other hand, parameter 13 has been modified, the front sensors arrow and detection zones will flash for about 8/10 seconds.

All other sensors will operate normally.



Sensor 1 inoperative; sensor icon flashes.

4.4 - OTHERS

POSSIBLE CAUSE	SOLUTION
Ice on sensors	Clean the sensors
Sensors mounted too low	Use the angle brackets (8) to tilt axe of sensors upwards
Back part of sensors in contact with frame	Create a separation between sensor and vehicle (at least 2mm)



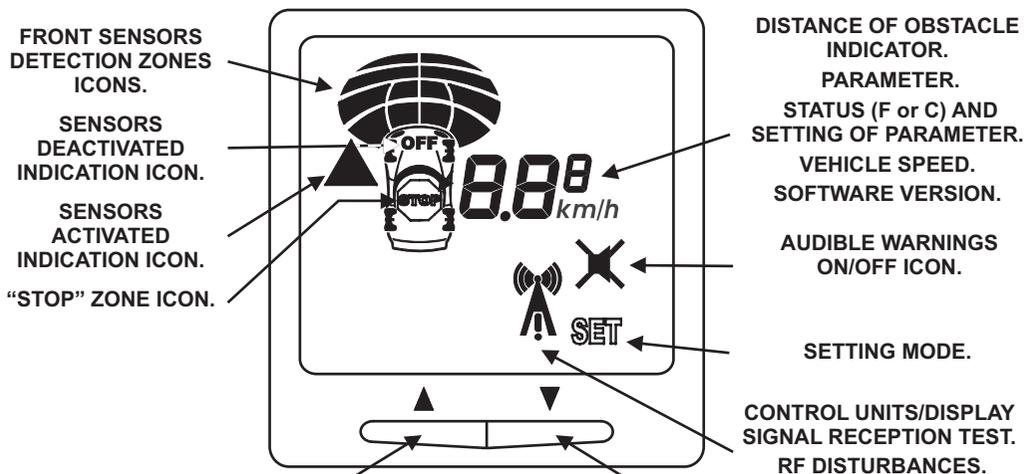
In areas with high RF disturbances, the antenna icon will light up on the display and a ticking sound will be heard.
The unit will deactivate within a few seconds (the upward arrow icon will turn off) but the continuous "STOP ZONE" alert will sound.
Press the left push-button on the display to stop the beeping and deactivate the sensors.



If necessary, adjust the sensors sensitivity level (see chap. 13.0, setting of parameter - parameter 16).

5.0 - DISPLAY

The following icons will be displayed according to operations.



ACTIVATION/DEACTIVATION OF SENSORS, TURNING OFF OVERSPEED INDICATOR, SCROLLING AND SETTING OF FUNCTIONS.
On every button press, the sensors will be activated/deactivated.

The upward arrow icon will be displayed when the sensors are activated.

SETTING OF OVERSPEED INDICATOR, SCROLLING AND SETTING OF FUNCTIONS.

6.0 - SETTING OF OVERSPEED AUDIBLE ALERT

This procedure can only be done if the relative cable of the display wiring is connected to the odometric signal of the vehicle; check with your installer.

- Turn the ignition “ON”.
- Enter in the programming mode (see chapters 12.0 and 13.0), select parameter 14, select value 2 and set it by keeping one of the two display buttons pressed for about 3 sec.; by activating this function the display and the speed value will light up every time speed exceeds 15 km/h.
- Turn ignition key “OFF” then “ON” and increase speed.
- Look at the speed displayed; when the required threshold is reached to set the overspeed audible alert, press the right-hand display button.
- A series of audible signals will now sound every time the vehicle exceeds the registered speed.
- To deactivate this function press the left-hand display button when speed exceeds 15km/h; an audible signal will indicate deactivation.
- To reactivate this function and set another threshold, press the right-hand side button (even if the speed is higher than the one actually set, the system will register this last value).

INSTALLER MANUAL

7.0 - INSTALLATION OF SENSORS

To install the sensors on a metal bumper, you must use appropriate adapters (not supplied).

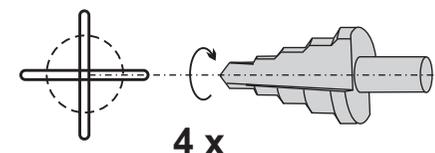
Choose the suitable type of plastic bracket and mark the center of the holes to drill. For brackets “7” drill holes with a 18mm diameter, for brackets “8” drill holes with a 22mm and for brackets “10” drill holes with a 24mm diameter.

Sensors and plastic brackets can be painted to match the color of your bumpers.

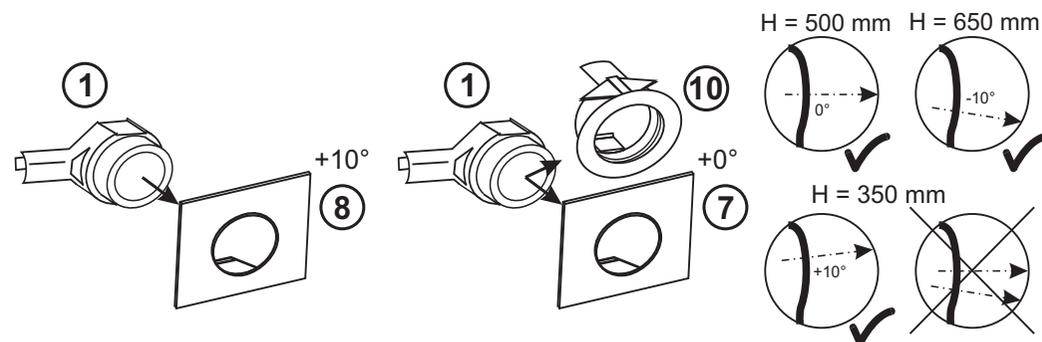
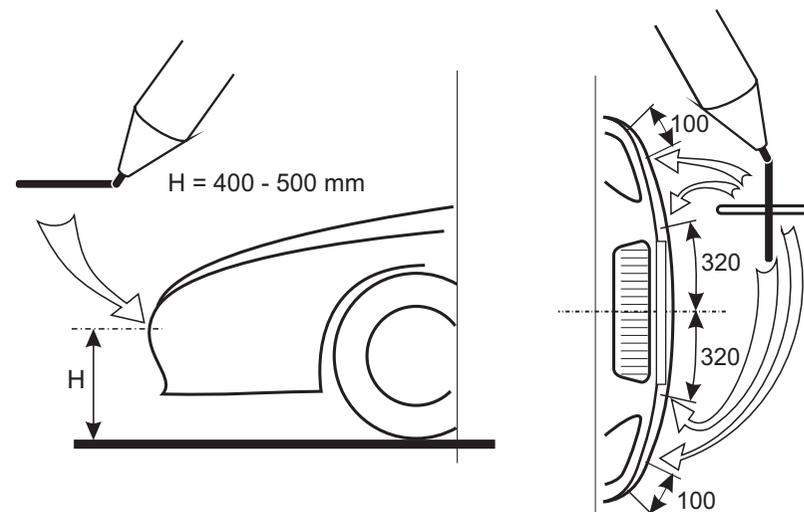
①+⑦ → Ø 18

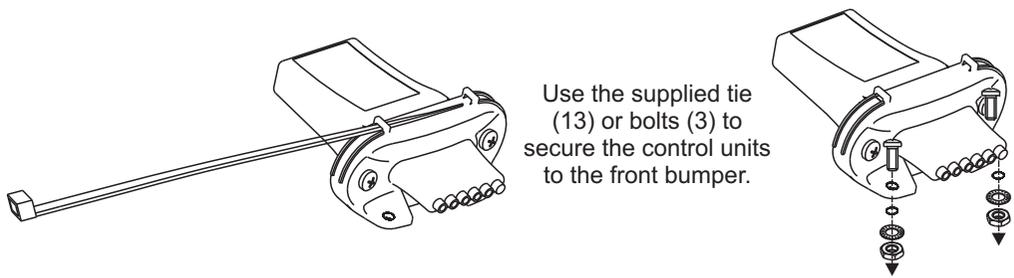
①+⑧ → Ø 22

①+⑩ → Ø 24

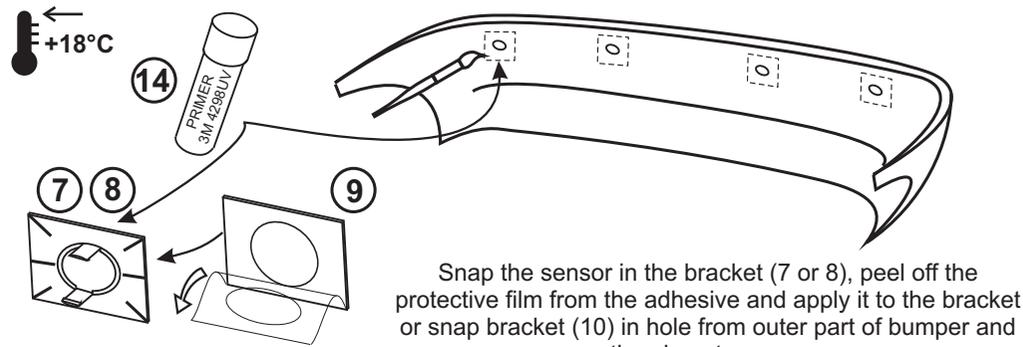


Before drilling, inspect behind the bumper to check for any possible obstruction such as iron struts and, in any case, be careful to avoid damaging parts behind the bumper.

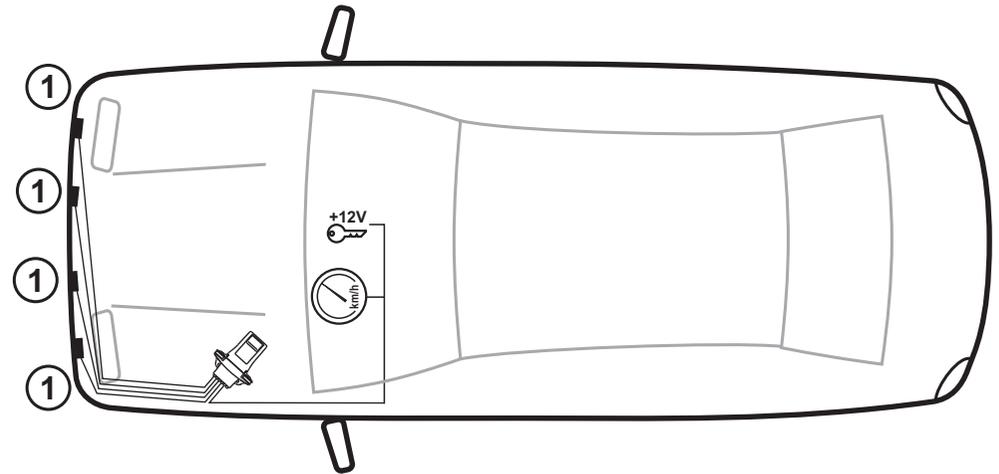
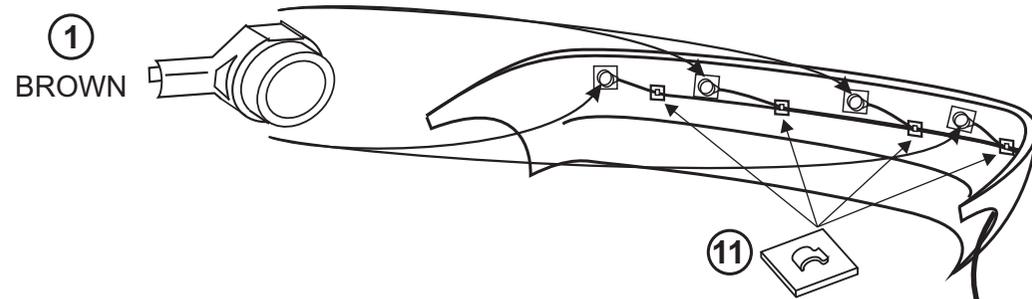
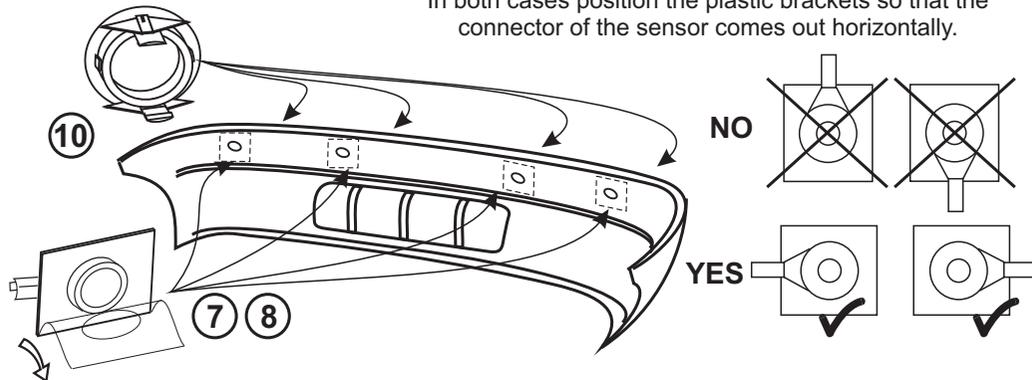




! Clean thoroughly the plastic brackets (7 or 8) and around the holes, apply "PRIMER" (14), let dry for at least one minute and then proceed as follows.



In both cases position the plastic brackets so that the connector of the sensor comes out horizontally.



! Check the wireless communication and the length of the cables before proceeding with the final positioning of the accessories.

- Install the control unit (4) in the front bumper away from heat sources.
- Connect the sensors (1) and route the power supply cable inside the engine compartment or the vehicle cabin.
- Fix the display (2) inside the vehicle cabin, in a dry place, away from eventual water infiltrations and heat sources where it can easily be seen during the parking and reversing manoeuvres.
- Connect the BLACK-BLUE wire of the control unit (4) to positive or to positive under key.

! If the power supply wire of the control unit is connected to a permanent positive, before you start making the connection, read the instructions for pairing the control units with the display.

- Connect the BROWN wire of the front control unit (4) to the metal frame of the vehicle (ground).
- (Optional) connect the BLACK-YELLOW wire of the control unit (4) or of the display (2) to the odometer signal of the vehicle (see "setting of parameter" to program the control unit or the display and to adjust the pulses).
- Connect the BLACK-BLUE wire of the display (2) to the positive under key of the vehicle.
- Connect the BROWN wire of the display (2) to the metal frame of the vehicle (ground).
- Insert the 3-way connector in the display.

9.0 - PAIRING OF CONTROL UNIT WITH DISPLAY



When pairing, make sure no similar control units are activated in the surroundings.



Once the front control unit is powered, you will have one minute to pair it to the display. If one minute has lapsed, you will have to restart the pairing procedure (disconnect and reconnect the front control unit).

- Supply the display only.
- Supply the front control unit.
- Press and keep pressed for about two seconds the two push-buttons on the display.



If the display shows "E1" it means that there are other activated control units in the surroundings; move the vehicle or turn off the other control units.

- When the letters "LE" and the upward arrow icon light up on the display, the front control unit has been paired.
- The pairing procedure is completed; parameters can eventually be modified according to individual needs.

10.0 - LEARNING OF ODOMETER PULSES (optional, only with display wire)



This procedure is useful when you do not know the odometer pulses of the vehicle and the display cable must be connected to the odometer. Use this procedure only if the customer wants the overspeed alert feature.

- Turn the ignition "ON".
- Enter in the programming mode (see chap. 12.0), select parameter 14 and set it to "3".
- Turn the ignition "OFF".
- Turn the ignition "ON"; the speed displayed will be 50Km/h.
- Increase the vehicle speed until the vehicle reaches the speed indicated on the display, then press the left-hand push-button.
- If both speeds are identical, press the right-hand side push-button.
- The display will turn off until the vehicle reaches 15Km/h.
- The system has automatically registered the vehicle odometer pulses per meter.
- Viceversa, if the reading is incorrect or the odometer signal is lost, the display will show "E3", which means the operation was not successful. Turn the vehicle "OFF" and "ON" again and repeat the entire procedure.

11.0 - TESTING

- Turn the ignition key "ON".
- Press and keep pressed one of the two push-buttons on the display (2) until the system enters the programming mode; select parameter "14".
- Press and keep pressed one of the two push-buttons on the display (2) until the system enters in the parameter settings.
- Select value "1" and turn ignition key "OFF".
- Turn ignition key "ON"; the vehicle and antenna (without the reception symbols) icons will light up on the display.



- Supply the control unit; the display will show the icons of the vehicle, the arrow indicating the activated control unit (front) and the antenna with the reception symbol.



- If necessary test the sensors; depending on the detection zone, the display will show the relative icons of the zones and the distance from the obstacle.



- Once testing is completed, restore setting of parameter "14".

12.0 - PROGRAMMING



Only expert users should modify these settings to avoid malfunctions of the parking system.

- Supply the display (turn "ON" the vehicle ignition key).
- Press and keep pressed for more than two seconds one of the two push-buttons on the display; the previous programming mode will be displayed.

0 1^F F: Factory, standard adjustment, "Factory parameters".

0 1^C C: Custom, user-chosen adjustment, "Custom Parameters".

Press the left push-button to go to the next parameter.

Press the right push-button to go to the previous parameter.

02^F

17^F

When the parameter you want to modify is displayed, press one of the push-buttons and keep it pressed until the display starts to blink; at this point you can modify the parameter.

80^F

Press the left push-button to increase the value of the parameter (the letter "C" will be displayed when parameter has been modified).

Press the right push-button to decrease the value of the parameter (the letter "C" will be displayed when parameter has been modified).

90^C

70^C

Press one of the two push-buttons on the control unit and keep it pressed for at least two seconds to register the value.

The display will stop blinking and the selected parameter will be displayed.

0 1^C

Cut supply to the display (turn off the vehicle) to exit the programming mode.



Press the two push-buttons on the display and keep them pressed for more than two seconds to reset all the factory settings (F).

13.0 - SETTING OF PARAMETERS

Nr.	PARAMETER	RANGE	SETTING
01	Volume of buzzer	0, 1, 2 (Ref.1)	2
02	Detection range of front central sensors	From 50 to 95 cm	80
03	Detection range of rear central sensors	Not used	---
04	Detection range of sides sensors	From 50 to 95 cm	60
05	STOP zone of front sensors	From 35 to 50 cm	35
06	STOP zone of rear sensors	Not used	---
07	Audible warning for front obstacles	0, 1 (Ref.2)	0
08	Mounting of front control unit	0, 1 (Ref.3)	0
09	Mounting of rear control unit	Not used	---
10	Display colour	1, 2, 3, 4, 5 (Ref.4)	3
11	Suppression of spare wheel indication	Not used	---
12	Number of speed signal pulses	From 1.0 to 25.0	3.0
13	Delay of front sensors deactivation	0 or from 10 to 60 sec. (Ref.5)	0
14	Service display (testing)	0, 1, 2, 3, 4 (Ref.6)	0
15	Connection of odometer wire	0,1 (Ref.7)	0
16	Front sensors sensitivity to detect obstacles	1, 2, 3 (Ref.8)	2
17	Rear sensors sensitivity to detect obstacles	Not used	---

Ref.1: 0 deactivated, 1 low, 2 high.

Ref.2: 0 continuous detection of obstacles (only if vehicle or obstacle is moving), 1 continuous detection of obstacles (even if vehicle or obstacle is not moving).

Ref.3: 0 standard detection (sensors position 1-2-3-4), 1 inverted detection (sensor position 4-3-2-1).

Ref.4: 1 red, 2 green, 3 blue, 4 amber, 5 white.

Ref.5: by setting "0" the system can only be deactivated with the push-button on the left-hand side of the display; automatic deactivation occurs when speed exceeds 15 km/h (operation via the odometeric pulse). By setting a different value, the sensors are deactivated according to the set time delay and if there are no obstacles in front of vehicle).

Ref.6: not activated, 1 wireless communication test, 2 speed indication and activation of "overspeed audible alert", 3 learning of speed pulses (only if the odometer cable is connected to the display), 4 display of software version (small number on display).

Ref.7: 0 connection of display cable, 1 connection of front control unit cable.

Ref.8: 1 low, 2 standard, 3 high.

14.0 - WARRANTY CONDITIONS

This product is guaranteed to be free from defects in workmanship for a period of 24 months from the date of installation reported on this warranty, in compliance with the 1999/44/CE Warranty Directive (L. D. N° 24 of the 02/02/2002).

Please fill-in entirely the guarantee certificate included in this booklet and DO NOT REMOVE the guarantee label from the device.

The warranty will become void if labels are missing or torn, if the installation certificate is not fully compiled or if the enclosed sale document is missing.

The warranty is valid exclusively at authorized Gemini Technologies centers.

The manufacturer declines any responsibility for eventual malfunctions of the parking sensors or any damage to the vehicle electrical system due to improper installation, use or tampering.

The parking system is strictly a parking assist device, it should not be considered to be a safety device for any purpose.