

INSTALLATION INSTRUCTIONS & USER MANUAL

Rear parking sensor mod. **EPS-DUAL 4.0**

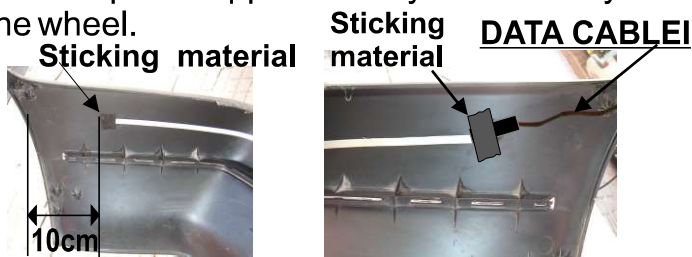
1 STARTING PROCEDURE

- a) The installation of the antenna sensor, constituted by an aluminium adhesive ribbon, must be applied to the inner surface of the bumper. It is **of some importance** that the zone of application corresponds to the **higher part** as regards the ground but also the **most distant** from the car body.
- b) Identify on the car body the zone close to the extremity of the bumper and, on the side where it is present the back-gear lamp, a possible hole of passage toward the intern of the trunk in order to carry on the data cable to the antenna sensor.

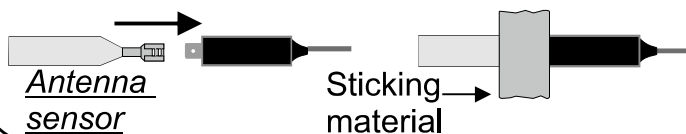
2 POSITIONING OF ANTENNA SENSOR

A- Thoroughly clean with alcohol or nitre solvent the inner surface of the bumper of the zone previously identified on which will be applied the antenna sensor.

B- Fix through its adhesive the black connection module of the data cable on the inner surface of the bumper at approximately 10 cm away from the wheel.



C- Connect the black module of the Data cable coming from the ECU to the antenna sensor. and fix it on the bumper by a strong pressure. When arrived at the opposite side of the bumper cut off the antenna in excess and fix the extremity using a piece of sticking material



3 ELECTRICAL CONNECTIONS (Fig.2)

- a) Connect the red lead of the power cable to the positive cable that feeds the reversing lamp.
- b) Connect the black lead of the power cable to the earth of the reversing lamp.

NOTE: Some vehicles are equipped with a metal crash protection bar insert facing the inside surface of the bumper. When this metal surface is too close to the inner surface of the bumper where you have placed the antenna sensor, the detection distance can be reduced.

However, you can increase the sensitivity by changing the position of slide switch (see FIG 3).

4 TESTING PROCEDURE

- a) Turn on the key, insert the back gear. In a fraction of second the control unit performs a check of the functionality of the system and, if everything has been done correctly, the buzzer emits an acoustic sound of "OK" (two notes in rapid succession). Once you have this signal the system becomes operational.

VERY IMPORTANT is not to carry out experimental tests (on bench) before having completely assembled the kit with the antenna applied to the bumper because the system does not work properly without the presence of the metal mass of the vehicle

Possible problems and their solutions

- If the buzzer produces 8 consecutive fast beeps control the data cable and its connection to the control unit and that there is not a short circuit between the antenna sensor and the metal body of the car.*
- If the transducer emits an audible warning signal consisting of 2 notes (one high and one low) repeated 3 times check the connection of Data cable with antenna sensor.*

b) Starting from about 1 meter away from a wall, approach **very slowly** to simulate a parking maneuver. At a distance of about 60/70 cm will be heard the first acoustic signals whose repetition rate will increase at the decreasing distance to become a fast intermittent sound and then a continuous higher frequency sound at about 10-15 cm from the bumper.

c) If the system shows to work regularly it is possible to fix definitely the bumper.

Notes: **EPS-DUAL 4.0** starts to give the signalling **only** when the vehicle is being approached to the obstacle; a fixed object in front of the bumper, for instance the hauls hook and a bull bar or the sides walls of a car box, is not signalled and it is not bothered the normal operation of the device.

If the **license plate** covers the antenna sensor, it does not alter its ability to detect obstacles in front of it.

USER MANUAL

The activation of the device is obtained by the insertion of the back gear and confirmed by a signal of "OK". Once activated, the **EPS-DUAL 4.0** generates around the bumper, on which is installed, a protection zone (Fig. 1). When any obstacle present in the protection zone tends to approach the bumper you will hear a series of beeps.

WORKING EXAMPLE

A) As soon as the **EPS-DUAL 4.0** is activated the control functionality of the system is carried out in a fraction of second. If the control is **OK** you hear a signal of two notes in rapid succession to confirm the proper functioning of the system.

B) When approaching an obstacle the system activates the acoustic signal at a distance between the bumper and obstacle (measured in the central area of the bumper) of about 70 / 80 cm with 3 types of sounds:

1) an increase in sequence of "BIP" (alert) informs the driver that an obstacle is approaching.

2) intermittent sounds of fast repetition rate when the obstacle comes close to the bumper at a distance between 15 and 30 cm measured on the middle of bumper (**alarm**).

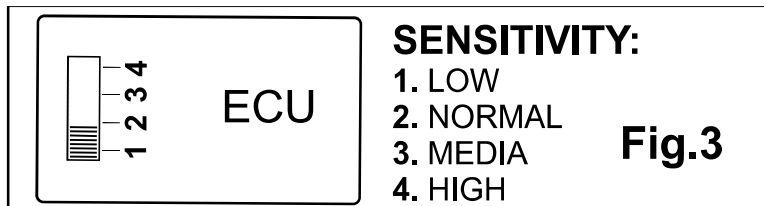
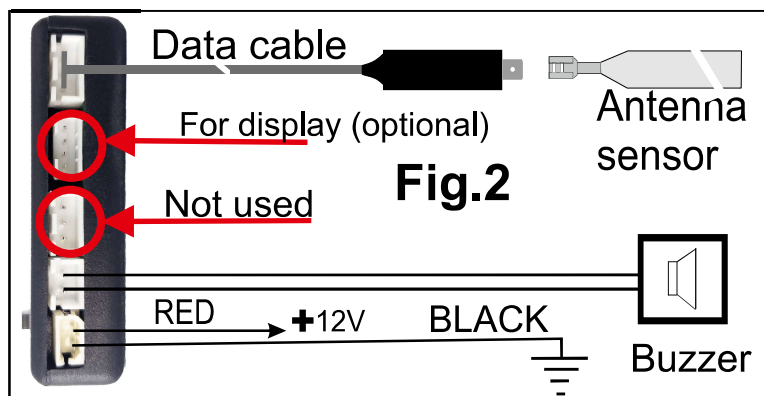
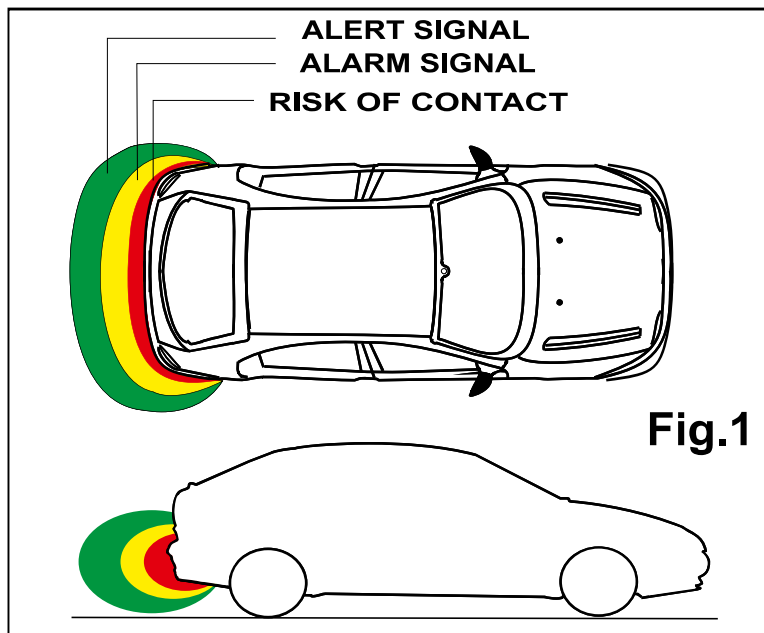
3) continuous sound at a more acute frequency (risk of contact) when an obstacle is very close to the bumper (10-15 cm).

Note:

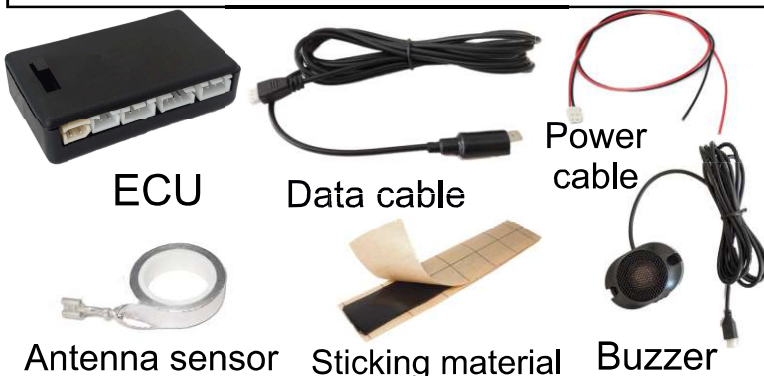
- The detection is depending on the size of the obstacle and while the max corresponds to the central zone in the lateral edges the distances of detection are less (see Fig. 1)
- The alert occurs only when the vehicle is approaching an obstacle, a fixed object in front of the bumper is only detected after the first movement of approach.
- The **ON / OFF** switch on the buzzer is blocked because it cannot be used in this version.

WARNING

In presence of rain or high moisture weather, the system reduces his sensibility automatically in order to eliminate a part of false alarms that could be given by movement of water on the bumper near the antenna.



| ELECTRICAL CHARACTERISTICS | |
|------------------------------|-----------------|
| - Operating Voltage | from 9,5 to 18V |
| - Average current absorption | 20 mA |



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