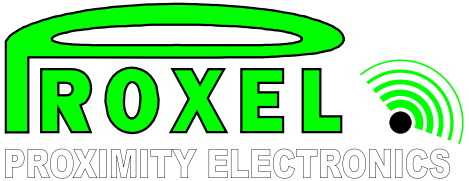


INSTALLATION INSTRUCTIONS
&
USER MANUAL

Parking sensor mod. EPS-DUAL WBD

The sistem is strictly a driver assistance device and should not be relied upon as a security device or a substitute for safe driving practices.
Use common sense when reversing and always follow recommended safe driving guidelines.

INSTALLATION INSTRUCTIONS

1.0

a) The installation of the antenna sensor, constituted by an aluminium adhesive ribbon, must be performed to the inside of the bumper. It is **of some importance** that the zone of application on the inside surface of the bumper corresponds to the **higher part** as regards the ground but also the **most distant** from the car body. It is not advisable to install the antenna sensor too low.

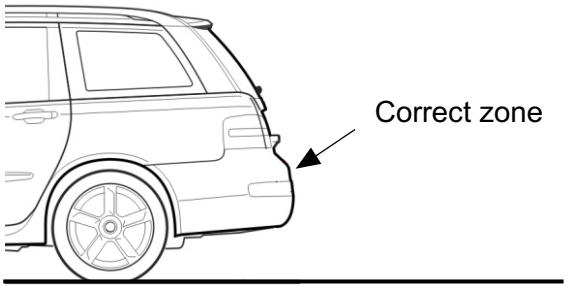


Fig. 1

b) Disassemble the bumper.

2. STARTING PROCEDURE

a) 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 interns of the trunk in order to carry out the connections cable from the electronic unit.

b) Through the individuated passages route the connections *cable* inside the trunk leaving the ECU outside**.** (Fig. 2)

Fig. 2

3.0 MOUNTING THE *ECU* AND *ANTENNA SENSOR*

Thoroughly clean with alcohol or nitro solvent (be carefull not to use antiadhesive detergent) the inner surface of the bumper of the zone previously identified (see Fig.1) on which will be applied the antenna sensor and the central unit.
Starting from the zone where the central unit + harness will be fixed, start applying the adhesive aluminum tape (antenna sensor) practicing a good pressure to make it well adhere to the inner surface of the bumper *.

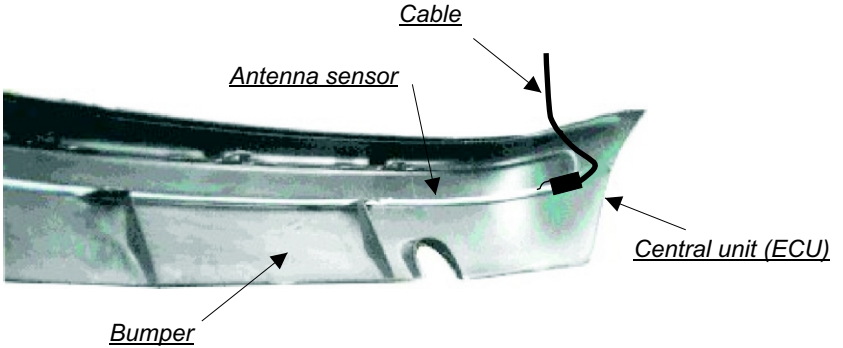


Fig. 3

When the *antenna sensor* has been attached, covering the whole of the bumper from left to right, the excess length is cut off. Place a piece of the included *sticking material* at either ends of the *antenna sensor* to ensure a secure fixing onto the bumper. Its recommended (but not essential) to cover the antenna with a black anti-rust protection paint that is applied to the underneath of a car chassis or similar to protect from the elements (do not use silicon paste).

NOTE:

1) It is advisble to start and finish the application of the antenna sensor tape et about 15 cm from the both end of the bumper (Fig. 4).

2) The *sensor antenna* can not be applied on metal bumpers.

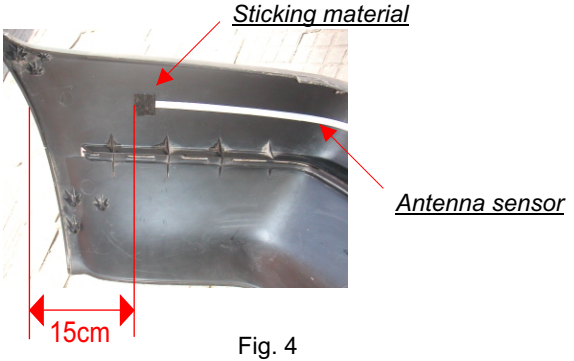


Fig. 4

Connect the small fastoned cable of the ECU to the *antenna sensor*. Apply a piece of sticking material on the unit and place it on the bumper by a strong pressure (If the ambient temperature is below 10 °C we recommend heating both the mastic and the sticking area on the bummper). It is advisable to use the same material to cover and block the connections (Fig. 5).

Replace the bumper and pull the wiring inside the luggage compartment or engine compartment in order not to leave excess cable outside.

Fig. 5

4.0 ELECTRICAL CONNECTIONS

A) Connect both black and white wires of the harness to the negative pole of the battery or if not possible to a good electrical ground.

b) Using a normal electrical wire prolong the red wireof the harness bringing it inside the car in order to connect it, through a switch or, if present, a free activation push-button on the dashboard , to a 12 Volt subkey (the system is so activated pressing the button).

c) Connect the two gray leads of the harness to the extension speaker cable (no polarity) and bring it inside the car.

If your vehicle has a metal crash protection bar and the antenna will be within 2 cm's of this metal bar (once the bumper is re-fitted) you can choose the **HIGH SENSITIVTY** option on the connection cables (harness) in order to prevent any reduction in detection range.
We suggest to carry out tests to determine the detection range, pointing out that increasing the sensitivity where it is not necessary, can cause more false alerts.

Summary of connections:

Red: +12 V **Copper shield:** negative (ground)
Black: ground **Yellow:** to the ground for high sensitivity
White: not connected

6. FINAL TESTING PROCEDURE

a) Turn on the key and insert the back gear.
In a fraction of second the electronic unit performs a complete control of the system and, if everything is correct, the speaker makes a sound of **"OK"** constituted by one single tone and the lighting of the red logo (car picture). Once obtained this signal the system becomes operational. If the acoustic speaker doesn't give any signal or gives a continuous repetitive Beep check all the connections.

Once you have this OK signal the system becomes operational.

b) Departing from around 1 meter of distance from the center of the bumper walk near slowly for simulate a backing manoeuvre of the car.
At a distance of around 50/ 70 cm it will perceive the first green light and the first acoustic signals. The second green light will appear at the decrease of the distance to become a first yellow light at around 20-30 centimeters with an icreasing of the the repetition rate of the acoustical signals.

A first and a second red light (indicating risk of contact) will come at few centimeters from the bumper toghether with a more frequent Beeping.

WARNING: For a correct simulation be carefull to reset the system every time you approach.

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

Note: EPS-DUAL WBD *starts to give the signaling* ***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 signaled and it is not bothered the normal operation of the device.*

USER MANUAL

1.OPERATING PRINCIPLE

EPS-DUAL WBD is an innovative parking sensor that uses low energy electromagnetic waves and is able to detect the approach of any kind of obstacle .
The activation of the device isobteined by the insertion of the back gear or by pressing the activation button (if installed on front bumper) and confirmed by a signal of "OK". Once activated, the EPS-DUAL WBD generates around the bumper, on which is installed, a protection zone (Fig. 6).
When any obstacle present in the protection zone tends to approach the bumper you will hear a series of beeps toghether with the lightening of the wave band display.

A) As soon as the EPS-DUAL WBD is activated the control functionality of the system is carried out in a fraction os second.
In case of anomalies the speaker emits an audible warning signal consisting of a continuous Beeping. If this happens check the antenna connection to the ECU and all connections.
If the check is **OK** you hear a signal of one single Beep to confirm the proper functioning of the system.

B) When approaching an obstacle the system activates the acoustic and led signals at a distance between the bumper and obstacle (measured in the central area of the bumper) of about 60 / 70 cm with 3 types of controll mode:

1) **Two green led in sequence toghether with the first "Beeps"** inform the driver that an obstacle is approaching **(alert)**.

2) **Three yellow led in sequence and intermittent sounds of faster 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) **Two red leds and fast intermittent sounds (risk of contact)** when an obstacle is very close to the bumper (10-15 cm).

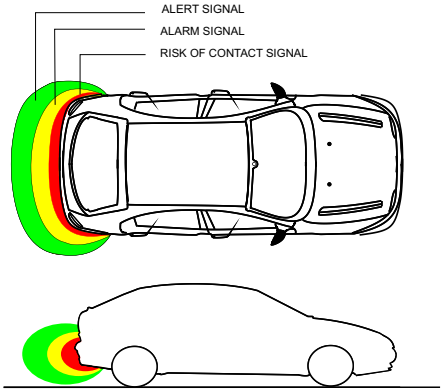
Note
- The distances will vary depending on the size of the obstacle and correspond to the central zone of the bumper; on the lateral edges the distances is less (see Figure 6)

WARNING

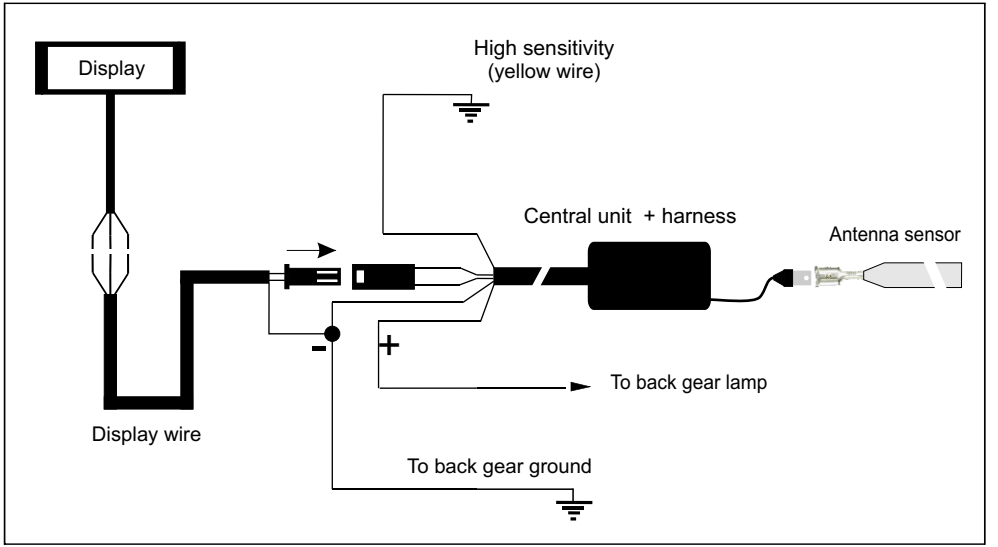
1. In presence of rain or high moisture weather, the system reduces his sensibility automatically in order to eliminate a part of false alarms that could be given by movement of water on the bumper.

2. As soon as the system is activated an acknowledgement of the surrounding of the bumper is made.
Consequently **it is very important**, during testing operation, not to switch on the system while you are very close to the central unit and antenna sensor in order not to have false information on the working capability of the system.

During the test you must also take into consideration the fact that, after the first approach to the bumper, any subsequent APPROACH without first reset the system , can give false interpretations of the functionality of the sensor due to special characteristics of the EPS-DUAL WBD software specifically done to reduce false signaling in the rainy conditions.



(Fig. 6)



Schema elettrico

TECHNICAL CHARACTERISTICS

- Operating range from 9,5 to 18V
- Max current absorption 70 mA
- Operating temperature from -20 to +90 °C
- Averange distance to begin detection 70-80 cm

Display wire

Display

Central module
+ harness

Antenna sensor

Sticking material

PROXEL S.r.l. -Via Val Della Torre 39 -10149 - TORINO (ITALY) - Tel. +39 011 296022 -
Fax +39 011 2218053
Assistenza tecnica: eps@proxel.com