

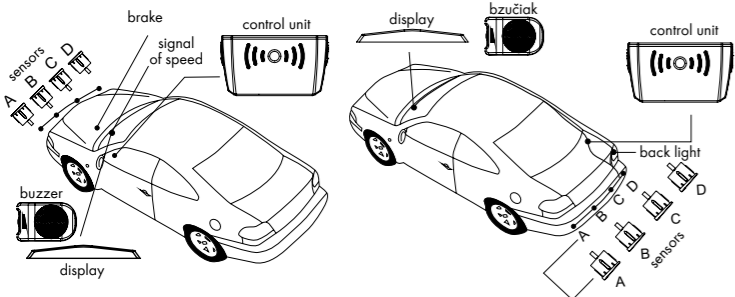


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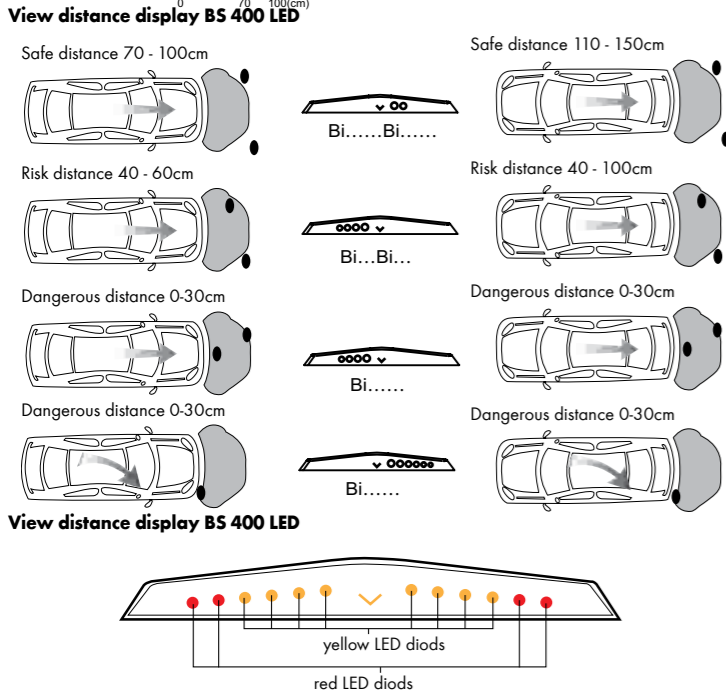
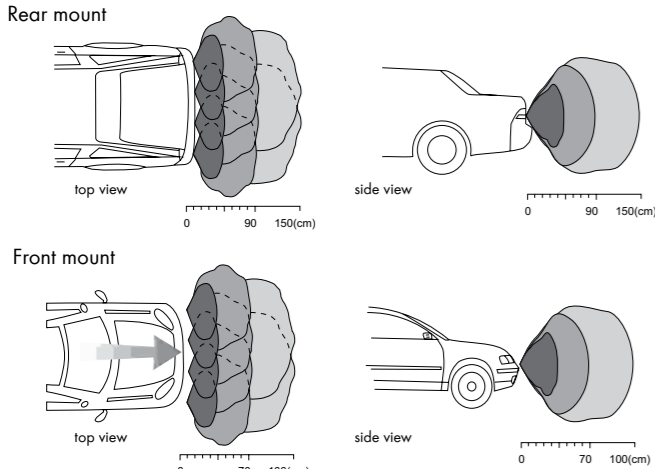
ATTENTION: Before installing, read the instructions and recommendations contained in the manual. Equipment must be installed and used in accordance with these instructions. The device is designed for installation in motor vehicles with 12-volt electrical. The device must be connected to 12V and negative terminals grounded. The manufacturer and retailer are not responsible for any damages resulting from improper installation, use, operation or control of the product differently from the instructions for use. Incorrect repairs to the facility or its treatment are at risk of damage to the equipment or vehicle power supply and loss guarantees. For proper operation and flawless product, we recommend installation of professional service.

I. SYSTEM DESCRIPTION

BS 400, BS 400 LED Park assistant is designed for motor vehicles with a supply voltage of 12V and serves as an aid for drivers to ease the parking of motor vehicles. The system is activated when reverse gear is engaged or active, depending on vehicle speed. When in the parking closer to the obstacle at a distance of 1.5 m (rear) or 1 m (front), run the acoustic signal and the display optical signal away from the obstacle. The closer the obstacle, the beep rate is increased until eventually the tone is continuous. The system includes an anti-Hook, which ensures that parking sensor nevyhodnocuje towing or spare on the tailgate as a barrier.



II. FUNCTIONS
RANGE OF THE DEVICE, DISPLAY AND ALARM



Sound and visual signaling distance from the obstacle

Rear mount

| Distance from obstacles (m) | Zone | Alarm | Color display (LED) |
|-----------------------------|-----------|-------------------|---------------------|
| > 1.5 | safe | without | without |
| 1.5 - 1.2 | safe | bi bi | 1 yellow |
| 1.1 - 0.9 | safe | bi bi | 2 yellow |
| 0.8 | risk | bi ... bi ... | 3 yellow |
| 0.7 - 0.6 | risk | bi ... bi ... | 4 yellow |
| 0.5 - 0.4 | dangerous | bi | 4 yellow 1 red |
| <= 0.3 | dangerous | bi | 4 yellow 2 red |

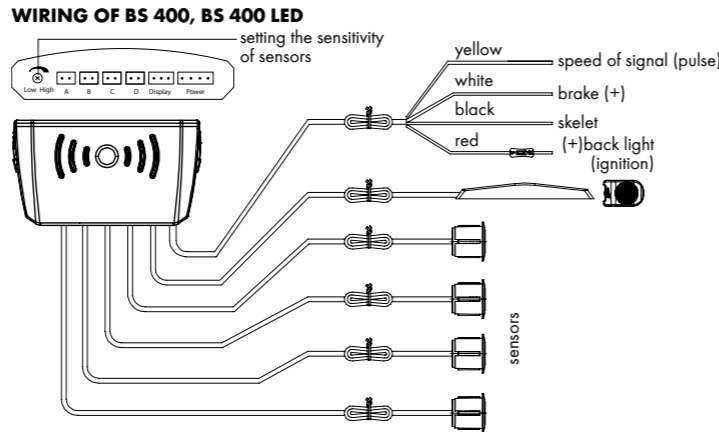
Front mount

| Distance from obstacles (m) | Zone | Alarm | Color display (LED) |
|-----------------------------|-----------|-------------------|---------------------|
| > 1.0 | safe | without | without |
| 0.9 - 0.8 | safe | bi bi | 1 yellow |
| 0.7 | safe | bi bi | 2 yellow |
| 0.6 | risk | bi ... bi ... | 3 yellow |
| 0.5 | risk | bi ... bi ... | 4 yellow |
| 0.4 | dangerous | bi | 4 yellow 1 red |
| <= 0.3 | dangerous | bi | 4 yellow 2 red |

III. MOUNTING SYSTEM

The sensors are mounted on the rear or front bumper at a height of 0.5 meters to 0.8 meters from the ground. Location at the end of the bumper is not recommended (risk of damage during a collision). Before installation, clean and prepare the bumper, where the sensors are located. Place the screen on the dashboard, rear view mirror or in the interior of the vehicle. The control unit should be located inside the vehicle, not to exposure to high temperatures and humidity.

Warning: Do not mount the control unit to the metal of the vehicle!



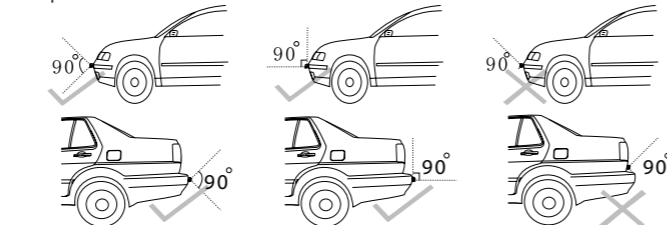
Note: If the parking sensor is mounted to the front of the car and the red wire is not connected to the reversing light.

Installation procedure

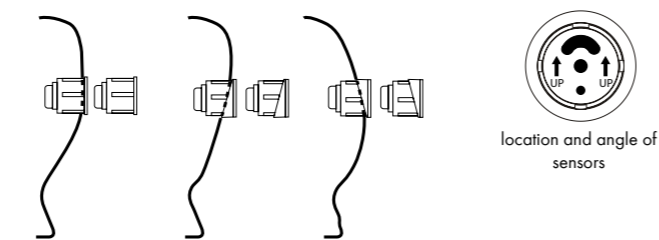
1. Find a suitable place for installation of sensors
2. Measured points for the installation of sensors A and D
3. Measured points for the installation of sensors B and C
4. Drill holes for sensors
5. Install the sensor into the prepared hole and draw wires
6. Fix screen and mount control unit
7. Connect all power cables and connectors according to wiring diagram

Position sensors

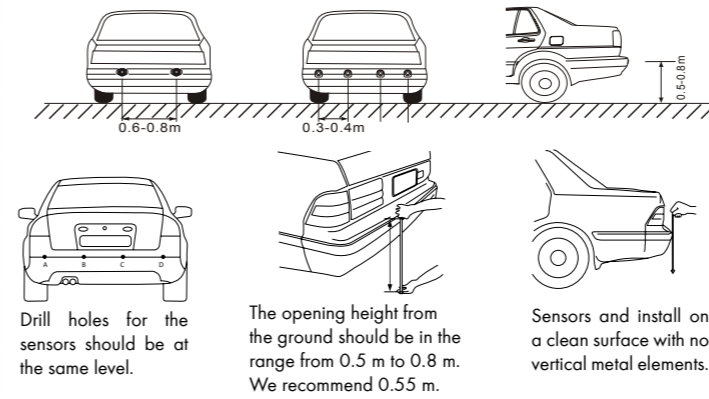
Make sure that the lateral angle of 90° is an obstacle that could cause a false alarm or affect the operation of sensors.



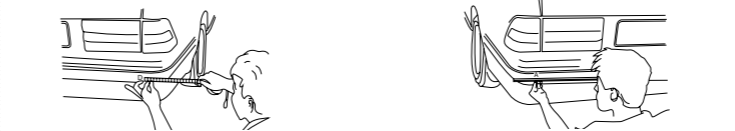
Place the sensor so that no interference with the vehicle in the shooting. Direction of sensor



The recommended distance and position sensors:

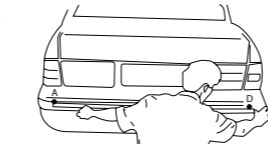


SENSOR ASSEMBLY

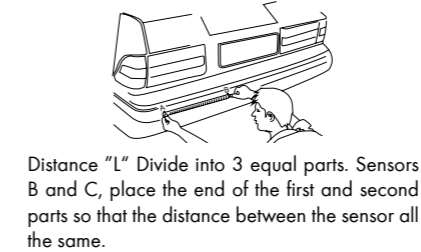


Choose a suitable location and acreage for drilling holes for sensors A and D.

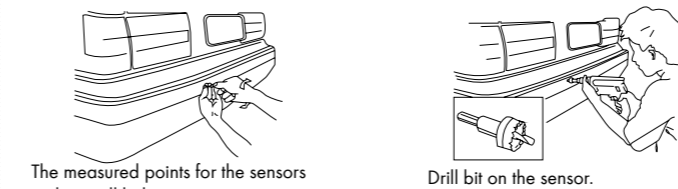
If you want to secure the best possible detection sensors A and D, place the 8-13 cm from the edge of the vehicle. We recommend 11 cm.



Measure the distance between sensors A and D will get the distance "L".



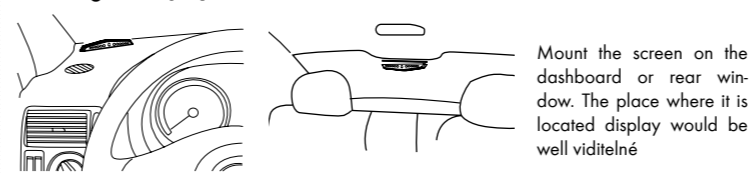
Drill holes for sensors



Installing sensors



Installing the display and control unit



Control unit is positioned so as not to face the effects of high temperature, moisture and mechanical damage. In the case. That parking sensors are mounted to the front bumper, the control unit is placed under the dashboard.

Hardly detectable obstacles



Checking the functionality of the system



Settings DIP switches:

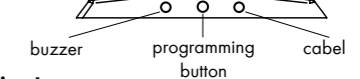
| DIP switch Nr. 1 | DIP | Position of sensors | |
|------------------|--------------|---------------------|------------|
| | OFF | rear bumper | 0.3 - 1.5m |
| ON | front bumper | 0.3 - 1.0m | |

Note: If the DIP is set to ON, the red wire is used to turn on and off systému. Pokud is set to OFF, DIP, red wire connects to the ignition is activated and saturated in two ways:
1. Vehicle-speed (must be connected to the yellow wire) - the system is activated to set rychlosti. After crossed the system automatically shuts down. After a fall below the set speed the system is active again.
2. pressing the brake pedal (must be connected to the white wire) - After pushing the foot brake system works 15 sec. If the barrier will reach even after 15 seconds, the system is automatically activated.

| DIP switch Nr. 2 | DIP | Sound signaling on the LED display | |
|------------------|-----------------------------|------------------------------------|------------------|
| | OFF | sound signal from the 1.5 m | yellow LED shine |
| ON | sound signal from the 0.5 m | red LED shine | |

| DIP switch Nr. 3 | DIP | Funkcia Anti-hook | |
|------------------|-----|----------------------------------------------------------------------------------------------|----------------------------------------------------|
| | OFF | OFF | system signals the real distance from the obstacle |
| ON | ON | switched system signals shifted by 20 cm distance from the actual distance from the obstacle | |

The back side of the display



Function of programming button

When programming the system must be turned on and not to indicate any obstacles.

1. Turn on / off the alarm on the display - press the 1 button to turn off the alarm. To turn on press 1 button again.
2. Setting the display on the LED display by the location of the display - press the button for 6 seconds until the yellow arrow is not tip over in the opposite direction. The setting is used to display the location the ceiling of the vehicle that signaled the real obstacles to the party.
3. Adjust the speed in which the system will be activated - press the button for 9 seconds until the display displayed. Release the button. The arrows start to flash. The system is in programming mode. Achieve the desired speed of vehicle in which you want the system to function and press the button. Speed is set. Activation of the system according to the speed of the vehicle is used when mounting sensor into the front bumper.
4. Reset the system - if you want to set the system to its original settings, press the button for 12 seconds. The display and all the yellow and red LED lights up. Release the button. The entire display will blink. Press 1. The system is set to the original settings.

Description of the installation and test the system:

1. Set sensor according to the instructions for use. Once installed, adjust the wiring to prevent damage.
2. Power control unit to light under backing diagram.
3. Connect the wires from the LED display to the control unit. Sensors just yet.
4. Turn the ignition on and shift into reverse. The LED display shows the default settings and the system is in test mode.
Test: A: If the LED display lights up, check its connections to the control unit and check the power management unit, if not below 9V.
B: If the display is not right or some LED lights and buzzer sounds continuously, disconnect power from the control unit and connect it again. If the problem persists, you may be wrong and the control unit is needed to replace the system.
5. Plug one sensor into the connector on the control unit. Check functionality. If everything is in order, disconnect the sensor and check the functionality of all sensors. After checking all the sensors connect to the control unit.
Test: A: When connecting the sensor to the controller will continuously sound the buzzer and some LED lights, check for any nearby sensors or obstacles are not close to large sources of interference (eg power cables).
B: If the display shows the distance from any obstacles and reach the sensor is not any obstacle, the sensor can scan the ground or any part of the vehicle (eg, license plate, tow bar). Check the location of the sensors.
C: If the system still does not work after checking the above, it may be bad sensor or the input of the control unit. Upon such finding is necessary to replace the wrong part of the system.

Note:

1. vehicle must be started during installation of ultrasonic sensors.
2. range sensors can be affected by the following circumstances: heavy rain, gravel, bumpy, downward path, very cold weather, high heat and humidity or sensor located above the ice surface.
3. when the sensors are located in the vicinity of a switch, electric waves, alternating or unidirectional tension, these factors can affect the effectiveness of sensors.
4. sensor should be correctly fitted.
5. sensors will be more effective if they are not installed on the metal of the bumper.
6. Before using check the correct functionality of the system.
7. system serves only as a supplement for parking and therefore the seller is not responsible for damage caused by the parking system installed.

| TECHNICAL PARAMETERS | BS 400, BS 400 LED |
|------------------------------|--------------------|
| Supply voltage | 9V - 16V |
| Operating temperature | -30°C - +70°C |
| Display size | 148x20x17 mm |
| Operating current | 20 - 200mA |
| Frequency Ultrasonic sensors | 40 KHz |