

Installation manual of universal carbon fibre seat heating system

Universal heating of the seats 227102 is heating system designed so, that it could be installed easily in a minimal amount of time with standardly available tools. The unique design allows installation onto 99% of existing seat designs.

Features:

- ⊗ Program 2-zone temperature
- ⊗ Control module regulates heater temperature with auto and manual functions.
- ⊗ Single Heat Pad Mode:
System can operate double or single pad
- ⊗ Back up temperature control: System has also as a backup traditional thermostat system to controls the high and low set points. In case that this control will fail, then a bimetalic system will be activated as a fail safe to ensure temperature will not exceed safe limits.
- ⊗ Efficient size of heating pads. 23 cm width is adapted to be installed on most of the vehicles and 46/38cm length provides coverage to full contact area of the seat without excess trimming and waste in comparison with larger carbon fiber pads. With quick installation and consequently less trimming is this solution more universal in comparison with its competition.

Before you start:

Check and determine if the heaters will fit under the seat covers in the desired area.

Warning:

Installation manual have been carefully and precisely compiled through actual vehicle installations. However, we do not guarantee the 100% accuracy of this information due possible changes in vehicle seat design, usage or misuse of this information or typographical errors.

It is the responsibility of the technician to verify the proper wire fixation and after the installation of the seat heating system to assure proper operation. We do not bear any responsibility for damage on the vehicle or injury of the operator caused by usage of this information. Improper installation and/or connection to the incorrect wires could cause failure of the seat heating system or vehicle malfunction, component damage and/or personal injury for you and/or your passengers.

GENERAL ADVICE:

- ⊗ Seat heater has to be installed underneath the seat cover. Always check placement of heating pad on the seat before it is put in operation. Make sure there are no vertical tie-down seams or any other obstacles that would not allow the perfect installation fo the pads and cabling.
- ⊗ Before installation please check, if the vehicle is equipped with the load sensor in the seat. **Heating system for seats cannot be installed above the mentioned sensor !**
- ⊗ Technician is responsible for any damage that arose due to improper installation.
- ⊗ All steps explained in this user's manual should be respected and carried out carefully. Installation should be performed only by qualified technician. Improper installation will cause warranty loss provided by the manufacturer distributor and may cause physical damage or injuries.

Date: 13.01.2014

Page 1 / 5

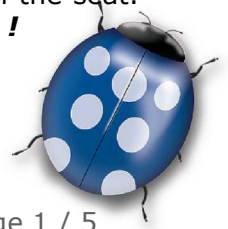
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- ⊗ Heating system has to be connected to 12V DC power supply. It necessary, so the system will function at direct current to 6A.
- ⊗ Heating pad has to be installed without any folding.
- ⊗ Wire harness has to be fully adjusted to the design of the seat and they has to totally adjust to the bend od the backrest and bottom seat without any damage.
- ⊗ In the vehicles that are equipped with side airbags, system has to be installed according the manual of the manufacturer of the vehicle. Heating element is fixed only to the middle of the seat. Connections to the side airbags has to be managed very precisely and they should not be connected to any energy source during the installation.

Contents:

- ⊗ 1 x backrest pad 23cm x 46cm
- ⊗ 1 x bottom pad 23cm x 38cm
- ⊗ 1 relay
- ⊗ Quick mountable cable harnesses
- ⊗ Illuminated round switch of the program – high/low (≈/~)
- ⊗ Adhesive insulation tape & quick lock cable ties
- ⊗ Installation manual

Installation:

Step 1: Dismantling of the car seat

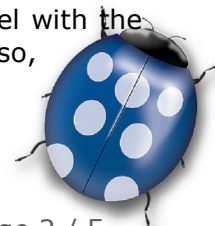
- ⊗ Stop the car on the flat surface and secure it by enabling the parking brakes.
- ⊗ Disconnect the battery of the vehicle or make sure, that the working surface is grounded. If you have any doubts related to the placing of the wire harnesses, take a look on the wiring diagram provided by the manufacturer of the vehicle.
- ⊗ Dismantle the car seat, that will be equipped with the heater. In the most cases is removing the seat cover is much easier while the seat is dismantled.
- ⊗ While dismantling the seat remove the plastic covers and screws, take out the seat from the interior of the vehicle completely.
- ⊗ Remove all seat covers on the whole area of the seat, where you are planning to place seat heating system. And cable harnesses.

Step 2: Removing the seat cover

- ⊗ Separate bottom and backrest from each other by removing the covers and unscrewing the screws. It is advised to place the seat on a table for the following steps.
- ⊗ Remove the lining of both the seat cushion and back. Remove and dispose of all upholstery clips. Unhook all other connections using a suitable screwdriver.
- ⊗ Make sure, that there are no loose metal parts left. Clean the seat's foam from any left-overs.

Step 3: Placing of the heating element into the seat cushion (23cm x 46cm):

- ⊗ Place the bottom heating pad with the wire harness so, that it will be in one level with the back edge of the bottom seat foam. The wires have to be fitted below the foam so, that they will not be visible once the seat is finished.
- ⊗ Place the heating element and make sure it will not be folded. All areas covered with adhesive tape have to be adhered to a surface.



Date: 13.01.2014

Page 2 / 5

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- ☛ Place the heating pads on the seat and mark the area, which will be cut and for the re-installation of the cover.
- ☛ Make the necessary cutouts for placing the rings or velcro.
Remove the protective paper adhesive areas on the pad, place it and push it to the seat so, that it would thoroughly sit close to the seating foam.
Front edge of the pad adhere with adhesive tape to foam of the car so, that it would not make the edge or that it would insulate the cut / cutout area of the pad.

Step 4: Placing the heating element to the backrest of the seat:

- ☛ Follow step 3 and use the heating pad on the backrest element.

Step 5: Assembling the wire harness and switch

While running the installation of wire harness, you have to pay attention so that wiring would not be cut, squeezed or damaged in any other way. Wire harness is to be attached to the seat frame securely.

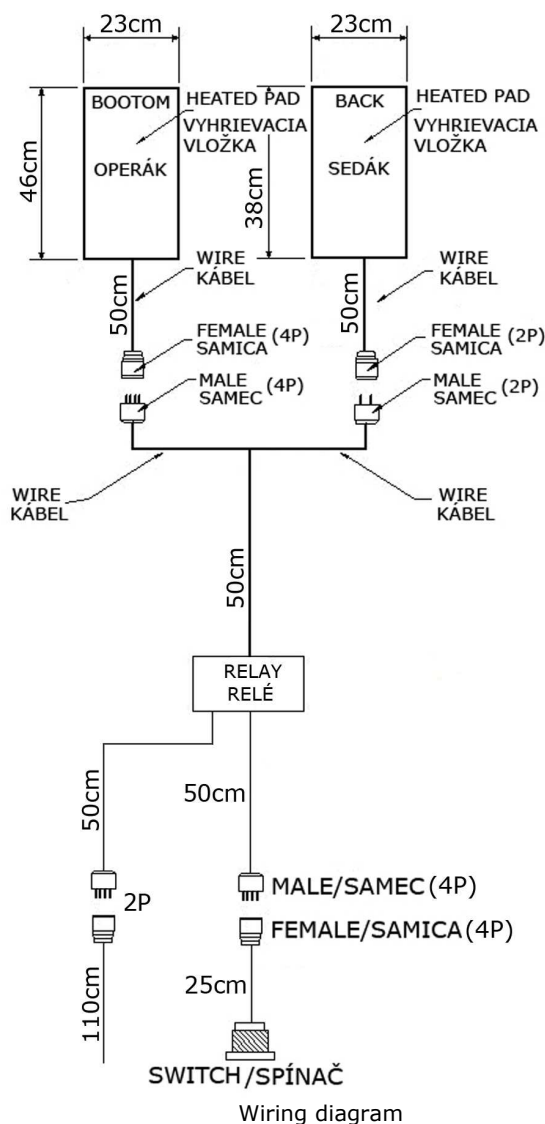
- ☛ Reassemble the seat. Plug the open connectors of the wire harness onto the open wires from the seat and back heating element. Fix the wire harness to the seat frame.
- ☛ Run the wire harness to the main console or side seat cover. Cut a 20mm hole to the panel, pull the connecting cable through and then plug in the switch and push the switch into the panel.

Step 6: Electrical connection and function test

- ☛ Connect the red (+) and grounding cable (-) to the power supply of vehicle (12V DC), that will be capable of conducting current 6A.
- ☛ Change the switch to the position High (≈), light will turn on and heating will start. When it reaches the highest possible temperature 55°C, system will turn off the heating system. If the temperature drops again to 45°C or less, system will turn on the heating element again, until it reaches the desired temperature 55°C.
- ☛ Change the switch to the position Low (∩), light will turn on and heating will start. When it reaches 38°C, system will turn off the heating. If the temperature drops to 28°C or less, it will automatically start heating, until it reaches the temperature 38°C.
- ☛ Switch position Middle is for turning off the whole system off, the light will turn off and the system is not heating.

Note: Do not connect the seat pads directly to the battery, because then it is possible to turn on the heating of the seats even without starting the engine. It would cost the increased power consumption approximately 50W for one seat, and this consumption is draining the battery, and that could cause early full drainage of the battery!





Features

❁ Illuminated Switch

With the round switch the system regulates the 2-zone temperature (high/ low) (~/~)

❁ Control system 2-zone temperature

Secondary system is bimetalic thermostat (integrated in each pad) and it represents backup safety system.

❁ Mode of single heating pad

If the pad for bottom seat cannot be installed due the load sensor of the airbag, use only the pad for backrest and this will be fully operative in low and high mode. Bottom pad will not be used.

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Page 4 / 5

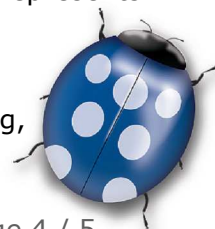
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⊗ Heating pads of backrest and bottom seat

Backrest pad = width 23cm x length 46cm
 Bottom pad = width 23cm x length 38cm

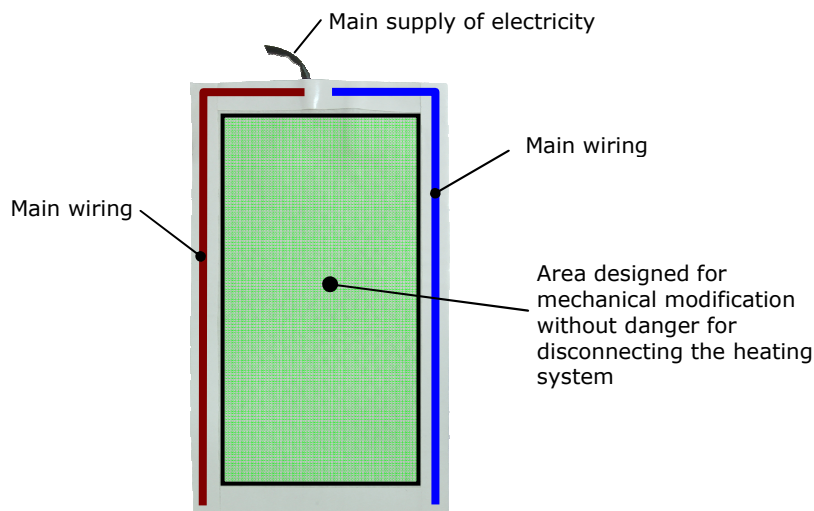


Figure N.1

⊗ Mechanical modification of the pad

Length of the pad can be modified to any desired size.

Width **has to be preserved and it is not possible to modify it/trim – it has to remain the same - 23cm.**

In case of mechanical damage of the „main wiring“, if in any place will be the electrical circuit disconnected in the part of the pad, that is more distant from the main conduction of the electricity. It is possible to do mechanical interventions only on the marked area. – according Figure N.1.

⊗ Quick connection/disconnection of the flexible system

Switch of the wire harness allows usage or shutdown of operation depending on application. This allows you to remove unwanted seat heater wiring when you install switches on the side of the seat.

⊗ Thermal resistance

Outer material of the wiring is made from superior PVC resistant to temperature +80°C. Connectors are from thermalresistant nylon.

Troubleshooting

If the seat will not get warm im 5 minutes:

- ⊗ Heating elements does not have to get warm, if the seat was disposed to sunlight.
- ⊗ Check the seat pad and fuses of the equipment.
- ⊗ Check all connectors and make sure, if they are fully operative.
- ⊗ Check, if the connection to +12V and to the ground is connected properly.

WARNING: Red cable **MUST** be connected to +12V and black to the ground ☺ .



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Page 5 / 5

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