
Pantera Electronics Assembly Manual for Replacement Signal Flasher BF211 or BF211A

REV 1

The BF211 is a board level flasher relay is a direct replacement for the Bosch relay flasher used in many 1960's through 1970's Volkswagen and other European cars.

The Bosch case is opened, Bosch electronic board is removed and the Pantera Electronics replacement board installed.

This replacement flasher relay board will operate incandescent light bulbs or LEDs lamps or any combination of both without the need of additional resistors or loads.

- This replacement flasher relay also has an adjustable rate flashing control that can be set for the rate of flashing. This may be needed for sequential or scrolling LED turn signals.

The KBL terminal functions as the same as the Hella flasher relay for the turn signal indicator.

The BF211A version simulates a tick sound as an audio indication that the flasher is operating.

Functional equivalent: [Bosch 211 953 215C \(SK675\)](#)

Before installing the replacement board the flash rate adjustment can be set by plugging in the harness and operating the flasher.

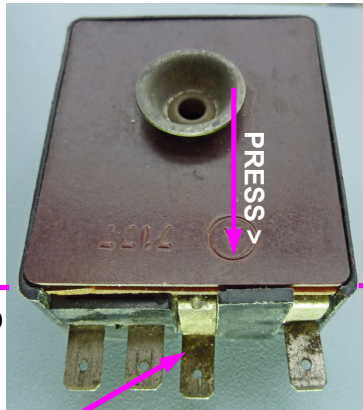
While the flasher is active rotate the "FLASH / MIN" adjustment control. Counter-clockwise rotation causes the flash rate to be slower. Clockwise rotation causes the flash rate to be faster.

After adjusting the flash rate disconnect the wire harness terminals



Connect the wire harness terminals to these tabs in the same order as the Bosch factory flasher.

Press on both corners at the same time.

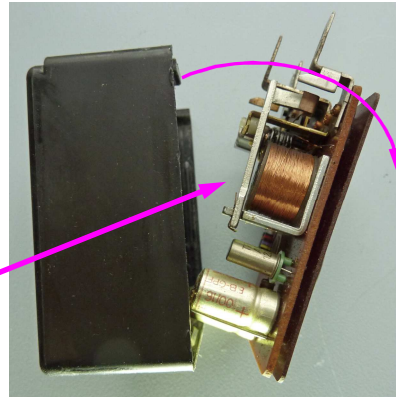


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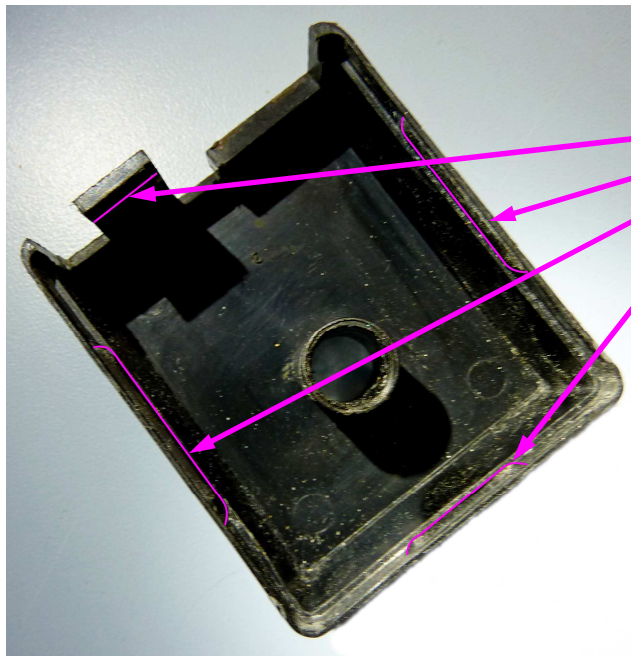
PRESS OUTWARD

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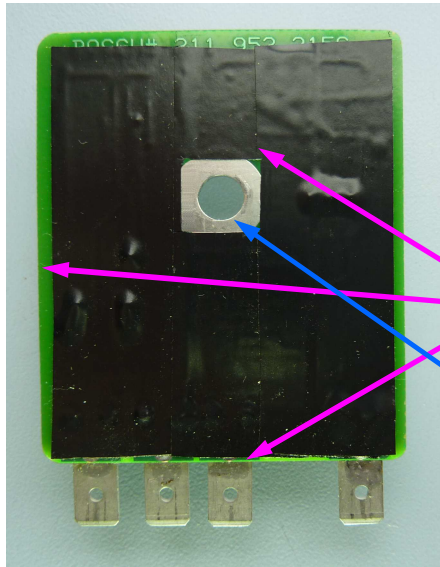
Grasp the corners of the box near the board and push out as the arrows indicate.
At the same time press the tab of plastic between these two terminals to release the board.



Push on terminals while the corners are pulled outward.
Then the rest of the board can be tilted out of the box.



Notice there are 4 retaining tabs molded into the inside edge of the box. This retains the board in a slot inside the perimeter of the box.



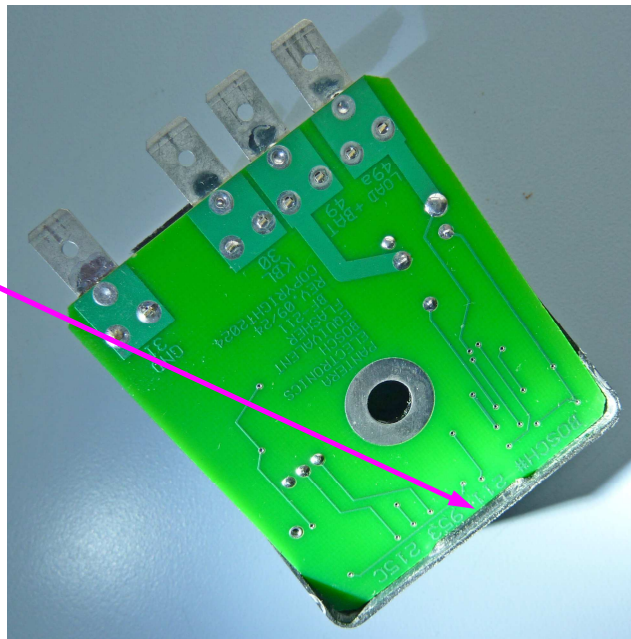
If the mounting surface is irregular or not flat it might be necessary to insulate the bottom of the replacement board.

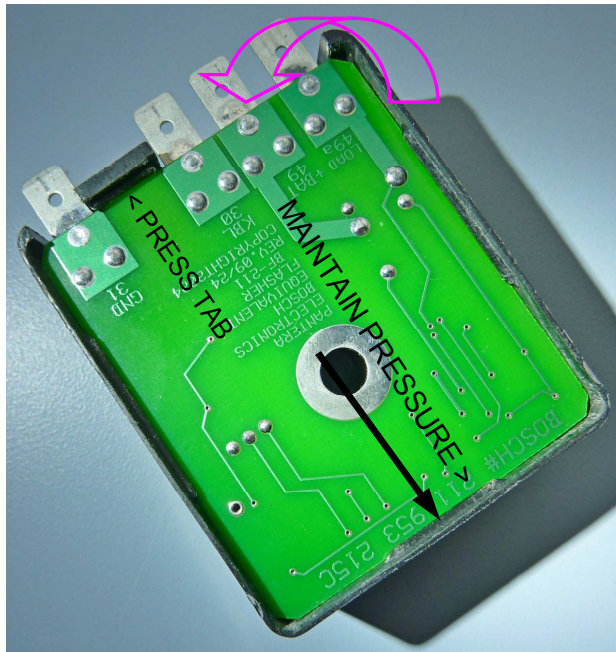
Insulate the bottom of the Pantera Electronics board with electrical tape.

Leave a margin for the retaining tabs around the edge.

Cutout the mounting hole with a sharp blade.

Insert the replacement board into the case tilted so that the edge of the board is **underneath** the retainer tab and in the slot.

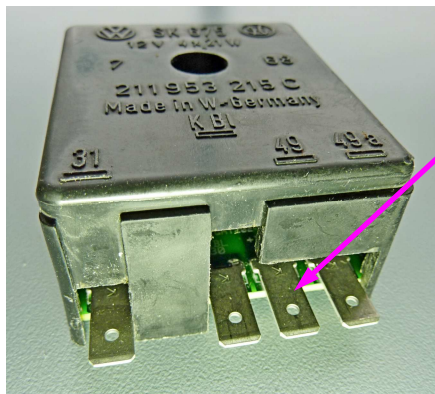




While maintaining pressure on the board to keep it in the slot press the board into the box. The board will snap into the slot behind the retaining tabs.

It might be necessary to pull the corners outward and the center plastic tab outward.

There are 4 retaining tabs on the box.



After pressing the board into the case the completed assembly should look like this with the terminals in this position.

The flasher is now ready for installation in the car.

NOTE: It's important to keep this installation manual for future reference since revisions to this product change the contents of the installation manual.

Disclaimer

The products from Pantera Electronics have been design and manufactured with the best quality components known to the engineer. The installation instructions have been written to assist the owner in the proper use and installation of the products. Pantera Electronics can not be held responsible or held liable for the interpretation or incorrect implementation of the products.

