

Mounting guidelines for the power independant relay



Due to the small dimensions of the micro 1000 and micro 1000 LED indicators the use of lamps with a low power input is necessary. This can cause a very high blinking frequency if the difference between the power input of the original turn indicators and the micro 1000 / micro 1000 LED indicators is too big.

Replacing the originally relay with a power independent relay can reset the blinking frequency to the normal value. The legislator prescribes a blinking frequency between 60 and 120 (90 \pm 30) pulses per minute.

That relay can replace 2-pinrelays as well as 3-pin relays.

The configuration of the pins is as follows:

pin "49 " or "B":	+	input
pin "49a" or "L":	+	output (pulsed, connected to the blinking switch)
pin "31" or "E":	-	input.

First of all you have to find the position of the original relay. Normally you have to demount the bench or one of the side parts. Hint: If you don't know where to find the relay, just switch on the indicators and listen to the typical clicking of the relay. Strip the original relay away from its plug/connector. Now you can control the number of pins on the original relay. If the original relay has three pins, replace it with the power independent relay. Then check the blinking frequency of the indicators. If they are blinking properly you can mount all demounted parts. If the indicators don't flash, the pin configuration between the two relays is different. In this case mount the power independent relay nearby the original position for example with cable fixers. Now you have to connect the pins of the power independent relay with the plug/connector. Therefore pay attention to the notation on the originally relay. If there is no or a mistakable notation on the original relay you have to find out the accurate pin configuration (see appendix). The following materials are necessary for the connection:

- Ca. 1m cable with a minimum cross-section of 1mm²

- 6 cable shoes, partitioned into:

3 insulated flat jacks 6,3mm

either 3 insulated blade terminals (normally 6,3mm) for a 3-pin relay

or 2 insulated blade terminals (normally 2,8mm) and 1 ring cable shoe (ground connection) for a 2-pin relay.

Original relay with 3 pins:

Cut off three pieces with proper length from the cable to straddle the distance between the power independent relay and the original plug/connector. Strip both cable tails on a length of about 5mm. Press on each cable one of the jacks and one blade terminal with a suitable pliers. Now connect the relay pins and the original plug/connector with the cables.

Original relay with 2 pins:

Cut off three pieces with proper length from the cable. 2 cables are used to straddle the distance between the power independent relay and the original plug/connector and 1 cable is used to connect the ground pin of the relay ("31" or "E") with the negative pole of the battery or a suitable ground point (for example a bolted connection). Press one of the insulated flat jacks on each cable. Press the two insulated blade terminals on two cables for the connection between relay and plug/connector. Press the ring cable shoe on the third cable for the connection of relay (pin "31" or "E") and the negative battery pole/ground point. Please use a suitable pliers. Connect the relay to the plug/connector and the negative battery pole/ground point.

After a successful check the assembly is completed.

Attention!

Normally you notice the malfunction of an indicator due to the rising blinking frequency. The use of ohmic resistors or a power independent relay will probably suppress this effect.

It is for this reason that you should inspect the indicators before each ride!!

Appendix:

How to find out the pin configuration of a relay with missing notation.

Therefore you need a testing lamp or one demounted original indicator. If you use an indicator first you have to strip the insulation of the cables on a length of about 1 cm. Then twist the cable tails and use them as test prod.

Proceed the following instructions:

Demount all original indicators (or split the electrical connection). Remove the original relay, so that you have unobstructed access to the plug/connector of the relay. Turn the ignition key to "on".

Connect one cable of the test lamp to the negative pole of the battery or a suitable ground point and the other end to one after the other connections of the relay plug.

If the lamp lights up, you found the connection of the positive pole ("49" or "B"). For a 2-pin relay the accurate terminal assignment is clarified. The free connection meets the notation "49a" (or "L").

To find out the ground connector ("31" or "E") of a 3-pin relay, connect one cable of the test lamp to the before detected connector of the positive pole ("49" or "B") and the other cable to one after the other free connectors of the plug.

If the lamp lights up, you found the connection of the negative pole ("31" or "E"). So the accurate terminal assignment of the 3-pin relay is clarified.