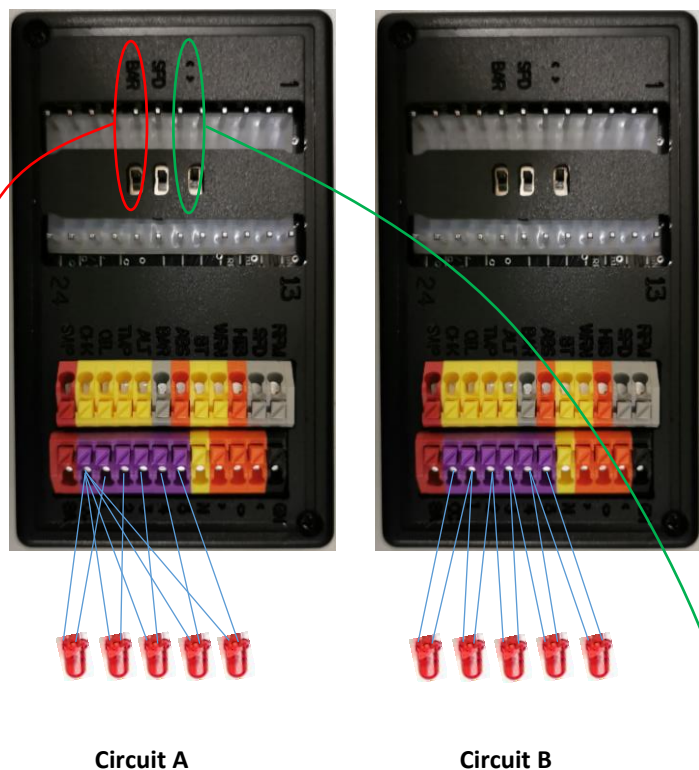


## BEP3 color code

The BEP3.0 now has color-coded outputs. But what is it for? The BMW K uses different switching states for different signals. Not every output can be wired arbitrarily. Since this is not entirely intuitive, I color-coded it. Below is a list of what color does:



BAR switch: This allows the BAR output (level indicator in the speedometer) to be switched to the reserve LED

This enables the load resistors for the turn signals to be switched on and off. Important when converting to LED turn signals

**Gray** are logic outputs that output a logic signal. Be it the spare lamp, which at 4L switches on, or speed or speed signal, which with evaluation electronics (tachometer) can be evaluated.

**Orange** outputs 12V when the signal is present. Example: When high beam is switched on, is at the output **HIB** (High Beam) + 12V. So an LED has to Plus pole connected to HIB and permanently connected to ground with the minus pole. These outputs should be loaded with a maximum of 35mA.

**Yellow** works the other way around. If there is a signal, yellow outputs GROUND. Example: When neutral is applied, there is ground at the output **N**. An LED has to go with it connected the negative pole to **N** and with the positive pole permanently to the switched power be connected. These outputs should be loaded with a maximum of 35mA.

**Black** is vehicle mass (ground) and should be loaded with a maximum of 4.5A

**Red** indicates the battery voltage. Whereby **BAT** (Battery) permanent plus and **SWP** (switched Power) correspond. These outputs should also be loaded with a maximum of 4.5A.

**Purple** is intended for the gear indicator. Gears 1 to 5 shift to ground (like yellow outputs) but have saved a logic with the CC output, with which LED full displays can be realized.

CC is a small constant current source, which is designed for LEDs. There are 2 possible circuits (figure left). With circuit A only lights up the gear engaged. With circuit B, the selected gear lights up and all below.