

velorian

BLINKERSET

Larry vs Harry - Bullitt



Installation

General Safety Instructions

The velorian e-bike blinkerset 2.0 contains small parts that can be swallowed by little children. There is a risk of injury when handling the cables and tools.

We recommend installation by a specialist workshop.

The electronics in the blinkerbox are reverse polarity protected. This means that swapping the connection cables (mixing up plus and minus) on indicators, switches or the power supply will not destroy the electronics or the connected components.

Scope of delivery

In addition to the individually packaged components, all cables and splitters are packaged together with the blinkerbox. This includes:

- 6-pin cable (violet) to the front of the handlebars
- 3-pole cable (yellow) to the rear
- Cable splitter (3-pin) for connecting the front indicators and rear indicators
- **Front splitter Cargo Base** (6-pin) to switch and status LED (4-pin) and to the front indicators (3-pin)
- **Cargo splitter** (4-pin) to the switch (3-pin) and to the status LED (2-pin)



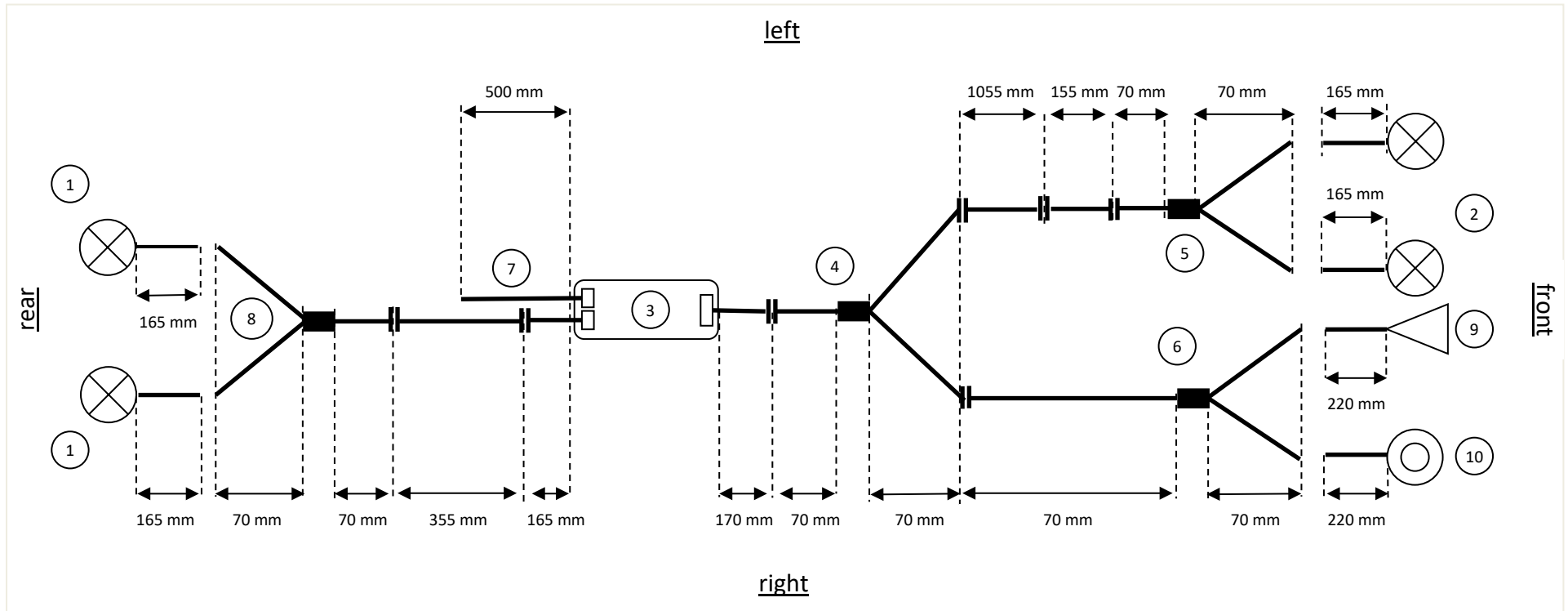
The extension cables are available in lengths of 10 cm, 20 cm, 30 cm, 50 cm and 100 cm to suit the respective frame size. See <https://shop.velorian.de/Cable-and-Splitter-Plug-and-Ride>

General installation instructions

The blinkerbox is splash-proof. Nevertheless, the side with the two cables and the opening of the sounder should be attached in such a way that no water can collect on the sounder. This side should point downwards.

Make sure that the plug and socket are correctly aligned before making the connection! Otherwise, the pins could bend when plugging together, especially the multi-pin plugs.

Schematic representation



1. 1st LED indicator
2. 2nd LED indicator
3. Blinkerbox
4. **front splitter Cargo Base** to switch and status LED (white cable marking) and to the front indicators
5. 5. splitter to the front indicators (red cable marking for right-hand side)
6. **splitter cargo** to the switch and status LED
7. 2-core power supply cable with a length of 1500 mm
8. rear splitter to the indicators (red cable marking for right-hand side)
9. indicator switch
10. status-LED

Cable list

3-wire	100cm
	30cm
	10cm

The length specifications include the cable lengths including the connector dimensions. We reserve the right to make changes in line with technical progress.

Front indicator mounting



Fig. 1

To mount the front indicators, the prepared indicator bracket is screwed to the front headlight using the existing screws.

The retaining screw of the headlight must be loosened, the bracket inserted and everything screwed back on again.

The connection cable is routed from the front to the rear underneath the cargo box and connected to the 3-pin cable on the front splitter cargo base of the blinkerbox.

The cable with the red marking on the splitter is for connecting the right-hand indicator in the direction of travel..



Switch mounting



Fig. 2

The indicator switch is mounted on the handle on the left-hand side as shown in Fig. 2. To do this, the control unit of the electric drive must be loosened, turned slightly towards the centre of the handlebars and refastened by turning it upwards. The status LED is mounted on the right-hand side of the handlebars.

On the Cargo cable splitter, the 3-pin connector is connected to the switch and the 2-pin connector to the status LED.



Fig. 3



The cable splitter to the switch and status LED is connected to the 4-pin connector on the Cargo Base front splitter of the indicator box.

Blinkerbox



Fig. 4

The intended mounting location for the blinkerbox is under the cross tube on the frame near the steering column.

The side with the sound generator opening and the two cables to the power connection and rear light points to the rear.

The rear cable splitter of the blinkerbox is routed to the centre of the luggage rack, if present, and underneath it to the rear light.

The cable splitters already laid from the indicators and the switch can now be connected to the cable from the indicator box.

Connecting the power supply and initial function test

Once the front indicators and switches are connected to the blinkerbox, an initial function test can be carried out.

The electrical connections are concealed on the left-hand side under the motor cover.

To do this, the 2-core connection cable of the blinkerbox is connected directly to the headlight connection (A front light, C rear light) on the engine.

Or on the 12 volt power port (B) of the Bosch motor. This requires a suitable connection cable for the power port. The advantage lies in the permanent supply of voltage regardless of whether the light is switched on.

The white wire is connected to the positive terminal and the brown wire to the negative terminal.

If required, the existing light connection cable can be split and reconnected with the 3-way single-wire connectors. To do this, simply insert the 3 cable ends that belong together into the single-wire connector and press the round part together using combination pliers. It is not necessary to isolate the cables.



Swapping the connection cables of the blinkerbox will **not** destroy it, it will only cause the indicators not to work. Alternatively, the test can be carried out using a 9 volt block battery, for example.

The indicators will flash very quickly at this point, which is due to the absence of the rear indicators. This corresponds to the requirement of the StVZO, according to which one indicator should indicate the failure of the other indicator on the same side by flashing faster.

Fitting the rear indicators



Fig. 5

Firstly, the indicator brackets for the rear indicators should be fitted.

Now the cables can be routed from the blinkerbox to the mounting position of the rear indicators and connected to the indicators there.

The cable with the red marking is for connecting the right indicator in the direction of travel.

During a new function test, the indicators should now flash in the normal rhythm. A rhythm of 60 to 120 flashes per minute is normal.



Mounting finish

To complete the assembly, the position of the switches and turn signals should be checked and all screw connections should be tightened. Likewise, the course of the cables should be checked so that no cable can be crushed when folding the wheel or by movements of the swingarms.

Now all cables should be fixed in their final position with the supplied cable ties.

Operation on a separate battery

If the indicator set is not to be operated from the bike's light connection, a separate rechargeable battery can be used, which can be ordered under item number 1510160210.

If the indicator set is ordered together with the battery, the blinkerbox is fitted with a 30 cm long connection cable for the battery instead of the 2-core power supply cable.

If the battery is ordered at a later date, the 30 cm long connection cable for the blinkerbox is included.



Function and operating instructions

The function complies with the requirements of the StVZO (Germany) and UN ECE 50.

Operation with indicator switch (toggle switch)

When the toggle switch is mounted on an appropriately configured blinkerbox triggers flipping the toggle switch to the left the turn signals to flash on the left side. When the switch is returned to its original position the flashing stops.

Flipping the toggle switch to the right causes the indicators on the right to flash.

If the switch is not returned to the home position, **the flashing stops automatically after 4 minutes**. Returning the toggle switch to its original position and switching it on again will restart the flashing.

Triggering the hazard warning lights is not possible with the toggle switch.

Operation with buttons

When the push-buttons are mounted on an appropriately configured blinkerbox triggers a short press on the left push-button flashing of the turn signals on the left side. If the left button is pressed again, the left turn signals stop flashing. Pressing the button on the right side causes the indicators on the right side to flash. If the right button is pressed again, the flashing stops. Switching the flashing from e.g. left to right can be achieved by pressing the other button in each case.

If the indicators are not switched off manually, **the flashing stops automatically after 2 minutes**.

The hazard warning lights are triggered by switching on the other side. Pressing and holding one button and pressing the other button starts the warning flashing. It can be stopped again by pressing one of the buttons.

The warning flashing stops automatically after 15 minutes.

Warning function in case of failure of one of the turn signals (only with configuration for 4 turn signals)

If, for example, one of the rear turn signals fails:

- The front indicator flashes twice as fast. If the front indicator fails, the rear indicator flashes twice as fast.
- The separate status LED (if installed) flashes twice as fast.
- The sound generator in the flasher unit (if active) ticks twice as fast.

Configuration of the Blinkerbox

The blinkerbox can be configured for different operating modes. The push-buttons or a corresponding device and a connection to the power supply are necessary for configuration.

The configuration mode is set as follows: Keep one button permanently pressed and press the other button eight times in succession. Then release both buttons. A short tone sequence sounds. Now the blinkerbox is in configuration mode and the software version can be set. The following is an overview of which button presses determine which setting:

1st button press:	number of installed turn signals	left button = 2 turn signals	right button = 4 turn signals
2nd button press:	button or switch operation	left button = push button	right button = switch
3rd button press:	indicator sound on or off	left button = indicator sound off	right button = sound on

This results in the following key combinations to select the software versions in configuration mode:

L designates the left button, R the right button:

2 indicators switch with sound	LRR	4 indicators switch with sound	RRR
2 indicators button with sound	LLR	4 indicators button with sound	RLR
2 indicators switch without sound	LRL	4 indicators switch without sound	RRL
2 indicators button without sound	LLL	4 indicators button without sound	RLL

After entering the key combination, the configuration is completed and another short tone sequence sounds. If no switch is pressed is made, the configuration mode is automatically exited after approx. 2 minutes. The configuration is retained even after disconnection from the power supply.

Technical Data Blinkerbox alpha22

EMC approval	EN 55016-2-1; 2014-12, EN 55016-2-2; 2011-09 ISO 11451-1; 2015, ISO 11451-2; 2015, EN 15194
Operating voltage	6-48 Volt
Output	12 Volt
Operating temperature	-20 bis +85 °C
Flashing frequency	90 pulses ± 30 pulses per minute
Protection class	IP 54

Subject to technical changes.

velorian

EU - Konformitätserklärung EU - Declaration of conformity



velorian e-bike blinkerbox alpha22

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erklären, dass vorstehend bezeichnete Geräte in Konzeption und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den Anforderungen der zutreffenden, unten aufgeführten Richtlinien entsprechen.

hereby declare that the design and construction of the above-mentioned products and the version placed on the market by us comply with the requirements of the applicable directives listed below.

EN 55016-2-1; 2014-12

EN 55016-2-2; 2011-09

EN 15194 11:2018

ISO 11451-1; 2015

ISO 11451-2; 2015

Berlin, 01.08.2022

A handwritten signature in black ink, appearing to read 'Eckehard Bahr'.

Eckehard Bahr
velorian GmbH
Geschäftsführung