velorian

E-BIKE
BLINKERSET 2.0
Plug & Ride

Installation

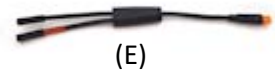
General Safety Instructions

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 indicator box.
This includes:

(A) 50 cm cable 6-pin (violet) to the front of the handlebars
(B) 50 Cable cm 3-pole (yellow) to the rear
(C) 10 cm cable 3-pin (yellow) extension to the rear
(D) a cable splitter for connecting the front indicators and switches or buttons
(E) one 3-pin to 2x2-pin cable splitter for the rear indicators


(E)


(D)

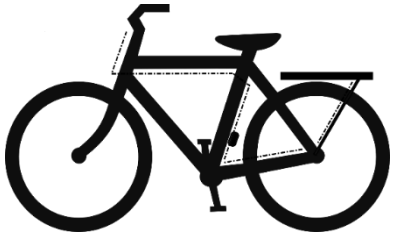
The extension cables are available in different lengths to adapt to the respective frame size.
See https://shop.velorian.de/Cable-and-Splitter-Plug-and-Ride

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.

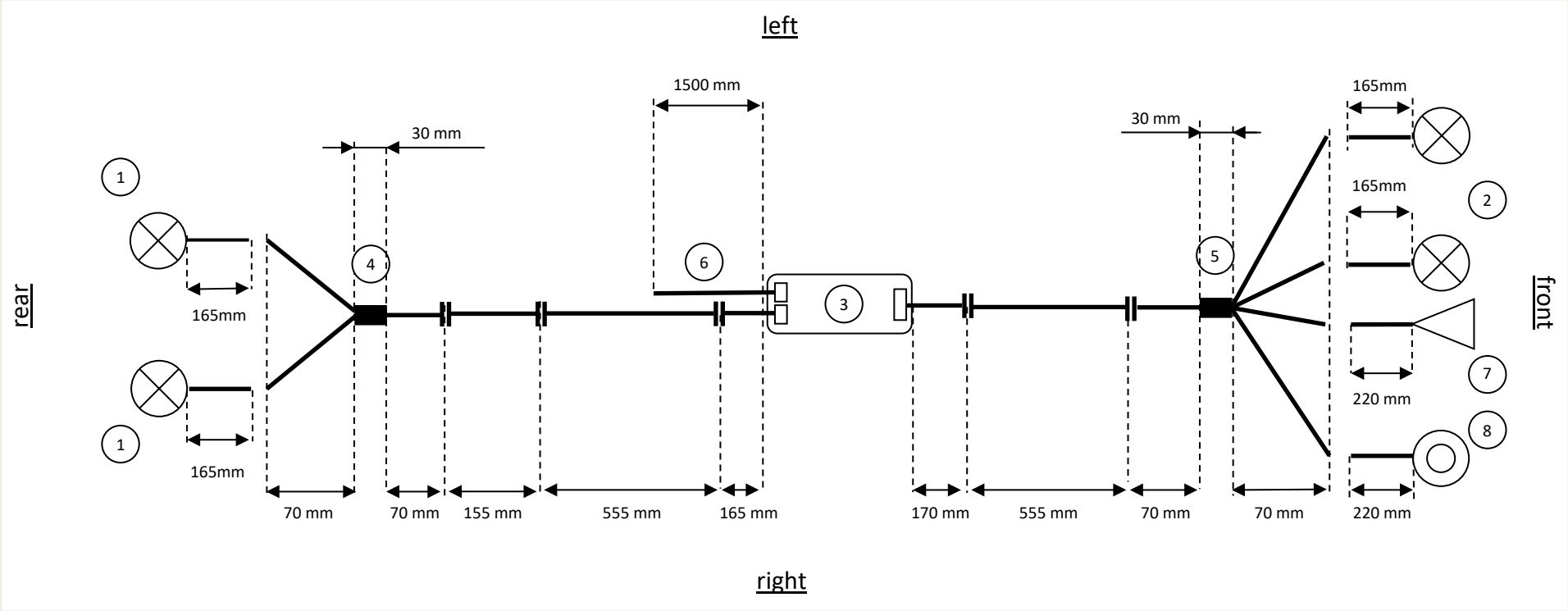
Make sure that the plug and socket are correctly aligned before making the connection! Otherwise, the pins could bend when plugging together, especially the multi-pin plugs.

The following illustration shows the imaginary cable route on the bike from the handlebars along the dash-dot line with the mounting position of the indicator box on the seat tube above the bottom bracket to the luggage rack.



Schematic representation

,



1. LED Indicator
2. LED Indicator
3. Blinkerbox
4. Rear splitter to the indicators
5. Front splitter to switch and status LED and the front indicators (cable marking for right-hand side)
6. 2-core power supply cable with a length of 1500 mm
7. Indicator switch
8. Status-LED

Cable list

3-wire	50cm
	10cm
6-wire	50cm

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

Schalter und Blinker vorn

First, mount the two universal brackets with the indicators and buttons or switches and status-LED on the handlebar.

To mount the front indicators, the upper section of a universal indicator bracket (Abb. 1) combined with the switch and screwed to the switch below the handlebars. Abb. 2

Abb. 1

Abb. 2

Only in this position does the switch position on the left trigger a flashing to the left and vice versa.

The status LED is then attached to the other side of the handlebar using the upper part of the second universal indicator bracket.

Then insert the indicators into the indicator holders, fix them lightly with the nut and pull the rubber cap over the cable onto the nut.

The switch and indicator can now be aligned for the first time. All 4 elements are then connected to the front splitter. The cable with the white marking is for connecting the right-hand indicator in the direction of travel.

Connect all four elements to the splitter (D). The cable on the splitter for the right-hand side is either colour-coded or has a white dot just behind the plug.

Now connect the extension cable (A) to the splitter and run it along the frame to the mounting position of the blinkerbox.

Blinkerbox

The indicator box should first be attached provisionally. Connect the cable (A) to the corresponding cable of the indicator box.

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.

Now connect the longer 3-pole cable (B) to the indicator box and pull it along the frame to the mounting position of the rear indicators.

Connection of the power supply

Once all indicators and switches have been connected to the indicator box, an initial function test can be carried out.

To do this, the 2-core connection cable of the indicator box is connected directly to the connection of the headlight on the engine. 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 triple single-wire connectors. To do this, the 3 cable ends that belong together are simply plugged into the single-wire connector and the round part is pressed together with combination pliers.
It is not necessary to isolate the cables.

Swapping the connection cables of the indicator box 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

Firstly, the indicator bracket for the rear indicators should be fitted to the bike and the indicators to the bracket.

When screwing in the indicators, the connection cable must be able to rotate so that the cable connection is not destroyed!

The rear splitter and the 3-pole extension cable can then be connected to the indicator box.

Assembly termination

To complete the assembly, the position of the switches and indicators should be checked and all screw connections tightened.

The routing of the cables should also be checked to ensure that no cables can be crushed when the bike is folded or due to movements of the swing arms.

All cables should now be secured in their final position using the cable ties supplied.

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 indicator box 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 indicator box 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 4 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 30 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 indicator box 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 indicator box 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 keystroke:	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

velorian

EU - Konformitätserklärung
EU - Declaration of conformity

CE **velorian e-bike blinkerbox alpha22**

Wir, die velorian GmbH,
We, velorian GmbH,

velorian GmbH
Storkower Str. 115a
10407 Berlin
Germany

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

Eckehard Bahr
velorian GmbH
Geschäftsführung