



Installation Instructions

Adapter LED headlights

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1 Liability Exclusion

Dear Customer,

Our cable sets are developed according to the connection- and circuit diagrams of the corresponding car manufacturers. Before the serial production, the cable sets will be adjusted and tested on an original vehicle. Therefore, the integration into the vehicle electronics follows the guidelines provided by the car manufacturer. Our installation instructions correspond to what is common in the vehicle electric/electronic regarding the required pre-understanding and the accuracy of the description in text and picture. They have proven its worth in practice hundreds of times.

If you should experience any difficulties while installing one of our products, we are available to provide support via phone or email. Additionally, we offer you to execute the installation in our workshop in Bad Segeberg.

Costs, arising from third parties assigned with the installation of our products, are not being covered by us. We will only compensate the proven costs of the assembly and the costs of the disassembly of the defective product, if it turns out that there is an issue with our product. We limit the reimbursement of costs up to 110 Euro gross and reserve the right to verify the claim in our workshop in Bad Segeberg. The costs for shipping will be refunded if the claim is justified.

We made the experience, that every professional workshop that is equipped with the necessary diagnostic devices, the diagnostic software and the manufacturer's circuit diagrams, is able to find any possible defects in one of our products in a short period of time. The assembly and disassembly including troubleshooting the issue should therefore only take up to 60 minutes.

We also made the experience, that many professional workshops are not able to cope with the manufacturer's circuit diagrams and can't read common wiring schemes, which results in the calculation of several hours for the simplest installations. You will understand the fact, that we can neither take the risk of finding a reliable workshop for you, nor can we finance the training of the employees of your trusted workshop.

Costs, arising from purchasing missing parts or replacements for defective parts from other suppliers, are covered by us up to the amount that the subsequent delivery would have caused (saved expenses). According to the legal warranty law, there would be no reimbursement right, if there was no deadline for the subsequent fulfilling set or the deadline for a subsequent fulfilling hasn't expired.

That being said, if you have any problems during the installation or operation of one of our products call us, write us an email, send us the product or come by our workshop in Bad Segeberg with your vehicle. We are certain, that we can find a solution for any kind of concern.

Kind regards,
Your Kufatec GmbH & Co. KG Team

2 Copyright

Our installation and operation instructions, installation plans, software and other written and/or pictured documentations are protected by copyright.

The publication or distribution of these documentations is only permitted with a written approval of Kufatec GmbH & Co. KG.

3 General notes

While developing this product, your personal safety combined with the best operating service, modern design and an up-to-date production technique was especially taken into account.

Unfortunately, despite the utmost care injuries and/or damages might occur due to improper installation and/or use.

Therefore, please read the following instruction manual fully and thoroughly and keep it!

All articles of our production line pass through a 100% check – for your safety and security.

We reserve the right to carry out technical changes which serve the improvement at any time.

Depending on each product and purpose, it might be necessary to check each country's legal regulations before installing and starting it.

In case of warranty claims, the product has to be sent back to the seller in the original packaging with the attached bill of purchase and detailed defect's description. Please, pay attention to the manufacturers return requirements (RMA). The legal warranty directions are valid.

The warranty claim as well as the operating permission becomes invalid due to:

- unauthorized changes to the device or accessories which have not been approved or carried out by the manufacturer or its partners
- opening the casing of the device
- repairing the device on one's own
- improper use/operation
- brute force to the device (drop, willful damage, accident etc.)

During the installation, please pay attention to all safety relevant and legal directions. The device should only be installed by trained personnel or similarly qualified people.

In case of installation problems or problems concerning the functionality of the device, limit the time to approx. 0,5 hours for mechanical or 1,0 hours for electrical troubleshooting.

To avoid unnecessary costs and time-loss, send in an immediate support-request, via the Kufatec-contact-form (<http://www.kufatec.de/shop/de/infocenter/>).

In case of, let us know the following:

- Car chassis number/vehicle identification number
- Five-digit part number of the device
- Exact description of the problem
- Steps you have taken to solve the problem

4 Safety Instructions

The installation should only be performed by trained personnel. Only perform installations while in a voltage-free state. For example, disconnect the battery. Please pay attention to the instructions provided by the manufacturer.

- Never use bolts or nuts from the car's safety devices for installation. If bolts or nuts from the steering wheel, brakes or other safety devices are used for installation of the device, it may cause an accident.
- Use the device with a DC 12V negative ground car. This device cannot be used in large trucks which use a DC 24V battery. If it is used with a DC 24V battery, it may cause a fire or accident.
- Avoid installing the device in places that would restrict you from driving safe or where it could damage the car's other fittings.
- This device should only be used in combination with the mentioned vehicles. Only connections described within this instructions guide are allowed or required to use for installation.
- For damages caused by faulty installation, unsuitable connections or inappropriate vehicles, Kufatec GmbH & Co. KG assumes no liability.
- We advise you that these devices process data from the MOST – protocol of the vehicle. As the supplier of this device we don't know the overall system you are working with. If your device causes damage, due to other changes made to the vehicle, Kufatec GmbH & Co. KG assumes no liability.
- Kufatec GmbH & Co. KG supplier does not guarantee the use of the product for changes within a new vehicle series.
- If the car manufacturers don't agree with the installation of our device by reason of warranty, Kufatec GmbH & Co. KG assumes no liability. Please, check conditions and warranty before you begin the installation.
- Kufatec GmbH & Co. KG reserves the right to change the device specifications without notice.
- Subject to errors and changes.

5 Requirements for the intended use

Only use this device in its intended area.

In case of unprofessional installation, improper use or modification, the permission for the operation and the warranty claim will expire.

6 Assembly Instructions

The following illustration shows the cable routing as well as the position of the individual components.

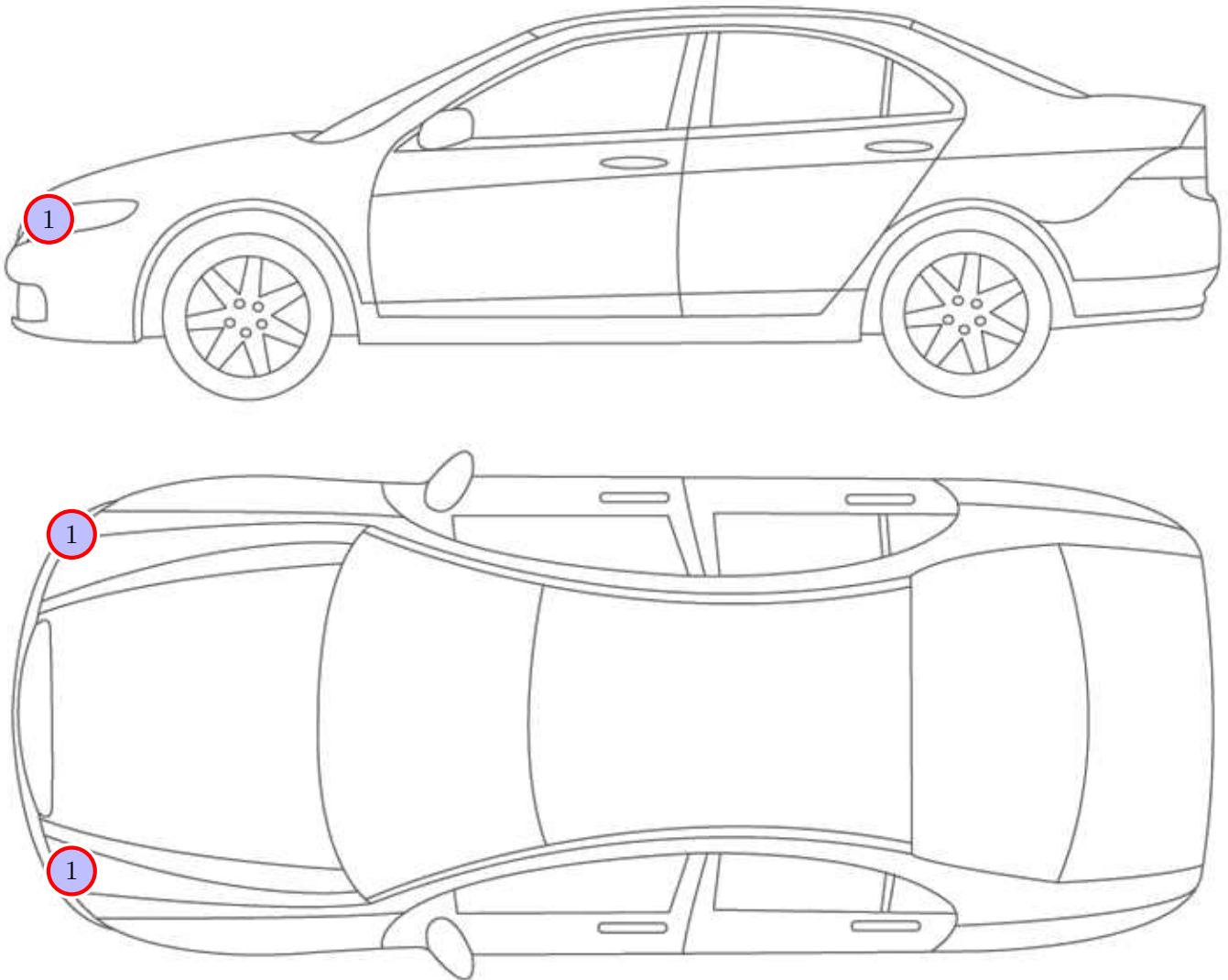


Figure 1: Vehicle overview

- 1 Front headlight

Please be aware, that this overview is only for **illustration purposes**. Always lay the cable set in the **most convenient and shortest way** possible. For a detailed description of the cable routing, please refer to the relevant sections of the following manual.

7 Assembly Note

Important note for the assembly

- The vehicle used for the assembly instruction was a **Smart fortwo 453**. We would like to point out, that the disassembly of the individual parts can vary depending on the type of vehicle. Please make sure to keep that in mind.

Notes for assembling the vehicle

- **Before you start assembling the vehicle, the system must first be tested for proper function.**

8 Connection

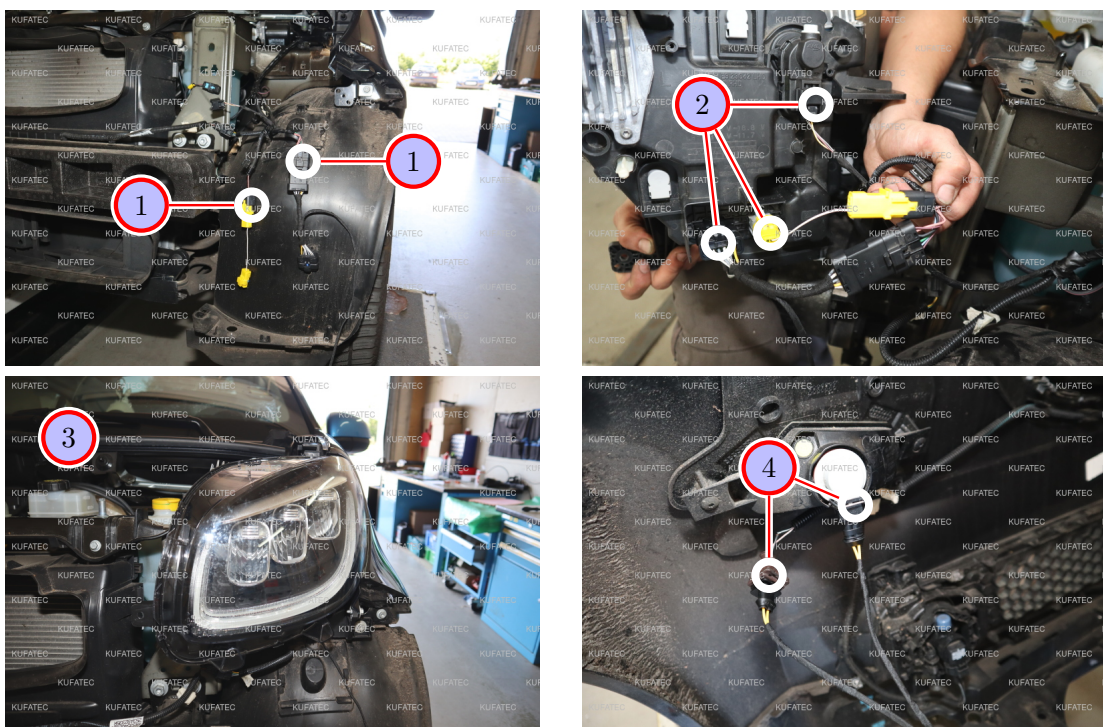


Figure 2: Connection

Table 1: Instructions to connect the cable set

No.	Work step	Note
	Remove the hood, the front bumper and the old headlight.	
1	Connect the 6-pole adapter to the manufacturer's side 6-pole plug . Also connect the 3 pole, yellow adapter to the manufacturer's side 3-pole plug.	
2	Connect both plugs (6-pole and 3-pole) of the adapter as well as the manufacturer's side plug to the new headlight. Both 2-pole plugs at the longer cable hang down for now.	
3	Assemble the new headlight to the point of assembly of the old headlight. Repeat steps 1-3 on the other side of the vehicle as well.	
4	The remaining plugs of the adapter (2-pole) are connected to the front bumper. In order to do so, the bumper has to be held against the vehicle. The light used to be the turning signal and is now the parking light.	

9 Coding with Coding Interface

Instructions for using the Coding Interface

- **Important note:** For the models from model year 2019 - the bonnet must be opened before coding. It must remain open during the coding process.
- Switch on the ignition. Please note that the **engine will not be started**. Wait approximately 30 seconds and plug the Interface into the diagnostic interface (OBD II plug) of the car. The diagnostic box is situated in the driver's leg area on the left side above the foot rest.
- On a coding dongle with one LED, as soon as the coding has been started, there will be one red LED, which will illuminate permanently. As soon as the LED turns off, the coding has been executed and the Interface can be removed. According to the car or retrofit, the coding can take up to a minute.
- On a coding dongle with two LEDs, as soon as the coding has been started, there will be one red and one green LED which will illuminate. While the coding the green LED flashes or rather flickers. As soon as the red LED turns off and the green LED illuminate permanently, the coding has been executed and the Interface can be removed. According to the car or Retrofit the coding can take up to a minute.

10 Coding Interface

Dongle for executing the coding

- In order to carry out the coding for the vehicle, the following dongle is required: Article number 44893 (not included in the scope of delivery for the complete set 44895.)

11 Assembling the vehicle

Notes for assembling the vehicle

- Before you start assembling the vehicle, the system must first be tested for proper function.

12 Bus rest

Final work / bus rest

- **Important note:** After the coding has been completed, you need to wait for the bus rest.
 - **Proceed as follows:**
 - Switch off ignition and close all doors.
 - Close up the car by remote control.
 - Leave the car for about 10 minutes.
- Important:** Make sure that the key is not inside or nearby the car if it is equipped with keyless go system.

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