



### Installation Manual Rhombus S DF Dark

Rhombus S DF Dark



#### Dear customer,

Thank you for placing your trust in us by purchasing this product. Please read these instructions carefully and completely before deciding whether you would like to do the installation yourself or have it done by a specialist.

#### Legal note: Rhombus S DF Dark

All Kellermann Rhombus S DF Dark are ECE-approved for motorcycles as documented by the approval mark engraved into the housing. This means that you may use the Kellermann products instead of the original tail/brake lights without any entry in your vehicle documents or presentation to a vehicle inspection organization. You do not need to carry any documentation with you. This applies to all motorcycles licensed under EU law and the corresponding lights.

ATTENTION! The warranty will not apply if the Rhombus S DF Dark has not been correctly installed or connected to the electrical supply on your motorcycle. Do not carry out the installation unless you are qualified to do so; otherwise, leave the installation and connection work for your Rhombus S DF Dark to a qualified repair shop. The warranty does not apply to damage due to wrong connection or excess voltage (such as due to a defective alternator regulator).

ATTENTION! Improper mechanical installation or orientation of your Rhombus 5 DF Dark lights may invalidate your motorcycle's roadworthiness and insurance protection, or even lead to accidents. Before every usage of your vehicle, check whether the indicators are correctly mounted and fully functional.

ATTENTION! Your Rhombus S DF Dark lights may heat up during use. Contact with bare skin or heat-sensitive objects may lead to damage or injury.

CLEANING ADVICE! Your new Kellermann products are premium-quality products. In order to enjoy them long time and maintain the warranty we recommend not to use any cleansers with alkaline/acid and/or grinding substances or steel wool. We also advice not to use steam cleaners.

## INSTALLATION

ATTENTION! Make sure that your motorcycle is standing firmly before you start work, as a fall may lead to damage to the motorcycle or injury to you or others.

Dismantle the original indicators. Mount the Rhombus S DF Dark in place of the original indicators, or drill a 5 mm diameter hole and fasten the Rhombus S DF Dark at **5 Nm** with the nut supplied. Make sure that the area where the wires emerge is protected from splash water. Mount the Rhombus S DF Dark in such a way that the beams run horizontally in your motorcycle's direction of travel. Alignment is important to safety in traffic and essential to your motorcycle's roadworthiness, as a motorcycle with incorrectly aligned lights is easy to overlook on the road.

Make sure that you keep the following measures in selecting your fastening point:

Position - In width: For rear indicators: minimum distance of 180 mm. In height:

350 mm – 1200 mm above the ground

In length:

The distance between the rear indicators and the rearmost limit of vehicle's over-all length shall not exceed 300 mm.

Geometric visibility:

Horizontal angle: 80° outwards, 20° inwards Vertical angle: 15° above and below the horizontal.

# ELECTRICAL CONNECTION

Separate the wires between the original indicators and the tail / brake light from the wire loom at a suitable position. By doing this the wiring loom stays untouched.

Connect your Rhombus S DF Dark as follows:

- Connect the grey wire on the left-hand (or right-hand) Rhombus S DF Dark to the plus pole on the left-hand (or right-hand) indicator.
- Connect the grey and white wire on both Rhombus S DF Dark lights to the plus pole from the original tail light.
- Connect the grey and red wire on both Rhombus S DF Dark lights to the plus pole from the original brake light.
- Connect the black wire on both Rhombus S DF Dark lights to the minus pole from the original tail light.

To connect the wires of the indicator to the wires of the original connector there are crimp connectors and shrink tubings included in the delivery. First push one of the shrink-on tubes over one of the cables you want to connect and remove five millimeter of insulation on the end of each cable. Then push both bare ends into a crimp connector and crimp it with an appropriate tool. Then pull the shrink-on tube over the connection and heat it up equally until it fits tight over the complete length.

This type of connection is technically permanent. To create a non-permanent connection, we recommend Posilock wire connectors (not included), which are available for purchase from our website.

Lay the cables in a way, that they are protected from splash water and fasten them, e.g. by using zip ties. Now test the function of the Rhombus S DF Dark.

This completes the installation.

### INDICATOR FLASH RATE

The flashing frequency can change when converting the original indicators. The installation of a load-independent flasher relay (e.g. R 2) or a multifunctional assistance system (e.g. CR 4®) will solve the problem. If the installation is not possible or not favored, then parallel connected power resistors (i.LOAD) will be an option. Only a few vehicles need special solutions, which we offer as i.SED, i.BOS products.

ATTENTION! The power resistors will become very hot after longterm usage of the indicator lights. Make sure that no components are damaged by this heat.

If you contact us, we will be happy to assist you. To date, we have been able to help every customer.

Our team is constantly working on new, improved solutions for all models and vehicles. If you are not sure which electronic equipment you require, please contact us. Refer to our homepage for additional information, and our online shop with a full range of spare parts and accessories and a download area. If you have any suggestions or questions, please do not hesitate to contact us by email. We are happy to assist you.

ATTENTION! The application of the described measure may interrupt correct functionality, in the case of a failure causing one of the indicator lights to increase in flash frequency in order to alert the driver of such a failure. Before each usage of the vehicle, check the functionality of the indicator lights.

The Kellermann Rhombus S DF Dark is equipped with the triedand-trusted **Long Life Protection Guard®** circuit, which ensures extremely long life with LED technology. It is not necessary to replace the illuminate and, due to the laws for device approval, it is not allowed.

