

Installation manual - micro Rhombus DF / DF Dark

Read through this installation manual closely before you start with the installation!

NOTE: Installed in pairs, the micro Rhombus DF system replaces both the original rear indicators and the brake and tail lights. The micro Rhombus DF system is approved for road use in the EU according to the ECE regulation for motorcycles as documented on the certification number embossed on each lens. This means that you may use the micro Rhombus DF – if correctly installed (see below) – instead of the original indicators and tail/brake lights without any additional entries in your vehicle documents or presentation to a vehicle inspection organisation in Germany, or equivalent in other EU member states.

You will not need to keep any documents with you.

WARNING! Your guarantee will not apply if your micro Rhombus DF system has not been correctly installed and connected to the electrical supply on your motorbike. Do not carry out the installation unless you are specifically trained to do so; otherwise, leave the installation and connection work to a qualified repair shop. Your guarantee does not apply to damage due to wrong connection or excess voltage (such as due to a defective alternator regulator).

WARNING! Improper mechanical installation or orientation of your micro Rhombus DF lights may invalidate your motorbike's roadworthiness and insurance protection, or even lead to accidents. Check that your micro Rhombus DF lights are securely fitted before you ride your motorbike, and tighten up the fastenings again if necessary.

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

WARNING! Each micro Rhombus DF is equipped with an elastic connector element to absorb vibration (silent rubber adaptor), which is designed in such a way as to prevent damage to the micro Rhombus DF lights from slight deflections of up to 15°. Heavier deflections will break the adaptor to prevent damage to the valuable lights, which will remain undamaged after mechanical overburden such as falls or vandalism. The rubber will overstretch and tear, or will be internally so heavily damaged that it may fall off after a certain period. You may purchase a new silent runner adaptor as a spare part in two helical fastening lengths – Order No.: 123.610 for 40 mm helical thread length or 123.620 for 20 mm length – from your dealer or direct from www.kellermann-online.com.

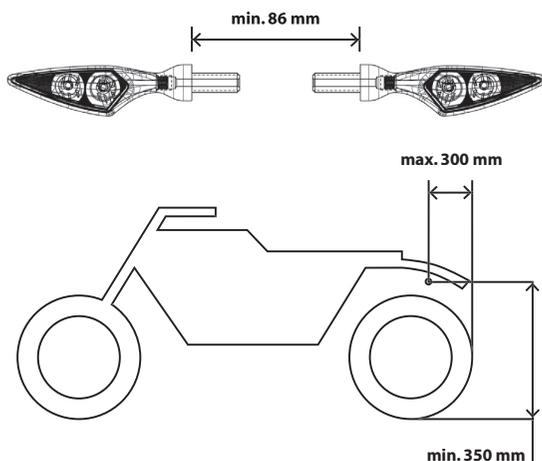
INSTALLATION

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

Dismantle the original indicators and tail/brake lights. Mount the micro Rhombus DF in place of the original indicators, or drill a 8.5 mm diameter hole and fasten the micro Rhombus DF at 8 Nm with the self-locking M8 nut supplied. Make sure that the area around the micro Rhombus DF where the wires will emerge is protected from splash water by fitting the grommets supplied; pull each wire through the hole and pull the grommet up over the thread. Use household detergent or grease to help. Mount the micro Rhombus DF in such a way that the beams runs horizontally, parallel to your bike's direction of travel. Orientation is important to safety in traffic and essential to your bike's roadworthiness, as a bike with incorrectly oriented lights is easy to overlook on the road.

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

Surfaces to which your micro Rhombus DF will be fastened should be at least 86 mm apart and at least 350 mm from the road surface, and must not be further than 300 mm from the rearmost point of your motorcycle.



Refer to the 93/92/EEC directive at www.eur-lex.europa.eu for more details on fitting.

ELECTRIC CONNECTION

Separate the wires between the original indicators and the tail/brake light from the wire loom at a suitable position. This avoids interfering with the original wire loom. Find the circuit diagram to the original wires in the wire loom for your bike and connect them to the micro Rhombus DF as follows:

- Connect the black wire on both micro Rhombus DF lights to the minus (earth) pole from the original tail/brake lights
- Connect the grey wire on the left-hand 1000 DF indicator light to the plus pole on the cut wire from the left-hand indicator
- Connect the grey wire on the right-hand 1000 DF indicator light to the plus pole on the cut wire from the right-hand indicator
- Connect the grey and white wire on both micro Rhombus DF lights to the cut wire from the original tail light
- Connect the grey and red wire on both micro Rhombus DF lights to the cut wire from the original brake light

You will no longer need the minus (earth) wire from the original indicators with the micro Rhombus DF, as the whole cluster will be using the earth wire from the tail light.

Four end connector sleeves are supplied (see Figure) to be fitted as follows: remove the insulation on the wire ends to a length of around 1 cm and insert the two wire ends to be connected into one of the sleeves supplied, and crimp the sleeve firmly with a suitable pair of pliers (see Fig. 1-3).

This type of connection is technically permanent. To create a non-permanent connection, we recommend Posilock wire connectors (not included), which can be purchased from our website at www.kellermann-online.com.

Arrange the wires to protect them from splash water and fasten them as appropriate, such as with wire connectors. Reconnect the motorbike battery and test the micro Rhombus DF lights (right and left indicator, tail and brake lights). Align the indicators as described above.

FLASH RATE

If you find that your indicators flash at a frequency above the limit permitted (some indicator relays only work at the original indicator wattage) or if all four indicators should flash instead of only two, we recommend that you use a load-independent indicator relay (Order No. 123970). We specifically recommend this solution as it is simple, safe and reliable, and also quick to install. If it is no longer possible to install this relay into your motorbike, you can also install resistors in parallel to the indicator. Install the resistors to make sure that they can effectively dissipate heat. The resistance necessary ranges from 7.5 to 150 ohm. As an example, if your original indicators had 21W bulbs, install a 7.5 ohm resistor with 50W load capacity for each micro Rhombus DF indicator.

WARNING! The actions described above may disable the fast-flash feature to alert you to a failed indicator, so always check that your indicators are in good working order before you set out on your motorbike.

WARNING! The resistors will heat up considerably if your indicators are subject to prolonged use. Make sure that heated resistors will not damage any other motorbike parts.

Your micro Rhombus indicators are fitted with tried-and-trusted **Long Life Protection Guard®** circuits for LED lighting to ensure extremely long life. LED replacement is therefore not necessary, and also not possible for vehicle registration reasons.

micro Rhombus DF



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Refer to our homepage at www.kellermann-online.com for our 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 (info@kellermann-online.com) or phone on +49 (241) 93 80 80.

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