



## 4 CHANGING THE BULB

### 4.1 PREPARATION

**WARNING!** You should ensure the safe positioning of the motorcycle before dismantling, since an unstable motorcycle can lead to injuries and to damage to the motorcycle.

**WARNING!** You should ensure that you wear work gloves and eye protection when changing bulbs so as to avoid injury from sharp edges, e.g. from the handlebar tube, or sharp objects such as the earthing contact points.

Ensure that the replacement bulb has the same specification, and replace the original bulb only with a bulb of the same H21W specification. You can obtain these special bulbs from Kellermann (Tel.: 0049 241 938 080) or from your dealer.

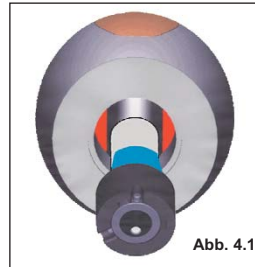


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### 4.2 DISMANTLING THE TURN INDICATOR

Rotate the turn indicator at its housing in an anti-clockwise direction, until you can feel it becoming loose. Then pull the turn indicator out of the handlebar. As the rubber attachment may become connected to the handlebar after an extended period, you may sometimes need additional force to loosen the rubber, and this may separate abruptly. You should therefore pay attention both to the safe condition of the motorcycle, and that the cable does not snap.

Use a slim spanner with a 10 mm width at the flats (flattennings) of the multi-functional part (4) and loosen the bolt connecting the turn indicator housing. Now remove the turn indicator housing from the multi-functional part with your hand. Make sure that the turn indicator housing thus faces downward, since only the frame and the bulb are now held in and may otherwise fall out.

Remove the frame and the bulb from the turn indicator housing. A gentle tap with the open palm is enough to release the frame. Do not try to rotate the frame. This is fixed by an anti-twist plate in the turn indicator housing in order to guarantee an accurate adjustment of the bulb.

### 4.3 ASSEMBLY OF THE TURN INDICATOR AND MOUNTING ON THE MOTORCYCLE

Take the new bulb and push this along the retaining slots into the frame. Rotate the bulb in such a way that both locking pins of the bulb holder sink into the retaining slots of the frame. Make sure that you do not touch the glass of the bulb with your bare fingers, or else wipe this with a clean cloth. Pick up the turn indicator housing and hold this with the thread opening facing upward. Rotate the frame and the bulb in such a way that the two orientation bars (marked in blue in Figure 4.1) of the frame are visible between the crescent shaped contact surfaces of the guiding channels in the turn indicator housing (marked in red in the Figure). Let the frame and bulb slide downward into the tapped hole. Take hold of the multi-functional part (4) and screw in the turn indicator housing carefully with your hand. If the multi-functional part cannot be screwed in, the frame is not correctly aligned in the turn indicator housing. In this case, align the frame and bulb again. Rotate the turn indicator housing again as described above on the multi-functional part. If the thread plate locks precisely with the turn indicator housing, use a 10 mm slim spanner on the flats of the multi-functional part and bolt the multi-functional part on. Then push the turn indicator into the handlebar up to the halfway point of the rubber attachment and proceed as described in Chap. 3.4. Do not forget to lock and adjust the accuracy of the turn indicator.

We have provided different Downloads for you on our homepage, [www.kellermann-online.com](http://www.kellermann-online.com). You can also find more information about our extensive list of spare parts and accessories there. If you have suggestions or questions, you can contact us at any time by e-mail ([info@kellermann-online.com](mailto:info@kellermann-online.com)) or by telephone (0049 241 938 080).

## Installation Instructions - BL 1000/BL 1000 white

(Front turn indicators)

- 1 Unit construction overview
- 2 Safety instructions
- 3 Installation
- 4 Changing the bulb

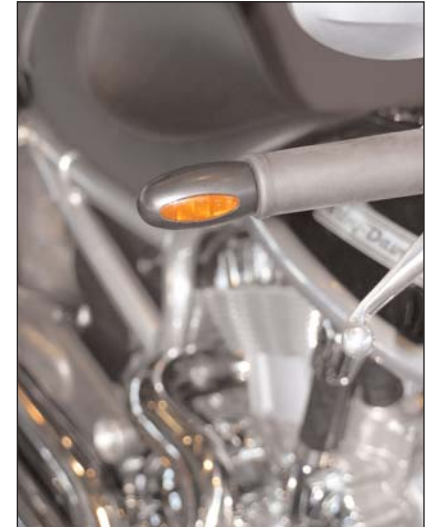
Dear Customer,

We thank you for the confidence you have shown in us by buying this product. We have taken the utmost care in the development and manufacture of your BL 1000 unit.

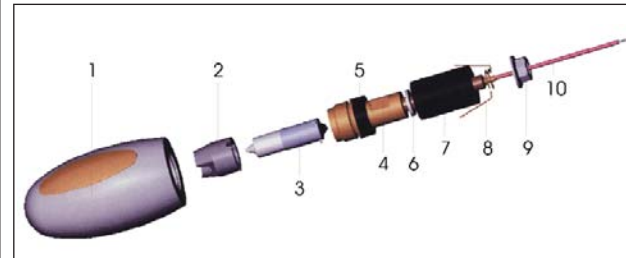
In order to fully enjoy this product, you should bear in mind the following important instructions. Please read the assembly instructions completely and carefully before deciding whether to fit the BL 1000 yourself, or to assign this task to a specialist. You should remember that only professional assembly can ensure safe operation.

We wish you pleasant and safe travel at all times,

Your Kellermann Team



## 1 UNIT CONSTRUCTION OVERVIEW



- 1 Turn indicator housing
- 2 Frame
- 3 Halogen bulb
- 4 Multi-functional part with flats
- 5 Tube ring
- 6 Spacer
- 7 Rubber attachment
- 8 Earthing contact points
- 9 Nut
- 10 Connecting leads

## 2 SAFETY INSTRUCTIONS

### IMPORTANT NOTICE!

**WARNING!** Please read these assembly instructions carefully before assembly!

Keep the instructions and the cardboard packaging, as well as any un-needed adapter sets, in case they are required at a later date!

**WARNING!** Only use the BL 1000 within the European Union as a front turn indicator and bear in mind the regulations for assembly given in 3.2.

**WARNING!** If you are unclear about the correct assembly method, you should assign this task to a specialist, since only the correct assembly can ensure proper operation. Incorrect installation can lead to accidents. For this reason you should check whether the turn indicator has come loose before each journey; if so, tighten the turn indicator again and re-align it immediately.



**WARNING!** The BL 1000 was designed only as a turn indicator for motorcycles and is not suitable for any other purpose. Any other use is prohibited; this can be dangerous and lead to severe damage.

**WARNING!** Use only original parts, and only replace the original bulb with a bulb of the same specification (H21W, BAY9S, s. Chap. 4)! This is vital for the normal and safe operation of the turn indicator. In the event of loss or damage, you can obtain spare parts, including special bulbs, from your dealer or directly from Kellermann (Tel.: 0049 241 938 080).

**WARNING!** We have selected a high performance halogen bulb for the BL 1000 for your safety. The BL 1000 can therefore become very hot after long periods of operation (more than 10 mins). You should therefore absolutely avoid contact with bare skin or heat sensitive items, as injuries or harm are otherwise possible.

## 3 INSTALLATION

### 3.1 PREPARATION

The BL 1000 is appropriate for handlebars which are hollow from the end to the respective switch unit and have a constant interior diameter of between 11.5 mm and 24 mm. Please note the installation instructions given in 3.2. If these conditions cannot be met, a suitable handlebar must be installed.

**WARNING!** Clean the tubing within the handlebar before assembling the turn indicator. Only a clean and grease-free surface will allow the safe attachment of the turn indicator. On anodised aluminium handlebars, it is necessary to remove the anodised coating from the tubing and other surfaces in order to create an electrically conductive surface.

**WARNING!** You should ensure the safe positioning of the motorcycle before installation, since an unstable motorcycle can lead to injuries and to damage to the motorcycle.

**WARNING!** You should ensure that you wear work gloves and eye protection when installing the turn indicator so as to avoid injury from sharp edges, e.g. from the handlebar tube, or sharp objects such as the earthing contact points (8).

### 3.2 INSTALLATION TOLERANCE

The BL 1000/BL 1000 white should be installed in a horizontal position at an angle of 15° with +/- 3° tolerance.

### 3.3 SELECTING THE ADAPTER

Measure the inside diameter of the handlebar tube. Fit the following for each diameter:

11.5 mm - 13.5 mm	Small rubber washer from Type 1 adapter
13.5 mm - 17 mm	Large rubber washer from Type 1 adapter
17 mm - 21 mm	Type 2 adapter (pre-mounted)
21 mm - 25 mm	Type 3 adapter

When using a type 1 adapter, dismantle the nut (9), the earthing contact points (8), and the rubber attachment (7) from the spacer (6) and the tube ring (5) (See Chap. 1 Unit construction overview). Install the parts of the type 1 adapter in the following order: Spacer, rubber attachment, earthing contact points and the nut with the toothed side facing the rubber attachment.

When using a type 2 adapter, you do not need to make any changes.

When using a type 3 adapter, dismantle as for type 1; then install the type 3 adapter on the tube ring first, followed by the spacer, the rubber attachment gasket, the earthing contact points and the nut with the toothed side facing the rubber attachment. You can also see the order of the adapter parts from the unit construction overview (chapter 1).

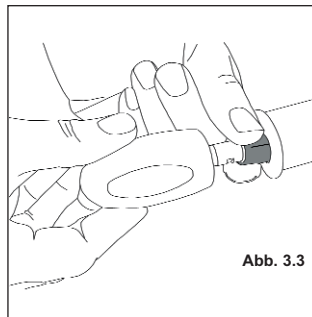
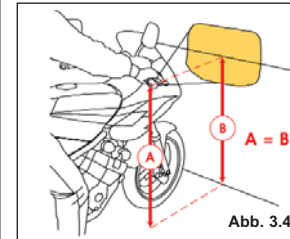


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### 3.4 ASSEMBLY OF THE TURN INDICATOR

**WARNING!** Before inserting the turn indicator into the end of the handlebar, be sure to check whether the multi-functional part (4) is firmly screwed onto the turn indicator housing. If this is loose, the multi-functional part must be tightened using a small spanner with a 10 mm width. A loose screw connection between the multi-functional part and the turn indicator housing can lead to the loss of the turn indicator housing while driving and to an accident.



To connect the turn indicator to the vehicle, it is necessary to draw the red cable of the BL 1000 through the handlebar. You may also need to drill a hole approx. 3 mm in diameter in the lower surface of the handlebar on either side directly behind the handlebar fittings, or a hole approx. 4 mm in diameter between the two handlebar clamps.

Deburr the drill hole so that no sharp edges remain. Then insert a wire (such as a binding wire) from the bored hole to the respective handlebar end, and pull the positive cable through the handlebar in this way. Make sure that you lay the cables with sufficient play, in order to ensure that the cable does not become strained through contact with the handlebar.

Then insert the turn indicator carefully through the centre of the rubber attachment into the end of the handlebar (Fig. 3.3). Hold the rubber attachment and rotate the turn indicator housing in a clockwise direction until the rubber attachment is inserted so far that it lies flush over the entire width of the handlebar tube.

Then insert the turn indicator into the handlebar to the level of the turn indicator housing. Then rotate the turn indicator housing with your hand gently in a clockwise direction, until a substantial amount of energy is required to release this. If it does not tighten after several revolutions, pull the turn indicator out again, rotate it counter clockwise gently until the cable is no longer twisted, and repeat the attachment procedure described above. Then rotate the turn indicator in a clockwise direction so far that the lens marked "F" (front/forward) faces forward and the lens marked "R" (Rear/Reverse) faces to the rear.

Before connecting the power, it is advisable to disconnect the battery of your motorcycle.

To connect the two BL 1000 units to the turn indicator mechanism of your vehicle, you must attach the red cable of each unit to the positive terminal of the appropriate forward turn indicator. A connection to the earth cable of the turn indicators is not usually necessary, since the turn indicator receives the necessary earthing connection point through the handlebar. This earthing connection may not be present in rubber-encased handlebars; in this case you should connect the earthing point to the handlebar by fastening an item such as an additional cable to both the handlebar and to the fork bridge, in order to bridge the non-conductive rubber casing. Re-connect the battery of the motorcycle.

### 3.5 OPERATING TEST AND ADJUSTMENTS

**WARNING!** Adjustment of the BL 1000 is necessary for traffic safety and component approval. An unaligned turn indicator can be easily overlooked by other road users and can lead to accidents.

When both turn indicators are installed, test their normal operation. If one turn indicator does not function normally, check that it is attached to the positive cable of the turn indicator mechanism, and whether the bulb is defective (See Chap. 4). If neither of them function normally, check whether the turn indicators are connected to the vehicle body through the handlebar. If required, install a connection lead (See Chap. 3.4).

To adjust the turn indicators, place the motorcycle on a flat surface with the front wheel facing directly ahead in such a way that when placed facing a wall, the vehicle's longitudinal axis and the wall form a right angle (Fig. 3.4). Hold the motorcycle in an accurate upright position without placing any load on it. Do not place it on the main or side stand; this may cause incorrect adjustments. Now measure (ask another person to do this) the distance A from the centre of the turn indicator lens to the ground. Place a clearly visible marking at the same height on the wall. Rotate each turn indicator housing in such a way that the marking on the wall is in the centre of the illuminated field in each case. Check again whether the lens with the letter F and the ECE test mark face forward on each turn indicator. If this is the case, the turn indicators are accurately aligned.

Finally, dismantle the original front turn indicators.