



installation guide

breaker-contact less ignition system BMW R45 bis R100 /5 und /7 part-no.: **1014006**

Dear customer,

you have purchased a high quality product from Ulis Motorradladen GmbH. Please follow the installation instructions carefully. Your Ulis Motorradladen GmbH team wishes you a safe journey at all times and lots of fun driving

Scope of delivery:

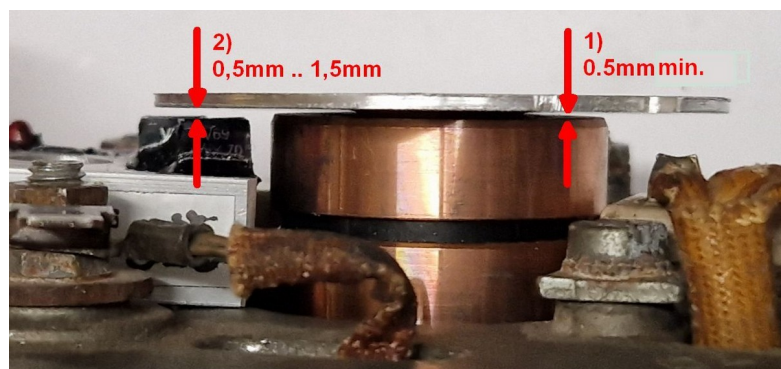
1 pc. ignition module, 1 pc. sensor disc, 1 pc. T-head bolt M6, 1 pc. flat nut M6, 3 pcs. washer M8 x Ø14 x 0,5mm,
2 pcs. washer M8 x Ø14 x 1,5mm, 1 pc. washer M6 x Ø12 x 0,8mm, 1 pc. installation guide.

Installation:

- Disconnect the battery before installing! Before reconnecting the battery, carefully check all connections! Only reconnect the battery once the sensor disk has been installed!
- disconnect or remove old ignition system.
- The new ignition is attached to a housing groove in the alternator using the included hammer head screw. To do this, the screw head is pushed through the groove and then turned 90° clockwise until the screw head is perpendicular to the groove. Attention: carefully insert the screw head into the groove and turn it so that the winding head of the alternator stator will not be damaged.
- Place the ignition module on the screw shaft and tighten it hand-tight with the flat nut + M6 washer

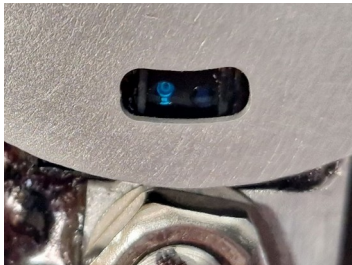
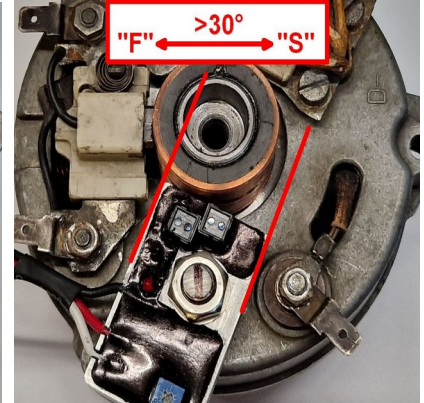
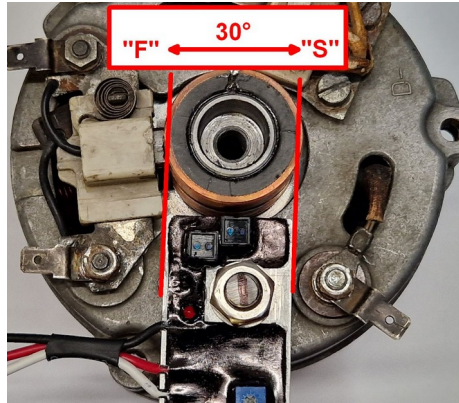
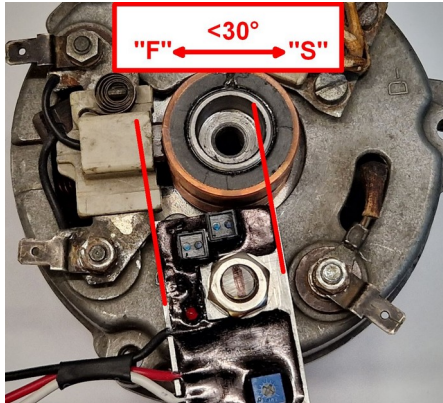


- only when new assembling the alternator rotor: pull the rotor firmly into the cone shaft by tightening the front rotor screw very tightly.
- Remove the front rotor screw and put on the encoder disk instead.
- Attention: the sensor disc must not touch the collector ring of the alternator! There should be a gap of at least 0.5mm between the sensor disk and the face of the alternator rotor: "1)". If the gap is smaller, line the sensor disk with washer(s).
- Measure the gap between the top edge of the reflex sensor ignition module and the bottom of the sensor disk. The gap should be 0.5mm to 1.5mm: "2)". If the gap is too small: Place M8 shim washer(s) under the encoder disc. If the gap is too large: place washer(s) under the ignition module.





- Screw the encoder disk hand-tight with the M8 central screw.
- Align the ignition module so that the central axis points to the center of the alternator and at the same time the two reflex sensors are in the middle of the two recesses in the sensor disk. If the angle is offset, the early ignition point "F" would shift:



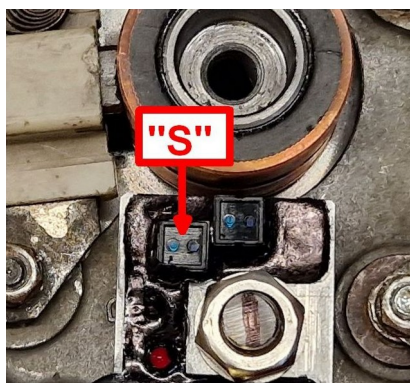
- fix the ignition module: tighten the nut on the hammer head screw.
- connect the ignition module electrically: red cable: "+U_b / ignition plus" (=terminal 15), white cable: input of the ignition coil (second connection of the ignition coil to "+"). The ground connection is made via the housing.

Adjustment:

- Turn the crankshaft exactly into position "S" (=retard ignition). If necessary, unscrew spark plugs before.
- Connect the battery and switch on the ignition voltage. Attention: Only switch on the ignition when the sender disc is installed! Otherwise the ignition module or ignition coil could overheat!

Attention: strong light can disrupt the function of the reflex sensors -> shade if necessary.

- Slowly turn the encoder disc clockwise until just to the point at which the red LED begins to light up. The approximate position is reached when the "S" marking on the encoder disk points to the center of this reflex sensor:



Note: while the LED is lit, sparks are constantly generated 4x per second.

- Hold the sensor disc in this position while tightening the alternator rotor screw. The screw should be glued in with medium-strength screw locking, with a moderate tightening torque (approx. 10Nm) so as not to deform the encoder disk.
- Check the setting by slightly turning the flywheel: when turning clockwise, the LED should start to light up exactly at the "S" marking.
- Fine adjustment can also be done by moving the ignition module sideways. Make sure that the distance to the central axis does not change so that the reflex sensors continue to lie exactly in the recess radii of the sensor disk.

Advice: with the engine running, position "S" (= retarded ignition) can be checked at approx. 1000rpm and position "F" (= advanced ignition) at approx. 3000rpm. The maximum deviation should not be greater than 4°

Test ignition cables and spark plugs:

- The red LED lights up when the flywheel is slightly above "S" in the direction of "TDC". At this position, when switched on ignition, ignition sparks will be generated 4x per second, which allows wiring and spark plugs to be checked.