



## installation guide

### electronic revolution counter for engines with battery ignition and one ignition pulse per crankshaft revolution part-no.: **9603002**

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 piece tachometer with mounting bracket and 1.2m cable, 1 piece installation guide

#### Functional description and area of application:

the purchased device is an electronic tachometer with analog display for 6V or 12V electrical systems.

The input signal is picked up at the ignition coil, the period is measured and evaluated, and displayed in analog form via a motor that drives the pointer.

In order to display the speed correctly, the ignition system must generate exactly one ignition pulse for each crankshaft revolution.

This is the case with many BMW vintage motorcycles, regardless of whether they are single-cylinder or twin-cylinder.

**Warning: this tachometer is not suitable for the BMW R27**, since an ignition pulse is only generated every second rotation of the crankshaft.

The circuit is optimized for operation with battery ignitions, regardless of whether it is a contact ignition or electronic ignition.

During operation, the scale is illuminated in warm white approx. 3000K.

After the voltage supply is applied, the drive motor references by moving the pointer against the lower stop. After switching off the supply voltage, the device continues to be supplied with power for a few seconds via an internal energy store, so that the pointer can move back to the zero position without current.

#### Technical data and operating conditions:

- Speed range: 400 rpm to 8000 rpm

- permissible operating voltage range: 5.5VDC to 14.8VDC

**Warning: above approx. 15V the device will be destroyed**

- Accuracy: better than +/- 1 tick mark (= +/- 200rpm)

- Current consumption: approx. 100mA. When switched on, the current consumption is up to 2.5A for a short time

#### Electrical connection:

- Disconnect the battery before installing! Before reconnecting the battery, check the connections carefully!

- the connection is made via 3 wires: "ignition positive voltage" (red), "earth" (black), "ignition signal" (yellow).

The yellow wire must be connected to the ignition coil input, where also the breaker contact, or the electronic ignition module is connected.

With battery ignitions, the other connection of the ignition coil is "ignition positive voltage" - the red cable can be here connected.

The black wire is connected to vehicle chassis.

- the 3 wires are protected against incorrect connection, e.g. reverse polarity, up to 15V.



Signal name	Cable color	Terminal name	Terminal name at ignition coil
Ignition positive voltage	red	Terminal 15	„+“
Ignition signal	yellow	Terminal 1	„-“
Chassis	black	Terminal 31	

