

Mounting instruction EEDM Ø48mm and (LED-) EEDM Ø80mm

1. Safety Instructions

Existing cable ducts should be used for electrical cable installation. Never do lay cables parallel to ignition cables or other cables leading to large power consumers. This can cause false revolution signals.

The cables should be fixed with cable ties or adhesive tape.

Please note when laying the wires:

- don't lay the cable over moving parts
- protect cables at feed-throughs (rubber grommets or similar)
- don't stress the cable by pressure, tension or shear
- strip the cable with stripping pliers without damaging the stranded wire
- do crimp connections only by means of crimping pliers
- exposed and unused wires must be insulated (danger of short circuit)

Check all cables and connection for short circuits after electrical work.

Incorrect connections can cause short circuits. Short circuits in the vehicle electrical system can cause cable fires, battery explosions and damage to other electrical systems.

Use suitable tools for installing the device. Please observe the safety instructions of the tool manufacturer.

2. Content

- rev-counter (EEDM)
- nuts and washer
- cable with plug 5-pin (only at Ø48mm)

3. Device description

The electronic rev counter (EEDM) is suitable for positive (e.g. transistorized ignition systems) and negative ignition pulses (e.g. CDI ignition systems) as well as for separate connection to the ignition electronics. The transmission ratio is switchable. Thus the rev counter can be used universally. Prerequisite is a 12 V vehicle electrical system with negative pole of the battery connected to vehicle ground.

The revolution input signal can be taken from:

- ignition coil (terminal 1 = minus pole)
- ignition electronics (ignition box with separate rev-counter connection)

Depending on the number of pulses per engine revolution there are different transmission ratios which can be set:

- i=1:2 (1 impulse per 2 motor revolutions) – e.g. Harley Davidson single fire
- i=1:1 (1 impulse per 1 motor revolution) – most common ratio
- i=2:1 (2 impulse per 1 motor revolution) – less usual, often at older engines or two stroke engines
- i=3:1 (3 impulse per 1 motor revolution)

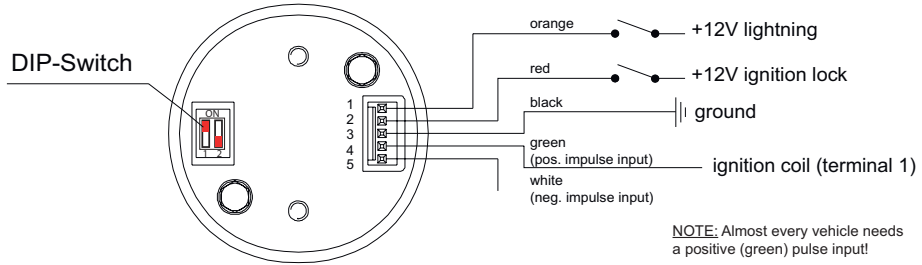
The ratio can be changed with the DIP-Switch at the botton. The ignition must be turn off.

The gauge can be installed inside a dashboard or with special mounting kits attached to the handlebar. Please mount vibration damped.

4. Electrical connection

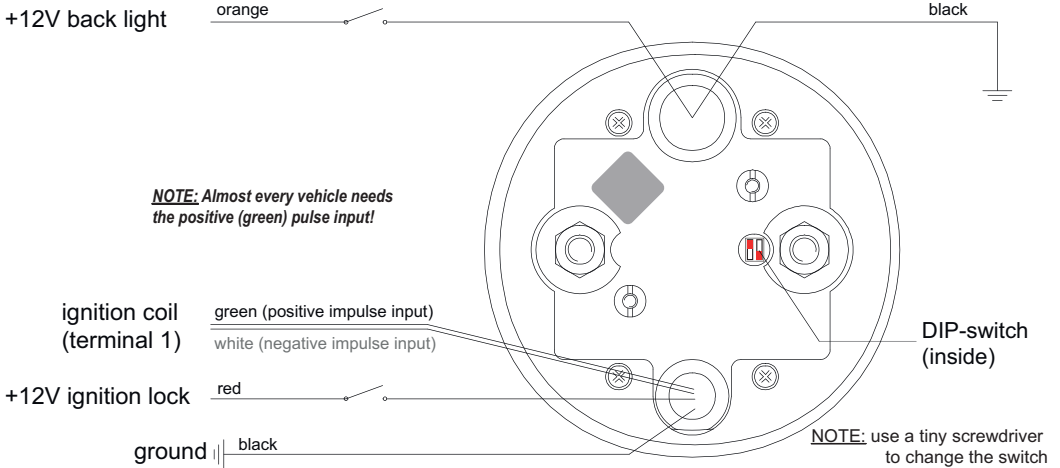
Before starting with the electric connection please disconnect the battery! Please note the previous safety instructions!

Ø48mm:



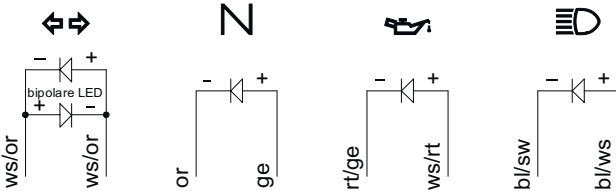
ATTENTION: You only need one impulse input! (green or white wire)
→ *The unused wire must be laid isolated blind!*

Ø80mm:



ATTENTION: You only need one impulse input! (green or white wire)
→ *The unused wire must be laid isolated blind!*

Connection of control lamps, if present (type: LED-EEDM80)



5. How to change the ratio (impulses per crankshaft revolution)

Please set the DIP switch with a small screwdriver (Ø80mm: through the hole in the housing bottom)

switch positions:



factory set is $i=1:1$

ratio: $i=1:2$ $i=1:1$ $i=2:1$ $i=3:1$

Procedure, if it is not known whether the ignition supplies positive or negative impulses:

1. DIP switch in position $i=1:1$ (factory set)
 2. If ignition electronics (ignition box with separate tachometer connection) are installed then connect the green wire to the revolution output of your vehicle.
Otherwise connect the green wire to terminal 1 (negative terminal) of one ignition coil.
 3. Reconnect the battery. When you switch on the ignition the rev counter will do a function check (pointer deflection)
 4. Start the engine!
 5. After starting the engine the pointer must move. It should show some revolutions. So if this works please isolate the white wire and continue with section 6.
- If the pointer doesn't move and show idle revolutions then turn of the engine and disconnect the batterie for safety.
 - Disconnect the green wire (Pin 4) and connect the white wire (Pin 5) with the revolution output or the terminal 1 of your ignition coil. Isolate the green wire and, after reconnecting the battery, please check the pointer movement in idle.

6. Adjusting the tachometer to the correct revolutions

Please check the shown idle revolutions for logical values.

→ The shown revolution is correct: you're done.

→ The shown revolution is false then please do the following steps for manual adjusting:

!!! The ratio must be made with ignition switched off !!!!

- Tacho shows half of the correct revolutions → switch DIP-switch from 1:1 to 1:2
- Tacho shows double of the correct revolutions → switch DIP-switch from 1:1 to 2:1
- Tacho shows driple of the correct revolutions → switch DIP-switch from 1:1 to 3:1

The red DIP-Switch is placed at the back of the tacho!

MMB Instrumente
SKS Holding GmbH
Wiesenstr. 2

D-09380 Thalheim

+49 3721 2698 - 967 +49 3721 2698 - 968

+49 176 4666 1018 +49 176 4666 1019

info@mmb-instrumente.de

www.mmb-instrumente.de




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8. Technical data

	Ø48mm	Ø80mm
housing depth	45mm	60mm
housing depth over all diameter frontring	ca. 56mm	ca. 85mm
diameter housing	52.5mm	85mm
hole through dashboard	48mm	80mm
weight	48.5mm...49mm	80.5...81mm
wires	Ca. 115g	ca. 235g
illumination	plug (5-pole)	permanent wires
nominal voltage	intern SMD-LEDs	bulb type T10
operating voltage	+12VDC (ground to battery)	
electr. consumption	10.8...15V	
operating temperature	max. 150mA (without bulb ca. 70mA)	
impulses	-20...+85°C	
	positive or negative impulse inputs	
	compatible with CDI/ECU terminal 1 of ignition coil	

9. Disposal notice & disclaimer

The symbol of the crossed-out bin  means that this electrical appliance shouldn't be thrown in household waste. Free collection points for waste of electrical and electronic equipment are available in your area, as well as other collection points for the reuse of the equipment.

You can obtain the addresses from your city or local government. If the old electrical or electronic equipment contains personal data, you are responsible for deleting it yourself before returning it.

You can find further information at www.elektrogesetz.de.

MMB gauges are manufactured with great care in Germany and are 100% tested. The instruments shouldn't be opened. No liability is accepted for damage caused by improper use or incorrect installation.