

Mounting instructions engine condition gauges Ø48 and 60 mm

Dear Customer,
you made a good selection buying this new **MMB** device.
The product should be installed by a person specialising in
the installation of such devices.

1. Safety Instructions

To install the electric cables, use existing cable ducts and looms, but do not run the cables parallel to ignition cables or parallel to cables leading to powerful consumers.

Secure the cables with cable binders or adhesive tape.

When you install the electric cables please also note:

- Do not run the cables over moving parts
- If cables have to be run through drilled holes, protect the cables using grommets or rubber bushings etc.
- Ensure that the cables are not exposed to any tensile, compressive or shear forces.
- Use only a cable stripper to strip the cables. Adjust the cable stripper so that the individual strands are not damaged or cut off.
- New connections should be made only by using commercial crimp connectors.
- Crimped connections should be made only by using a cable crimping pliers.
- Insulate exposed leads in such a way that short circuits cannot occur.

Caution: Risk of short circuit through faulty junctions or damaged cables.

Check all cables and connections for short circuits after you have finished the installation. **Short circuits in the electrical system can cause cable fires, battery explosions and damages to other electronic systems. Incorrect connections can lead to short circuits.**

Use suitable tools for building-in the gauges and note the safety instructions of the tool manufacturers.

2. Content

- 1 Indicator gauge
- 1 mounting bracket + 2 knurled nuts (for installation gauges)
- 1 external earth connection with Ø 60 mm
- 3 flat type connections 6.3 (2 pieces for voltmeter)

3. Technical Data

- Instrument height: approx. 50 mm
- Weight: approx. 100g ... 150g (depending on the type)
- Operating voltage: 12V
- max. current consumption: approx. 40mA (Voltmeter approx. 100mA)
- Illuminating lamp description: Bulb J 12V/2W DIN 72601 with Ba7s base

4. Electric connections

Before starting with the electric connections clamp the battery to disconnect it. Please note the safety instructions of item 1.

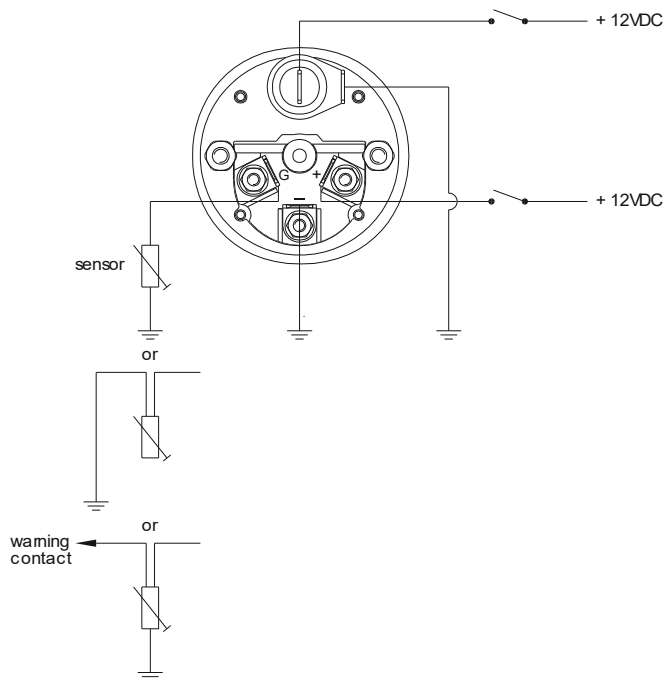
Connect the individual leads as shown in the illustration. Take also account of the mounting instructions of your sensor.

During the function of the voltmeter, falls off the connection to the sensor.

The plug connections of the device are flat type plug sockets of 6.3. Please use only the inserted isolated flat type sockets. Use wire with a cross section of approx. 0.5 mm² to 1.0 mm² with PVC-insulation for the connecting cable. The illumination lamp is of bipolar design and can be connected according to the vehicle's connection possibilities. An earth connection is already mounted. (except the water level gauge).

Before start up connect the battery to the vehicle.

Wiring Diagram:



5. Mounting of the device

The user has to provide a recess of Ø 48.5 + 0.5 mm for 48mm and 60,5 + 0,5mm for 60 mm gauges in the instrument panel.

The mounting bracket is for a clamp height of approx. 0.5 – 2 mm. If you need a bigger clamp height, remove the two plastic caps of the mounting bracket and shorten both sides by the amount you need and remove the burr at the edges. The bracket has to be mounted by two knurled nuts, which should be tightened only with the power of your fingers.

The gauges should be mounted in a vibration-damped way. The plastic cap protects the backside and has to be put back in place after electric installation.

6. Recycling notice

Please contact an authorised recycling company to dispose your wasted or inoperable devices properly. Our products are manufactured with utmost care and they are in accordance with the relevant DIN-Standards (German Industrial Standards).

Pulsotronic GmbH & Co. KG is not liable for damages arising from improper handling. Illuminating lamps are wearing parts and are excluded from the warranty.

In case of an accident the instrument's glass may shatter if broken. To avoid injuries, please wear helmet, gloves, protective glasses etc. when driving with your motorcycle.

Your team at **MMB**

