

**Ultra-compact
Fast, professional**

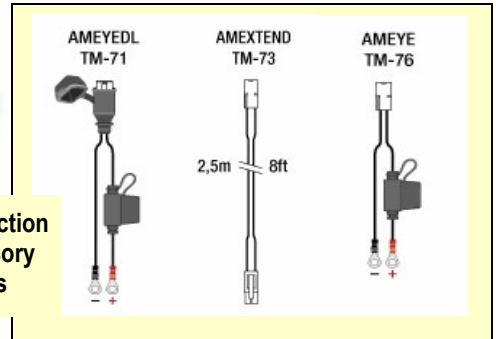


TestMate *mini*

Fast, accurate & professional on-vehicle testing of 12V batteries & charging systems.

Weak automotive batteries and charging system anomalies are identified in seconds.

Test without disassembly : Fast, clean, easy



Connection accessory options

Connections and mounting accessories:- The compact yet professional **TestMate mini** is delivered with a detachable & replaceable set of battery clips, as well as 2 cable straps and some adhesive velcro® strips for attaching the **TestMate mini** to a surface of your choice. 3 screws are included in the packaging for mounting the removable backplate onto the main enclosure. Do this immediately unless intending to insert the cable straps as shown on the packaging. If the battery clips become worn or corroded, these can be replaced by TecMate part number TM-74. Optional connection accessories are shown above.

Using the **TestMate mini** to test the battery and the charging system.

Step 1. Connect the **TestMate mini**.

In case of wrong connections, the **TestMate mini** circuit is electronically protected.

Step 2. Battery voltage check : with the **TestMate mini** correctly connected and ignition switch, vehicle lights and power consuming accessories switched off, the centre green LED (battery icon with V) should light. This indicates a battery voltage of 12,5V or more, which is normal for a charged battery. A reading of 12V or less indicates a discharged or even a defective battery. Such batteries will probably show a weak cranking voltage during the cranking test (step 3).

Step 3. Test the battery under cranking load : Switch off any vehicle lights or audio systems. Turn the ignition key (or press the starter button) to crank the engine while observing the **TestMate mini** display. The voltage will drop sharply for an instant, then it should settle slightly higher until the engine starts.

GOOD – Voltage initially drops into yellow / green zone, settles in green zone.

ACCEPTABLE – Voltage initially drops into red / yellow zone, settles in yellow zone.

POOR – Voltage remains in red zone.

If a charged battery does not test “GOOD”, this is normally indicative of a worn or defective battery, but if the engine has been modified to enhance performance and the battery was not upgraded accordingly it may well be at the limit of its capability.

Step 4. Test the charging system alternator and voltage regulator : Once the engine has started during the cranking load test in step 3, the vehicle's charging system will automatically come into circuit with the battery. The output voltage settings of voltage regulators are designed to deliver the appropriate charging voltages for the type of battery with which the vehicle was factory-equipped. The appropriate voltage at normal engine idling speed (800rpm or higher) should be 14V to 14,5V* (see NOTES below). Check your vehicle's technical manual for the correct charging system voltage setting. If the charging voltage displayed is not as specified, have the system professionally checked. An incorrect charging voltage setting will lead to premature battery failure.

*NOTES: ♦ Some vehicles may require engine speeds of 2000 rpm or higher to deliver sufficient charge voltage.

- ♦ On some models of motorcycles / ATVs the charging systems are low power. It may take a few minutes (following cranking) before the appropriate voltage is reached.
- ♦ A voltage of up to 14,8V can be expected on a stationary vehicle with only the basic electrical components powered up (e.g. headlight(s), ignition system, fuel injection ECM). TIP: Switch on additional powered accessories that may be used during normal vehicle use and check that the voltage does not drop below 14V at 2000 rpm / normal engine operating speeds. If it does, the battery may not receive sufficient charge and this will lead to starting problems and premature battery failure.
- ♦ On most motorcycles, ATVs & watercraft & on older trucks & cars, the battery forms part of the regulatory circuit. A battery in poor condition (with increased internal resistance) may cause an abnormally high charge voltage.
- ♦ Modern cars & trucks may be fitted with temperature compensated voltage regulators that vary charge voltage according to ambient temperature (i.e. higher in winter, lower in summer).

