CAUTION

This appliance is not intended for use by persons (including children) with reduced physical, sensory and mental capabilities, or lack of experience or knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.

For repair or service please contact your place of purchase.
Note: Under no circumstances should you attempt to repair the device yourself or via a non-authorised Altronics service centre, as this will invalidate the warranty! During the warranty period, we undertake to repair or replace your product at no charge if found to be defective due to a manufacturing fault. The warranty excludes damage by misuse, neglect, shipping accident, incorrect installation or no fault found.

NOT FIELD SERVICEABLE.
Distributed by Altronic Distributors Pty. Ltd. Perth. Western Australia.
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MICRON® Q 3215 Handeld Digital Automotive Battery Tester

Q 3215 HANDHELD DIGITAL SLA SEALED LEAD ACID BATTERY TESTER

Operating Instructions

Manufactured for Altronic Distributors Pty Ltd

INTRODUCTION

Congratulations on purchasing this product! This digital Sealed Lead Acid (SLA) battery tester with protective holster has been designed with overload protection and will safely, easily, and accurately test the charge for a typical 12-volt lead-acid battery. It is suitable for use by the professional electrician or hobbyist. The gauge is equipped with a digital display to quickly detect voltage changes, and stable clamps to handle high current loads.

The BCI (Battery Council International) protocol promotes the use of load testing for battery test accuracy. This tester not only meets the BCI standard, it also promotes accuracy and speed for today's technician, as this microprocessor-based tester uses Digital Voltage-drop Analysis Technology to test the battery.

Intended Use of the SLA Battery Tester includes:
Determination of the battery status for a regular 12-Volt SLA Battery as a power supply, from 5 Ah to a maximum of 80AH with a full load.

Read the operating instructions before use.

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SPECIFICATIONS

Display: .....3 digit LED display up to 999, 14 mm resolution
Test current: .....approximately 15A ± 5 % at 13.2 V
Voltage measurement range: .....approximately 7.5 Vd.c. to 16 Vd.c.
Voltage measurement tolerance: ..... ±(1% of rdg. +0.1V)
Running voltage range: .....approximately 7.5 Vd.c. to 16 Vd.c.
Charge (test) time: .....10 seconds average
Overload Protection: .....Provided with resettable fuse and protected circuit.
The resettable fuse takes at least two minutes to restore after the load is removed.
Overvoltage switch off: ..... ~ 17 Vd.c.
Measuring accuracy: ..... ~ 1 second
Operating temperature: ..... 0°C to + 55°C
Storage temperature: ..... -20°C to + 70°C
Relative humidity: ..... Max. 80%, non-condensing
Weight: .....approximately 0.35 kg without the wire clips
Dimensions (L X W X H): ..... ~ 155 X 80 X 45mm including the protective holster
A pair of connecting wire clips is included

SAFETY INSTRUCTIONS

Neither the manufacturer nor supplier claims any liability for damage to property or physical injury caused by the improper use of the product, or failure to observe the safety instructions. The warranty will become void in such cases.

This device is constructed and tested to fulfill DIN 57 411/ Type 1/VDE 0411 Type 1 protection guidelines for electronic gauges. To guarantee a safe operation, the user must observe the safety instructions, cautions and warnings contained in this manual.

Solvent vapors and hydrogen gas that may be present during the charging of SLA batteries can be hazardous. Avoid inhaling such vapours.

If the battery tester shows signs of visible damage, and/or does not work after a period of extended storage, then do not use it until it has been certified by an authorised technician.

Dispose the unusable, irreparable SLA battery tester safely and responsibly in accordance with local environmental laws.

HOW TO USE THE BATTERY TESTER

A. Setting the Ah value of the battery

1. Prior to measuring, the rating value (Ah) of the battery has to be set on the measuring device. Normally, this value is stated on the battery. If this value is not stated, it can be requested from the dealer/manufacturer.
2. Connect the black pole clips to the minus '–', and the red pole clips to the plus '+' pole of the battery to be checked.
3. By pressing the button SET Ah, the value can be set. This is preset to 50 Ah and each press of the button changes it.

NOTE: This tester offers varied battery capacities for selection before testing with the below values:
5Ah, 10Ah, 20Ah, 30Ah, 40 Ah, 50Ah, 60Ah, 70Ah, 80Ah.

B. Battery Endurance Testing

This device detects whether the battery has enough capacity to run it's load, even under harsh climatic conditions. A load of approximately 15 Amps is applied to the battery during this measurement. The battery is functioning normally if the battery voltage is relatively constant at >12 V while taking the measurement (it takes about 10 seconds to complete the test). The battery is either defective or over discharged if the voltage level collapses within a very short period of time. Proceed as follows to take the measurement:

1. Disconnect all the external power supply and switch off all connected devices.
2. Insert the terminal of red test clip to the positive jack '+', and terminal of black test clip to the negative jack '-'. Then connect the clips to the battery poles and set the current value. For an accurate reading the battrery must be tested when it is cold. That is do not test the battery after use or immediately after charging. The internal electrolyte should be at ambient temperature.
3. A connection with the correct polarity displays the idle voltage of the battery. If the battery voltage is below 12V, charge the battery before performing an endurance test. If a value of <12.0V is displayed after recharging, the battery is already defective. If nothing displays on the screen, there may be a poor battery connection or the battery voltage is below 7.5V. Check the battery connections and try again.
4. Briefly press the LOAD button once. The relay picks up and the endurance testing begins. '-L-' is displayed when the measuring process starts with a battery voltage < 7.5V. The battery should be recharged and the test repeated. (First let the battery cool down after charging) After approximately 10 seconds the Tester ends the measuring process. At the same time, the battery status is displayed via three LED's (Green, Yellow or Red). If '-L-' is shown on the display, the battery voltage must have dropped below 7.5 V during the test. If a buzzer signal is heard, it means the battery probably needs to be replaced.
5. When the LED light returns to the condition it was in before load testing, it means load testing has ended.

IMPORTANT NOTE: This device must ONLY be used ONCE IN A 5 MINUTE PERIOD. Whilst under "Test" intense heat is generated internally due to the high load applied to the battery. More frequent use than this will create extreme heat which will eventually cause failure.

Please observe the following table, as it shows the different battery conditions.

LED Display	Battery status display:
Green LED illuminated	The battery has enough charge.
Yellow LED illuminated	The battery does not have enough charge. This battery either needs charging or is defective.
Red LED illuminated	The battery is flat and possibly defective and should be replaced.

WARNING THIS DEVICE CAN ONLY BE USED ONCE PER 5 MINUTE PERIOD. Whilst under test, intense heat is generated internally due to the high load applied to the battery. Using the tester more than once every 5 minutes creates extreme heat which will eventually cause unit failure.

Additional information about Sealed Lead Acid (SLA) batteries:

- The starting power (capacity) of a fully-charged battery drops to under 70% at minus temperatures.
- Most damage to lead batteries comes from overcharging (using low quality chargers).
- 'Warm' batteries reach full charge at a faster rate than cold batteries.
- Every battery naturally loses its charge over time.
- A battery that has remained uncharged over a long time period will 'sulphurise' very easily (i.e. sulfur deposits on the plates) and it will lose charge capacity as a result.
- A charged fault-free battery has a no-load voltage of 12.5 to12.7 V or more. A defective or uncharged battery has a no load voltage of 10.5 V or less.

Errors and Warning Messages:

Er 1 Displays when either the battery clips have not made good contact, the charge relay or tester is defective, or the internal resettable fuse has been overloaded. Firstly, check the battery clip contacts. If these are ok, wait at least 2 minutes in case the resettable fuse needs to re-set. If the unit still displays Er 1, have the unit repaired by an authorised technician.

Er 2 Displays when the internal charging relay has failed. Disconnect the battery tester from the battery to prevent an overload. This battery tester may no longer be used for measurements. Have the unit repaired by an authorised technician.

Beeper Sounds: When overloaded, the resettable fuse can cut off the circuit and an incorrect reading may show on the display. After the load has been removed for at least 2 minutes, the resettable Fuse restores.

Maintenance:

The lead battery tester is maintenance-free except for the need for occasional cleaning of the clamps and unit cover. The device case must not be opened under any circumstances, except by a qualified service technician. If the battery tester is nevertheless opened or modified, the warranty claim expires. Use a clean, lint-free, static-free dry cleaning cloth to clean the device.

Caution! Do not use any carbon-containing cleaning agents, gasoline, alcohol or similar for cleaning the device. These will affect the gauge casing, and their fumes are noxious and potentially explosive. Also do not use any sharp tools, screwdrivers, metal brushes etc. for cleaning.