



ACT D4000
Universal Battery Tester



Operating Instructions

STOP!
READ THESE
INSTRUCTIONS
BEFORE OPERATING

WARNING: THE ACT D4000 UNIVERSAL BATTERY TESTER IS DESIGNED TO TEST 2.4V – 12VOLT RECHARGEABLE BATTERIES WITH AN AMPERE-HOUR CAPACITY ABOVE 4Ah. DAMAGE OR INJURY MAY RESULT IF CONNECTED TO ANY OTHER BATTERY OR VOLTAGE SOURCE. THE BATTERY MUST BE ISOLATED FROM THE CHARGING SUPPLY BEFORE TESTING. IF THE BATTERY TESTER IS USED IN A MANNER NOT SPECIFIED BY THE MANUFACTURER, THE PROTECTION PROVIDED BY THE EQUIPMENT MAY BE IMPAIRED.

DESCRIPTION

The ACT D4000 Universal Battery Tester is designed to significantly reduce the time taken to test rechargeable Lead-acid, Lithium-ion, Nickel-cadmium and Nickel Metal hydride batteries commonly used in stand-alone emergency lighting luminaires, security and fire alarm panels, battery powered tools, bicycles and toys etc. It contains a microprocessor-controlled circuit, which is powered by the battery under test. Once connected, it automatically detects the battery voltage then applies a timed load to quickly and efficiently test the battery. A single PASS test will draw 1Ah (Ampere-hour) out of the battery. When repeat testing the same battery, wait 5 minutes for the battery to cool down. Test times will vary between 7 – 10 minutes according to battery voltage. After a successful single test, sufficient capacity is left in the battery to aid recharge recovery and power emergency lighting for at least 30 minutes. A defective battery will normally be identified by a red FAIL LED within 1 minute. A low capacity battery will normally be identified within 3 minutes. This makes it possible to quickly identify a good battery without having to wait for the full 1Ah discharge test to be completed.

FEATURES

- Quick and easy to use with no switches or complicated settings
- Simulates a 1 hour and full battery duration test in minutes by discharging 1Ah from the battery (single test)
- Identifies flat batteries in seconds
- Tests 2.4v – 12v batteries commonly used in stand-alone emergency lighting luminaires, security and fire alarm panels, battery powered tools, bicycles and toys etc
- Fully automatic, simulated load tests with pass, fail LED indication
- Will identify a defective battery normally within 60 seconds
- Reverse polarity protection fuse
- 2 meter heavy duty test leads with durable clips.

TEST PROCEDURE

IMPORTANT: Only use the test leads provided with the battery tester. These are heavy-duty leads designed to carry specific current loads. If the leads become lost or become damaged, replacements can be obtained from ACT Meters Ltd or your distributor (Part No. ACT-LMTL).

WARNING: THE BATTERY MUST BE ISOLATED FROM THE CHARGING CIRCUIT BEFORE TESTING.

Securely connect the test leads and clips to the sockets and battery terminals observing correct polarity. If connected the wrong way round, a reverse polarity fuse will instantly blow. If this occurs, replace with a 10Amp quick blow blade type fuse. Spare fuses can be obtained from ACT Meters Ltd or any car accessory store.

- The battery must be fully charged before testing
- All LED's will indicate before commencing the test
- Flashing Yellow LED indicates TEST IN PROGRESS
- Latched Red LED indicates battery FAIL
- Latched Green LED indicates battery PASS
- Wait 5 minutes before repeat testing the same battery

Note: Flashing Red LED indicates OVERHEAT. Allow tester 5 minutes to cool down.
Important: Only use test leads provided. Replace polarity protection fuse with 10Amp quick blow type only.

- To simulate a 1Ah test, the battery should be tested ONCE
- Each further successful test will draw 1Ah from the battery
- After a full battery duration test, let the battery tester cool down for approx. 5 minutes.

TEST INTERRUPTION

IMPORTANT: Make sure that the clips do not become detached from the battery interrupting the test. If this happens the battery must be fully recharged before re-testing.

RECHARGE TEST (FOR EMERGENCY LIGHTING)

After testing the battery, it must be recharged for at least 15 minutes, then checked to ensure that it operates the emergency light for at least 5 minutes. On completion of all tests, attach a tested and passed label onto the battery indicating the date and signature of when the battery was tested.

FUTURE RE-CALIBRATION

The ACT D4000 battery tester is microprocessor controlled and contains no internal adjustments for re-calibration.

IMPORTANT: Accuracy is maintained by using the heavy-duty test leads supplied with the Luminaire battery tester. If these leads become worn or damaged they must be replaced by ordering Part No. ACT-LMTL. If the reverse polarity protection fuse is blown, it must be replaced with a 10Amp quick blow blade type fuse.

SPECIFICATIONS

- Input sockets: Red + Black – (4mm)
- Test leads: 2 meter long, heavy duty leads with durable clips (Part No. ACT-LMTL)
- Power Supply: Self-powered by battery under test (step-up inverter)
- Microprocessor controlled digital controller
- LED Indication: red/fail, yellow/testing, green/pass
- Acceptable batteries: 2.4V to 12.0V, (SLA LI-ION, NICAD, NIMH batteries)
- Acceptable battery capacity: greater than 4.0 Ah (Ampere-hour)
- Test times: between 7 to 10 minutes dependant on battery voltage
- Heat dissipation: between 23 to 115 watts
- Heatsink cooling with processor controlled fan
- Ambient operating temperature: -5 to 40 deg C
- Maximum heatsink temperature (safety trip point): 100 deg C
- Input protection: Reverse polarity and high voltage protection (18VDC max)
- Input Fuse: 10Amp quick blow blade type
- Enclosure: Flame retardant ABS
- Size: 167mm x 107mm x 65mm

