MIDTRONICS

Battery Management Innovation™

Total Battery Management

Digital Midtron®

6/12V Battery Conductance Tester

*Fast and Affordable Battery Screening - **On-Line***

Applications:

- **CATV/Broadband Power Networks**
- Railroad - End of Train Device
- Railway Crossing Control Cabinets
- Security System Batteries
- Emergency Lighting Batteries
- 6/12volt, 5Ah - 600Ah Stationary Batteries

Conductance Testing Technology Benefits:

Simple: One-step testing, no instrument inputs or adjustments required.

Quick: Battery voltage and conductance displayed in less than 10 seconds. Test an entire 48-volt string in less than 1 minute!

Safe: Utilizes patented conductance technology, a passive method that minimizes technician risk.

Accurate: Field test proven to +/- 2% accuracy across test range. Conductance method recognized by IEEE standard for the testing of lead-acid batteries with proven correlation to battery capacity.

Economical: Efficient and accurate battery tester priced to fit into every technician's tool kit.

Features:

- Weather resistant vinyl case protects the unit in outdoor testing conditions from weather and impact.
- Tests 6 and 12 volt batteries both on-line (under float charge) or offline.
- Consistent, repeatable on-line testing without discharging battery.
- Helps prioritize battery replacement for cost-effective power system management.
- No external power needed.
- Kit includes DuraProbe set and Protective Case.

Available Accessories:

- **Infrared Temperature Sensor** for accurately accessing the temperature impact on battery conductance.

Interface Options:

- **InCabinet test cable** installs on the battery string for simple battery testing in confined environments.
- **Clamp Set** Option for simple testing of larger post batteries.
- **Amp test connector** for interface with pre-cabled strings.
- **ETD test cable** for testing end of train device batteries.

Conductance Technology

Conductance describes the ability of a battery to conduct current. It is a measurement of the plate surface available in a battery for chemical reaction, which determines how much power the battery can supply. High relative conductance is a reliable indication of a healthy battery, while conductance declines as the battery deteriorates.

Years of laboratory and field test data have determined that battery conductance is an indicator of battery state-of-health showing a linear correlation to a battery's timed-discharge capacity test result. If conductance can be measured, discharge capacity can be predicted, giving a reliable predictor of battery end-of-life.

Other testing alternatives like voltage and specific gravity testing are not predictive. Timed discharge testing is very time-consuming and expensive, and impedance testing does not correlate directly and linearly with discharge capacity. Thus, conductance testing is a very effective and economical battery management tool.

Conductance Technology Industry Approvals and Recommendations:

IEEE Standards 1188 and 484
EPRI (Electrical Power Research Group) Guide for Testing Stationary Batteries
International Telecommunications Energy Conference, since 1992
Bellcore T1Y1 Presentation for American National Standards Institute
International Lead Zinc Research Organization
Battery Council International

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6/12V Battery Conductance Tester

Specifications:

Model Number:
DM-3200

Applications:
Tests 6V and 12V batteries (low and high voltage errors for batteries measuring out of range) Test circuitry matching the Midtronics Micro Celltron

Operating Range:
Voltage = 12 Volt batteries = 11.5V - 15.0V
6 Volt batteries = 5.7V - 7.7V
Amp Hour = approximately 5 Ah to 600 Ah, 12 Volt
Conductance = 100 - 3,200 Siemens

Test Data Storage:
Last test result (single test only) retained for review after test set powers down. Each subsequent test overwrites the prior test result

Test Results:
DC Voltage and Conductance, expressed in "Siemens"

Jars/Straps:
Test result for an individual 6-volt or 12-volt jar test only

Accuracy:
+/- 2% across test range

Reverse Polarity Protection:
Diode protected

Test cables:
Interchangeable interface (one standard #C065 DuraProbe cable set and spare probe tips provided with each tester)

Voltmeter resolution:
+/- 20 mV DC

Calibration:
Auto-calibration prior to every test; no future calibration required

Power requirements:
One 9V alkaline battery for test review

Visual Output:
STN LCD - 2 line 16 character, extended temperature

Operating Temperature range:
0° C to +40° C, 95% relative humidity, non-condensing

Storage Temperature Range:
-29° C to + 70° C, 95% relative humidity, non-condensing

Over Voltage Protection:
Fused protected to 60 VDC, four spare fuses included

Housing Material:
Sulfuric acid resistant ABS plastic (Grade T)

Carrying Case:
Acid-resistant soft vinyl case for the tester to protect each unit during storage and transportation

Infrared Temperature Sensor available independently - can be used to determine the actual battery case temperature and battery operating environment temperature

Temperature Compensation Range:
None, temperature compensation conversion card included

Dimensions:
8" x 4.25" x 2.5"
205 mm x 102 mm x 65 mm

Case Dimensions:
14" x 10.5" x 5"
750 mm x 110 mm x 65 mm

Tester Weight:
1 lb. / 500 grams

Special Features:

- Impact resistance tested
- Connection interfaces tested for durability and endurance
- No-Ox grease petroleum product resistance

QS - 9000 CERTIFIED

MIDTRONICS

Midtronics, Inc.
ISO 9001 Certified

Midtronics, b.v.
ISO 9002 Certified

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