Micro Celltron®

Battery Conductance Tester

The Micro Celltron is the ultimate tool for stationary battery management. Research proven technology and field-tested design make it a must for critical power maintenance.

Benefits:
• Quick, simple, safe & accurate operation
• Measures individual cell and overall string health and voltage
• Menu driven test sequence
• Consistent, repeatable on-line testing without discharge to batteries
• Tests 2-volt through 12-volt batteries on-line or off-line
• Stores up to 252 consecutive tests results and overall string statistics
• Provides advanced warning of potential battery failures
• Test each cell in under 10 seconds and entire string of batteries in just minutes
• Helps prioritize battery replacements for more cost-effective system management
• Tests both battery cell and intercell strap integrity
• No external power source needed
• Portable IR wireless printing and data transfer to PC laptop
• User definable battery reference number storage and fault thresholds

Accessories Available:
• Quick, simple, safe & accurate
• Infrared Printer*
• Infrared PC Data Receiver & Software
• Infrared Temperature Sensor*
• Multiple String Storage Device*
• Protective Carrying Case*
• Both Clamp and Probe Cables*
• Custom Interfaces available
• Amp Test Connector

*Included with standard CTM-300 Kit
Micro Celltron®

Model Number:
CTM-300 (Kit); CTM-100 (Tester Only)

Applications:
Tests individual lead acid cells or monoblocs (up to 12 Volts) in any common configuration

Voltage:
110 - 10,000 Mhos/Siemens,
1.0 - 15.0 Volts DC

Test Data Storage:
Up to 252 consecutive test results can be stored internally

Capacity:
Approximately 5 to 2,000 Ah
(For larger batteries - consult Midtronics)

Conductance:
100 - 10,000 Siemens

Voltmeter Resolution:
110 - 10,000 Mhos/Siemens
1.0 - 15.0 Volts DC

Test Data Storage:
Up to 252 consecutive test results can be stored internally

Accuracy:
± 2% across test range

Voltmeter Resolution:
10 mV DC

User Programmable Functions:
• Preset values for up to 31 battery types
• Low voltage alarm setting
• Low conductance warning
• Low conductance failure
• Day/date/time
(USA/international)
• Test mode
(push button/auto start)

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

Connectorized Test Cable Options:
• Dual contact clamps
• Dual contact probes
• Custom cables by quotation

Power Requirements:
One 9V high capacity/heavy duty alkaline battery

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

Storage Temperature:
-20 to 82°C

Over Voltage Protection:
Fused protection to 60 volts DC
Reversed polarity protection

Housing Material:
Sulfuric acid resistant ABS plastic

Tester Dimensions:
9” x 4” x 2.5”
230 mm x 102 mm x 65 mm

Case Dimensions:
19” x 15.5” x 5”
750 mm x 610 mm x 200 mm

Tester Weight:
1 lb / 500 gm

CTM-300 Test Kit
Shipping Weight:
9.5 lb / 4 kg

Special Features:
• Impact resistance tested
• Connection interfaces tested for durability and endurance
• No-Ox grease petroleum product resistance

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
• Bellcore T1Y1
• Presentation for American National Standards Institute
• International Lead Zinc Research Organization
• Battery Council International

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