



# 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:

- Portable IR printer included in CTM-300 test kit, test data can be printed for onsite records
- Accessory IR receiver with cable & Windows compatible software for data downloading to PC

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)

### Midtronics, Inc.

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#### 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-ofhealth 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-oflife.

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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