Franklin Electric GRID SOLUTIONS

Specialized Products COMPANY

POWER UTILITY | TELECOM | DATA CENTERS | RAIL

APPLLICATIONS

With the capability to test Valve Regulated Lead-Acid (VRLA), Vented Lead-Acid (VLA), and Nickel Cadmium (Ni-Cd) batteries, the CELLTRON Advantage is capable of measuring battery voltage down to one (1) volt as well as measuring inter-cell and terminal connection resistance.

CRITICAL POWER   **POWER UTILITIES**   **TELECOMM**   **TRANSPORTATION**

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WHAT IS CONDUCTANCE?

Conductance can *identify most battery failures before* they happen

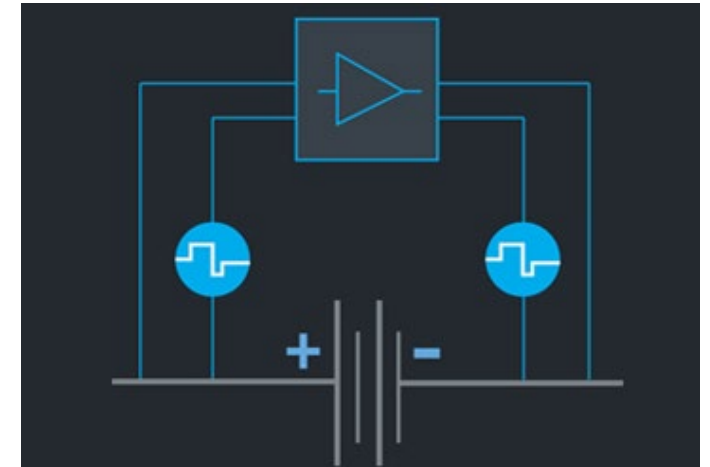Conductance can help determine the state of health of the battery

Conductance decreases as the batteries age/degrade. The ability to deliver power decreases proportionately with aging of electronic and ionic components

Conductance is a precise measure of changes within the battery that impact battery state-of-health and performance

There is an indirect correlation between Conductance and discharge/capacity tests

Years of laboratory and field-based research found that conductance correlates with battery capacity as measured in a timed discharge test. Since voltage and specific gravity testing are not predictive, timed discharge testing is very time consuming and expensive, conductance testing is a very effective and economical way of analyzing the health of your battery systems.

STATIONARY & GENERATOR START BATTERIES

VLA FLOODED

VRLA

Nickel-Cadmium

GENERATOR START

![Franklin Electric Grid Solutions logo]

CELLTRON ADVANTAGE

MOST PORTABLE BATTERY TESTER IN THE INDUSTRY

FASTEST TEST TIME COMPARED TO THE COMPETITION

A COMPLIANCE SOLUTION FOR
NERC PRC-005-6
NFPA-110
NFPA-111

A HIGHLY RATED PRODUCT FOR

TELECOM   UTILITY   INDUSTRIAL

Celltron Advantage DIGITAL

OVERVIEW

- New platform utilizes digital signal filtering – a dramatic departure from analog signal processing

- Features onboard Wi-Fi, and will connect directly to **Unite**

- Isolated board layout and fast acting relay enable substantially improved user safety and device protection

- New fan and heat sink architecture improves device cooling

- New board architecture provides superb noise immunity for UPS applications

- Test times reduced by as much as 30%

- Error previously induced by long probe and clamp cables has been eliminated

- Compatible with all existing Advantage accessories

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Advantage Digital

ACCESSORY COMPATIBILITY

Compatible with all existing accessories, the CELLTRON™ Advantage Digital will integrate seamlessly into your existing fleet of CELLTRON™ Advantage Battery Testers.

ACCESSORIES

Lighted probe and clamp sets

Quick-disconnect cable

Replacement probe tips

8-hour rechargeable battery

Battery charger

USB cable

Belt loop strap

Thermal infrared external printer

Ballistic nylon backpack

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BATTERY CHARGING

The battery pack can be recharged directly through the tester or with a desktop charger which provides a rapid charge up to 80% of rated voltage within 1 to 2.5 hours.

30" PROBE EXTENDERS

8' LONG PROBE CABLE

Flex strain relief and spread of 48" with "Y" junction, for 6 and12 Volt batteries only.

30" LIGHTED PROBE EXTENDERS

Extenders are used with the 8' long probe cable.

PORTABLE THERMAL PRINTER

Print reporting data on the spot with the rechargeable, battery powered thermal printer.

BATTERY ASSET MANAGEMENT DATABASE

UNITE™ is a sophisticated IoT database that features advanced data visualization tools for Franklin Electric handheld battery testers and battery monitoring systems. UNITE™ provides centralized data storage for an entire network of battery plants, enabling remote analysis and reporting from a centralized location.
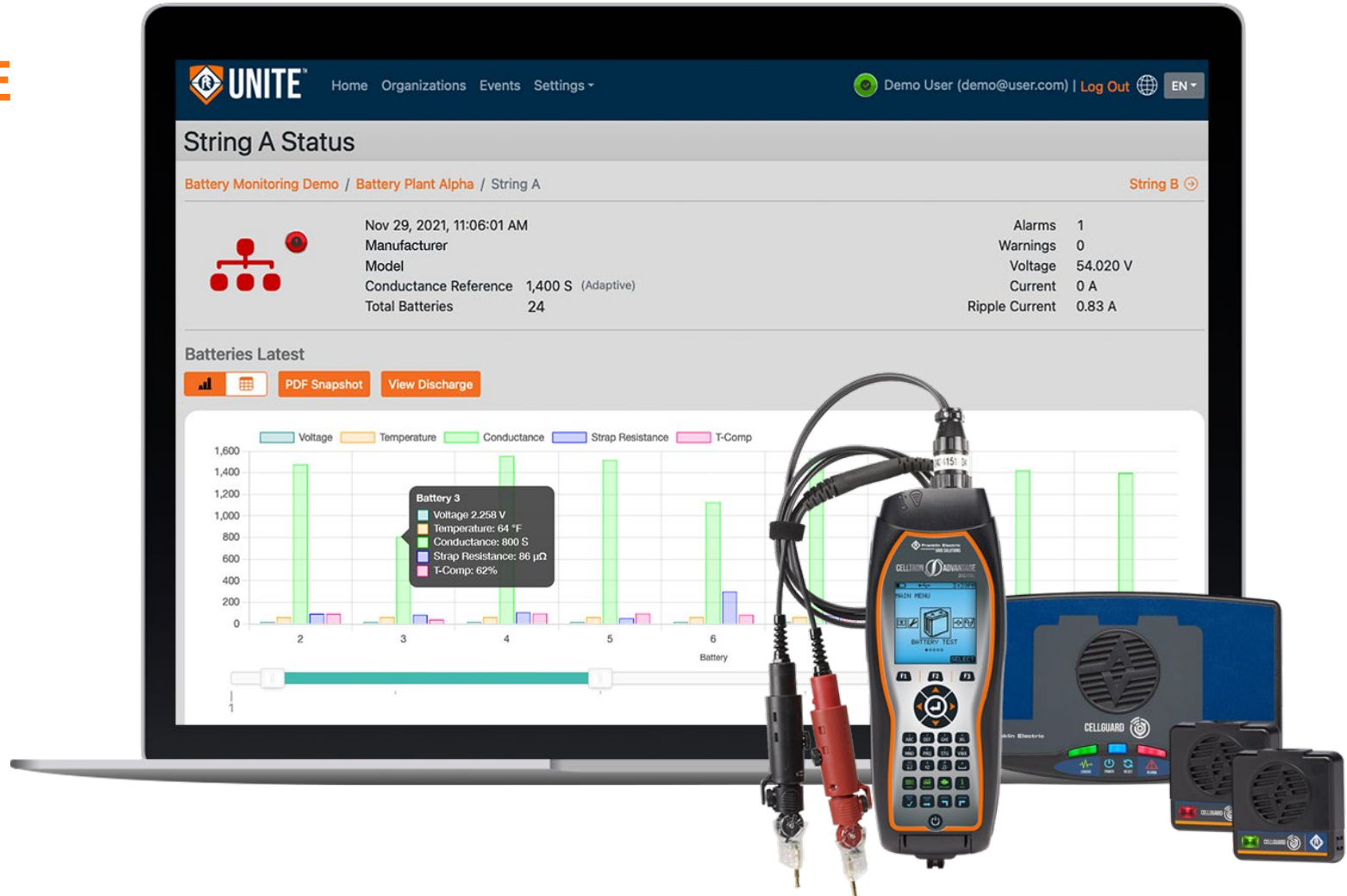
Enhanced Data Visualization

Network Oversight

Simplified Battery Testing

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UNITE™

HANDHELD BATTERY TESTERS

SIMPLIFIED BATTERY TESTING

When paired with a CELLTRON™ Advantage Digital Battery Tester, UNITE™ enables users to:

- Pre-program plant and string details.

- Wirelessly export setup details to the handheld tester.

- Wirelessly upload battery test results to UNITE™ via Wifi before leaving the site.

THE BENEFITS

✓ No cords

✓ No apps

✓ No return trips for undiscovered testing errors

1. LCD display

2. Tester body

3. Glove-compatible key pad

4. Port access door

5. USB A port (data storage/transfer)

6. USB B port (PC connection)

7. On-board re-charging port

8. Probe/clamp cable port

9. Temperature sensor

10. Infrared printer LED

11. Rechargeable battery pack

12. Side vent

13. Rear vent

14. Rubber handle grip

15. Probe testing interface

16. Clamp testing interface

17. Integrated light

18. Interchangeable cable port

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SPECIFICATIONS

Measure Voltage Range

- 1.0 - 23.5 Volts DC

Measure Conductance Range

- 100 - 19,990 Siemens

Measure Temperature Range

- 0 to +104°F (0 to +40°C)

Measure Strap Resistance Range

- 10 – 1,000µΩ

Accuracy

- +/-2% across test range, voltage & conductance

Voltmeter Resolution

- 5mVDC

User Programmable Functions

- Preset values for over 250 battery types
- Low voltage alarm setting
- Low conductance warning
- Low conductance failure
- Test mode (pushbutton/auto start)

Test Data Storage

- 50 string locations of 240 test results
- Stored internally (1.0MB)
- Unlimited transfer to USB drive

Cable Options

- Dual contact clamps
- Dual contact probes
- 4' and 8' Long Cables

LCD Display

- 2.97 in x 2.81 in (75.4 mm x 71.3mm)
- 128 x 128 pixels
- 40 degree viewing angle
- LED backlight

Keypad

- Alpha-numeric
- Stainless-steel dome
- Polycarbonate overlay
- 1,000,000 actuations

Power Requirements

- 7.2V, 2280mAh, NiMH
- Internal swappable battery & charger

Data Transfer

- USB Flash Drive (Type A)
- USB PC Interface (Type B)
- Half-duplex IrDA protocol for optional printer

Environmental Operating Range

- 0 to +104°F (0 to +40°C)
- 95% relative humidity
- Non-condensing

Over Voltage Protection

- Auto-reset disconnect
- Reverse polarity protected

Housing Material

- Acid-resistant ABS plastic
- Santoprene™ overmold

Languages

- English
- Spanish
- Portuguese
- French
- German
- Dutch
- Polish
- Russian

Weight

- 2.6 lbs. (1 kg.)

Case Dimensions

- 11 in. x 4 in. x 3 in. (279mm x 105mm x 80mm)

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CELLTRON ULTRA

BATTERY TESTER

MOST SOUGHT-AFTER PORTABLE BATTERY TESTER IN THE INDUSTRY

VERY RELIABLE COMPARED TO THE COMPETITION

A COMPLIANCE SOLUTION FOR
NERC PRC-005-6
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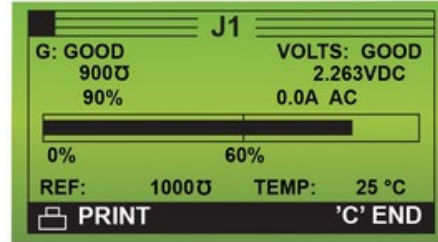
A HIGHLY RATED PRODUCT FOR

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STRAIGHT FORWARD FUNCTIONALITY

CELLTRON ULTRA

The CELLTRON™ Ultra software includes an icon-based menu and pre-loaded data on over 200 battery models to expedite testing and record-keeping. Over 250 pre-established reference/benchmark values are stored to assist in the development of battery pass/fail thresholds.

TEST
Measures the status of a jar in voltages and conductance values. It displays conductance values in mhos.

BATTERY SETUP
Configure testing information including site name, test jars only or jars & straps, battery voltage (2 Volt or 16 Volt).

BATTERY MANAGER
Data on 12 battery manufacturers is pre-loaded to expedite testing and record-keeping process.

REPORTS
Print results, transfer to PC, add a Battery, test counter & version.

UTILITIES SETUP
Update warning thresholds, temperature (C or F), mode-to change from automatic to manual test, or update to the latest firmware.

DIGITAL MULTIMETER
Measures AC & DC voltage, Current and Scope mode.

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CELLTRON ULTRA

INCLUDED IN THE KIT

- CELLTRON™ Ultra battery tester
- Test probes
- Test clamps
- 2 GB memory SD card

- Charger with spare battery
- Backpack
- 32" lighted probe extenders
- Belt loop

- Infrared temperature sensor
- Portable infrared printer
- CELLTRAQ™ Express battery asset management software

8' LONG PROBE CABLE

Flex strain relief and spread of 48"
with "Y" junction, for 6 and12 Volt
batteries only.

DIGITAL CLAMP METER

- 40A DC/AC range
- .90" (23mm) diameter jaw
- One touch zero button
- 400V DC/AC range
- Requires 2 AA batteries
- 600V overload protection for Ohm measurement
- Weight: 1.5 lbs
- Dimensions 10"L X 2"H X 4"W

SPECIFICATIONS

Measure Voltage Range

- 1.5 – 20.0 Volts DC

Measure Conductance Range

- 100 - 19,990 Siemens

Measure Temperature Range

- 0 to +104°F (0 to +40°C)

Measure Strap Resistance Range

- 10 – 1,000µΩ

Accuracy

- +/-2% across test range, voltage & conductance

Voltmeter Resolution

- 5mVDC

User Programmable Functions

- Preset values for over 250 battery types
- Low voltage alarm setting
- Low conductance warning
- Low conductance failure

Test Data Storage

- 500 string locations of 480 test results
- Storage SD Card (2GB)

Cable Options

- Dual contact clamps
- Dual contact probes
- 4' and 8' Long Cables

LCD Display

- 2.619 in x 1.309 in
- 128 x 64 pixels
- 40 degree viewing angle
- Contrast Ratio 8
- Green LED backlight

Keypad

- Alpha-numeric
- Stainless-steel dome
- Polycarbonate overlay
- 1,000,000 actuations

Power Requirements

- 9.6V, 1600mAh, NiMH
- Internal swappable battery & charger

Data Transfer

- SD Card
- Half-duplex IrDA protocol for optional printer

Environmental Operating Range

- 0 to +104°F (0 to +40°C)
- 95% relative humidity
- Non-condensing

Over Voltage Protection

- Auto-reset disconnect
- Reverse polarity protected

Housing Material

- Acid-resistant ABS plastic
- Santoprene™ overmold

Languages

- English
- Spanish
- Portuguese
- French
- Dutch
- Italian
- Russian

Weight

- 2.6 lbs. (1 kg.)

Case Dimensions

- 19 in. x 15.5 in. x 7 in. (485 mm x 395 mm x 180mm)

CELLTRAQ EXPRESS APPLICATION

- CELLTRAQ Express (PC-based) interface via the USB port for the storage, analysis, and reporting of battery testing data.

- CELLTRAQ Express utilizes a .CSV file to create a pdf report.

- Allows the configuration of test data reference values and threshold values to denote poor test results.

- Outputs the test results in a table and graph format for easy analysis.

- Reports can be customized to include company logo and site information.

CELLTRAQ ENTERPRISE SOFTWARE

- CELLTRAQ Enterprise (Server-based) provides remote access of test data, viewable via Web

- Provides two-way communication between the Celltron Advantage Digital and Celltraq Enterprise software

- With the Celltron Advantage Digital, allows you to preload site setup information in the test set before going out in the field to do your testing

- Ensures proper naming conventions to keep your database and record keeping pristine

- Keeps historical data and allows for trending of test data.

- Outputs the test results in a table and graph format for easy analysis.

- Reports can be customized to include company logo and site information.

TESTER COMPARISON

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	Celltron Advantage Digital	Celltron Ultra
Voltage Measurements	1.0V – 23.3V	1.5V – 20.0V
Nominal Battery Voltages	1.2,2,4,6,8,10,12,16,18	2,4,6,8,10,12,14,16
Conductance Measurements	100℧ – 19,900℧	100℧ – 19,900℧
Temperature Measurements	0°C – 40°C (Built In IR)	0°C – 40°C (Requires P/N C058)
Strap Resistance Measurements	10μΩ – 1,000μΩ	10μΩ – 1,000μΩ
Data Management System	Celltraq, UNITE	Celltraq, UNITE
Upload/Download to/from UNITE	Yes (WiFi)	Yes (CSV via Web/PC)
Upload/Download to/from Celltraq Enterprise	Yes (CDO)	Yes (CSV)
Tester Interface Compatible	Yes (To Celltraq)	Yes (To Celltraq)
Celltraq Express Compatible	Yes (CSV) (via USB cable or USB Drive)	Yes (CSV) (via USB Drive)
Support CTU CSV Format	Yes (Next FW Rel.)	Yes
NiCd Battery Testing	Yes	No
Data Trending on Tester	Yes	No

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	Celltron Advantage Digital	Celltron Ultra
Discharge Capacity Manager	Yes	No
Multimeter	Yes (VDC Only)	Yes (VDC and VAC)
GenStart (CCA)	Yes	No
Field Upgradable	Yes (via USB Drive) (via WiFi - Next FW Rel.)	Yes (via SD Card)
WiFi 802.11	Yes	No
IR Printer	Yes	Yes
Battery	7.2V, 2280mAh, NiMH	9.6 V, 1800mAh, NiMH
Storage	50 string locations of 240 test results	500 string locations of 480 test results stored internally
Export Device	128MB – 8GB (USB Drive)	2GB (SD Card)
Over Voltage Protection	Auto-Reset Disconnect	Auto-Reset Disconnect
Noise Immunity	Yes	Yes
Cable Calibration Required	No	Yes

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