



### Testimonials

*"In 1995 we purchased the B-Tech monitoring system for each of 5 UPS units with more than 300 batteries in the system for our corporate offices. Since their installation we have not had one battery related outage of an operating UPS unit.*

*The B-Tech system has fore warned of more than 30 potential battery failures allowing us to replace batteries before they fail...The only way to know how your batteries are performing is to monitor their performance on weekly basis. B-Tech has provided flawless service in maintaining our battery back-up systems."*

Ken Rheault, Consumers Energy

*"BTECH's Battery Monitoring Systems have proven to greatly reduce battery maintenance costs, extend the life of the batteries and virtually eliminate battery failure by being able to predict precisely which cells need to be replaced in advance. Based on our experience, I highly recommend BTECH Battery Monitoring Systems"*

S. Alim, Manager of Engineering, ADP

### S5 48 Volt/24 Cell VRLA Stack



### Find Problem Batteries In Your CO and TELCO Batteries

BTECH's S5 Series Battery Monitoring and Validation System has been specifically designed to measure every cell in your 48 VDC battery systems. Our patented and proven impedance measurement technology has the sensitivity required to find failing cells well before they pose a risk. Plus, with battery sensing harnesses pre-designed and tested for your battery system, installation time is cut in half while increasing system reliability.

### Why BTECH Is The World Leader In Battery Monitoring

**We're Proven:** Over 3,500 Systems Installed Worldwide

**We're Superior:** BTECH's patented impedance method provides rock solid data accuracy and stability, allowing more time to respond - *no other system comes close.*

**We're Non-Destructive:** With a load signal optimized to the battery type, our system never subjects your batteries to a stressful load test. Plus, our system is not powered by your batteries.

**We Know Your Batteries:** With more experience than anyone in the business, our sales and service staff is there for you when you have questions.

### Key System Features

- BTECH Monitors Key Battery Parameters: Cell and Inter-cell Impedance, System Voltage, Float, Charge and Discharge Current, plus ambient and pilot cell temperatures
- Impedance measurement spec of 0.1 +/- 0.01 mΩ - the sensitivity required for flooded cells
- Programmable Test & Out-of-Limits Alarms
- Battery Discharge Data Logging
- Up to 480 Individual Cells and 8 Strings per system
- Individual String Current Monitoring for multi-string systems
- Complete Isolation from the Battery String
- No PC Required in the battery room
- Powered by the +48VDC Charger - No AC Power Required

### Facility Management System Integration

- MODBUS over TCP/IP for simple third-party software integration
- SNMP Enabled
- (6) Programmable Output Relays
- (4) Programmable Input Relays

### Alarm and Data Acquisition Options

- Local: RS-232 and USB
- Integral Dial UP 56k Modem
- Integral Ethernet Card (Cat 5/6)
- Alarms: Text Message to multiple cell phones, pagers or e-mail addresses, through BVM Software or FMS integration

### Safety

- BTECH Quick-Disconnect Safety Fuses simplify battery replacements while protecting personnel during installation and routine maintenance.

## SYSTEM SPECIFICATIONS

- Measurement Capability:**
  - Total Voltage: 24-60V
  - Total Number Strings: 4
  - Unit Voltage: 1-16 VDC
- Unit Impedance** 100 $\mu\Omega$  to 20m $\Omega$
- Temperature - Unit and Ambient:** -32°F to 160°F
- Discharge Events:**
  - Date & Time
  - System Voltage
  - Load Current
  - Power Removed
- Discharge Logging:** Programmable
- Connection Capacity:**
  - Total Connection Points: 480
  - Total Number of Parallel Strings: 8
- Measurement Accuracy & Repeatability:**
  - System Voltage: +/- 0.1% Full Scale
  - Unit Voltage: +/- 0.1% of Reading
  - Unit Impedance: +/- 0.01 m $\Omega$
  - Temperature: +/- 1.0°F
- Power Requirements:**
  - 24-48 VDC
- Enclosure:**
  - SCM-600 Controller Metal, Rack or Wall Mount
  - VM-24 Voltage Temperature Module: FR Poly
  - CM-2 Current Measurement Module: FR Poly
- LED Indicators - VM24 DCM:**
  - Green = Power On
- LED Indicators - SCM600 Controller:**
  - Green = Summary No Alarms
  - Yellow = Summary Maintenance Alarms
  - Red = Summary Critical Alarms
  - Red Equipment = Module not Communicating
  - Alternating Green = Performing Measurement
- Software:**
  - BVM 4.x Windows® based software package
  - BVS Observer 4.X
  - Designed for Windows® XP, and higher
- CE Mark**

## SYSTEM CONFIGURATION

<b>S5L</b>	<b>1</b>	<b>02</b>	<b>024</b>	<b>- C</b>	<b>0</b>	<b>- RM</b>	<b>00</b>
Type	Strings	Point Voltage	Monitoring Points	Current	Options	Configuration	Custom Code

<b>Type</b> S5L (24-60V) <b>S5L</b>	<b>Current Measurement</b> Clamp, per string <b>C</b> Clamp, per system (2-8 strings) <b>T</b> Shunt, per string <b>S</b>
<b>Strings</b> 1-4 <b>1</b>	<b>Configuration (examples)</b> Wall Mounted: <b>WM</b> Rack Mounted: <b>RM</b> Shelf Mounted: <b>WM</b>
<b>Point Voltage</b> 1.2 <b>01</b> 2 <b>02</b> 4 <b>04</b> 6 <b>06</b> 8 <b>08</b> 12 <b>12</b>	<b>Applications</b> Flooded Cells on Racks VRLAs on Racks VRLA Stack
<b>Monitoring Points</b> 2-480 <b>024</b>	<b>Custom Code</b> <b>00</b>

### Example Ordering Codes

1 String of 24 -2v Flooded Cells  
 S5L-102024-CO-WM-00

1 String of 24 Stacked VRLA 2v Cells