VRLA UPS Battery System

BTECH's S5 battery Monitoring and Validation Systems are designed specifically for your UPS VRLA Monoblock battery systems; as each system can manage up to (8) eight parallel strings. BTECH's impedance measurement technology is considered the reference method for stationary monitoring system ohmic testing. BTECH's S5 system has the sensitivity and high-end filtering required to finding failing cells in any application and UPS/charger type. BTECH's patented rate of change analysis finds bad units well before they pose a risk to your critical systems. BTECH's S5 system uses fewer wires than any of our competitors. The wire set is pre-designed, pre-terminated and tested; cutting installation time in half while increasing system reliability.

Key System Features

- Real-Time Monitoring of System/String/Unit Voltages, Float, Charge and Discharge Current
- Programmable Cell Impedance Measurement: Up to 24x/Day
- Battery Discharge Data Logging
- Up to 320 Individual Units and 8 Strings per system
- For use with all battery jars, including 16 Volt
- Individual String Current Monitoring for multi-string systems
- Complete Isolation from the Battery String

Facility Management System Integration:

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

IFC Compliance (International Fire Code)

Real-Time Thermal Runaway Management, Ambient, Pilot Cell and Differential Unit temperatures (Delta T) are recorded; if the Delta T measurement reaches a 15°F threshold, the system generates a critical alarm. Delta T alarms are recognized as the best way to identify and mitigate Thermal Runaway. The system monitors elevated unit voltages and excessive float charging. Optional smoke detection enables the S5 system to provide compliance with Local Fire Code. Operators have the option to take a programmable relay contact in the S5 system and turn off the battery charge, or trip battery breaker (dual Shunt trips required).

Alarm and Data Acquisition Ports:

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

Safety

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

Why BTECH Is The World Leader In Battery Monitoring

WE'RE SUPERIOR

With over 7,000 systems installed worldwide, 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 avoiding unnecessary parasitic battery loads.

WE KNOW YOUR BATTERIES

BTECH doesn't just manufacture battery monitoring systems, BTECH's core competencies include DC plant experts, DC plant maintenance and UPS/charger design requirements. These core skills not only enable BTECH to provide the industry leading consulting services our customers expect but also provide unbiased support on the best practices in battery maintenance, battery testing and battery

System Specifications

Measurement Capability:
- Total Voltage: 0-600V
- Unit Voltage: 6-16 VD
- Unit Impedance: 100μΩ to 20mΩ

Temperature:
- Unit and Ambient: -32°F to 160°F
- Differential: 15°F from default ambient

Discharge Events:
- Date & Time
- System Voltage
- Load Current
- Power Removed
- Unit Voltage Decay

Discharging Logging:
- Programmable

Connection Capacity:
- Total Number Strings: 8
- Total Number of Units: 320

Measurement Accuracy & Repeatability:
- System Voltage: +/-0.1% Full Scale
- Unit Voltage: +/-0.1% of Reading
- Unit Impedance: +/-0.01 mΩ
- Temperature: +/-1.0°F

Power Requirements:
- 110 – 250 VAC 50/60 Hz (UPS Protected Power) (max 110 watts)

Enclosure:
- SCM – 600 Controller: NEMA 1 Metal Rack or Wall Mount
- VM24i Module: Voltage/Temperature/Current Flame Retardant Poly
- 1 Current Transducer per string 1% sensitivity

LED Indicators – VM24i DCM:
- Green = Power On

LED Indicators – SCM 600 Controller:
- Green = Summary No Alarms
- Yellow = Summary Maintenance Alarms
- Red = Summary Critical Alarms
- Red Equipment = Hardware Failure
- Alternating Green = Performing Measurement

Software:
- BVM 4.x Windows 7® based software package
- BVM Observer 4.x designed for Windows® 7 or above

System Configuration

S5H	1	12	040	C	O	WM	00
type	strings	point voltage	monitoring	measurement	options	configuration	custom code
S5H (60-600)	1-4 1	12 12	2-480 040	clamp, per string: C		cabinet, WM	
		1.2 01		clamp, per system: T		Rack Mount, RM	
		2 02		(2-4 strings): S			
		4 04					
		6 06					
		8 08					

Testimonials

"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