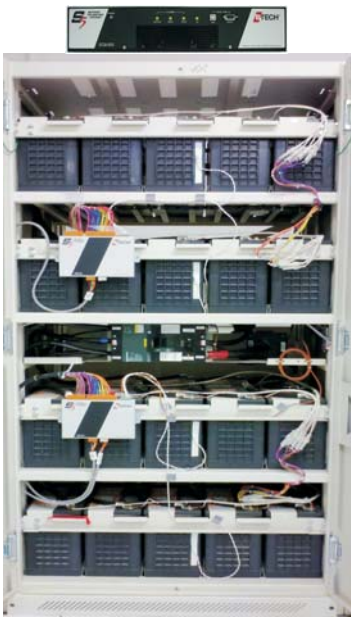
BATTERY MONITORING SYSTEM
UPS / VRLA BATTERY CABINET

S5 Cabinet Installation



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 BTECH system has forewarned 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 eliminated 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

Find Problem Batteries In Your UPS Battery Cabinet

BTECH's S5 Series Battery Monitoring and Validation System has been designed specifically for your UPS battery cabinet. BTECH's patented and proven impedance measurement technology finds bad batteries well before they pose a risk to your critical systems.
Plus the battery sensing harness is pre-designed, tested and can be pre installed in your battery cabinet, installation time is eliminated or greatly reduced and increases system reliability.

Why BTECH Is The World Leader In Battery Monitoring

We're Proven: Over 5,500 Systems Installed Worldwide
We're Superior: BTECH's patented impedance method provides rock solid data and accuracy 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. Additionally, our system is not powered by your batteries.
We Know Your Batteries: With more experience than anyone in the industry, our technical support staff is there for you when you have questions.

Key System Features

- Real Time monitoring of System/String/Unit Voltages, Float, Charge and Discharge Current
- Real time Thermal Runaway Management, Ambient, Pilot Cell and Differential Unit temperatures (Delta T) are recorded, if the Delta T measurement reaches a 15 deg 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 also 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 programable relay contact in the S5 system and turn off the battery charger, or trip the battery breaker (dual shunt trips required).
- Programmable Cell Impedance Measurement: Up to 24x /Day
- Battery Discharge Data Logging
- Up to 480 Individual Cells 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) Programable Output Relays/(4) Programable Input Relays

Alarm and Data Acquisition Options

- Integrated Web Card
- 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 BMS integration

Safety

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

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SYSTEM SPECIFICATIONS

- **Measurement Capability:**
  - Total Voltage: 0-600V
  - Total Number Strings: 8
  - Unit Voltage: 1-16 VDC
- **Unit Impedance** 100µΩ to 20mΩ
- **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 mΩ
  - Temperature: +/ -1.0°F
- **Power Requirements:**
  -110-250 VAC 50/60HZ(UPS Protected Power)
- **Enclosure:**
  - SCM-600 Controller: NEMA 1 Metal Rack or Wall Mount
  - VM24i Module: Voltage/Temperature/Current Flame Retardant 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 BVM Observer 4.X Designed for Windows XP or Above
- **CE Mark/FCC**

SYSTEM CONFIGURATION

S5H	1	12	040	-	C	0	-	WM	00
Type	Strings	Point Voltage	Monitoring Points		Current	Options		Configuration	Custom Code

Type	
S5H (60-600V)	**S5H**
Strings	
1-4	**1**
Point Voltage	
1.2	**01**
2	**02**
4	**04**
6	**06**
8	**08**
12	**12**
16	**16**
Monitoring Points	**040**

Current Measurement	
Clamp, per string	**C**
Clamp, per system (2-8 strings)	**T** **S**
Configuration (examples)	
Cabinet, WM	**WM**
Rack Mount, RM	**RM**
Custom Code	
	00

Example Ordering Codes

Liebert UPS, 2 Cabinets of 40-12v Batteries - S5H-212080-C0-WM
Powerware UPS, 3 Cabinets of 40-12v Batteries - S5H-312120-C0-WM
MGE UPS, 1 Cabinet of 36-12v Batteries - S5H-112036-C0-WM