

# THE BENCHMARK FOR MODERN BATTERY MANAGEMENT SYSTEMS

The S5 Battery Management System is designed to monitor Lead Acid and NiCad battery systems. Capable of supporting up to 480 individual cells and eight strings per system, the S5 allows you to make prompt evaluations with advanced notification of potential failures, collect data from most battery types, including cells with high Amp-Hour ratings (4000+).

This system monitors unit voltages, unit impedance, pilot temperatures, differential temperatures, and functions as a data logger when batteries are in discharge. Adding optional smoke detection and battery compartment heat detectors will enable compliance with local fire codes. Electrolyte Level Monitoring can be added to comply with NERC utility standards, and the S5 system can easily gather data about your battery system and trigger alarms that keep you in the know.



Designed to Work with Lead Acid and NiCad Battery Systems - Including 16 Volt VRLA



High-End Filtering & Sensitivity



Quick Disconnect Safety Fuses Simplify Replacement



Advanced Notifications

## Key System Features:

- Monitors system/string/unit voltages, float, charge, and discharge current
- Provides real-time thermal runaway management Records ambient and pilot cell temperatures
- Monitors elevated unit voltages and excessive float charging.
- Optional programmable relay contact system that turns off the battery charger or trips the battery breaker (dual UVR or shunt trips required)
- Measure up to 480 individual units and 8 string systems.
- Compatible with most battery types including 1 to 16-volt VRLA/NiCad/VLA
- Individual string current monitoring for multiple systems
- Complete isolation from the battery string

## Mounting and Dimensions

- SCM-600 Controller:**  
*NEMA 1 Metal Rack/Wall/Shelf Mount*
  - Dimensions:  
H 16.875" x W 16.5625" x D 3.5"  
(429 mm x 421 mm x 89 mm)
  - Weight: 24 lb. (10.9 Kg)
- VM24i Module:**  
*Voltage/ Temperature/Current Flame Retardant Poly Rack or Cabinet*

## Power Requirements:

- 110-250 VAC 50/60 Hz (UPS Protected Power)
- (Max 100 Watts) or 24-145 VDC

## Operating Environment:

ENVIRONMENT	MIN	MAX
Temperature	41°F(5°C)	104°F(40°C)
Humidity (32-86°F / 0-30°C)	0%	80%
Humidity (88-104°F / 31-40 °C)	0%	50%
Altitude	0m	2000m

**Facility Management System Integration:**

- MODBUS over TCP/IP for simple third-party software integration
- SNMP compliant
- 6 programmable output relays  
4 programmable input relays

**Alarm and Data Acquisition Ports:**

- Integrated network card
- Local: RS-232 and USB
- Alarms: sends alerts through SMS or email by using our BVM Software or BMS integration

**Discharge Events:**

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

**Software:**

- BVM 4.x Windows® Based Software Package
- BVM Observer 4.x designed for Windows 10® or Above

**SYSTEM CONFIGURATION**

**Measurement Accuracy & Repeatability:**

- Total Voltage: 0-600V
- Unit Voltage: 1-20V
- Unit Impedance: 100 μΩ to 20 mΩ

**Temperature:**

- Unit and Ambient: -32°F to 160°F
- Default Differential: 15°F above ambient

	RANGE	ACCURACY	RESOLUTION
System/String Voltage Range)	0-650 VDC (optionally up to 1200 VDC in a delta configuration)	± 0.1% full scale	0.1 VDC
Unit Voltage Range	1 – 20 VDC	± 0.1% full scale	1 mV
Unit Impedance Range	100 μΩ – 30 mΩ	± 0.01 mΩ	1 μΩ
String Current	(100 A CT)	0 – ±100 A ± 0.5% full scale	0.1 A
String Current	(200 A CT)	0 – ±200 A ± 0.5% full scale	0.1 A
String Current	(600 A CT)	0 – ±600 A ± 0.1% full scale	0.1 A
String Current	(3000 A CT)	0 – ±3000 A ± 5% full scale	0.1 A
Unit/Ambient Temperature Range	-35 °C – 70 °C	± 1.0 °C	0.1 °C



**QUESTIONS OR INQUIRIES?**

Log into the Online Battery Validation Manager portal or contact us at [sales@btechinc.com](mailto:sales@btechinc.com) or **973-983-1120** to speak with one of our battery monitoring innovation experts.

**PREDICTIVE. PROACTIVE. PREVENTIVE.™**

BTECH is a leading global provider of sustainable US-based manufacturing and battery monitoring solutions that ensures batteries perform as intended for safety, reliability, and lifespan. Through battery innovation expertise, proactive management services, and leading analytic and predictive technologies, BTECH helps companies deploying reserve power or battery systems eliminate the risk of failure in mission-critical buildings and applications.



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