Small Systems Battery Monitoring

Model PBT-BMS-SCMini-XC

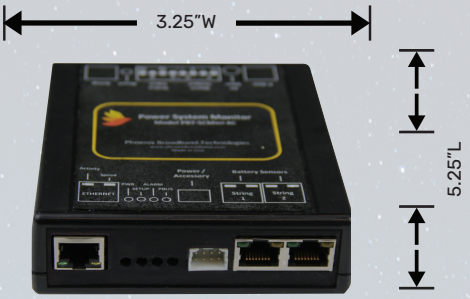
Our, "smaller" 4th Generation Battery Monitoring System

- Lowest cost, highest capability solution for closet, cabinet, and small systems power monitoring
- Built-in SNMP proxy agent
- Sends alarms to management systems, email addresses, and cellular devices (text).
- Implements industry-standard SNMP MIB
- Configurable alarm thresholds for every parameter via controller webpage or template files
- No special software licenses or expensive controllers required
- Built-in web server for convenient monitoring and provisioning from any computer on the network.
- Fully downloadable operating firmware as well as firmware for connected components.

The **PBT-BMS-SCMini-XC** is based on a powerful ARM-9 microcomputer with an embedded Linux operating system. The architecture and capabilities are based on PBT's PBT-SC4 system controller, which is field proven in thousands of monitored sites. This platform provides a wide range of functionality along with a full suite of secure networking protocols and utilities, including:

- IP V4 & V6
- SNMP V1, V2, V3
- FTP, SMTP, SSH, HTTP (web server)

The unit is equipped with two battery sensor interfaces for a total monitoring capacity of up to 60 batteries (30 per input). It also has a PBUS interface to allow use with other PBT sensors, including float current measurement and general-purpose RIM and ROM I/O modules for facilities monitoring. More information on battery sensors and expansion modules can be found in associated data sheets. The unit can be powered from a wide range of DC voltages from 9-60 VDC.



Mechanical Specifications

Size	3.25"W x 5.25"L x 1.20"H
Construction	Molded plastic
Weight	0.6 lb nominal

Environmental Specifications

Temperature:	-40 °C to +80 °C
Humidity	0 to 95%; non-condensing

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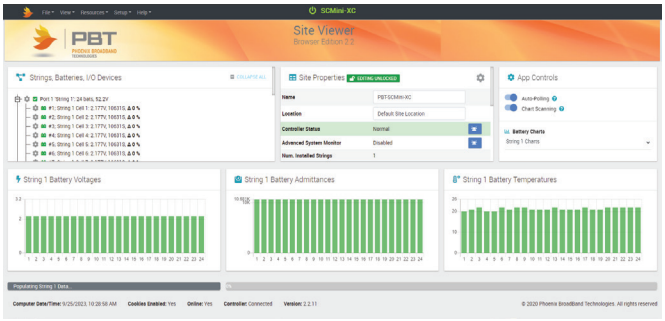
Monitored parameters include:

- Local line voltage
- Controller internal temperature
- Battery voltage, temperature, impedance (admittance)
- Two built-in digital contact closure inputs
- Two built-in relay contact outputs
- USB-C programming connector
- Internal logging of all measurements and states
- Battery electrolyte level (optional sensor)
- String float charging current (optional sensor)
- String discharge current (optional sensor)
- AC current (optional sensor)
- Moisture detection (optional sensor)
- Thermal runaway detection/control (optional sensor)
- Ground fault detection (optional sensor)



The built-in web server allows the status of the monitored batteries to be analyzed from anywhere in the network using a common web browser. The built-in SMTP mail client can be set up to send alarm messages to user-specified email addresses or text message when an alarm occurs. A rules-based system allows combinations of states/conditions to set relay contact outputs.

The **PBT-BMS-SCMini-XC,** battery sensors, and all expansion modules are firmware downloadable over the network, facilitating firmware upgrades and feature enhancements as they become available.

General Specifications

Analog Readings	
Utility AC voltage	0 to 140VAC; true RMS, requires optional module
Battery string voltage	0 to 60 VDC
Individual battery measurements	up to 60 batteries (30 per input), see datasheet for battery sensor type PBT-PA-BSxx: Voltage, Admittance (“Ohmics”), Temperature
Mini-controller internal temperature	(tracks ambient temperature)
Charger float current	Requires optional equipment
DC load current:	Requires optional equipment
AC load current	Requires optional equipment
Ground fault detection	Requires optional equipment
Moisture	Requires optional equipment
Digital Status Indications/Control	Two general purpose digital status inputs, Two relay contact outputs
Options	Rack bracket; “wall-wart” power pack, cable kits. RIM, ROM, current sensors

Power	
DC input power:	9-60 VDC; 5 watts max