

## Small Systems Battery Monitoring Model PBT-BMS-SCMini-XC



- 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 text message addresses
- Implements industry-standard SNMP MIB
- Configurable alarm thresholds for every parameter
- Other management protocols available (contact PBT)
- No special software licenses or expensive controllers required
- Built-in web server allows convenient read-only monitoring and limited provisioning from any computer on the network
- Full provisioning with powerful template files
- Built-in SMTP mail client sends alarm messages to email addresses or to a mobile phone (text message).
- Fully downloadable operating firmware
- All expansion modules' firmware downloadable

The Phoenix Broadband Technologies **PBT-BMS-SCMini-XC** is a low-cost controller for battery management and small systems backup power monitoring.

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
- DNP3
- FTP, SMTP, SSH, HTTP (web server)

The unit is equipped with two battery sensor interfaces for a total monitoring capacity of up to 48 batteries (24 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.

Monitored parameters include:

- Local line voltage
- Controller internal temperature (tracks ambient temperature)
- Battery voltage, temperature, impedance
- 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)
- Two built-in digital contact closure inputs
- Two built-in relay contact outputs
- USB-C programming connector
- Internal logging of all measurements and states

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.

# Small Systems Battery Monitoring

## Model PBT-BMS-SCMini-XC

## Specifications

### Measurements:

### 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 48 batteries (24 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 module
- Digital Status Indications/Control:
  - Two general purpose digital status inputs
  - Two relay contact outputs

### Power:

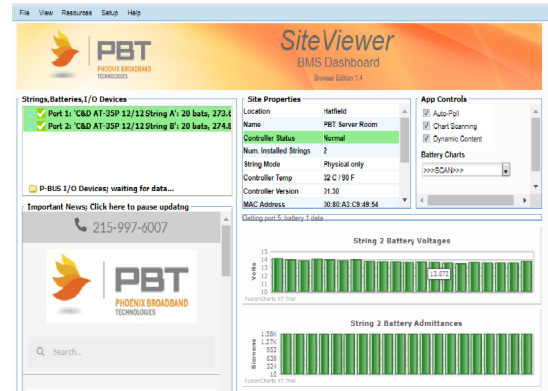
- DC input power 9-60 VDC; 5 watts max

### Environmental:

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

### Mechanical:

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



### Additional Information

- PBT-PA-BSxx (battery sensor)
- PBT-PAC-SCminiB-CT (AC current sensor)
- PBT-PA-ELS (electrolyte sensor)
- PBT-PA-MS-1 (moisture sensor)
- PBT-PA-FCM (float current sensor)
- PBT-PA-UGM (ground fault sensor)
- PBT-PA-xxxx (power transformer)
- PBT-PA-RIM/ROM (I/O expansion)

Preliminary data; subject to change  
Rev 1.0



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