Small Systems Battery Monitoring
PBT-BMS-SCMini-XC

PBT
A SENS COMPANY

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 9-59VDC.

Mechanical Specifications

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

Environmental Specifications

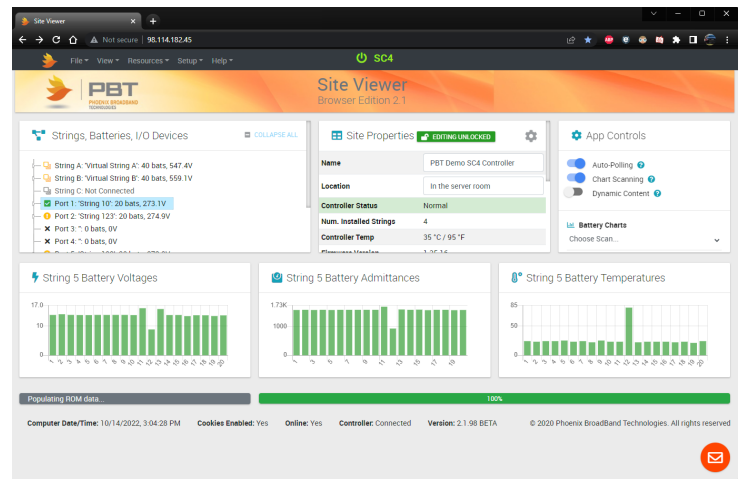| Temperature	-40 °C to +80 °C
Humidity	0 to 95%; non-condensing

Contact Information

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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	9-59VDC