

BTRM

Battery Test Remote Monitor

Are your remote-site UPS batteries healthy? Many remote sites that have wired or wireless equipment for relaying critical data are designed with battery backup systems. However, batteries have an operational lifespan that can be reduced by environmental factors. Ventev's Battery Test Remote Monitor (BTRM) performs automatic battery load tests and sends exception reports via SNMP, text or email using Ethernet or DNP3 communication protocols.

The BTRM provides

- ◊ Reliable testing using the system's own load to evaluate battery health in real-time
- ◊ Cost savings ensuring you only replace batteries which are near end-of-life but before they fail
- ◊ Support for the latest in Ethernet communications including SNMP and DNP3
- ◊ Consolidating your truck rolls enabling battery replacement when a crew will already be in the area
- ◊ Peace of mind that if widespread power fails, all systems will operate for the designed amount of back-up time
- ◊ A two-channel RTU using dry contacts that can be configured for additional I/O

Features & Benefits

- ◊ The BTRM continuously assesses the actual battery voltage independent of the charger voltage (float voltage) which is the most reliable method for battery testing
- ◊ Each device is IP addressable and is remotely configurable with a web-based GUI
- ◊ Units include a user selectable Low Voltage Disconnect On/Off
- ◊ The BTRM alarm will trigger when batteries fail to meet minimum capacity requirements or have low battery voltage. The BTRM will issue the appropriate message to the Network Operations Center and/or activate one of the unit's alarm contacts
- ◊ Two dry contacts are available for basic TRU functionality

Example configurations include:

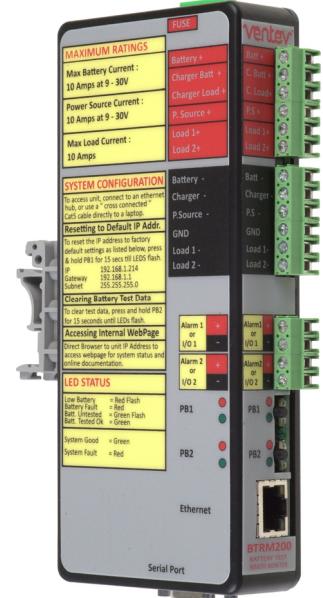
- Door alarm
- AC power off
- DC power on

- ◊ The BTRM supports multiple communication protocols included in SNMP and DNP3

Designed for Remote UPS & Solar Systems

Oil & Gas or Utility SCADA systems such as;

- ◊ Wireless remote monitoring of well heads
- ◊ Smart Grid
- ◊ AMI/AMR
- ◊ Security & Surveillance



Ventev Part No: BTRM-200

For project support contact a TerraWave Regional Sales Executive.

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Overview

Batteries age and their capacity slowly deteriorate until they need replacement. Also, batteries can suddenly develop an internal fault that again limits their capacity. In an AC Line Down situation, where batteries are used in critical back-up applications, these conditions will result in premature, or in some cases immediate, system shutdown. Although a battery's state of charge can be inferred by monitoring the battery terminal voltage while in standby mode, this voltage will not give an indication of actual capacity. Furthermore, a battery that is marginal may not be detected until it is called upon to perform, at which point it is too late to prevent a system failure. For a battery connected to a charger that maintains a float voltage, neither condition can be checked. In these cases, the BTRM is designed to evaluate battery capacity transparently to system operation and provide a network based notification should a battery fail or its capacity drop below a specified level. This also has the advantage of allowing batteries that exceed their nominal lifetime to remain in service, provided they meet capacity requirements.

Technical Specifications

Operating Voltage

9 to 32 VDC

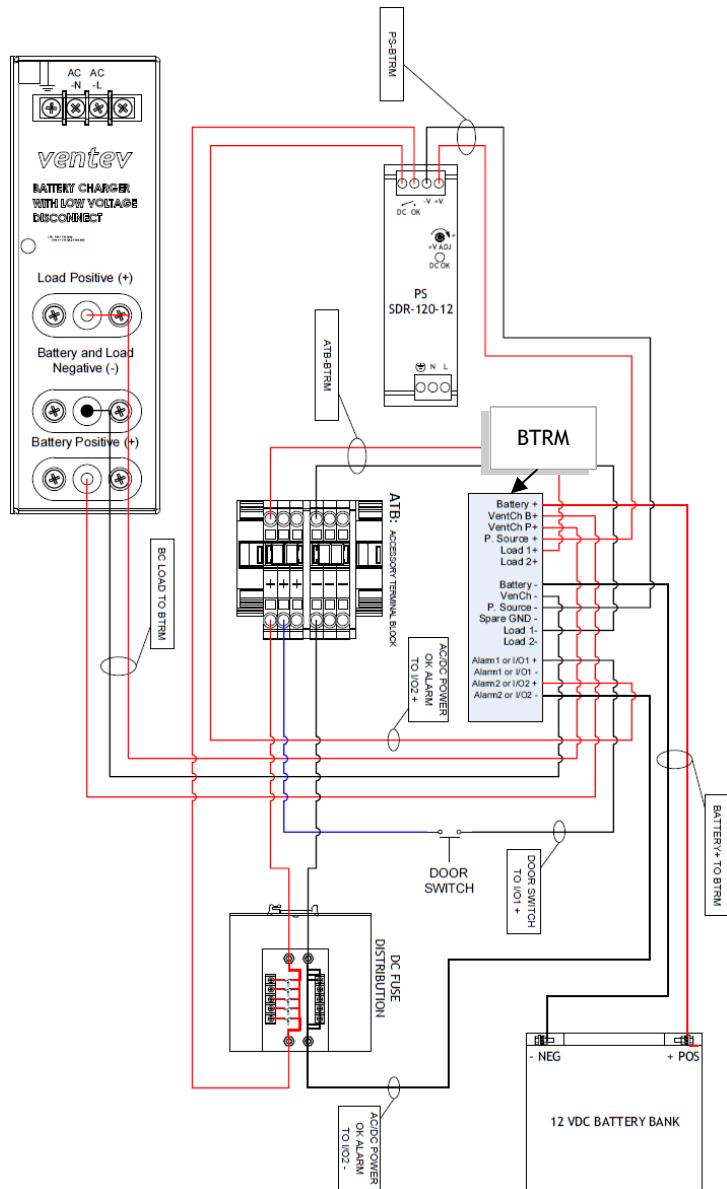
Battery Max Current	10 A Continuous
Charger Max Current	10 A Continuous
Load 1 & 2 Combined Max Current	10 A Continuous
Battery & Charger Voltage Measurement	0 to 32V ± 1%
Current Measurement	0 to 10 Amps ± 1%
Environmental Temperature	-20° C to 60° C
Humidity	5% to 95% Non Condensing
Mounting	DIN Rail
Mechanical	6.25" x 2.8" x 1.2"
Weight	5.0 oz (142g)
Warranty	1 Year

Web-based GUI

- ◆ IP addressable
- ◆ Name each device for location or coordinates
- ◆ Configure testing parameters

The screenshot shows the BTRM200 configuration interface. On the left is a vertical navigation menu with options like System Status, Battery Status, Battery Test, Manual Test, Port Options, E-Mail Configuration, E-mail Test, Network Configuration, DNP3 Modbus Configuration, SNMP Configuration, SNMP MIB File, Help, and About. The main area has tabs for 'System Status' and 'Capacity Test Settings Results'. Under 'System Status', there's a 'Email Configuration' section. It includes a note about character limits, a list of fields (Contact, Location, SMTP Server, To), and a form to enter settings. The form fields include Contact (BTRM contact, BTRM location), Location, Port (25), User name, Password, Server Addr (smtp.aaa.com), and Email Addr (email@aaa.com). A 'Save' button is at the bottom.

Reference Wiring Diagram



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