EAGLE EYE POWER SOLUTIONS

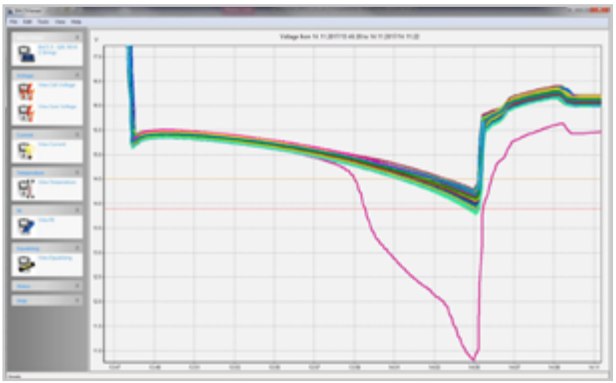
BACS Battery Management System

Common Applications: Power Utilities & Distribution, UPS Systems, Telecom/Communications

BACS WEBMANAGER and Module

Product Features

- 24/7/365 Battery Management and Monitoring
- Comprehensive Battery Management Software
- Easy DCS integration
- Meets IEEE and IFC standard recommendations for battery monitoring
- Patented voltage balancing algorithm to eliminate under and over charging
- Injects minimal current for measurement
- Simple to install with custom, pre-assembled installation materials
- Can be powered by AC or DC



BACS VIEWER Battery Management Software

Product Description

The GENEREX BACS (Battery Analysis and Care System) is an integrated monitoring and management system designed for critical backup batteries.

BACS unique patented voltage balancing system ensures that all units within a string are maintained at their optimum recommended float voltage eliminating over and undercharging of units within a string to ensure maximum performance and longest life. Thermal runaway protection is included as standard. BACS also measures and records system voltage, unit voltage, unit resistance, unit and ambient temperature and load current (optional).

BACS is intended for use on up to 330 vented lead acid (VLA), valve regulated lead acid (VRLA), or nickel-cadmium (Ni-Cad) batteries. Installation of BACS is one of the most straightforward on the market.

Standard communication includes GENEREX's BACS VIEWER battery management software for recording and trending measured parameters. BACS is entirely web based and can be installed on a private network on multiple PC's. Networked systems can utilize SMS/Email alerts during alarm conditions. BACS can utilize Modbus or SNMP protocols for integration to a distributed control system (DCS) or SCADA (some limitations may apply).

BACS on a 480 VAC Critical UPS Battery System

Battery Management Software

- Displays and records system voltage, unit voltage, unit resistance, unit temperature and load current (optional).
- Trending analysis of measured parameters on a string and cell/unit level with colored easy to read graphs
- PDF and Excel reporting
- Detailed log of alarm outbreak history
- Email and SMS alerts
- Automatically record, save, & playback discharge & recharge events

WEBMANAGER (Main Unit)
A single WEBMANAGER per system processes all measurement data and handles communication. Allows on-site viewing via web browser.

BACS Module (1 per unit)
Manages each unit's float voltage and reads voltage, resistance and temperature.

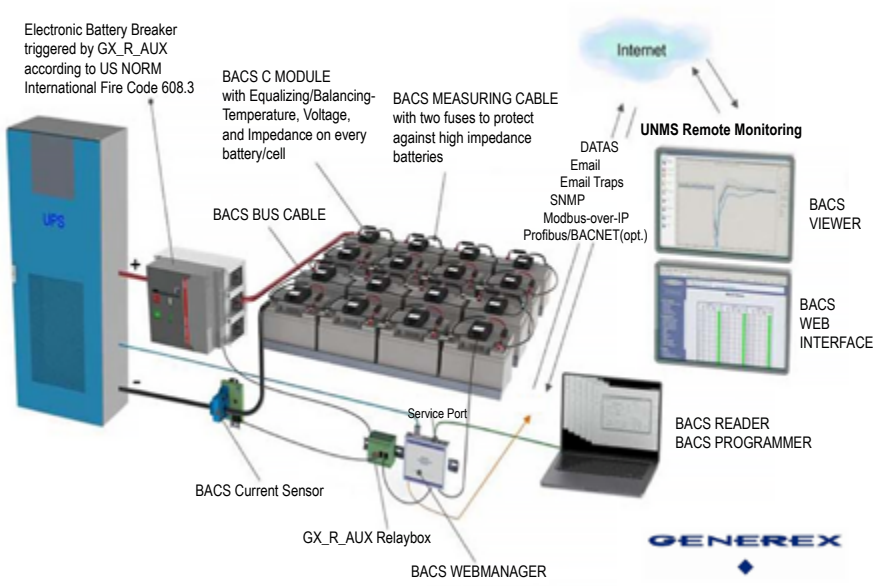
GX_R_AUX (Relay Unit)
4 Digital inputs and 4 dry contact outputs for thermal runaway notification and control and other auxiliary inputs and outputs.

Current Sensor
Physical connection to battery system. Installs to battery inter-cell cables or busbars

Server & Client PC
Main computer which interfaces with the WEBMANAGER. Runs BACS WEBVIEWER. Client PC's installed on same network for additional users.

BACS System Schematic

Typical BACS systems are configured with the following main components:



Technical Specifications

Measurement Range:	Battery Capacity: 5 – 6,000 Ah Nominal Unit Voltage: 2, 4, 6, 12 or 16 Volts System Voltage: 0 – 575 VDC Load Current: ±999.9A (optional)
Accuracy / Resolution:	System Voltage: ±0.5% / 0.1 V Load Current: ±1% / 0.1 A Unit Voltage: < 0.5% Internal Resistance: 2 - 4v < 10% 6 – 16v < 5% Unit Temperature: < 15%
Test Speed / Test Load:	4 seconds per cell / less than 2 amps AC per cell
Measuring Interval:	Adjustable from 10 min to 24 hours (cell/unit read- ings)
Data Transfer:	TCP/IP to proprietary software, Modbus, SNMP
Internal Storage:	Approximately 2 years (dependent on system size)
Operating Environment:	Temperature: 0 – 60 °C (32 – 140 °F) Relative Humidity: Under 90% non condensing
Power Requirements:	Input: 18 - 250 VDC / 110 – 220 VAC
Dimensions:	Webmanager: 130x125x30 mm (5.1x4.9x1.2 in.) **Module:** 55x80x24 mm (2.2x3.2x0.9 in.) **GX_R_AUX:** 75x75x45 mm (3x3x1.8 in.)

Applications

- UPS Systems
- Power Utilities
- Distribution
- Financial Instiutions
- Telecom/Communications
- Oil, Gas & Fuel Mining
- Government/Defense
- Transportation Operations
- Battery Suppliers and Manufacturers
- Meidcal/Biotechnology
- Generators

System Includes

- BACS hardware
- BACS VIEWER battery management software
- Installation materials
- Software and support literature
- Printed manual
- Optional: Spare parts kit

Ordering Information

Model No.	Description
BACS	Battery Management System: Up to 330 Cells/Units