

Front Panel

Rear Panel

Introduction

The **Sentry-4012HV** is an industrial grade **battery health** monitoring system designed specifically for medium size UPS systems with 30 to 40 blocks of either 12V or 16V batteries. This compact unit combines superior data quality with flexible and streamlined installation, which makes it suitable for server rooms, data centers as well as numerous other industrial applications.

IEEE standard reference:

IEEE-1188, IEEE Recommended Practice for Maintenance, Testing, and Replacement of Valve-Regulated Lead-Acid (VRLA) Batteries for Stationary Applications

IEEE-1184, IEEE Guide for Batteries for Uninterruptible Power Supply Systems

IEEE 1491-2012 IEEE Guide for Selection and Use of Battery Monitoring Equipment in Stationary Applications



7309 York Road
Towson, MD 21204
United States

TEL +1 410-337-5233
FAX +1 484-687-9904
info@batterydaq.com
www.batterydaq.com



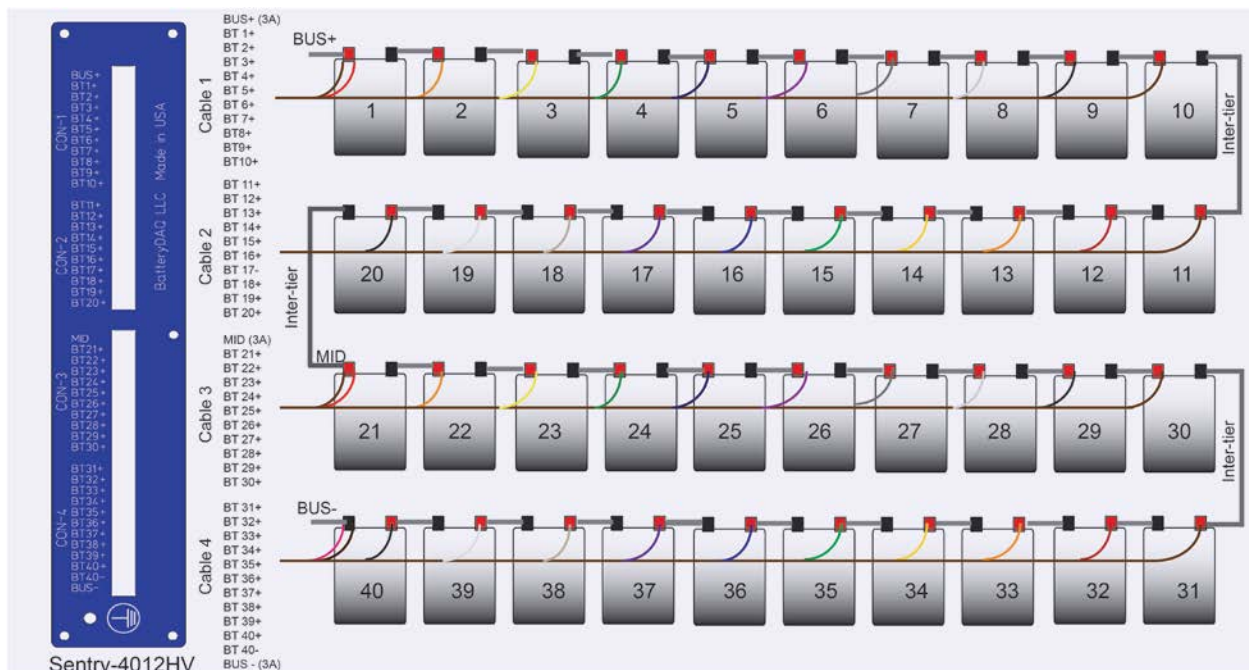
Main Features

- **Digital Wavelet Technology.** Precise IR (Internal Resistance / Conductance) online measurement is performed on each battery. User selectable internal resistance or conductance data display
- **Over Voltage Protection.** Designed with over voltage input for each sampling channel
- **580VDC.** Allows the unit to be installed in a wide range of voltage applications
- **High Resolution.** 16 bit high resolution provides for clear and precise data acquisition
- **Solid State Scanning.** (rather than mechanical relay) provides the highest reliability for data center and industrial applications
- **Noise Immunity.** Provides for accurate measurement on high ripple ups systems
- **Modbus/RTU Communication.** Provides high reliability and ease of integration
- **Compact Design.** Permits convenient installation on top, or inside of the battery cabinet
- **Access Data/Alarm from Anywhere.** Firewall friendly Battery Analyzer software, plug and play, easy to manage large number of sites from anywhere via internet. Alarming through email, SMS and SNMP trap
- **HMI Panel.** The plug and play touch panel (optional) allows the technician to configure and calibrate without the need of a PC
- **Supports Site/Building Management Systems.** The system fully supports 3rd party network battery management systems with SNMP, Modbus TCP and hyperlink to real-time data

Main measurements

- Cell Voltage Monitoring
- Cell Internal Resistance (IR) Monitoring
- String Voltage Monitoring
- String Charge & Discharge Current Monitoring
- Ambient Temperature Monitoring
- Pilot Battery Temperature Monitoring

Other Models for UPS Applications:
Sentry-1012 for up to 10 x 12V or 20x6V
Sentry-2412 for up to 24 x 12V
Sentry-30EX for 240 x 2V



7309 York Road
Towson, MD 21204
United States

TEL +1 410-337-5233
FAX +1 484-687-9904
info@batterydaq.com
www.batterydaq.com



Specifications

Power Supply	
Power Input	+12VDC, AC/DC adapter 100-240VAC input; Maximum Consumption: 10W
Isolation	2,500VDC@1min to battery string
Current/Temperature Measurement	
Current Sensor	Support LEM current sensor with internal +/-12V power supply Default range +/- 400A, window size 20mmx15mm D32mm and split core available
Accuracy	0.1% + sensor accuracy
Temperature Sensors	1 ambient temperature sensor, 1 pilot temperature sensor
Range	Measurement range: -20 to 60°C, operating range: 5°C to 40°C (41°F to 104°F)
Accuracy	1 °C
Voltage Measurement	
Channel	Max 40 channels (configurable for less than 40 channels)
Bus Voltage	Range: 0 – 580V; Accuracy: 0.1%
Input Range to Each Channel	+/- 20V for 12V (40x12V) or 16V (30x16V) batteries
Accuracy	0.1%
Input Wiring	1-wire from (+) positive of each battery plus the (-) negative of last battery.
Internal Resistance / Conductance	
Range and Resolution	0 to 30mΩ, 0.01 mΩ resolution
1-wire mode	Total value of Internal Resistance + Connection Resistance.
Communication	
Serial Port	Isolated RS-232C and RS-485 interface
Protocol and Serial Settings	MODBUS RTU, 9600-8-1-None
Modbus address	1 to 28, configurable with HMI
Ethernet	Onboard Ethernet LAN connection to Battery Analyzer or MyBattery Platform™ SNMP, Modbus TCP, email/SMS message, hyperlink to real-time data
Indication and Alarm	
LED indication	<ul style="list-style-type: none"> ▪ Dual-color LEDs for status ▪ Orange flashing LED for service alarm ▪ Red LED for urgent alarm
Alarm Outputs	Service Alarm (Normal Close, Voltage-free, 60V 0.1A capacity) Urgent Alarm (Normal Close, Voltage-free, 60V 0.1A capacity)

***Specifications subject to change without notice**

