Kokii BatteryDAQ is the leader for comprehensive battery monitoring solutions. We have invented the core technology - online internal resistance measurement and developed a series of products for battery manufacturing and field applications for reserve power and deep cycle battery system since 1995. The service extends to financial and data centers, telecommunication, electric utility, petrochemical, broadcast, defense and transportation.

For many applications, there are only small number of batteries in the cabinet. It is unrealistic to install traditional battery monitoring system because of the cost, space and remote management concerns. Sentry is a revolutionary design to serve those applications. It utilizes the same proven wavelet technology to achieve accurate internal resistance online measurement. With the industrial grade design and components, Sentry complies with the most rigorous international standards for indoor/outdoor cabinets with unsurpassed reliability.

Battery Analyzer V3.0 is a powerful battery monitoring and data management software based on Kokii's experience and expertise. It provides users detailed information about batteries by data, tables and charts. The flexible connectivity allows multiple users access to multiple sites in order to manage thousands of batteries throughout a network.

Sentry is compatible with MyBattery global platform. Unlimited sites can be managed by intelligent platform and experts in Kokii data center through land network or wireless connection worldwide.

Features & Benefits

- Secure critical battery systems with 24/7 online monitoring
- Identify weak batteries with precise internal resistance and trending
- Compact design to fit with any cabinet, for any number of batteries.
- Perform a load test with high resolution curve log for each battery
- Record reliable data for routine battery maintenance
- Manage remote sites with land network or wireless GPRS

Construction

Measuring devices: Sentry is a system on board device. It measures voltage, internal resistance, current (optional), and temperature. It integrates data collection, processing, communication and alarm output in this incredible size.

Communication Options
1) RS232 or RS485 port to PC or server.
2) Through Serial-Ethernet adapter.
3) Virtual GPRS to MyBattery platform.
4) Wireless GPRS for remote sites.

Management Software:
1) Battery Analyzer software.
2) MyBattery platform subscription.

Installation & Operation

Sentry comes with standard or customized harness. It is simple to pre-install Sentry in new cabinet or retrofit into cabinet with existing batteries.

DIY kit includes:
1) Sentry monitor with temperature sensor
2) Harness, hardware and RS232 cable
3) Software and step-by-step instruction

Field technician can read data through HMI or laptop. Battery Analyzer software and MyBattery platform provides reliable solution to manage thousands sites remotely.

Best for

- Telecom Outside Plants
- Cellular Sites
- CATV Cabinets
- Traffic Control Cabinets
- Small/Medium UPS
- Marine UPS

Standards

- In compliance with the requirements of the IEEE std 1491 (2005)
- RoHS Compliance
- CE certified
- Manufactured in ISO 9001 facility
## General Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>5VDC (Universal AC or DC adapter available)</td>
</tr>
<tr>
<td>Isolation</td>
<td>500VDC@1min</td>
</tr>
<tr>
<td>Current</td>
<td>0.1% + sensor accuracy, 0 to 400A, close loop (Optional)</td>
</tr>
<tr>
<td>String Voltage</td>
<td>0 to 100VDC, 0.1% accuracy</td>
</tr>
<tr>
<td>Temperature</td>
<td>-20 to +60 °C, 1°C accuracy</td>
</tr>
<tr>
<td>Battery Voltage</td>
<td>+/- 20V, 0.1% accuracy</td>
</tr>
<tr>
<td>Input Protection</td>
<td>O-ring fused lead for each battery terminal, 100mA fuse</td>
</tr>
<tr>
<td>Internal Resistance</td>
<td>0 to 30,000 μΩ, 5 μΩ resolution</td>
</tr>
<tr>
<td>Connection Resistance</td>
<td>0 to 30,000 μΩ, 5 μΩ resolution</td>
</tr>
<tr>
<td>TM Protocol</td>
<td>MODBUS RTU</td>
</tr>
<tr>
<td>Baudrate</td>
<td>Default 9600 (14400/19200/28800/57600 selectable)</td>
</tr>
<tr>
<td>Alarm Output</td>
<td>Normal Close, dry 2A30V</td>
</tr>
</tbody>
</table>

## System Example: Sentry 0412-4

- **RS485 to PC or Remote Management Center**
- **48V System**
  - 16 blocks of 12V 170Ah
- **Major Parts:**
  - SENTRY-8 X 2
  - LEM Sensor X 1
  - Temperature Sensor X 1

## Typical Application

- **24V System**
  - 2 x 12V, 1 string or 2 strings
  - 4 x 6V, 1 string or 2 strings

- **48V System**
  - 4 x 12V, 1 string or 2 strings
  - 8 x 6V, 1 string

Multiple units can be chained for more batteries.

## Software Environment

- Windows XP+SP2 home/professional
- Windows Vista home/professional
- Windows 7 home/professional/ultimate
- Windows Server 2003 or 2008

## Validated Battery Type

- Valve Regulated Lead Acid Battery
- 6V, 12V
- Capacity Range: 17Ah to 350Ah

## Parts List

- Sentry TM-8: 2 units
- Temperature sensor: 1
- Current sensor, 100A: Optional
- RS232-485 converter: Optional
- Network adapter (RS-485): Optional
- 5VDC power adapter: 1
- Harness kit: 1 kit
- Battery Analyzer software: 1 license
- HMI GT-01: Optional

Current sensor is NOT recommended. Please specify application for pre-configuration.