

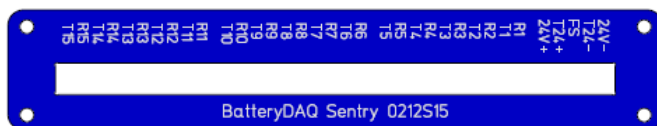
Sentry series compact battery monitors combine superior data quality and flexible installation to address cell site applications. Compatible with Battery Analyzer software, MyBattery Platform™ or other remote site management system with standard Modbus communication, Sentry monitors can be utilized for virtually every remote telecom application.

Sentry-S15 is specifically designed for 24V systems with up to 15 strings of 2x12V in parallel which are popular in telecom sites.

- **Digital Wavelet Technology.** Precise IR (Internal Resistance / Conductance) online measurement is performed on each battery. User selectable internal resistance or conductance data display
- **No Noise/Interference to Power System.** No need for high current discharge during internal resistance measurement
- **Over Voltage Protection.** Designed with over voltage input for each sampling channel
- **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 telecom site and industrial applications
- **Modbus/RTU Communication.** Provides high reliability and ease of integration
- **Compact Design.** Permits convenient installation on top, or inside of the battery cabinet/rack
- **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



Front Panel (Battery Terminal Connections)



Rear Panel (BUS, Signal and Communications)



Contact us for our white paper:
"Comprehensive Large Scale Battery Monitoring for Cell Sites"



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Key Features

Model	Sentry-S15
Battery System	Optimized for telecom 24V system with 12V batteries 2x12V, 3 to 15 strings (For 1 or 2 string, select Sentry-NB8 or Sentry-S2)
Power Supply	Powered by battery bank BUS, not by individual battery
String Voltage	Continuous monitoring with High/Low float charge voltage threshold and discharge Low setting
float current	Built-in proprietary float current measurement, no need for external sensor. 0.1A resolution, eliminates drift from Hall effect sensor, wide range 0 to 1,000A
Ambient temperature	2 sensors (1 for ambient and 1 for pilot, or 2 locations for a battery bank)
Individual battery voltage	Flexible interval to report data, high/low threshold for floating and discharge
Internal Resistance	Wavelet technology to achieve unsurpassed IR precision.
Enclosure	Compact aluminum, mounts on battery rack or on top on battery bank
Harness and installation	Simplified wiring design for easy installation Pre-made/customized harness for quick installation enables large scale deployment Portable touch screen for onsite validation
Battery discharge capture	High resolution capture, no limit to time lapse, no limit to onboard memory size. Online access to discharge curve for every battery (with MyBattery Platform™)
Generator Monitoring	Optional analog port for fuel monitoring Optional digital ports for generator status
Network	Instant drop-in, no field configuration. Ethernet compatible with static and dynamic IP. Optional wireless GSM/CDMA, M2M technology Certified with PTCRB, AT&T, T-Mobile, Sprint, Verizon, Jasper and Rogers network
MyBattery Platform™ capacity	Cloud based parallel computing No limit, validated with >10,000 sites
Integration	Standard Modbus RTU and Modbus TCP protocols. Software provides SNMP integration and SMS, email alarm delivery.



Specifications

Battery System	24V battery system (18 ~ 30V range) 2x12V per string, up to 15 strings in one DC system
Power Supply	Internal power converter. Maximum Consumption: 6W
Isolation	500VDC@1min to battery string
Current Sensor	Support LEM current sensor with internal +/-12V power supply (Default range +/- 400A, window size 20mmx10mm)
Accuracy	0.1% + sensor accuracy
Temperature Sensors	1 ambient temperature sensor, 1 pilot temperature sensor
Temperature Range	Measurement range: -40 to 65°C, 1 °C accuracy
Bus Voltage	Range: 0 – 30V; Accuracy: 0.1%
Input Range to Each Channel	+/- 16V for 12V batteries
Accuracy	0.1%
Internal Resistance/Conductance	0 to 30mΩ, 0.01 mΩ resolution
1-wire mode	Total value of Internal Resistance + Connection Resistance.
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
Wireless Option	GSM/GPRS (PTCRB, AT&T, T-Mobile, Jasper, and Rogers Network certified)
LED indication	<ul style="list-style-type: none"> ▪ Dual-color LEDs for status ▪ Orange 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)
Dimension	165W*31H*165L(mm) (Mounting bracket excluded)
Mounting	Magnetic Cup (default), DIN rail or customized bracket

***Specifications subject to change without notice**

IEEE standard reference:

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

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

