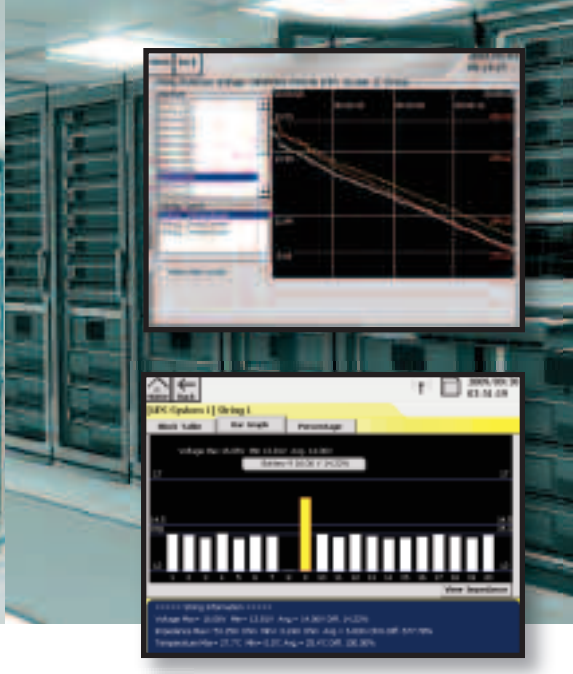
Battery Monitoring System



MONITOR • RECORD
REPORT • TREND

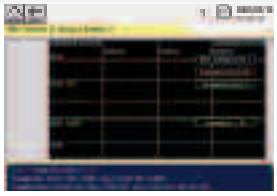
- Measure and record battery voltage, string voltage, string current, cabinet temperature and battery impedance.
- User selectable measurements interval (second-hour-daily) monitors each battery's ohmic value
- Maximizing battery life of your investment
- Eliminate unpredicted back-up power failure during a emergency due to undetected battery failure.

Battery Sentinel

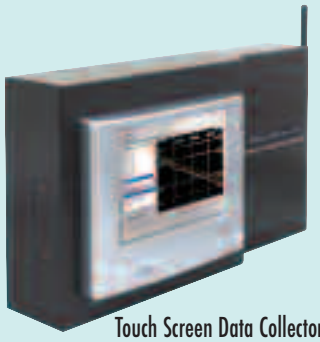
Battery Sentinel is designed to protect and enhance your investment in backup emergency power systems. Utilizing state of the art electronic "ohmic value" testing and monitoring, the Battery Sentinel provides the added assurance that when emergencies happen, the power will be available when it's needed.

Incorporating wireless or wired components, the system is easy to install, easy to operate, and easy to maintain. Battery voltage, string voltage, string current, cabinet temperatures, battery terminal temperature and battery impedance are measured, stored and displayed in the touch screen Data Collector. The Battery Sentinel is designed to detect impending failures long before they become an operating risk, and long before a technician might discover them during a routine maintenance check or during an emergency.

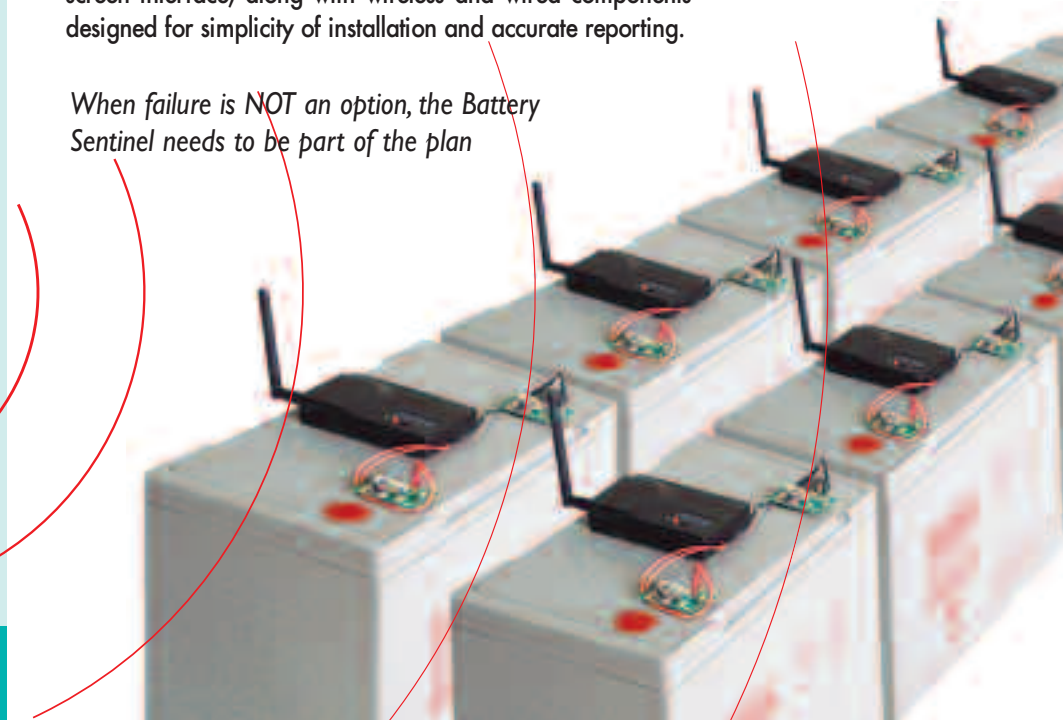
The Battery Sentinel includes a Data Collector utilizing a touch screen interface, along with wireless and wired components designed for simplicity of installation and accurate reporting.



When failure is NOT an option, the Battery Sentinel needs to be part of the plan

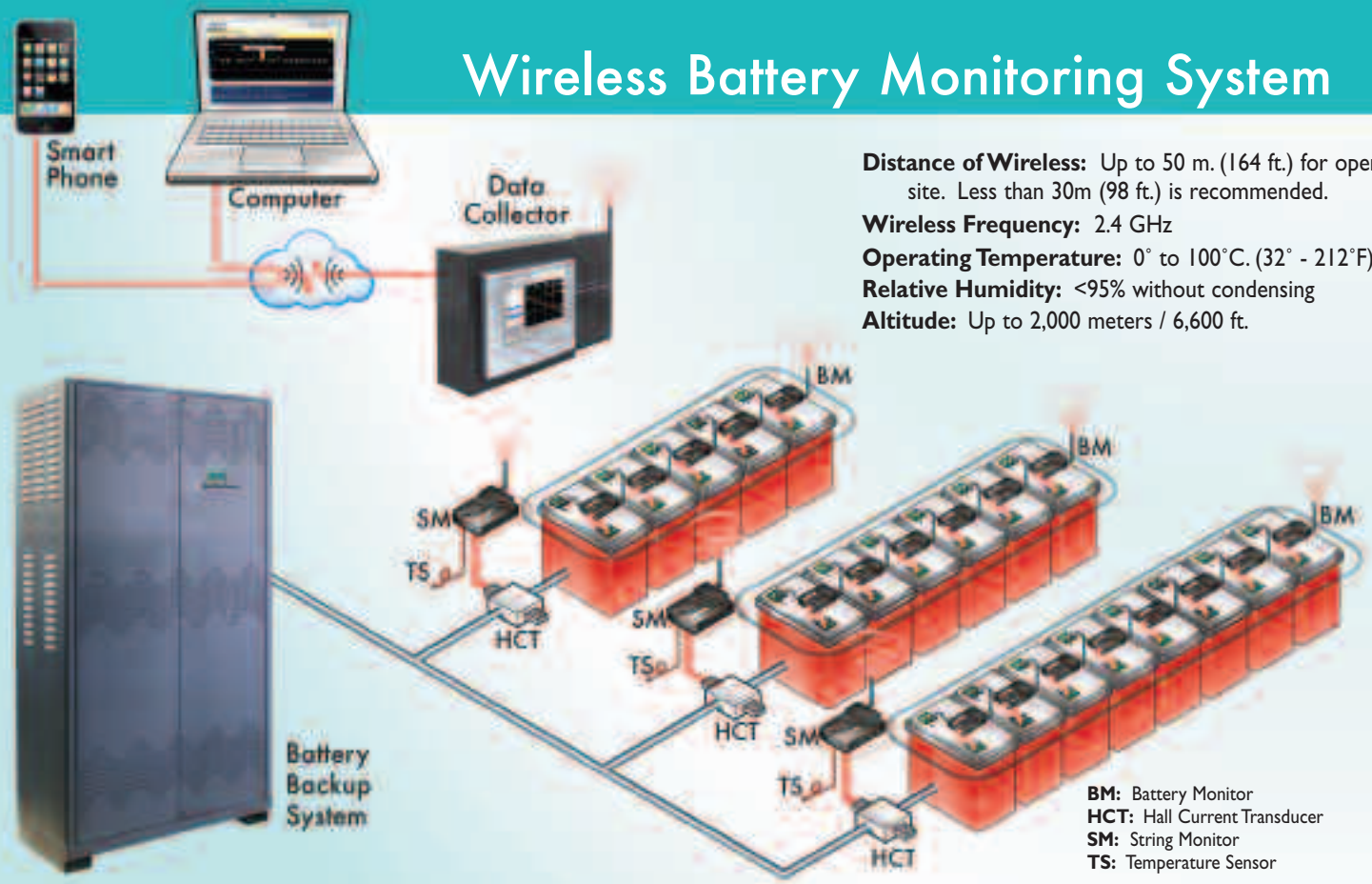


Touch Screen Data Collector



CRUCIAL POWER PRODUCTS

Wireless Battery Monitoring System



Distance of Wireless: Up to 50 m. (164 ft.) for open site. Less than 30m (98 ft.) is recommended.
Wireless Frequency: 2.4 GHz
Operating Temperature: 0˚ to 100˚C. (32˚ - 212˚F)
Relative Humidity: <95% without condensing
Altitude: Up to 2,000 meters / 6,600 ft.

BM: Battery Monitor
HCT: Hall Current Transducer
SM: String Monitor
TS: Temperature Sensor

SM: Single String Monitoring

SM (String Monitor)

Voltage	Range	Up to 750 V
	Accuracy	±0.2%
Current	Range	Up to 3000 A
	Resolution	±3%
Temp.	Range	32˚ to 212˚F (0˚ - 100˚C)
	Accuracy	±1.8˚F
Imput Power Supply		120V (provided by Customer)
Power Consumption		3.0Watt Max.
Dimensions		4" W x 1" H x 2.75" D
Additional String Monitor need for more string of batteries. See ordering guide.		

Data Collector

Input Power Supply	120V (provided by Customer)
Power Consumption	18W, Max.
Max. Monitoring Kits	Ethernet TCP IP, RS485, Alarm Output Contact x1, External Trigger Contact x1
Display	6.4" LCD Touch screen
Store Media	SD/MMC Flash Memory Card
Dimensions	15" W x 9.8" H x 3.2" D

- Real-time Monitoring Information: Block Voltage, Battery Impedance, String Voltage, String Current, and Temperature
- Chart: Curve, Bar graph, Average
- Battery Test: Battery Voltage, Battery Impedance, Battery String Voltage, Battery String Current, Environment Temperature, Curve

BM (Battery Monitor)

Part # BMK (1 ea. per battery)

Block Voltage		12V	
Voltage	Range	9 - 16V	
	Accuracy	±0.1%	
Impedance	Battery Capacity	<65Ah	<66Ah
	Resolution	0.01 mΩ	0.03 mΩ
Temp.	Range	32˚ to 212˚F (0˚ - 100˚C)	
	Accuracy	±1.8˚F	
Power Consumption		0.5Watt Max.	
Dimensions		4" W x 1" H x 2.75" D	

Ordering Guide

	Part #	Name	Description
String Monitoring	SM-1	Base Single String Monitor	Single String Monitoring Including Data Collector + Connection Accessories + Temperature Sensor
	SM-2	Additional String Monitor	One String Monitoring module + Connection Accessories + Temperature Sensor
Battery Monitoring	BM	Each individual Battery Monitoring	Battery Monitoring module + Connection Accessories
	Antenna	Antenna	for additional room separation (for touch screen to extend its range beyond 100Ft)
Temp. Sensor	BM-TS	Battery Monitor Temp. Sensor	each individual battery temp. sensor (if temperature reading is required per battery jar)

If Data Collector is located in separate room optional Antenna is available.

Battery Facts

- Undetected battery failure is the leading cause of 75% of Battery Backup System failure.
- 95% of undetected battery failures occur after the battery warranty period expires.
- Quarterly maintenance alone is inadequate in critical applications.
- Any string of batteries is only as good as its weakest battery.
- Failing batteries can compromise the expected usable life of the entire string of Batteries.
- Batteries near end-of-life have lost 20% of the original load capacity and 50% of their original runtime capacity.

Specifications are subject to change without prior notification.

CRUCIAL POWER PRODUCTS

14000 S. Broadway, Los Angeles, CA 90061
Tel: (800) 244-4069 • Fax: (800) 246-2346
www.crucialpower.com