

# PowerShield 8

## Battery management system

Get more out of your battery investment, while ensuring maximum uptime.

PowerShield 8 is a modular system providing complete visibility to battery health and performance, no matter the size and complexity of your situation.

### **MORE UP**

Have confidence there is sufficient battery capacity to maintain systems for the designated time in the event of a power failure.

### **MORE OUT**

Ensure the battery bank is maintained in an optimum environment to maximise performance and life.

### **NO SURPRISES**

Identify faults and weaknesses in the battery bank early so preventative maintenance and replacement can be done in a safe and orderly way.

## Why PowerShield 8?

- Avoid costly downtime and protect your business from losses.
- Optimise battery life by replacing batteries at the correct time.
- Improve safety by reducing the need for physical contact with the battery bank.
- 24/7 alarm notifications enable quick response to potential battery issues.
- Make informed decisions from automatically captured and consistently reported data.
- Reduce maintenance and replacement costs by monitoring and performing preventative maintenance.
- Save time by having remote access to battery data and pinpointing faults to specific individual batteries.
- Maintain security and overall systems integrity by limiting access to sensitive areas for external service providers.

## PowerShield 8: the modular battery management system

The Controller is at the heart of the PowerShield 8 system, a complete solution of hardware and software for monitoring an unlimited number of batteries. PowerShield 8 ensures maximum availability of your battery backup, while ensuring you get the most out of your battery investment.

### **MEASURE with mSensors**

Gather individual voltage, impedance (Ohmic value) and temperature data, for VRLA, VLA and Ni-Cd batteries.

### **RELAY with the Hub**

Applied per battery string, the Hub takes inputs from in-built sensors and sensors at the battery rack and consolidates for transfer to the Controller.

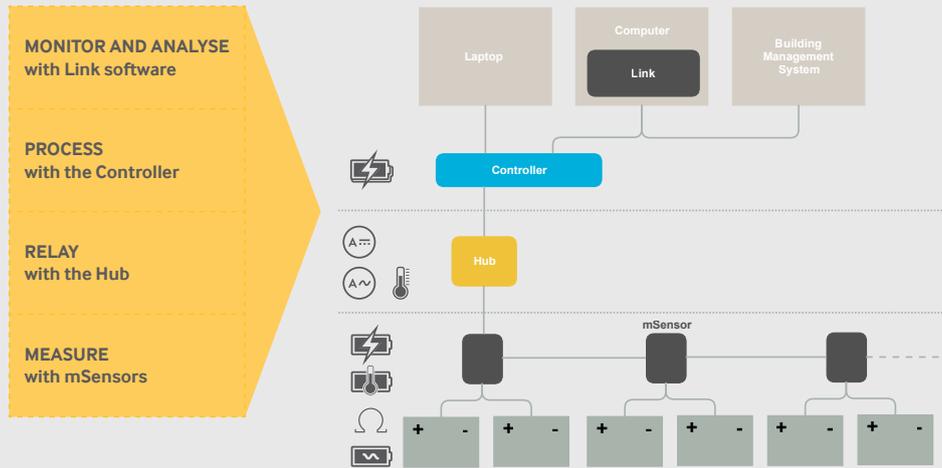
### **PROCESS with the Controller**

At the heart of PowerShield 8, the Controller captures, processes and stores data from the battery sensors.

### **MONITOR AND ANALYSE with Link software**

Comprehensive monitoring from a single control point, from batteries held in a single room through to large numbers of batteries held across multiple facilities or countries.

# PowerShield 8



## With PowerShield 8 you can track:

- Individual battery voltage**  
Identify anomalies within the string.
- String current**  
Identify unbalanced battery strings, capture charge and discharges.
- Ambient temperature**  
A 10 degree Celsius increase in ambient temperature can decrease battery life by 50%.
- String ripple current**  
Detect excessive ripple current or unexpected changes over time.
- Individual battery impedance**  
Trending impedance allows you to accurately determine end-of-life, as well as highlight poor connections and open circuit batteries before failure.
- String voltage tracking**  
Ensure charger is on and avoid incorrect float charge affecting battery life.
- Individual battery temperature**  
Measuring the temperature of each battery allows the early detection of thermal runaway, pinpoint localised environmental problems through poor HVAC, and highlight poor connections during discharge and excessive charger ripple.

## SYSTEM SPECIFICATIONS

<b>Battery inputs</b>	up to 512	<b>Temperature inputs</b>	up to 16 (connected via remote Hubs)
<b>Sensor type</b>	mSensor	<b>Maximum distance</b>	50m / 160ft from Controller via Hub 15m / 45ft from Hub
<b>Nominal sensor voltage</b>	1.2V Nicad, 2V, 4V, 6V, 8V, 12V, 16V Lead Acid	<b>Inputs</b>	up to 18 2 via Controller, up to 16 via remote Hubs
<b>Maximum distance</b>	50m / 160ft from Controller via Hub 25m / 80ft from Hub	<b>Type</b>	Dry Contact
<b>Current inputs</b>	up to 8 (connected via remote Hubs)	<b>Relays</b>	4 via Controller
<b>Current range</b>	0A to $\pm 2000A$	<b>Type</b>	Single Pole Double Throw (SPDT)
<b>Maximum distance</b>	50m / 160ft from Controller via Hub 15m / 45ft from Hub	<b>Rating</b>	1A (Q 30VDC, resistive)

## About PowerShield

PowerShield specialises in the design, manufacture, installation and operation of advanced battery monitoring systems for organisations with critical services that rely on continuous power. PowerShield provide the most advanced and most cost-effective tools for monitoring and managing stand-by battery banks. PowerShield's continuous data sampling, reporting and battery management capability delivers reduced costs, peace of mind that you have batteries that perform when needed, and you are maximising the life of your batteries.



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