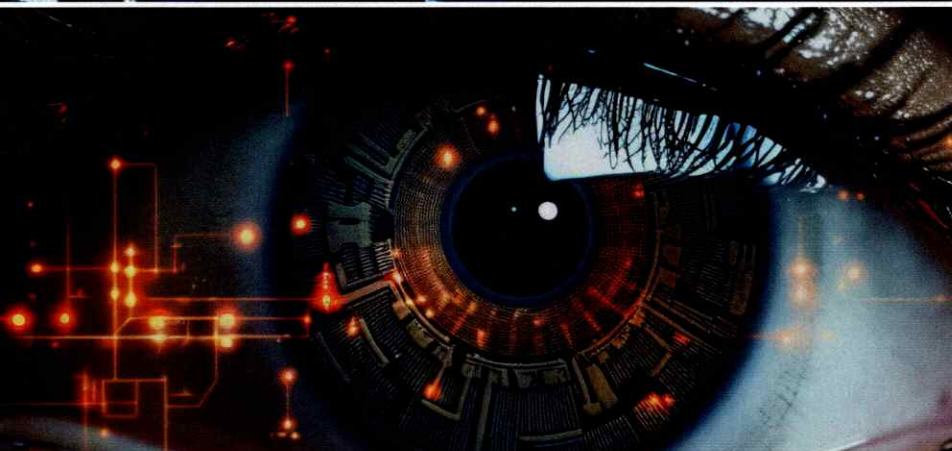




ADVANCED BATTERY MONITORING FOR LITHIUM BATTERIES



*See your
batteries health
more clearly.*

Data first by design

What sets PowerShield8 apart is its data-first system design. Every hardware and software component has been designed to ensure comprehensive, high-frequency, accurate and repeatable data collection, management and presentation.

PowerShield8 makes your battery data accessible at a battery system and enterprise level. A complete PowerShield8 Advanced Battery Monitoring and Management installation of hardware and software components ensures that all your battery assets are continuously monitored in a consistent and comparable manner.

Modular, scalable and flexible

PowerShield8 is a versatile Advanced Battery Monitoring System designed to make any standby battery installation smarter.

PowerShield8 can be configured to consistently monitor an almost unlimited number of cells (Li-ion) or blocks (VRLA, VLA NiCad), whether in racks or cabinets, in a high-quality, consistent manner, regardless of their charging regime or location.

A full PowerShield8 installation allows you to view and manage all your battery assets across multiple locations in one system

PowerShield8 sets the standard

PowerShield8's fast, high-quality, continuous real-time battery data sampling and ease of use set the standard for standby battery monitoring. It empowers your team with complete visibility of all battery assets and their battery health parameters, enabling them to proactively ensure they remain healthy, live longer and are ready to perform whenever needed.

PowerShield8 advanced features

- Continuous fast data sampling in all string states (float, charge, discharge and idle)
- Advanced data logging (7 log types) makes fault finding and trend analysis easier.
- Powerful drill-down and drill-through analytical tools for fast problem solving
- Lifetime data capture by Controller (Battery System) and Assure/Link Software (Enterprise)
- 24/7 user-defined alarms and alerts
- Consistently monitor and manage any number of battery assets across multiple locations

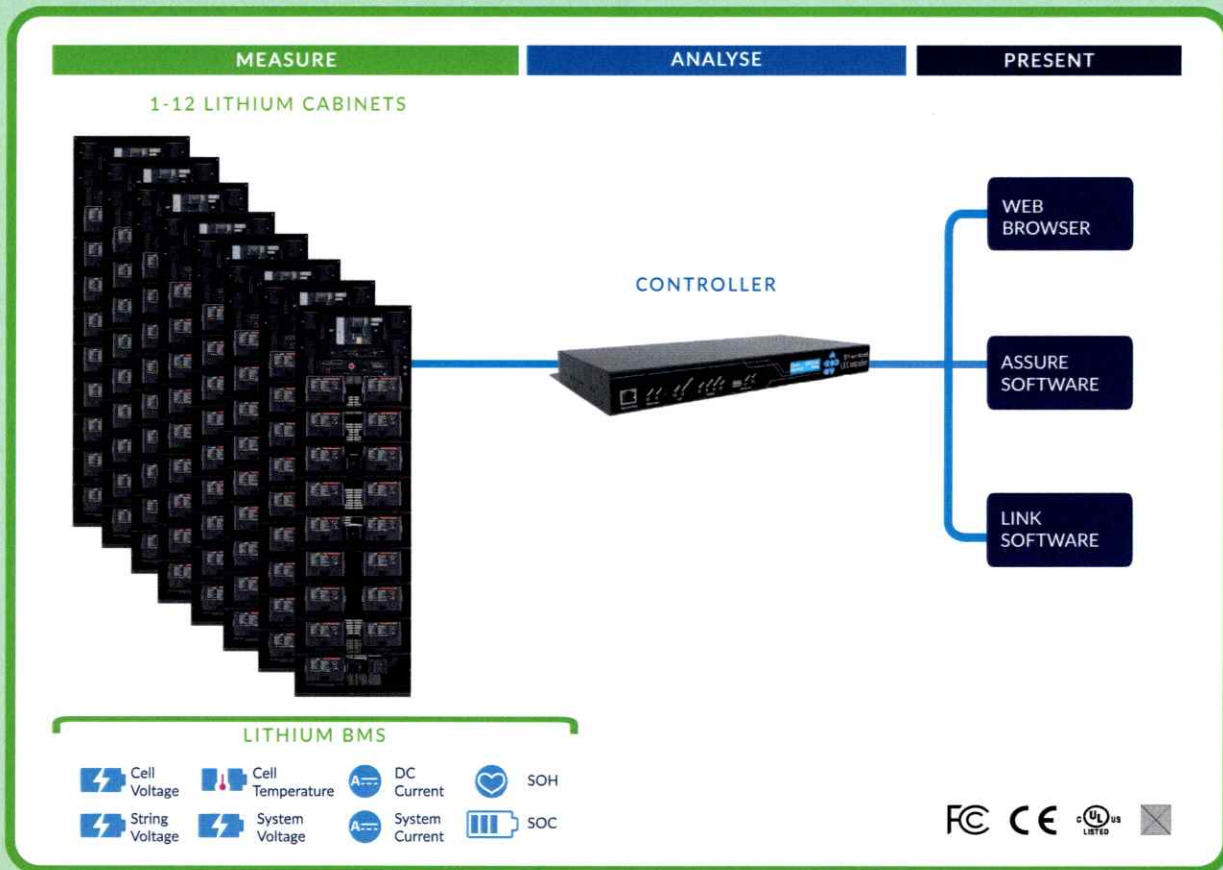
PowerShield8 for lithium benefits

- Gain full visibility of the past and present status of your Lithium batteries down to cell level
- Powerful battery management dashboards - see all battery assets on one screen
- Trend all battery parameters over the life of the battery, including SOH and SOC
- Analyse battery discharges with the click of a button
- Identify failing lithium cells early - for timely, cost-effective replacement
- All the battery data that you need for warranty claims in one report

PowerShield8 Specifications

See separate PowerShield8 for Lithium batteries datasheet.

How it works



Collect more battery data with PowerShield8 Controllers



Controllers are smart devices that collect, analyse and store the battery measurements retrieved from the Lithium BMS. Continuous, fast data sampling in all string states (charge, discharge and idle) allows the Controller to initiate event logging and provide real-time battery visibility and status.

Advanced data logging (7 log types) makes fault finding, assessing performance under discharge and life trend analysis easier. Value is added by calculating key battery management metrics. Every Controller has sufficient onboard storage capacity for the life of your batteries. Alarms are output via Link and Assure and relay contacts when required.

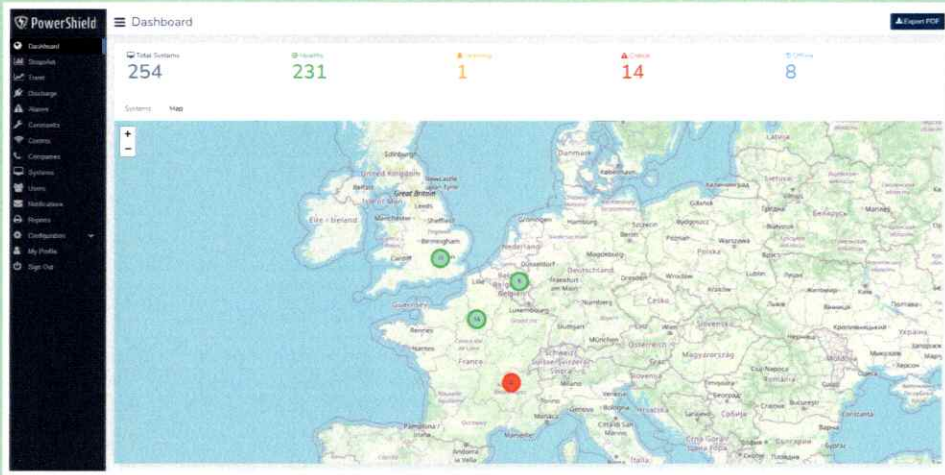
The Controller has a browser-based UI for configuring the system and visualising real-time battery measurements. In the battery room, a dedicated service port, USB, SD card, and LCD give simple visibility and data transfer options. Designed with two network ports, it allows the customer network to remain secure and uninterrupted during service visits.

- Independently security tested. Ships security hardened
- Consistently monitor and manage any number of battery assets across multiple locations
- CSV log file output
- Controllers are battery chemistry agnostic - Lithium, Lead Acid and NiCad

PowerShield8 software for battery management excellence

PowerShield8 offers three battery management software options, all supporting Lithium, VRLA, VLA and NiCad.

Assure - Cloud based

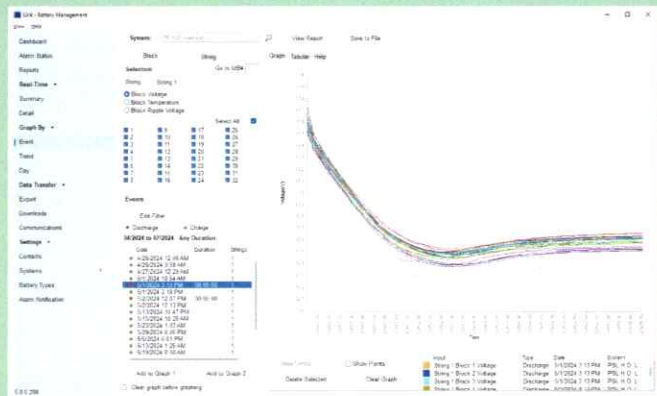


Intuitive and powerful - PowerShield8 Assure provides a window into the health and performance of all connected battery systems and assets, highlighting which ones need attention. It enables your team to make proactive, informed decisions and take action to optimise battery health, performance, and lifespan. Data is turned into actionable information and insights in the form of powerful battery management dashboards and reports with user-defined alarms, alerts, and other automations to minimise the risk of battery failure and ensure that nothing is left to chance. Quickly identify the root cause of any battery issues with real-time data and powerful drill-down, drill-through, trending and comparison tools. Trend lifetime battery data.

Cloud-based means you can access your battery management system and information wherever you are from any connected device.

Link - On-premise.

PowerShield8 Link is Windows based, on-premise battery monitoring software, also suitable for field service use. Standard Edition for 24/7 operation and the Service Edition for field service use. It has similar functionality as Assure without the advantages that the secure Cloud offers. Dashboards provide facility level battery views with powerful drill-down and drill-through analytical tools.



Controller UI - Browser interface.

PowerShield8 Controllers have a browser-based UI for configuring the system and visualising real-time battery measurements. This UI is ideal for field service use or one-to-one connections across the LAN.





Take control

PowerShield8 advanced battery monitoring system

Gain full visibility of your lithium battery assets with PowerShield8

Battery management teams that are used to advanced battery monitoring and management for Lead-Acid batteries and who have recently switched to Lithium batteries may be disappointed with what they see. PowerShield8 can help fill the gaps, ensuring complete visibility of each battery asset's past and present health and performance down to an individual cell level.

By accurately capturing more complete battery data, PowerShield8 helps you comply with your battery warranty requirements and achieve the highest battery management standards. It also helps you accurately predict each battery's remaining useful life, facilitating more cost-effective and proactive battery replacement.

Powerful battery management dashboards, reports and analytical tools allow you to drill from the enterprise level through to facilities, systems, modules, and cells. Consistently monitor VRLA, VLA, NiCad and Lithium battery assets on one platform independent of the UPS system used.

See your Lithium batteries more clearly and take control with PowerShield8.

When continuous power is critical

If continuous power is critical for your operational success, then you need advanced battery management. Battery failure is the largest cause of UPS failure, so to achieve uptime excellence, you first need to achieve battery management excellence.

Lithium standby batteries come with battery management systems (BMS) supplied by the battery OEM. These systems are primarily designed to ensure battery safety and control the charging regimes. Facilities aiming for the highest uptime standards will need more visibility and control than the standard Lithium BMS provides.

PowerShield8 makes any stationary battery asset smarter and easier to manage, including Lithium batteries.

Lithium standby batteries require monitoring as well

Battery management starts with measurement

All batteries fail at some point; the trick is to know when and what's causing any changes in battery status. To know this, you need to measure the right battery parameters accurately and frequently at an actionable level of detail.

To manage standby batteries effectively, you need comprehensive, continuous, real-time battery monitoring. Lithium batteries require faster battery data sampling and far more processing power and storage than Lead Acid and NiCad batteries

PowerShield8 measures and retains everything you need to achieve the highest battery management standards.

Why choose PowerShield

- **UPS agnostic** - works with all common UPS systems.
- **Battery agnostic** - works with VRLA, VLA, NiCad and Lithium batteries.
- **Flexible** - modular, scalable design that can be configured to meet each specific battery installation's requirements.
- **Powerful, intuitive software** for battery management excellence.
- **Proven technology** - trusted by industry leaders.
- **Battery data** - completeness, accuracy and repeatability. See your batteries more clearly.
- **See the status of all your battery assets** in one system.

Our sales & installation network includes:



Trusted by:



ABOUT POWERSHIELD

PowerShield has been designing, manufacturing, installing and operating advanced battery monitoring systems in critical power facilities around the world for over 25 years.

A true specialist, PowerShield has its own in-house innovation and technical team and manufacturing to remain responsive to customer needs and the rate of change in technology.

Today, there are well over one million batteries being monitored by PowerShield systems in critical power facilities like data centers, banks, hospitals, telcos, power utilities and a wide range of industrial and commercial enterprises.



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SMART BATTERY MANAGEMENT

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