PowerShield8 Controller

The brain of your battery management system

Controller

A component of PowerShield 8, the Controller is an intelligent hardware device that captures, processes and stores all relevant data collected from batteries and the operating environment.

The strength of a battery monitoring system is proportional to the number of points monitored and monitoring frequency. With regular monitoring comes the accumulation of data, the ability to report and spot trends, and the ability to make smart decisions. At the heart of this is the Controller.

The Controller captures, processes and stores data from the Hubs and mSensors, including battery voltage (DC and ripple), impedance and temperature, string voltage and current (DC and ripple), humidity plus ambient temperature.

Key features:

- Simple installation, minimal cabling and the capability to monitor UPS batteries that are up to 10 strings.
- A user friendly web interface with smartphone/tablet friendly status screens.
- Dry contact inputs can be utilised for monitoring battery breaker status, door status, electrolyte level sensors or other 3rd party devices.
- High recording frequency to enable best practice battery diagnostics.
- Event logs providing history of configuration changes and other events to the system to support business process validation requirements.
- In-built memory to record all battery activity and track the entire life of the battery.
- Battery behavior captured accurately through non latching alarms, providing high resolution record of battery readings that cross two level alarm limits, as well as capturing the extreme values recorded during alarms.
- Integration with infrastructure management systems enabled with built-in protocols (SNMP, ModbusTCP, HTTP).
- Access options for non-networked sites, including LCD version of the Controller with keypad access, and simplified data collection option with USB port.

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.

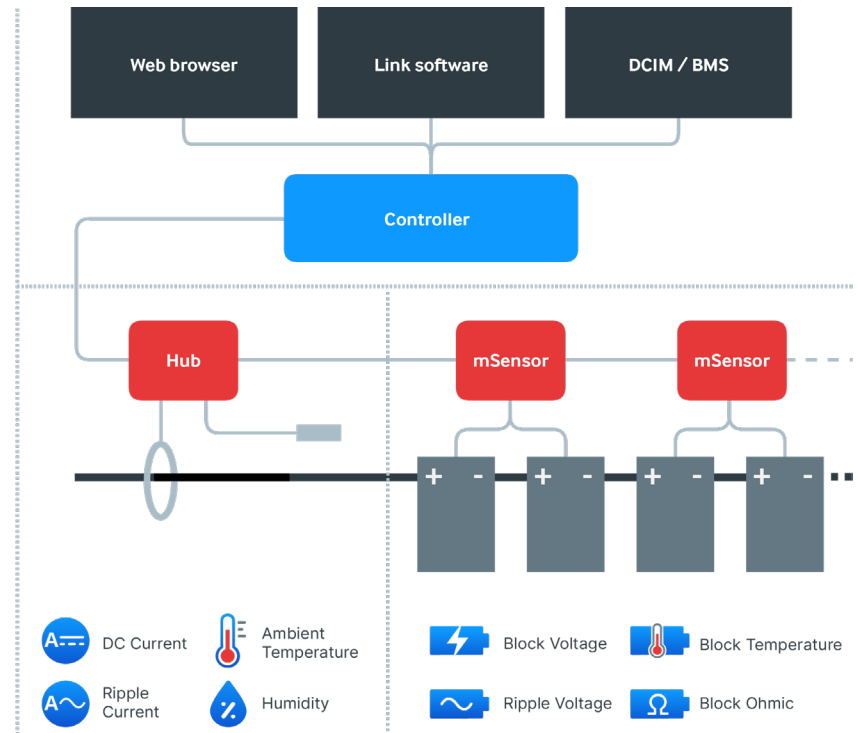|			
MEASURE with mSensors	Gather individual voltage, impedance (Ohmic value) and temperature data, for VRLA, VLA and Ni-Cd batteries.	**PROCESS with the Controller**	At the heart of PowerShield 8, the Controller captures, processes and stores data from the battery sensors.
RELAY with the Hub	Applied per battery string, the Hub takes inputs from in-built sensors and sensors at the battery rack and consolidates for transfer to the Controller.	**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.

Component-Diagram

PRESENT

ANALYSE

MEASURE

String Voltage
(by Controller)

DC Current

Ripple Current

Ambient Temperature

Humidity

Web browser

Link software

DCIM / BMS

Controller

Hub

mSensor

mSensor

Block Voltage

Ripple Voltage

Block Temperature

Block Ohmic

Controller LX

Service port	Front Ethernet port (1000Base-T)
Port 1 Port 2 Port 3	Back Ethernet port (1000Base-T) Expansion port - optional RS485 Expansion port - optional RS485 or Wi-Fi[1]
Display	16 x 2 character LCD
Front	USB data storage
Power consumption	5W + 1.2W per Hub
Power supply	AC Model: 90 – 260V 50/60Hz 24V DC Model: 18 – 30V 48V DC Model: 35 – 60V 110V DC Model: 80 –150V

Configuration interface Minimum version	Web browser Chrome 51, Edge 15, Firefox 54, Safari 10.0
Dimensions Width Depth Height Weight	1U High 19" rack mount 430mm / 16.9 inches 265mm / 10.4 inches 45mm / 1.8 inches 3.0 kg / 6.6 lb
Relay outputs Rating Selectable	4 SPDT 1A @ 30VDC, resistive* Any relay configurable to any alarm
Digital Inputs	2 (Voltage free / Dry contact)
Memory	2GB RAM 16GB Flash

Installation Dimensions

Dimension	Maximum		Factory Sizes	
	Metres	Feet	Metres	Feet
A	75	246	-	-
B	50	164	3, 5, 10, 15	10, 16, 33, 49
C	25	82	-	-
D	15	49	3	10
E	-	-	0.2, 0.4, 0.7, 1.0	8, 16, 28, 39 inches

A

B

C

Controller

Cat 5/6

Hub

4 core flat

mSensor

mSensor

E

D

D