


PowerShield 8



Battery management system

System specifications

Capability	up to 512 blocks up to 8 strings*	Interfaces	Link Battery Management Software Controller Web Interface 16 x 2 character LCD & keypad
Battery system information	Block Voltage, Block Temperature, Block Ohmic, Block Ripple Voltage Ambient Temperature, Humidity, Current, Ripple Current and String Voltage	Communication ports	2 x 1000Base-T Ethernet 2 x Expansion ports RS485 (optional) USB port for storage devices
Battery types	Lead Acid (2V, 4V, 6V, 8V, 12V & 16V) Ni-Cd (1.2V, 3.6V, 4.8V)	Protocols	ModbusTCP, SNMP and HTTP ModbusRTU when RS485 card is fitted
Battery Charging Regime	Float and Intermittent	Outputs	4 relays
Certifications		Digital Inputs	up to 18 2 via Controller, up to 16 via Hubs
		Environment*	Operating temperature*: 0 to 50°C / 32 – 122°F Storage temperature: -10 to 70°C / 14 – 158°F 10 to 90% RH non condensing Altitude: 2000m max. , Indoor use only.

Link battery management software

Minimum pc system requirements

Processor	Intel i3-4170 or faster	RAM	4GB (32bit OS) or 8GB (64bit OS)
Operating system	Windows 7, 10 Windows Server 2008, 2012, 2012 R2, 2016	Storage	20GB available hard disk space
		Monitor	1024 x 768 or 1366 x 768

Controller

Service Port	Front Ethernet port (1000Base-T)	Physical dimensions	1U High 19" rack mount Width: 430mm / 16.9 inches Depth: 265mm / 10.4 inches Height: 45mm / 1.8 inches
Port 1	Back Ethernet port (1000Base-T)		
Port 2	Expansion port		
Port 3	Expansion port	Power supply	AC Model: 90 – 260V 50/60Hz 24V DC Model: 18 – 30V 48V DC Model: 35 – 60V 110V DC Model: 80 – 150V
Port 2/3 Expansion option	RS485 card		
Display	16 x 2 character LCD	Power consumption	Typical 5W + 1.6W per Hub Max. 6W + 1.8W per Hub
Front USB	USB data storage	Digital Inputs type	2 Voltage free
Relay outputs	4 Single Pole Double Throw (SPDT)		
Rating	1A (Q 30VDC, resistive)		
Selectable	Any relay configurable to any alarm	Memory	2GB RAM 4GB Flash
Configuration interface	Web browser		
Minimum version	Chrome 50, Firefox 45, Safari 6.1, Internet Explorer 10, Edge 12		

*Contact PowerShield for further details.

Battery type	Lead Acid (2V, 4V, 6V, 8V, 12V & 16V) Ni-Cd (1.2V, 3.6V, 4.8V)			
Nominal voltage¹	NiCad ²	2V	6V	12V
Operating range	0.8V-1.9V	1.6V-2.6V	4.8V-7.8V	9.6V-15.6V
Maximum input voltage	±5V	±6V	±25V	±65V
DC resolution / accuracy	1mV / ±0.3%	1mV / ±0.3%	5mV / ±0.2%	5mV / ±0.2%
AC resolution	1mV	1mV	1mV	1mV
Ohmic measurement range	0.10-5mΩ	0.10-5mΩ	0.50-20mΩ	1.00-40.00mΩ
Resolution / accuracy	1uΩ / ±2.5% + ±15uΩ	1uΩ / ±2.5% + ±15uΩ	1uΩ / ±2.5% + ±25uΩ	1uΩ / ±2.5% + ±25uΩ
Temperature³				
Range	-10 to 70°C / 14 to 158°F			
Resolution / accuracy	0.1°C / ±1°C			
Power supply current⁴	50mA	30mA	18mA	18mA

¹Most common models, other models available on request

³Operating temperature -10 to 50°C / 14 to 122°F

Design rated to 750VDC. UL certified to 600Vdc

²Ni-Cd single mSensor cannot perform ohmic measurement

⁴Power by block being monitored

The mSensor communicates via Modbus, meaning it can be easily integrated with other Modbus based site management systems. Contact PowerShield for further details.

Hub

Powered	24Vdc supplied by Controller	Power consumption	1.3W typical, 1.8W max.
Digital inputs	2, voltage free	Aux. Input*	-12 to 12V
DC current¹	0 - 2000A (Hall Effect sensor)	Temperature	-10 to 80°C / 14 to 176°F
Typical resolution	0.05A	Resolution	0.1°C / 0.18°F
Accuracy	±1% + CT accuracy	Accuracy	±1°C / 1.8°F
Ripple current (AC)¹	True RMS	Relative Humidity	0 - 100%
Typical resolution	0.5A	Resolution	1.0%
Accuracy	±1% + CT accuracy	Accuracy	20%-80% ±3% at 25°C / 77°F < 20%, > 80% ±5% at 25°C / 77°F
Frequency range	10 – 1000Hz		

¹resolution dependent on CT model used, typical values are based on 400A CT

*Contact PowerShield for further details.

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

