

PowerShield Battery Monitoring Systems

protecting your power supply



Sentinel Battery Monitoring

- Permanent monitoring solution designed for stand-by batteries
- Complete package including hardware & software
- Designed to allow IEEE/IEC best practice
- Flexible to suit battery model & application
- VRLA, VLA, Ni-Cd compatible
- Fast, accurate, smart
- Individual bloc voltage, impedance & temperature; string voltage & current; ambient temperature



Sentinel Battery Monitoring

- All parameters sampled continuously & automatically
- 24/7 alarm notification
 - All alarm settings user-editable
 - All alarm settings battery & application specific
 - Alarms for bloc V and Ω , string V, temperature, current, plus system diagnostics
 - Detailed, specific alarm information – to bloc level
 - Limits to match all states – FI/Ch/Dis/Idle
- Automatic data logging gives historic/predictive view & trending over battery lifetime
- Automatic logging of battery discharge for capacity analysis
- All events and alarms time & date stamped

Sentinel System Hardware

- Modular layout for safety & efficiency
- Sentinel monitor + battery sensors [voltage+impedance or voltage]
- Up to 1280 blocs / 16 strings per system
- Individual bloc voltage – all sampled simultaneously every 4 seconds, with 0.2% accuracy.
- Individual bloc impedance – sampled daily, but only in Float for best trending & comparison
- 600VDC optical isolation at battery



Sentinel System Software

- Permanent connection to multiple sites – unlimited total number of batteries
- Remote access via LAN/WAN
- Real time battery status – including discharge
- Alarm & activity log
- Automated data management
- Battery database for life trending
- Point & click report generation
- Multi-seat, multi-user
- Password access
- Standard Windows software



Sentinel System Software

- New Dashboard screen for Link – see all the batteries in your facility at a single screen.
- Fast overview.
- Simple colour coded buttons.
- Drill down to battery specific detail.
- Single click for site report.
- Independent Reporting service available.

The screenshot shows the 'Link Client' software interface. At the top, it displays 'Home', 'Facility: Data 1', and 'Country: United Kingdom'. A summary bar indicates 'Total Sites: 30' with a status breakdown: 'Ok :25' (green circle), 'Alarms: 3' (red circle), and 'No Comms: 2' (grey circle). Below this is a filter for 'In Alarm only' (unchecked) and a 'Strings' section. The main area contains two tables, each with 8 columns representing strings (1-8) and rows for individual UPS units. The left table lists UPS units A.1.1 through A.2.5 and B.1.1 through B.2.3. The right table lists UPS units B.2.4 through B.3.4, A.4.1 through A.4.2, and C.1 through C.3. Each cell in the grid contains a colored circle representing the status of that specific string: green for 'Ok', red for 'Alarm', and grey for 'No Comms'.

Status	Site Name	1	2	3	4	5	6	7	8
●	UPS A.1.1	●	●	●	●	●			
●	UPS A.1.2	●	●	●	●	●	●	●	●
●	UPS A.1.3	●	●	●	●				
●	UPS A.1.4	●	●	●	●				
●	UPS A.1.5	●	●	●	●	●	●		
●	UPS B.1.1	●	●	●	●	●	●		
●	UPS B.1.2	●	●	●	●	●	●	●	●
●	UPS A.2.1	●	●	●	●	●	●	●	●
●	UPS A.2.2	●	●	●	●	●	●	●	●
●	UPS A.2.3	●	●	●	●				
●	UPS A.2.4	●	●	●	●				
●	UPS A.2.5	●	●	●	●				
●	UPS B.2.1	●	●	●	●	●	●		
●	UPS B.2.2	●	●	●	●	●	●		
●	UPS B.2.3	●	●	●	●	●	●		

Status	Site Name	1	2	3	4	5	6	7	8
●	UPS B.2.4	●	●	●	●	●	●	●	●
●	UPS B.2.5	●	●	●	●	●	●	●	●
●	UPS A.3.1	●	●	●	●	●	●	●	●
●	UPS A.3.2	●	●	●	●	●	●	●	●
●	UPS A.3.3	●	●	●	●	●	●		
●	UPS A.3.4	●	●	●	●	●	●	●	
●	UPS B.3.1	●	●	●	●	●	●	●	
●	UPS B.3.2	●	●	●	●	●	●	●	
●	UPS B.3.3	●	●	●	●	●	●		
●	UPS B.3.4	●	●	●	●	●	●		
●	UPS A.4.1	●	●	●	●	●	●	●	
●	UPS A.4.2	●	●	●	●	●	●	●	
●	UPS C.1	●	●	●	●	●	●	●	
●	UPS C.2	●	●	●	●	●	●	●	
●	UPS C.3	●	●	●	●	●	●	●	●

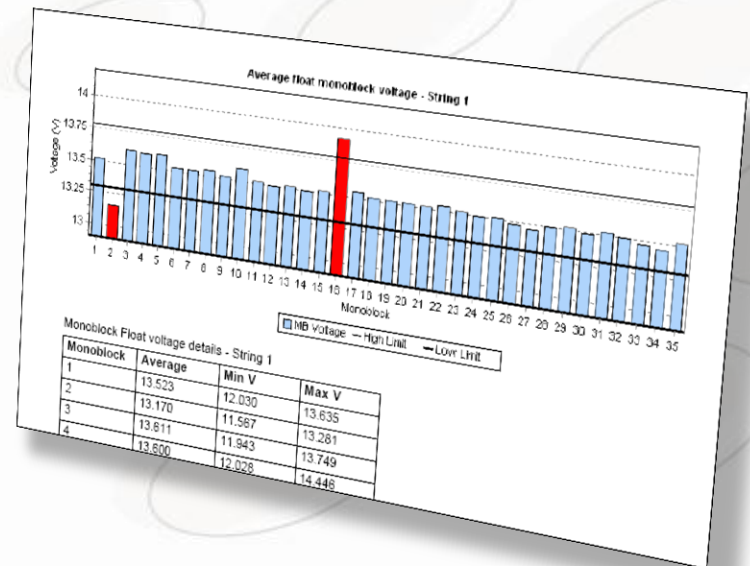
Sentinel Communications

☉ Sentinel monitor

- Ethernet to Link software
- Modbus/SNMP to local building management system
- Dry contacts for additional alarm outputs
- Dedicated RS232 port for local service & diagnostics

☉ Link battery management software

- Email alarm alerts
- Onscreen alarm pop-ups
- Pre-formatted PDF reports
- Raw CSV data available



Sentinel Users

- LG Philips
- Taiwan Stock Exchange
- BT
- Ministry of Defence [UK]
- Ministry of Defence & ASIO [Australia]
- Chevron
- Barclays Bank
- IBM
- Bank of America



"PowerShield gives us the confidence to get on with running our business with the peace of mind that, should there be a power outage, our backup battery is in A1 condition." - Television New Zealand