

PowerStor Battery Analysis & Care System (BACS)



Civil Aviation Authority Installation, Europe

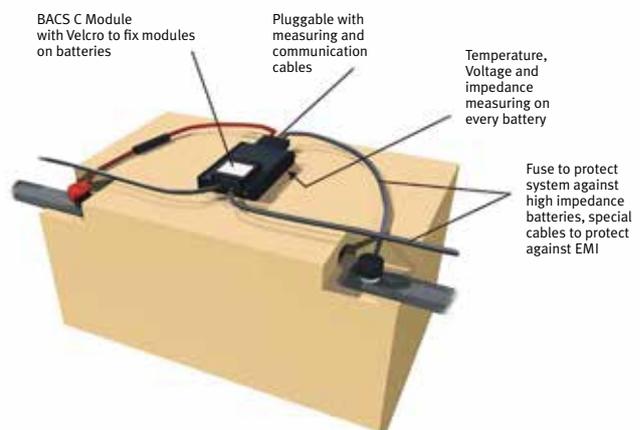
BPC BACS is the most advanced product of its kind on the market today. An Ethernet integrated battery monitoring and management system, BACS uses web management technology to monitor the temperature, internal resistance and voltage of every single battery in a given system.

In critical standby applications the battery can be a large integral part of the system and can also be an unpredictable element of the design. Battery condition can be invisible and not determined from its appearance making early diagnosis hard, especially if problems have been experienced in transit, storage, installation, poor site conditions or misuse causing failure of just one cell which can lead to open-circuit of a complete battery.

The analysis part is the continuous checking of the internal resistance, temperature and voltage of every single battery block. The care part is an equalisation process that corrects the charging voltage for each battery block as well as constant monitoring and controlling. In addition, it can manage environmental measurements such as temperature, humidity etc., as well as the UPS and Inverter system.

- » **Monitoring and regulating the charging process**
- » **Individual voltage regulation through the equalising process**
- » **Equalisation to avoid overcharging and undercharging**
- » **Indicators to alert battery problems**
- » **Protection of neighbouring batteries**
- » **Increase battery capacity**
- » **Early warning and alert system permits early treatment**
- » **UPS / Inverter power manager**
- » **MODBUS / PROFIBUS / LONBUS / SNMP compatible**
- » **Analysis software provided**
- » **Effectively extends the battery life expectancy**
- » **Reduces frequent site inspection and the need for manual measurements**
- » **Very efficient and economical method of testing**
- » **Intelligent battery disconnection**

BACS effectively mitigates the possibility of overcharging the batteries, helping to prevent gassing and drying, as well as alleviating the possibility of undercharging, preventing sulfation. Through the equalisation process, the batteries are kept at an optimal charging voltage and therefore, in an optimal state of health. By managing the batteries charging voltages, BACS vastly improves the durability and reliability of the system.



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The web browser interface of the system is designed for easy configuration, displaying all system values and events and alarms through a flexible event manager.

The BACS WebManager acts as the central control unit by gathering, evaluating and storing all information on its internal flash memory. This can log all system data for a duration of at least 6 months up to 3 years dependent on the size of the system. All data can be downloaded and archived over the network in order to free-up storage capacity for further data logging and analysis using the BACS Viewer software or other graphical programmes.

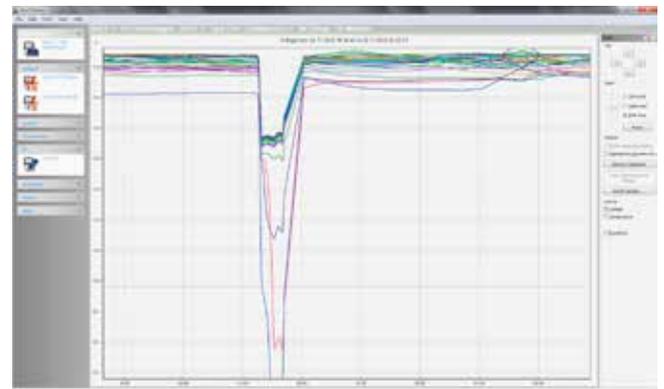
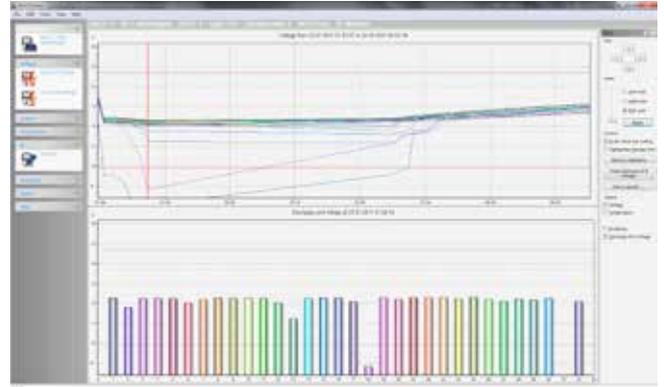
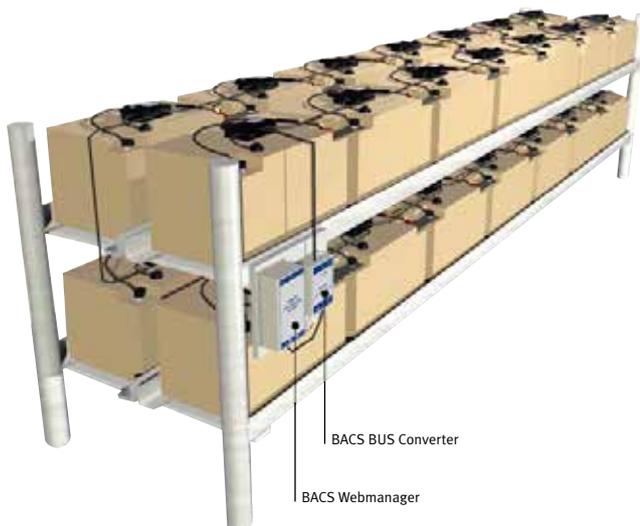
BPC BACS monitors key battery parameters and sets thresholds, therefore allowing advanced warnings, via audio, video and network messages, of a system event that requires attention.

ENHANCED MAINTENANCE

Typical battery problems like sulfation, gassing, dry-out and thermal runaway are easily detectable given proper monitoring.

The BPC BACS improves service quality by providing remote monitoring through the internet, VPN or any other network that allows downloading of real time data and battery history.

It is possible to test batteries without disconnecting them from the system meaning that testing and maintenance can take place under real operating conditions and requires no downtime.



EXTENDED BATTERY LIFE

The service life of a battery string depends on the weakest cell of the weakest battery in a string. The BACS equalising process allows each of the batteries within a string to be maintained at optimal voltage levels, eliminating the ill effects of improper charging. The constant care provided by the equalising process has been shown to increase service life by more than 30%.

BATTERY PROTECTION

The BPC BACS system can be the protective entity in the system by continuously monitoring each parameter, and a DC Isolator can be tripped if the batteries hit alarm levels in impedance, temperature or voltage. This helps eliminate and prevent thermal runaway of the battery.

ALERTING

The BPC BACS system continuously monitors high and low parameters of each individual battery block. It will send out warnings and then alarms when different limits are reached. These alerts are sent instantly to the person responsible for maintenance via email or any other compatible device.

Advanced Power Conversion Solutions

The BPC Group

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To ensure a high level of pre and post-sales support is offered, BPC work closely with distributors, providing key commercial and technical training whilst providing competitive costing structures tailored to specific region markets, ensuring the most suitable BPC products are offered. We pride ourselves on long standing relationships with our partners which is reflected in the ongoing support provided locally.



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