



einfach stark.



SUPERCAPACITORS



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SUPERCAPACITORS

Super-capacitors

Super-capacitors are not unlike a battery having two electrodes and an electrolyte however unlike a battery its charge-discharge cycle life exceeds one million, is very efficient (narrow hysteresis) typically 97% and does not require maintenance. Super-caps have a lower internal resistance however whilst peak power is high, energy storage capacity is much lower than that of a (lithium) battery.

The electrolyte solvent comprises a mixture of organic poly-carbonates with lithium which even under abuse conditions leading to electrolyte decomposition, cannot form hydrogen or toxic gases, making this system extremely safe.

The totally enclosed shape, size and fixings is designed to meet client's specific environment. Its a modular "plug and play" solution to energy storage and back-up. The simple black box design with screw connections reduce time needed to install and commission these units. No configuration is needed before deployment of the unit other than a possible setting of the charge current of your DC-supply.

Brown-outs

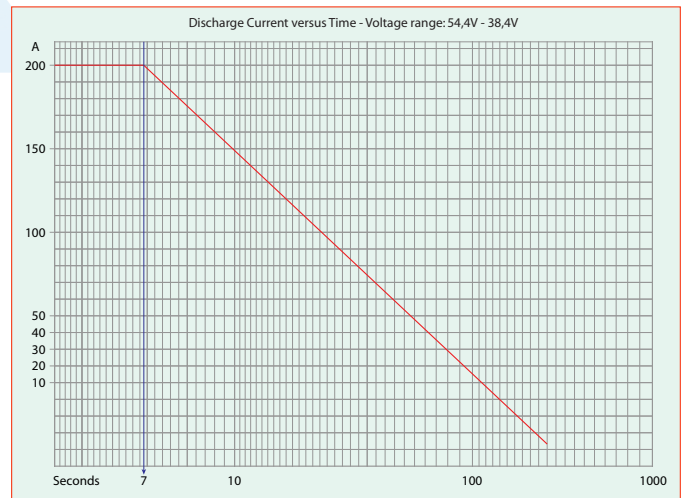
Brown-outs are short dips in the mains power supply often caused by switching of heavy loads in the vicinity of your application. Usually these brown-outs are very short and are just a matter of milliseconds or seconds. However, modern equipment, especially telecommunication equipment, might take as long as 20 minutes to re-configure and log onto the network again.

This super-capacitor system can bridge these power gaps without the need for extensive maintenance, cooling and space that traditional lead acid batteries might take. The fast recharge and high efficiency ensures that the system is ready for the next brown-out in no-time!

Linear Power

The linear discharge behaviour of super-capacitors makes it easy to calculate the time this unit can support your application. At 200A the system can support your application 7 seconds while at a current of 10A you will have well over two minutes of back-up time.

Multiple units can be connected in parallel to increase the available current for your application. Paralleled systems do not need any additional control electronics or supervisory system.



System Specifications

System Capacity	2200F
Maximum system voltage	57,0V
Minimum system voltage	33,0V
I _{max.} charge	300A
I _{max.} discharge	200A
Specific energy (cell stack)	72Wh/litre
Energy density (cell stack)	200Wh/kg
Design life	15 years
Efficiency	>97%
Min Operating Temp.	-40°C
Max. Operating Temp.	+75°C
Self discharge	<2,5%/week
Vibration	2-9Hz - 3 Axis, 9-200Hz 0,5G - 3 axis
Humidity	0 - 90% non-condensing
Electrostatic Discharge	EN/IEC 61000-4-2
Dimensions	19" x 1U x 40cm

Typical Applications

- Mobile phone networks
- Off-shore systems
- Medical devices
- Security systems
- Defence Electronics
- Renewable Energy
- Machine control
- PBX systems
- UPS systems
- Traffic control systems