

PowerCheq™

Battery Equalizer

PowerCheq™ is a revolutionary and patented battery equalization device that greatly extends battery life and runtime. The PowerCheq modules interconnect batteries in a series string creating a bidirectional energy transfer path between neighboring batteries and enabling the entire battery string to be equalized. PowerCheq is the first real time balancing system that equalizes and maintains batteries during charge, discharge, and while sitting idle. With PowerCheq, the life cycle cost of motive and stationary batteries is greatly reduced. PowerCheq is universally adaptable to all battery systems and configurations and can be easily installed in new and existing battery systems. PowerCheq's benefits are well documented with independent tests showing significant improvement in battery life and capacity.



Advantages:

- Modular design
- Real-time equalization
- Highly efficient

Applications:

- Electric scooters, wheelchairs, and golf carts
- On-road and low speed electric vehicles
- Telecom / Cable TV / Backup power systems

FEATURES & BENEFITS

❖ Modular Design

PowerCheq's versatile design allows end users to easily retrofit the equalization modules into their existing battery systems. The PowerCheq modules interconnect batteries in a series string creating a bi-directional energy transfer path between neighboring batteries and enabling the entire battery string to be equalized. Bi-directional equalization ensures that all batteries in a string are balanced no matter where the low voltage battery is located.

❖ Real Time Equalization

PowerCheq equalizes battery strings during charge, discharge, and idle periods. By continuously equalizing individual batteries within a string, batteries are properly maintained and kept at the same state of charge.

❖ Highly Efficient

Unlike all other "battery equalization" products on the market that dissipate/burn excess energy of fully charged batteries during overcharge cycles, PowerCheq is a highly efficient equalizer. PowerCheq continuously transfers excess energy between battery modules efficiently with minimal energy waste.

❖ N-1 Equalizers Needed for N Batteries

PowerCheq's modular design allows users to customize their equalization needs easily to fit their battery configurations. For a string with N batteries, N-1 PowerCheq modules are needed to provide full equalization for the entire battery pack.

For further information please visit our website at www.powerdesigners.com

or contact PowerDesigners, LLC at +1-608-231-0450.

PowerCheq Product Specifications

SPECIFICATIONS	PCHQ-12V-2A
Nominal Battery Voltage	12V
Operating Voltage	10V-16.5V
Max. Equalization Current	2A (±10%)
Quiescent Current Draw	≤ 5mA
Operating Temperature*	-25°C – 50°C
Typical Efficiency	85%
Current Limit	PowerCheq will not exceed the specified maximum equalization current.
Voltage Sense Resolution	0.2% of nom. battery voltage
Operating Modes	Equalizes during charge, discharge, and idle modes
Safety	<ul style="list-style-type: none"> ➤ Under voltage shutdown ➤ Over voltage shutdown ➤ Reverse polarity protection ➤ Transient voltage protection ➤ Replaceable fuses
Fuse	2A mini ATO (replace with same type fuse)
Dimensions	2.375" x 2.75" x 0.875"
Weight	0.3 lb. (136 g)
Patented	US Patent No.: 6150795 Taiwan Patent No.: NI-167313 Other international patents pending

Product Ordering Information

PART NUMBER	DESCRIPTION
PCHQ-12V-2A	Standard PowerCheq unit for a 12V battery