

NEC ENERGY INTRODUCES BREAKTHROUGH 12-VOLT LITHIUM-ION BATTERIES FOR TOUGH, CRITICAL APPLICATIONS

The intelligent ALM™ 12V35 product line offers up to twice the usable energy, 50X greater cycle life, and 100X faster charging than typical lead-acid batteries.

January 27, 2015 – Westborough, MA – [NEC Energy Solutions](#), a leading energy storage solution provider, announces production availability of the ALM™ 12V35 product line of 12-Volt batteries that offers higher performance, longer life, and robust safety compared to standard lead-acid batteries or other lithium-ion products. With its EverSafe™ battery protection technology, the ALM 12V35 is immune to short circuit, overvoltage, under voltage, and other common accidental battery abuse conditions. In addition, it can be easily assembled into battery arrays of 24V, 36V, or 48V for up to 350Ah and 18kWh systems with no additional BMS devices necessary. The ALM 12V35 batteries are drop-in alternatives to common 12-Volt, 35 Amp-hour lead acid batteries and are breakthrough solutions that significantly extend the service life and reduce the total cost of ownership of energy storage systems used with telecommunication equipment, remote off-grid power systems, uninterruptible power supplies (UPS), medical carts, and solar photo voltaic systems. The ALM 12V35 is especially well suited for deep cycling applications such as weak and off-grid power systems, including remote wireless base stations, oil and gas infrastructure, and portable lighting and signage systems.

“Through in-house and field testing, LiiON has determined that the ALM 12V35 exceeds the performance and life expectations of traditional back-up power solutions used in stable, weak, or off-grid environments” said Gary Gray, CEO of LiiON LLC, a developer of high-performance power systems. “We look forward to the opportunity to apply the ALM technology to specific telecom and other standby power applications.”

The exceptional cycle and float life, high power performance, unparalleled safety features, and integrated intelligence fundamentally change how power system developers may design, service, and support battery back-up systems. The key benefits of the ALM 12V35 vs. typical lead-acid batteries include:

- Up to twice the usable energy at fast discharge rates, reducing by up to half the number of similarly sized batteries required for high power applications.
- Market-leading cycle life and calendar life combine for an ALM 12V35 service life that may match or exceed the life of the equipment it supports, virtually eliminating battery replacements.
- Charge rates up to 100X faster than lead-acid batteries and 5-15X faster than other lithium-ion solutions enable systems to remain in service longer, reducing the total cost of ownership (TCO).
- Compatibility with most popular lead acid battery chargers.

- Built-in management and communications (CAN bus or SMBus) enable accurate monitoring and alarms, eliminating the need for complex external battery management systems.
- Fully integrated, redundant safety systems using NEC Energy Solutions' EverSafe™ battery protection technology provide multilayer protection at the cell, battery and system level, making the ALM 12V35 among the safest batteries in the industry.

"Customers increasingly need reliable and cost effective energy storage solutions in telecommunication and UPS back-up power, medical carts, and off-grid power systems that address deep cycling in even harsh environment. The ALM 12V35 is ideally suited for critical applications and provides the performance and intelligent features to meet the demanding needs," said Bud Collins, CEO of NEC Energy Solutions.

The ALM 12V35 offers system engineers the flexibility to match application requirements with standard (s) and intelligent (i) models. The intelligent ALM 12V35i is offered with integrated CAN Bus or SMBus communications for access to critical battery status, usage tracking, state of charge (SOC), runtime to empty, and other parameters.

All ALM 12V35 models are available now and are shipping to initial customers. For more information please visit NEC Energy Solutions at www.neces.com.

About NEC Energy Solutions

NEC Energy Solutions is a leader in advanced energy storage, developing and manufacturing smart energy storage solutions for electric grid, backup power and lead-acid replacement applications. With system integration expertise focusing on high performance, efficiency, safety and reliability, NEC Energy Solution's products range from compact advanced industrial batteries to massive grid-scale energy storage systems. Its turnkey GSS™ (Grid Storage Solution) products have successfully operated in commercial revenue service since 2009 and have reached over 110MW deployed on the grid worldwide, while its commercial and specialty batteries provide solutions to fit the needs of telecom, IT backup, datacenter, medical, lead-acid replacement and other industrial applications. For more information, please visit www.neces.com.

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