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Magellan to offer LiFePO4 batteries

Until recently, there has really only been one main battery type available to support a multitude of remote power applications; the lead acid battery. Lead acid batteries are extremely heavy and while weight may not be an important factor for batteries in a stationary environment, (eg: a fixed solar power station), for batteries being used in a motive application, (eg: aviation and marine applications), having to carry such a heavy dead weight can be arduous.

As a result, the search has been on to find a lightweight battery solution for many years; enter Lithium Iron Phosphate or LiFePO4.

LiFePO4 batteries are extremely stable and safe to use. This safety, combined with their light weight has seen them picked up widely for use in both military and commercial applications. Furthermore, LiFePO4 batteries do not suffer from some of the problems which are inherent to lead acid such as thermal runaway, sulphation and high rates of self discharge.

Another great advantage of the LiFePO4 battery is found in its extremely long life. Lead acid batteries generally have a life of only a few hundred deep charge cycles while a quality LiFePO4 battery can typically be charged in excess of 2000 times. Indeed, there are LiFePO4 cells which are currently testing in US Department of Energy Laboratories which have passed 7000 cycles.

Magellan Power's new range of LiFePO4 batteries enhance the amount of power that can be stored in a given size battery and allows access to a source of sustained electrical current which will power electrical equipment for longer. Combine this with safe, non-explosive technology and a completely maintenance free battery life, Lithium Iron Phosphate batteries are sure to revolutionise remote power requirements in coming years.

Some of the advantages of LiFePO4 include:

- Operation at up to 75°C
- Half the weight of Lead Acid batteries
- Smaller in size
- Do not explode or catch fire
- No thermal runaway
- Much higher cycle life than Lead Acid
- No corrosive element – Ph \approx 7
- Environmentally Friendly – no toxic heavy metals (eg: lead, cadmium)
- Safe disposal
- High discharge rate – up to 10 times the capacity of Lead Acid
- Low self-discharge
- Can be operated in any orientation

To find out more about Magellan Power's new range of LiFePO4 batteries please contact us.



A LFP160 (LiFePO4) battery

Magellan awarded supply contract for Edinburgh Defence Upgrade

Magellan Power was recently awarded a contract to supply DC systems to the Hardened and Networked Army (HNA) Edinburgh Facilities Project (EFP), in South Australia.

The contract is for the design, manufacture, factory acceptance testing and delivery to site of DC panels and associated equipment. In total, Magellan will supply seven of its custom built SMCR-II series DC systems and associated equipment to the project.

The \$624m upgrade is underway to enable the 7th Battalion Royal Australian Regiment (7RAR) to move from Darwin to Edinburgh Defence Precinct, north of Adelaide, as part of the Federal Government's wider HNA initiative. Business Development Manager for the SA region, Carlos Zanlongo, said he was delighted with the result.

"We worked very hard, over nearly twelve months to achieve this" he said. "We are delighted to part of such an important project and are thrilled that quality of our products continues to be recognized by Defence and Industry."



The Edinburgh Precinct

Meet Cameron

In April 2008, the staff at Magellan Power welcomed new Business Development Manager for Queensland, Cameron Angus, to the team.

Cameron says he was attracted to the role because of the variety it offered him day-to-day.

"I deal with different things everyday," he says. "One day I'm working through power solution options with clients, the next I'm feeling fantastic because we helped someone achieve their goals."

He counts the work he did with Ergon on the solar charger and GUSS products as the most memorable. "It was really rewarding to work through their requirements and see it come to fruition with the awesome support of the Research and Development team."

Originally from Mackay, Cameron has spent time working all over the world. Now based in Queensland, he draws inspiration from his family.

Existing and potential clients in Queensland can contact him on, 0438 965 225 or email: cangus@magellan-power.com.au.



Cameron Angus
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Product Feature – Switch-Mode MCR-II Battery Charger

With an integral battery impedance monitor that can assess the health of the battery *and* the integrity of its connections, the SMCR-II series is undoubtedly the most advanced battery management system of its kind.

Incorporating dual battery management capabilities including automatic battery testing, the SMCR-II prolongs battery life in any application. Highly reliable, robustly designed and with advanced communication facilities that enable full remote monitoring of the system, the SMCR-II is state of the art. The SMCR-II offers a range of powerful features, including:

- Constant voltage and constant current charging facilities
- Large 128x64 pixel LCD graphic display
- Comprehensive metering
- Adjustable precise temperature compensation for all battery types
- Battery impedance and amp per hour capacity measurements
- Battery disconnect detection
- Full AS2293 alarm specification
- Revert to factory settings facility
- RS232/RS485 Mod Bus RTU protocol
- Data logging
- Ethernet TCP/IP
- DNP3
- Webserver
- Modbus TCP
- "Limp home" facility ensures continuity of operation even if control circuitry fails
- AS4044 type 2 (type 4 also available)

Available in single and three phase up to 100kw in compact, high-efficiency switch-mode, this series is ideal for all industrial applications including substation battery systems and DC UPS.



The SMCR-II Display Panel

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