

Welcome to the eleventh issue of Alert.

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Customer Case Study: HammondCare - Miranda



HammondCare
An independent Christian charity



Established in 1932 by Anglican Archdeacon R B S Hammond, HammondCare is an independent Christian charity specialising in dementia and aged care, palliative care, rehabilitation and older persons' mental health. Regarded nationally and internationally as one of Australia's most innovative health and aged care providers, HammondCare offers hospital care, residential care and community services throughout NSW.

HammondCare is passionate about improving quality of life for people in need and has a particular commitment to dementia care and research as well as to people who are financially disadvantaged.

In late 2012 HammondCare was in the midst of building a new facility in Miranda, NSW. NPS was successful in our bid to supply, install and commission the UPS systems for the new facility. Working with Hammond Care's key IT staff, NPS supplied one Emerson Liebert GXT3 6KVa UPS with the addition of an extended battery module to provide greater runtime for the main IT data comm's room. Seven Emerson Liebert GXT3 1500VA UPS's were supplied for each of the comm's rooms spread throughout the facility. The GXT3 1500VA UPS's were all installed with a Liebert Micro POD, the Micro POD allows the UPS to be bypassed without

causing any outage to the connected IT equipment, this is especially useful when a preventative maintenance needs to be performed on the UPS's.

All UPS's were supplied with an SNMP network card to allow Hammond Care IT staff on going remote management of the UPS's.

Working with the tight deadlines imposed by Hammondcare to have the facility complete, NPS was not only able to supply the UPS's in a timely manor but was able to install and commission the UPS's meeting all the deadlines.



Technology Focus: An End to End Solution



NPS has a product range covering the whole spectrum of power protection and power distribution, enabling us to provide an end to end solution.

1. SURGE PROTECTION

Many people believe the most important issue is power loss or blackouts, yet the truth is that the majority of power faults are caused by power surges or noise transients. Power surges and noise transients, which are destructive to electronic equipment, are caused by lightning strikes, substation switching, variable speed drives, and electric motors.

Surge Diverters

Surge Diverters are single-stage, shunt connected devices which are generally used for point-of-entry (main switchboard) protection. They provide coarse protection that is suitable for the protection of non sensitive equipment.

Surge Power Filters

NPS provide a range of softwired and hardwired surge filters and power boards for all applications from the protection home computers or work stations all the way up to a large UPS and generators or high end industrial equipment.

2. MAINTENANCE BYPASS SWITCH

A Maintenance Bypass Switch allows you to manually transfer your connected equipment to utility power via a switch, permitting scheduled maintenance or UPS replacement without power disruption.

A Maintenance Bypass Switch has two modes of operation: UPS mode (UPS online) and Utility mode (UPS offline). During the UPS mode, the power is being routed through the UPS system. During the utility mode of operation,

power is being routed around (bypassing) the UPS system with power being supplied to the connected load through Bypass & Output distribution accessory.

3. UPS SYSTEM

The main purpose of an Uninterruptible Power Supply (UPS) is to provide backup power when the mains fail. It is designed to handle the 'tail end' of a major surge in power – supplying 240 volts AC power in the event of a power disruption or blackout.

Most UPS are used to keep computer systems running for a period of time after a power disruption. This enables the computer system time to shut down correctly, preventing loss or corruption to data.

4. CONNECTIVITY

SNMP Communication cards are a UPS accessory that connects the UPS to the local area network by assigning it an IP address. This allows IT managers to remotely monitor and manage the UPS. The SNMP card gives information about various faults on the UPS.

Other connectivity accessories provide active monitoring and early detection of environmental conditions such as temperature, humidity, door contact, vibrations and smoke.

5. RACKS AND ENCLOSURES

Server Racks are known by several names including computer racks, server cabinets, 19" rack enclosures, network racks, and network equipment

enclosures. These rack enclosures are integral to the success of every organisation because they provide the platform that houses the mission-critical equipment your business depends on.

Selecting the right server rack will help effectively power, cool, and protect your equipment; keeping your business running smoothly by reducing potential downtime and making the management and organisation of your data centre more efficient.

NPS is able to configure a rack environment with a high level of availability and support you in the integration of servers and networking devices.

6. POWER DISTRIBUTION UNITS

PDU's are designed to increase the manageability and efficiency of your data centre. There are three main types:

Basic PDU

Basic PDU's provide reliable and cost effective power distribution via a single input with multiple output receptacles, ideal for safely connecting the loads of multiple rack-mounted devices.

Metered PDU

Metered PDU's offer an easy-read digital ammeter for easy start up and provisioning of servers.

Switched PDU

Switched PDU's provide remote power monitoring of voltage and current plus remote on/off/reboot control of individual receptacles.

Product Feature: 96% Efficient Socomec Green Power UPS



The Socomec Masterys Green Power UPS is suitable for environments with high efficiency requirements and specific environmental constraints.

Data Centres are typically prodigious consumers of electrical energy for their operational functions and air conditioning systems and are among the economic sectors that are first and foremost concerned with reducing energy usage and heat output.

This Socomec Masterys Green Power UPS offers an excellent ratio between size, power supplied and back-up times provided, making it ideal for operation in situations requiring specific attention to the protection of critical business IT environments.

The Socomec Masterys Green Power UPS delivers the following benefits:

1. Reduced electrical infrastructure costs by improving output, reducing equipment space, and better

management and optimisation of the batteries (energy saving);

2. Improved exploitation of the electrical infrastructure upstream and downstream by using a "clean" rectifier and equipment functioning that is adapted to leading loads (e.g. servers).

Product Highlights:

- Available from 10kVA to 200kVA
- Easy to handle - fitted with castors and highly compact size saves valuable floor space.
- Maximum energy saving – 96% output efficiency can save thousands dollars off energy bill
- Extended battery life - EBS battery charging management improves the battery lifespan
- Advanced battery monitoring and management - For optimum battery reliability
- Smaller upstream installation due to very low input current - Input power factor > 0.99 and input current harmonic distortion < 2.5 %
- Flexible modular upgrades - Easy to add supplementary units (up to 6)

- High availability architecture - Parallel redundant architectures and Internal Automatic Cross Synchronisation (ACS)
- User-friendly interface with graphic colour display
- Flexible communications for every BMS (Building Management Systems) – SNMP, Dry contacts, MODBUS serial link, PROFIBUS and DEVICENET.



Partner Profile: Lightning Protection International Pty Ltd (LPI®)



Natural Power Solutions (NPS) has recently signed a partnership with LPI (Lightning Protection International).

Lightning Protection International Pty Ltd (LPI®) is a fully Australian owned manufacturer of direct strike lightning, surge and transient protection equipment and earthing solutions.

NPS has for sometime provided a range of POWERLINE filters. The NPS/LPI partnership enables NPS to provide

lightning Protection in the following areas:

- Powercomms Protection
- Cat 5 and Cat 6 protection
- Low Voltage signal Line protection
- BNC -90 (CCTV protection)
- Telephone line protection

These lines are vulnerable with induced lightning issues and possible electrical feedback.



Product Spotlight: Are you ready for Queensland's storm season?



Here at Natural Power Solutions (NPS) we are happy to help you and your customers with any surge and lightning protection that you may require for this up and coming season. A surge is a transient electrical fluctuation that happens in a fraction of a second and can cause serious damage to electronic and electro mechanical equipment.

They can be caused by lightning strikes and local power utility company "spikes" which can enter your business or home through the electrical system ie. cable television, telephone wiring etc and attack any electrical equipment attached to them.

Power surges and noise transients are caused by:

- Lightning strikes
- Substation switching
- Variable speed drives
- Electric motors

Example UPS's that are helpful protection:

- Cyberpower BRIC 650VA – 850VA
- Emerson PSI XR 1000VA – 3000VA
- Powerware 9130 1000VA – 6000VA

Please Note:

A lightning protection system does not prevent lightning from striking – it

provides a means for controlling it and preventing damage by providing a low resistance path for the discharge of lightning energy.



Out and About: Kalgoorlie Mining Show



NPS recently participated in the Kalgoorlie Mining Exhibition. As an integral feature of the Australia's mining calendar for the past 27 years, the Goldfields Mining Expo in Kalgoorlie continues to be a must-attend event for decision-makers from the dynamic Western Australian mining industry. Staged every two years and supported by the Kalgoorlie-Boulder Chamber of Commerce & Industry, GME provides a unique opportunity to conduct business face-to-face with key buyers, end-users and decision-makers in Australia's largest mining state. GME showcases a huge range of leading suppliers exhibiting the latest mining technology, equipment, and services, including applications from exploration through to extraction, production and mineral processing.

NPS was in attendance to exhibit the power quality products and services for the mining and resources industry. These products would include Industrial style UPS and specific custom made Power quality solutions.

New Staff Member: Gavin Swadling

Gavin joined NPS in August 2011 as NSW Key Account Manager. Gavin joins us with an extensive background in the IT industry, most recently working as the Business Development Manager with an IT integrator specialising in implementation of power solutions. Gavin's career started in technical support before making the switch to sales and account management. With a broad understanding of most vendor products, Gavin is specialising in the implementation of UPS in the IT sector of business. Outside of work Gavin enjoys spending time with his young family, long distance running and having a couple of quiet beers with friends on the weekend.



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