

STATIC POWER

Critical Power Solutions

SOLUTIONS

For network-critical physical infrastructures

- ✓ STATIC TRANSFER SWITCHES
- ✓ UNINTERRUPTIBLE POWER SUPPLIES (UPS)
- ✓ MAINTENANCE & MEASUREMENT SERVICES
- ✓ POWER ELECTRONIC SOLUTIONS
- ✓ BATTERIES & BATTERY MAINTENANCE
- ✓ BATTERY MONITORING SYSTEMS
- ✓ VENTILATION & COOLING
- ✓ SECURITY
- ✓ DISTRIBUTION
- ✓ DATA & POWER CABLING
- ✓ **PLC & PROCESS CONTROL**

Rack-based power, cooling, and environmental management
for computer rooms and small data centers with 1-20 racks

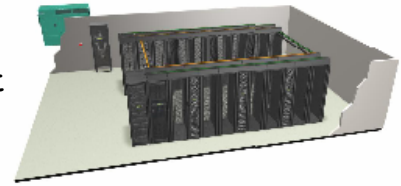
<http://www.staticpower.com.au>

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STATIC POWER

INTRODUCING SOLUTIONS

For network-critical physical infrastructures
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We focus on your systems critical power infrastructure to provide you with higher reliability.

We provide solutions to:

- ✓ Critical power distribution using /- STS Static Transfer Switches,
- ✓ UPS power back-up security using **APC** & EATON
- ✓ Redundant distribution configurations, **UPS AUDIT**
- ✓ N+1 redundant configurations, **UPS AUDIT**
- ✓ Infrastructure, racks & accessories, **APC**
- ✓ Power distribution & system vulnerabilities, **UPS AUDIT**
- ✓ Maintenance, **UPS AUDIT**
- ✓ Data & Power Cabling, **POWER**
- ✓ Computer Room Cooling, **PROCESS**
- ✓ Software Management Tools & Monitoring, **PROCESS**
- ✓ Security, **APC**
- ✓ PDU & Surge Protection, **POWER**
- ✓ Environment, **PROCESS**
- ✓ Power Generation **POWER**
- ✓ Batteries & Battery Monitoring **NDSL** **CELLWATCH**

/- STS, STATIC TRANSFER SWITCHES provide an extensive range of fully featured Static Transfer Switches from 15 Amperes to 2500 Amperes, various models from 19 Inch 1RU Rack Mount to floor mounted stand-alone.

STATIC POWER are a proud partner of **APC** for the support and supply of UPS Systems from 300 VA to 800 kVA. We do the installation, maintenance and support.

UPS AUDIT SERVICES with over 30 years of experience in UPS and the critical power industry we are well placed to provide you with expert opinion on how better to achieve a high reliability IT infrastructure. UPS Audit provides both professional consultative advice, measurement and problem resolution and solutions.

The **POWER** within **STATIC POWER Pty Ltd** provides infrastructure hardware components, fits it all together and integrates all aspects of your IT installation including, power and data cabling, distribution, equipment housing, environmental solutions, surge protection, and line conditioning products to safeguard your equipment from everyday power surges, lightning strikes, and other power anomalies.

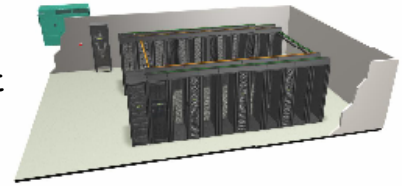
PROCESS

With the advent of high-density servers, heat densities have climbed to challenging levels. In many instances, the amount of heat generated per rack exceeds that which can be effectively handled by traditional air-cooled solutions. We provide Infrastructure expertise in environmental cooling, cabinet ventilation, software management, security, NMS monitoring, and remote control.

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Uninterruptible Power Supplies

Any size any battery back-up time !

Our preferred range are **Double Conversion, True On-Line, Sine wave** With internal batteries, static switch always supplies load, 3% waveform



2RU 1000VA – 2000VA
Rack or free-standing



3RU 3,000VA – 6,000VA
Rack or free-standing



6RU Rack 7,500 VA – 10,000
Rack or free-standing



2,000VA - 6,000VA N + 1 Systems



10 kVA – 40 kVA
Three-phase power protection



4kVA – 16 kVA N+1



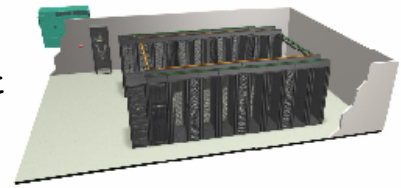
80 kVA N+1
Three-phase power protection

Call us for UPS to 600 kVA

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UPS and Battery maintenance;

With more than 30 years in the Power Electronics industry, **STATIC POWER Pty. Ltd.**, are focused on supporting your business infrastructure with a pro-active approach to system wide maintenance, auditing, analysis, reporting and testing.

If you are unable to **ascertain the exact state of the batteries** or are experiencing too many failures or premature end of life additional investigation may be warranted. We can provide independent measurement, informed opinion and solutions.

Batteries

- ✓ State of charge determination,
- ✓ individual battery DC measurement & impedance & temperature,
- ✓ equalization,
- ✓ DC ripple voltage and current, charger operation,
- ✓ inspection of cases for plate growth determination,
- ✓ cracking, faulty seals,
- ✓ Connection torque checking,
- ✓ string sharing,
- ✓ earthing and earth leakage or imbalance,
- ✓ temperature compensation,
- ✓ determination of capacity by discharge,
- ✓ string sharing, cleanliness, temperature stability,
- ✓ inspection of battery connections and re-torqueing
- ✓ operation of and accuracy of Battery Monitoring System (if installed),
- ✓ evaluation of battery stand or cubicle,
- ✓ safety audit., signage and security, fire detection and flammability,
- ✓ A battery analysis /tear down can be undertaken to identify poor quality or batch manufacturing problems.



Battery impedance Meter

UPS battery banks typically consist of a large number of single cells connected in series and parallel to achieve the power density required. This increases the propensity of a single cell failure or degradation. This single cell failure becomes the weakest link in the battery chain and hence the limiting factor of your UPS being able to provide the energy to your critical load resulting in insufficient or non-existent bridging time.

It is possible to manually monitor each battery using multimeters and special impedance measuring devices as well as undertaking periodic performance discharge tests but is time consuming. A Battery Monitoring System takes the hassles out of this difficult process and ends up being cheaper in the long term than the manual solution.

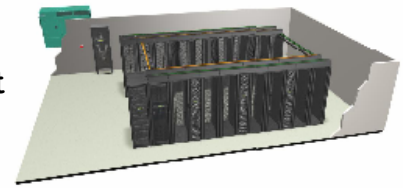
Most Battery Monitoring Systems undertake continuous DC measurements of each battery and compare the readings against pre-set limits. DC measurement is useful during discharge testing when it is possible to witness the collapse of a battery during the discharge, however, it's usually too late by then resulting in premature and unexpected short fall in battery autonomy time. Too often the failed battery or batteries in the bank become over-discharged and suffer permanent damage but go unnoticed as they recover to nominal float voltage readings. Unfortunately, **DC float measurements seldom inform of faulty cells or batteries with internal faults, dried up electrolyte and loss of capacity.** For this, you need to be able to take ohmic (impedance) measurements as well.

The proven **CELLWATCH** Battery Monitoring System by **NDSL** provides all of the features desired to ensure that batteries which are not capable of performing are identified and reported prior to causing your site any unplanned disruption.

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We will **audit your existing power system**. Power Quality measurements such as harmonics, checks for overloading and determination of any weaknesses within their existing infrastructure will be undertaken. All to minimize unknowns and ensure that future plans and system reliability is optimized. Augment that process with added assurity by undertaking **Infrared Thermography**. This will highlight faulty connections, parallel cables that do not share, incorrect and / or overloaded componentry before failure occurs. A full pictographic report and recommendation is provided of the cable installation, switchboard, UPS and equipment.

We are confident that **STATIC POWER Pty. Ltd.**, are experienced, capable and focused on supporting your business infrastructure by offering a pro-active preventative approach to on-line system wide auditing, analysis, reporting and representation.

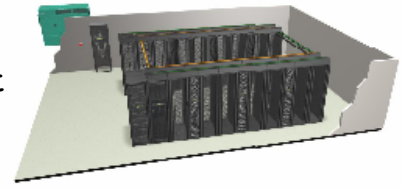
- Transient over /under voltage / Interruptions
- Brown-outs / Swells
- Flicker / Instabilities
- Harmonics to 50th
- 4 voltages and 4 currents & DC simultaneously
- Intermittent load faults
- Continuous transient and harmonic trending
- Vector Analysis
- Remote LAN / Modem Instrument Interrogation
- Up to 30 days of continuous recording



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COOLING



Cooling Options	Chilled Water
Air Discharge Patterns	Horizontal
Air Flow	2900.00 CFM per Fan
Condensate Pump Capacity	1.30 gal/hour
Minimum Water Inlet Temperature	7.0 °C
Total System Waterside Pressure Drop	48.0 kPa
Required Water Flow Rate	0.84 lps
17-30kW Cooling depending on Inlet Temperature	

The InfraStruXure® InRow RC is a computer room air conditioning system with a horizontal airflow pattern specifically designed for hot aisle/cold aisle configurations.



Cooling Capacity Options	4.60 kW
Cooling Options	Air
Compressor Type	Rotary
Air Discharge Patterns	Horizontal
Intake Air	Rear Return
Refrigerant	R410A
Air Flow	1200.00 CFM per Fan

InfraStruXure InRow SC is a self-contained cooling solution that maximizes availability within small IT rooms



By attaching to the rear of the NetShelter SX, air exhausted from IT equipment is forced to pass through the cooling unit where it is conditioned. This ensures that warm exhaust air does not find its way back to the air inlets of installed servers.

Rack Air Containment Rear Assembly