



power protection

solutions

Surge Protection | **Uninterruptible Power Supply (UPS)** | Accessories

POWER PROTECTION

Product Catalogue



DESIGNED BY AUSTRALIANS FOR AUSTRALIAN CONDITIONS

THE AUSTRALIAN COMPANY



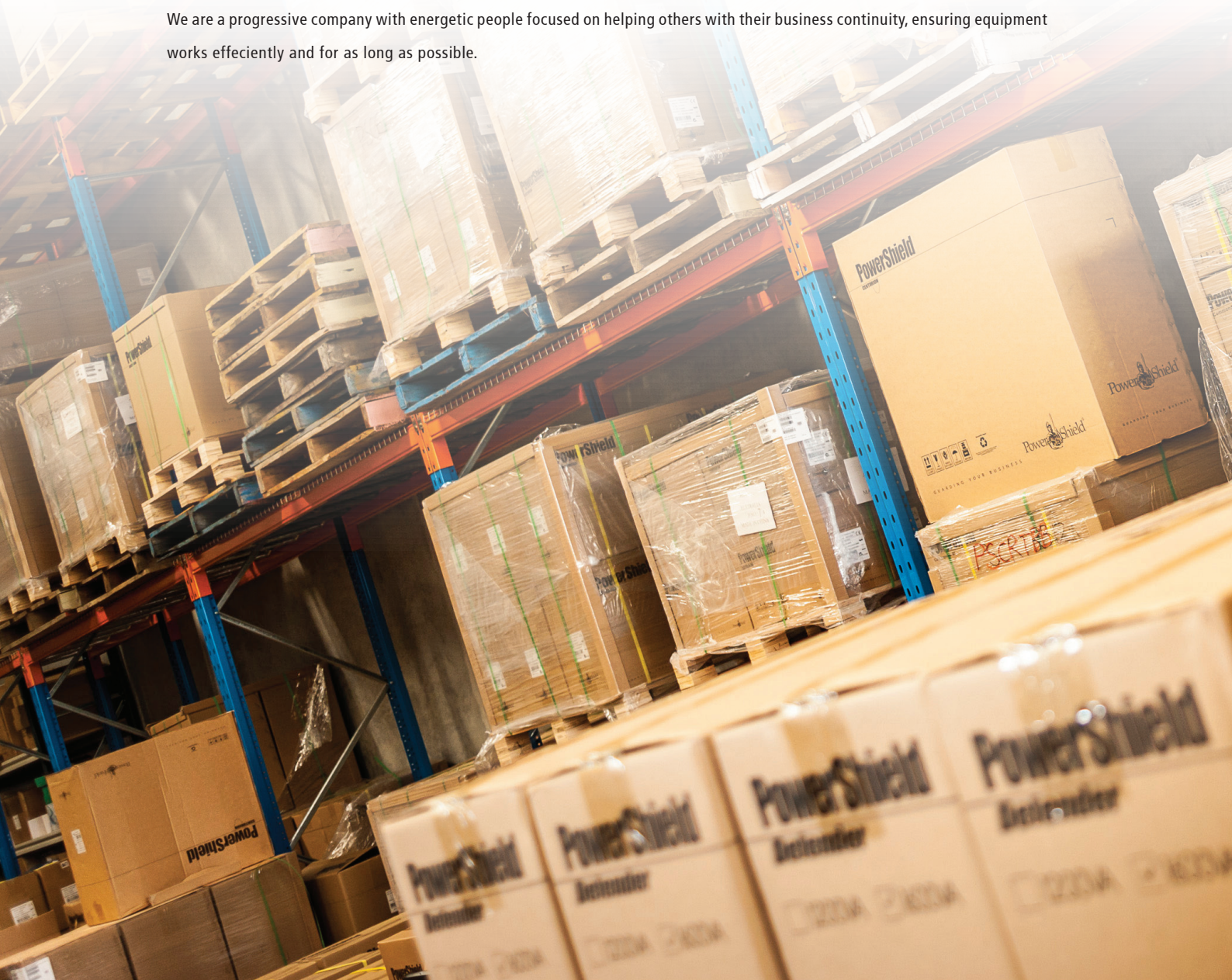
DESIGNED BY AUSTRALIANS FOR AUSTRALIAN CONDITIONS

Power Shield is a fully Australian owned and operated company specialising in providing clean, uninterrupted power protection solutions for Australian conditions.

Power Shield is focused on customer service and the management team seeks constant and never ending improvement. The built in features we offer in our range of products provides flexibility and diversity in the support of all applications. Our overall goal is to provide the most reliable and economical protection against electrical disturbances for your valuable equipment.

PowerShield® is a well known and trusted brand throughout Australia, engineering solutions for many projects first hand. Our customer list is diverse and includes radio stations, government, defence, security, health and medical departments, mines, process control operations, point of sale, system integrators and server room applications to name a few.

We are a progressive company with energetic people focused on helping others with their business continuity, ensuring equipment works efficiently and for as long as possible.



AVAILABILITY AND SUPPORT

With warehousing in both WA and NSW and a large distribution network of valued PowerShield partners throughout Australia and the Pacific, Power Shield is strategically placed to service the entire country as well as our island neighbours. Our quick stock availability means our products are always readily available to customers.

Power Shield supports customers in many ways including:

- Priority stock allocations
- Special bid pricing
- Local representatives
- Training and support
- Access to any relevant upgrades and information



CHOOSE YOUR UPS

The Right UPS Solution

We've Made It Simple. **A Higher Standard Level of Protection.**



Power Shield offer a **complete selection of power management and power protection solutions**. From home computers to critical systems in high-availability environments, we have meticulously developed our products to provide better value and to suit the power needs of Australia and the Pacific region.













Our Shield System will allow you to quickly determine the best UPS for your application. From large enterprise, industry, telecommunications and security applications to standalone servers, workstations, VoIP, modems/routers and electric gates, PowerShield has a UPS to suit your needs.



All PowerShield UPSs are designed to address the major causes of power issues in our environment.

We offer Automatic Voltage Regulation (AVR)/Line Interactive as our minimum level of protection for small office/home office applications rather than the commonly used Standby technology, to help preserve the battery life.

Choose Your Level of Protection Against Power Problems

	Basic protection 	Our minimum level of protection 	The ultimate protection of critical equipment 
UPS Type	Standby Power Systems have batteries that provide power only when AC power is lost and do not provide constant power. PowerShield provide a higher standard level of protection in all of our UPSs, which come with the next level of protection as standard - Line Interactive .	Line-Interactive UPS Systems use Automatic Voltage Regulation (AVR) to correct abnormal voltages, without switching to battery. This means less drain on your backup power that can shorten the length of battery life. The UPS uses transformers to increase or decrease voltage and return it to an optimum range when the voltage reaches a preset low or high value.	True Online Double Conversion (TODC) UPS Systems are a finely tuned method of voltage regulation. By continuously converting power from incoming AC to DC, then the DC to an ideal AC output, this double-conversion isolates equipment from all problems on the incoming line . TODC provides power with zero transfer time to the battery, making it ideal for sensitive equipment.
Solutions		SafeGuard, Defender & Commander Range	Centurion & Platinum Range
Problems Addressed	Power Failure refers to a complete mains power outage. This may be a result of damaged power lines, natural disasters, lightning strikes, grid overloads or car accidents. Power Sags refer to short term low voltage which may be a result of large loads starting up, utility switching or equipment failure. Power Surges refer to short term high voltage which can occur from a rapid reduction in loads and utility switching.	Power Failure refers to a complete mains power outage. This may be a result of damaged power lines, natural disasters, lightning strikes, grid overloads or car accidents. Power Sags refer to short term low voltage which may be a result of large loads starting up, utility switching or equipment failure. Power Surges refer to short term high voltage which can occur from a rapid reduction in loads and utility switching. Brownouts are extended periods of reduced voltage. This can occur from heavy loads exceeding utility grid capacity and conservation of energy during peak demand periods. Spikes are an instant increase in voltage that can be in excess of 5000 volts. This is a result of lightning strikes sending voltage spikes down the power line.	Line Noise is Radio Frequency Interference (RFI) and Electronic Magnetic Interference (EMI). This can be interference caused by transmitters, heavy machinery and large office machines. Frequency Drift is an intermittent change in frequency. This occurs when nearby generators are loaded and unloaded. Switching Transients are a quick high voltage increase that is shorter than a spike and result from indirect lightning strikes and utility switching. Harmonic Distortions are Pure Sign Wave deviation. They occur from transmissions from large machinery, computer and office equipment.
			
Backup Duration	Short 	Short to Medium 	Long 
Voltage Regulation	On Battery Only	Limited	Permanent
Line Filtering (surges)	Limited	Limited	Permanent
Frequency Regulation	No	No	Yes
Typical Usage	Small Office	Small Office / Entry Level Enterprise	Harsh Environment
Protection	Limited	Medium	High

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DC Mini

12V DC, 18W

Plugpack UPS



The **PowerShield DC Mini** is designed to provide emergency power backup to all kinds of DC powered equipment including routers, modems (including fibre optic - ONT), VOIP phone systems, surveillance equipment, alarm systems and many critical telecommunications devices. The DC Mini can economically provide hours of operation during power failure.

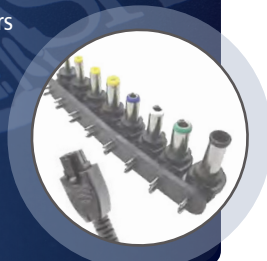
Features:

- Built in replacable Li-ion battery
- Auto start when plugged in
- Embedded Micro-controller
- Multi-colour indicator
- Manual power off switch port
- Overload, short-circuit, over-charge & over-discharge protection

Power Connectors Included:

Complete set of DC Power Jack tip adaptors allowing simple connection to all devices using DC powered jack sockets, such as modems, phones etc.

Molex connector as used by many popular ONT (Optical Network Terminal) devices



MINI UPS		
Model Number		PSDCMin 12/18
AC INPUT		
Voltage Range		90 VAC ~ 265 VAC
Frequency		50Hz or 60Hz
Surge Protection		125 J @ 4500 A
DC OUTPUT		
Voltage		12V DC \pm 5%
Maximum Power		18W (1.5 A)
BATTERY		
Battery Type		Lithium-ion Battery / 3.7V DC / 2600 mAh
Typical Charging Time		3 hours recover to 90% capacity
PROTECTION		
Battery		Deep discharge, over-charge and short circuit protection
Input/Output		Fuse for short circuit and overload protection
INDICATORS		
Multi-colour LED Display	Full Battery	Green - Solid
	Battery Charging	Green - Slow Flashing
	Battery Discharging	Green - Quick Flashing
	Fault	Red - Solid
PHYSICAL		
Dimensions D x W x H (mm)		78 x 42 x 74
Net Weight (g)		280

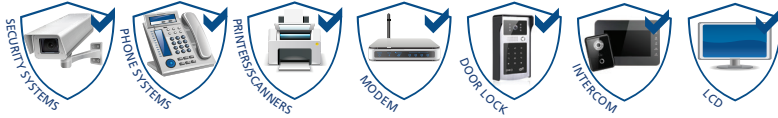
TYPICAL BACKUP TIMES

Typical Small Router (0.25 Amp / 3 Watt)	150 minutes
Typical Router (0.75 Amp / 9 Watt)	120 minutes

DC Mini UPS^{PSDCM36}

Voltage Selection of 12, 15, 19, 24Vdc

DC-DC Inline UPS



The **PowerShield DC Mini 36** is an inline DC UPS designed to provide emergency power backup to DC powered equipment including modems, routers, VOIP phones, surveillance equipment, alarm systems and many critical telecommunication devices. The DC Mini 36 can economically provide hours of operation during power failure.

Features:

- Includes 4 x Li-Ion batteries
- Auto-start when plugged in
- Microprocessor control
- Multicolour LED indicator and manual Power Off Switch
- Overload, short circuit, overcharge and overdischarge protection
- Long backup time
- Additional terminal output for hardwired DC connection

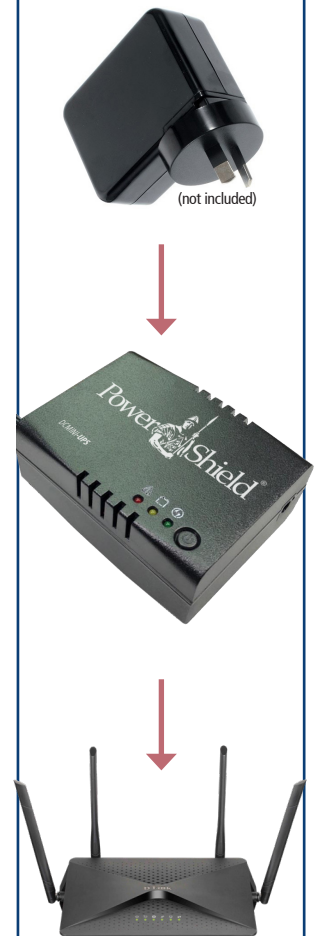
Power Connectors Included:

Complete set of DC Power Jack tip adaptors allowing simple connection to all devices using DC plugpacks.



DC MINI-UPS

Model Number	PSDCM36
INPUT	
Voltage DC	12V-24V DC
OUTPUT	
Voltage	12V / 15V / 19V / 24V Auto Detection
Current	36W = 3A / 2.4A / 1.89A / 1.5A
Protection	Short Circuit Protection Over Load Protection Over Current Protection Over Voltage Protection Over Charging Over Discharging
BATTERY	
Type	Lithium-ion 18650 type battery (4 x 2600mAh)
Voltage	7.4V
Capacity	5200mAh
Protection	Over Charge Protection Over Discharge Protection Over Current Over Voltage
Backup Time	36W = Full 20 minutes / 18W Half 60 minutes
INDICATORS	
LED	ON Green, Battery Yellow, Fault Red
OUTPUT CONNECTORS	
Output Cord	DC Power Cord + Terminal
Included Connector (Total: 6 pieces)	F5.5mm x 2.5mm / M5.5mm x 2.1mm & F5.5mm x 2.1mm / M5.5mm x 2.5mm F4.8mm x 1.7mm / M5.5mm x 2.1mm & F5.5 x 2.1mm / M4.8mm x 1.7mm F3.5mm x 1.35mm / M5.5mm x 2.1mm & F5.5 x 2.1mm / M3.5mm x 1.35mm
DIMENSIONS	
Dimension, D x W x H (mm)	105 x 80 x 43
Weight (grams)	320
ENVIRONMENT	
Humidity	0% to 95% Non-condensing
Operating Temperature	0°C to 40°C
TYPICAL DEVICE BACKUP TIMES	
Small Router (6 Watts)	24 hours
Medium Router (12 Watts)	12 hours



SafeGuard

750VA

Line Interactive UPS



SIX SOCKETS

The **PowerShield SafeGuard** remains one of the most popular UPS choices as it provides automatic voltage regulation, battery backup, surge protection and telephone/modem protection. This line interactive powerboard style UPS can also be wall mounted. The SafeGuard is perfect for workstations, telephone and security applications.

Features

Exceptional surge protection

- Best surge protection in its class.
- 460 Joules/11000 Amps protection .

Extra surge protected sockets

- The SafeGuard provides three Australian outlets, which provide a high level of surge protection as well as a UPS output supply, to keep essential systems running during utility power outages. It also provides an additional three Australian surge only protected sockets that do not require battery backup.

Hot swappable batteries

- Batteries are easily hot swappable and user replaceable, extending the service life of your UPS.

Fax / LAN surge protection port

- Includes ports for telephone or Lan network connections to provide extra surge protection on these lines.

Cold start function

- The UPS can turn on equipment when there is no AC simply by connecting equipment and turning the UPS on. This is excellent when users need to power equipment for a short time.

Off-mode charging

- The plugged in UPS will continue to charge internal batteries whether the unit is on or off.

HID Communication via USB

- HID can be used for simple management with Windows, Apple, Linux and NAS devices and a large variety of industrial controllers that support HID.
- HID ensures a safe and orderly shutdown in the event of a prolonged power outage.

NetGuard software communication via USB

- The free, downloadable NetGuard software provides complete power monitoring. Parameters such as input/output voltage, battery remaining time and load level are easily viewed. It also ensures a safe and orderly shutdown in the event of a prolonged outage.

Automatic voltage regulation (AVR)

- The AVR automatically bucks/boosts unstable fluctuating utility voltages, bringing it within 10% of nominal voltage range and thereby protecting valuable equipment.

Wallmountable / Powerboard style

- This AVR powerboard style UPS has been conveniently designed to suit physically restricted areas. Additionally as an option, the UPS can also be wall mounted.

Applications Include:

Small office & home office equipment, stand-alone personal computers, work stations, telephone systems, point of sale equipment, computer peripherals, NAS

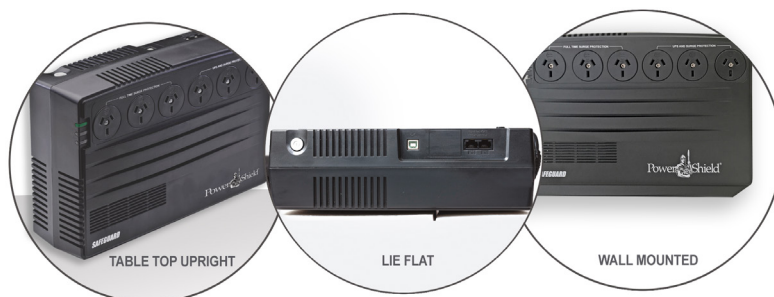


SAFEGUARD SPECIFICATIONS	
MODEL	SAFEGUARD 750
Model Number	PSG750
Capacity	750VA / 450W Line interactive
INPUT	
Voltage	240Vac (Nominal)
Voltage range	177 to 290Vac
Frequency	50Hz or 60Hz (Auto sensing)
OUTPUT	
Output Voltage	240Vac $\pm 10\%$
Frequency range (Batt. Mode)	50Hz or 60Hz ± 1 Hz
Transfer time	6 msec (Typical)
Wave Form (Batt. Mode)	Simulated Sine Wave
Australian Outlets	3 (UPS and Surge Protection)
Australian Outlets	3 (Full Time Surge Protection)
BATTERY	
Capacity	12V*9AH
Backup Time	25 min (1 PC load at 100W)
Typical Recharge Time	8 hours recover to 90% capacity
PROTECTION	
Full protection	Overcharge, discharge, short circuit and thermal protection
Surge protection	468Joules /11000Amps - Best in its class
Data protection	Tel/LAN, RJ45 connector
COMMUNICATIONS & MANAGEMENT	
Interface	USB interface
Software	PowerShield® NetGuard® supports Windows, Linux, Unix & Mac
HID	Supports Windows, Apple, Linux, NAS and various industrial controllers
LED Alarm	AC Mode, Battery Mode, Low Battery (Batt. Mode), Fault
Audible Alarm	Battery Mode, Low Battery (Batt. Mode), Fault
PHYSICAL	
Dimensions L x W x H (mm)	292 x 91 x 199
Weight (kgs)	6.5
OPERATING ENVIRONMENTS	
Temperature	0 - 40°C
Humidity	0-90% (RH Non-condensing)
Noise level	<5dB (No Fan)
COMPLIANCE	
Safety	EN62040 - 1 - 1 2003, IEC60950 - 1: 2001
EMC	EN62040 - 2 2006
RoHS	Directive 2011/65/EU

* Specifications are subject to change without prior notice
 * UPS output capacity is calculated at PF=0.7

TYPICAL RUN TIMES

Small telephone with 4 handsets	60 minutes
Medium telephone with 16 hand sets	23 minutes
DVR and 4 cameras	62 minutes
DVR and 16 cameras	37 minutes
Computer with 17" LCD monitor	17 minutes
Computer with 24" LCD monitor	12 minutes



Defender Tower

650VA | 1200 | 1600VA

Line Interactive UPS



The **Defender Range** uses Automatic Voltage Regulation (AVR) to minimise the effects of fluctuations in input voltage, protecting your valuable equipment from power line disturbances.

To protect your valued equipment against damaging surges, the Defender has been designed to incorporate the best surge protection in its class. The stylish LCD display, user replaceable, hot swappable batteries and Australian sockets makes the Defender the complete package at this level.

Features

Surge Protection

- Offering the best protection in its class, the Defender protects against damaging surges.

Informative LCD display

- Modern, stylish LCD display indicates voltage in/out, amount of load and remaining battery time.

Buck and Boost AVR for Voltage Stabilization

- The AVR automatically bucks/boosts unstable fluctuating utility voltages, bringing them within 10% of nominal voltage range and thereby protecting valuable equipment.

Hot Swappable batteries

- Batteries are easily hot swappable and user replaceable, extending the service life of your UPS.

Auto restart when AC recovers

- After an extended power outage the UPS will turn back on and resume equipment functionality once power has returned.

Cold start function

- The UPS can turn on equipment when it is off, simply by connecting equipment and turning the UPS on. This is excellent when you need to power equipment for a short time.

HID Communication via USB

- HID can be used for simple management with Windows, Apple, Linux and NAS devices and a large variety of industrial controllers that support HID.
- HID ensures a safe and orderly shutdown in the event of a prolonged power outage.

NetGuard software communication via USB

- The free, downloadable NetGuard software provides complete power monitoring. Parameters such as input/output voltage, battery remaining time and load level are easily viewed. It also ensures a safe and orderly shutdown in the event of a prolonged outage.

Silent Operation (no fans)

- Power Shield Engineers have designed the Defender range to run cool without fans. This makes it the perfect complement to Audio Visual.

Off-mode Charging

- The plugged in UPS will continue to charge internal batteries whether the unit is on or off.

Applications include:

- Home office applications
- Workstations
- Security applications
- Point of sale equipment
- NAS Drives



DEFENDER RANGE SELECTION GUIDE

MODEL	DEFENDER 650	DEFENDER 1200	DEFENDER 1600
Model Number	PSD650	PSD1200	PSD1600
Capacity	650VA / 390W	1200VA / 720W	1600VA / 960W
Topology	Line Interactive		
INPUT			
Voltage	240Vac (Nominal)		
Voltage Range	177-290Vac		
Frequency Range	50/60Hz ± 5Hz (auto sensing)		
OUTPUT			
Output Voltage	240Vac ± 10%		
Frequency	AC mode tracks utility		
Frequency Range (Batt. Mode)	50Hz or 60Hz ±1Hz		
Transfer Time	6ms (Typical)		
Waveform (Batt. Mode)	Simulated Sine Wave		
Australian Outlets - UPS & Surge Protection	2	3	
Australian Outlets - Surge Protection	0	3	
BATTERY			
Battery Type & Number	12V / 9AH (x1)	12V / 7AH (x2)	12V / 9AH (x2)
Typical Recharge Time	6 hours recover to 90% capacity		
Backup Time (50% Load)	6 min.	13 min.	10 min.
PROTECTION			
Full Protection	Overload, discharge, thermal, short circuit and overcharge protection		
Surge Protection	312Joules / 6500Amps	936Joules / 19500Amps	
COMMUNICATIONS & MANAGEMENT			
Interface	USB interface		
Software	NetGuard® supports - Windows®, Linux, Unix and Mac (Free Download)		
HID	Supports Windows, Apple, Linux, NAS and various industrial controllers		
LCD Alarm	AC Mode, Battery Mode, Low Battery (Batt. Mode), Fault, Overload		
Audible Alarm	Battery Mode, Low Battery (Batt. Mode), Fault, Overload		
PHYSICAL			
Dimension L x W x H (mm)	323 x 97 x 144	393 x 146 x 202	
Net Weight (kgs)	5.2	11.5	11.9
OPERATING ENVIRONMENT			
Temperature	0-40°C		
Humidity	0-90% RH (non-condensing)		
Noise Level	Less than 5dBA @ 1 meter (no fan)		
COMPLIANCE			
Safety/EMC	(A-tick PSD650) EN62040-1 -1 2003, IEC60950-1 : 2001, EN62040-2 2006		
RoHS	Directive 2011/65/EU		

* Specifications are subject to change without prior notice.

* UPS output capacity is calculated at PF = 0.7.

LCD DISPLAY ③



1. Input voltage/remaining backup time
2. Output voltage
3. AC mode indicator
4. Battery mode indicator
5. Load level indicator, flashing indicates overload
6. Battery capacity indicator, flashing indicates low battery level

REAR VIEW



PSD650



PSD1200, PSD1600

Defender RackMount UPS



800VA

Line Interactive UPS



The **Defender Rackmount** expands the successful Defender Range by building the popular features into a Rack Mount UPS. At 230mm deep, this is the perfect UPS for shallow, wall mounted Comms cabinets.

This versatile UPS uses Automatic Voltage Regulation (AVR) to minimise the effects of fluctuations in input voltage, protecting your valuable equipment from power line disturbances whilst also incorporating the best surge protection in its class.

Features

Surge Protection

- Offering the best protection in its class, the Defender Rackmount protects against damaging surges.

Informative LCD display

- Modern, stylish LCD display indicates voltage in/out, amount of load and remaining battery time.

Buck and Boost AVR for Voltage Stabilization

- The AVR automatically bucks/boosts unstable fluctuating utility voltages, bringing them within 10% of nominal voltage range and thereby protecting valuable equipment.

Compact Design

- The 230mm depth provides a very shallow, rackmountable solution, which will fit any wall mounted equipment box.

Hot Swappable Battery

- Battery is easily hot swappable and user replaceable, extending the service life of your UPS.

Silent Operation (no fans)

- Power Shield Engineers have designed the Defender Rack Mount to run cool without fans. This makes it the perfect complement to Audio Visual.

Auto restart when AC recovers

- After an extended power outage the UPS will turn back on and resume equipment functionality once power has returned.

HID Communication via USB

- HID can be used for simple management with Windows, Apple, Linux and NAS devices and a large variety of industrial controllers that support HID
- HID ensures a safe and orderly shutdown in the event of a prolonged power outage

NetGuard software communication via USB

- The free, downloadable NetGuard software provides complete power monitoring. Parameters such as input/output voltage, battery remaining time and load level are easily viewed. It also ensures a safe and orderly shutdown in the event of a prolonged outage.

Off-mode Charging

- The plugged in UPS will continue to charge internal batteries whether the unit is on or off.

Extra Sockets

- Comes standard with 6 Australian sockets and 2 IEC outlets. All six Australian sockets are spaced wide to allow for large plug packs.

Cold start function

- The UPS can turn on equipment when it is off, simply by connecting equipment and turning the UPS on. This is excellent when you need to power equipment for a short time.



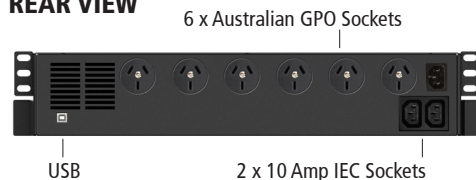
DEFENDER RACKMOUNT 800VA UPS

MODEL	DEFENDER RACK 800
Model Number	PSDR800
Capacity	800VA / 480W
Topology	Line Interactive
INPUT	
Voltage	240Vac (Nominal)
Voltage Range	177-290Vac
Frequency Range	50/60Hz (auto sensing)
OUTPUT	
Output Voltage	240Vac \pm 10%
Frequency Range (Batt. Mode)	50Hz or 60Hz \pm 1Hz
Transfer Time	6ms (Typical)
Waveform (Batt. Mode)	Simulated Sine Wave
Australian Outlets - UPS & Surge Protection	2x 10 Amp IEC Sockets, 6 x Australian Sockets
BATTERY	
Battery Type & Number	12V / 9AH (x1)
Typical Recharge Time	4- 6 hours recover to 90% capacity
Backup Time (50% Load)	8 min
PROTECTION	
Full Protection	Overload, discharge and overcharge protection
Surge Protection	312Joules / 6500Amps
COMMUNICATIONS & MANAGEMENT	
Interface	USB interface
Software	NetGuard® supports - Windows®, Linux, Unix and Mac (Free Download)
HID	Supports Windows, Apple, Linux, NAS and various industrial controllers
LCD Alarm	AC Mode, Battery Mode, Low Battery (Batt. Mode), Fault, Overload
Audible Alarm	Battery Mode, Low Battery (Batt. Mode), Fault, Overload
PHYSICAL	
Dimension L x W x H (mm)	230 x 438 x 86
Net Weight (kgs)	7.7
OPERATING ENVIRONMENT	
Temperature	0-40°C
Humidity	0-90% RH (non-condensing)
Noise Level	Less than 5dBA @ 1 meter (no fan)
COMPLIANCE	
Safety/EMC	EN62040-1 -1 2003, IEC60950-1 : 2001, EN62040-2 2006
RoHS	Directive 2011/65/EU

* Specifications are subject to change without prior notice.
 * UPS output capacity is calculated at PF = 0.7.



REAR VIEW



Dimensions: 230mmD x 438mmW x 86mmH (2RU)

Weight: 7.7kg

Commander Tower

1100 | 2000 VA

Line Interactive UPS



The **PowerShield Commander** is a sophisticated pure sine wave, line interactive UPS. Besides providing Automatic Voltage Regulation (AVR) it also provides for a Pure Sine Wave output while in backup mode.

This UPS is a cost effective solution for protecting applications such as networking, telecom, security and motors to name a few.

Features



Pure Sine Wave Output

- The Commander Tower provides a sine wave output, even when the UPS is running off of its batteries.
- The pure sine wave offers an economical solution to back up gates, cameras, computers, motors, telephone systems and other sensitive equipment.

Output Power Factor 0.9

- With an output power factor of 0.9 the Commander Tower is a high-density UPS that will provide higher performance and efficiency to critical applications.

Programmable Power Management

- Features a combination of both Australian and IEC outlets.
- With programmable power management outlets users can easily and independently control load segments. During power failure this feature enables users to extend battery time to mission-critical devices by shutting down non-critical devices in a timely manner.

Modern, Informative LCD

- Designed by Power Shield engineers this modern LCD features extra large numeral displays and an informative mimic allowing users to view up to date information at a glance.

Inbuilt Battery Management (HID)

- Plug and play on any computer or NAS drive
- Allows for orderly shutdown without software

ECO Mode

- With built in advanced ECO mode this UPS will achieve an efficiency of up to 98% during normal mains operation. Using this option will allow for reduced ongoing running costs.

HID Communication via USB

- HID can be used for simple management with Windows, Apple, Linux and NAS devices and a large variety of industrial controllers that support HID
- HID ensures a safe and orderly shutdown in the event of a prolonged power outage

NetGuard software communication via USB

- The free, downloadable NetGuard software provides complete power monitoring. Parameters such as input/output voltage, battery capacity and load level are easily viewed. It also ensures a safe and orderly shutdown in the event of a prolonged outage

Smart AVR with Buck and Boost

- With a built in voltage regulator, the Commander Tower will maintain regulated nominal output without using battery power during brownouts and overvoltages.

Emergency Power Off Function (EPO)

- This feature can turn off and isolate the UPS in the event of fires or other emergencies.

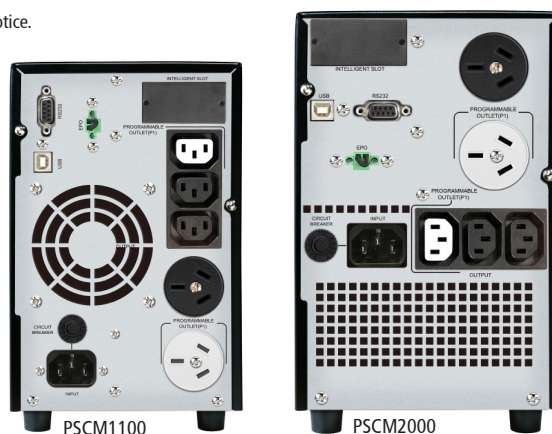
Options

- PSSNMPV4 - SNMP card (option to connect PSEMD)
- PSEMD - Environmental Monitoring Device for temperature and humidity
- PSModbus - Modbus card
- PSAS400T & PSAS400D - AS400 dry contact card
- PSMB52k, Maintenance Bypass Switch
- PSCXW - 1 year extended warranty

COMMANDER TOWER						
MODEL		Commander 1100		Commander 2000		
Model Number		PSCM1100		PSCM2000		
Capacity (PF = 0.9)		1100 VA / 990 W		2000 VA / 1800 W		
INPUT						
Nominal Voltage		240Vac				
Acceptable Voltage Range		162-290 VAC				
Frequency Range		50/60Hz ± 5Hz (auto sensing)				
OUTPUT						
Voltage Regulation (AC Mode)		240Vac (Selectable 208/220/230Vac) ± 10% AVR				
Voltage Regulation (Batt. Mode)		± 1.5% (before battery alarm)				
Frequency Range (Batt. Mode)		50 Hz or 60 Hz ± 1 Hz				
Current Crest Ratio		3:1				
Total Harmonic Distortion		2% max @ 100% linear load, 5% max @ 100% non-linear load (before low battery alarm)				
Transfer Time		6ms (Typical), 10ms max.				
Waveform (Batt. Mode)		Pure Sine Wave				
EFFICIENCY						
AC Mode		98% (Advanced ECO design)				
Battery Mode		89%		91%		
BATTERY						
Standard Model	Battery Type & Number		12V / 9AH (x2)		12V / 9AH (x4)	
	Recharge Time		4 hours recover to 90% capacity			
PROTECTION						
Full Protection		Overload, thermal, short circuit, discharge and overcharge protection				
Surge Protection		1968 Joules / 39000 Amps				
ENVIRONMENT						
Operation Temperature		0 - 40°C				
Relative Humidity		0-90% (RH non-condensing)				
Noise Level		< 45dB				
COMMUNICATIONS & MANAGEMENT						
Interface		USB and RS-232 as standard, Intelligent slot for PSSNMP, PSModbus or PSAS400 dry contact				
Software		PowerShield NetGuard® software - supports Windows based operating system, Linux, Unix and Mac				
HID		Supports Windows, Apple, Linux, NAS and various industrial controllers				
LCD Display/Alarm		AC mode, Batt. Mode, Load Level, Input Voltage, Output Voltage, Overload, Fault, Battery Replacement, Low Batt., Batt. Time Remaining				
Audible Alarm		Battery Mode, Low Battery (Batt. Mode), Battery Replacement, Fault, Overload				
PHYSICAL						
Standard Model	Dimension D x W x H (mm)		397 x 145 x 220		455 x 145 x 220	
	Weight Nett/Gross (kg)		12.9 / 14.4		20.5 / 22.5	
COMPLIANCE						
Safety		EN62040-1 -1 2003, IEC 60950-1 -1				
EMC		EN62040-2 2006				
RoHS		Directive 2011/65/EU				

* Product specifications are subject to change without further notice.

Rear of Commander Tower



Commander RT

1100VA | 2000VA | 3000VA

Line Interactive UPS



The Microprocessor-based, line Interactive, Pure Sine Wave **Commander Rackmount/Tower** UPS offers power protection for applications such as networking, telecom, security and motors.

The Advanced ECO mode function allows cost effective operation of the UPS with an efficiency as high as 98%. To provide longer backup time the 2kVA and 3kVA models are expandable to include an additional battery bank.

Features



Exceptional surge protection

- Offering the best surge protection in its class to protect against damaging surges.

Output power factor 0.9

- The Commander RT is high-density UPS with output power factor 0.9 to provide higher performance and efficiency to critical applications.

Informative & easy-shift LCD display

- The front panel LCD display panel is readily viewable whether the UPS is horizontal or vertical. It displays all critical and noncritical parameters, including the estimated battery backup time remaining.

Rack/Tower design

- The Commander RT can be easily installed as a floor-standing tower or in a 19-inch rack.

Programmable outlets

- This UPS comes with programmable power management outlets allowing the user to control the load segments, thereby extending battery backup times to mission critical devices by shutting down non-critical items.

Emergency Power Off Function (EPO)

- This feature can turn off and isolate the UPS in the event of fires or other emergencies.

ECO & advanced ECO mode

- It has an advanced ECO mode, which allows the UPS to operate at a very high efficiency, up to 98%. When the utility mains input voltage is within the ECO range the UPS saves energy by passing the mains supply directly through to the load, while the inverter continues to operate in a passive mode.

HID Communication via USB

- HID can be used for simple management with Windows, Apple, Linux and NAS devices and a large variety of industrial controllers that support HID.
- HID ensures a safe and orderly shutdown in the event of a prolonged power outage.

NetGuard software communication via USB

- The free, downloadable NetGuard software provides complete power monitoring. Parameters such as input/output voltage, battery capacity and load level are easily viewed. It also ensures a safe and orderly shutdown in the event of a prolonged outage.

Hot swappable batteries

- Incorporates hot-swappable internal battery packs which can be accessed via the front panel for maintenance changes, keeping the UPS operational during battery replacement. Additional battery banks can be added to increase battery backup time.

Buck and Boost AVR

- Built-in buck and boost AVR (combination of Australian and IEC).

Optional Accessories

- PSSNMP - SNMP card (option to connect a PSEMD)
- PSEMD - Environmental Monitoring Device for temperature and humidity
- PSModbus - Modbus card
- PSAS400 - AS400 dry contact card
- PSRK - 1RU rail kit
- PSRTBB8, PSRTBB12 - Extra battery bank
- PSMB52k, PSMB53k- Maintenance Bypass Switch

Commander RT					
MODEL	COMMANDER RT 1100K	COMMANDER RT 2000K	COMMANDER RT 3000K	RT BATTERY BANKS	
Model Number	PSCRT1100	PSCRT2000	PSCRT3000	PSCRTBB8	PSCRTBB12
Capacity	1100VA/880W	2000VA/1600W	3000VA/2400W	Suits PSCRT2000	Suits PSCRT3000
Topology	Line Interactive, Pure Sine Wave				
INPUT					
Voltage	240Vac (Nominal)				
Voltage Range	162-290Vac				
Frequency Range	50/60 Hz (Auto Sensing) ±5Hz				
OUTPUT					
Output Voltage (AC Mode)	240Vac (Selectable208/220/230Vac) ±10% AVR				
Voltage Regulation (Batt. Mode)	±3%				
Frequency Range (Batt. Mode)	50Hz or 60Hz ± 1Hz				
Current Crest Ratio	3:1				
Transfer Time	6ms (Typical)				
Waveform (Batt. Mode)	Pure Sine Wave				
EFFICIENCY					
ECO Mode (Advanced)	98%	98%	98%		
Battery Mode	83%	89%	87%		
BATTERY					
Standard Model	Battery Type & Number	12V*9Ah (x 2)	12V*9Ah (x 4)	12V*9Ah (x 6)	12V*9Ah (x 8)
	Typical Recharge Time	4 Hours Recover to 90% Capacity			
Additional Battery Banks		N/A	PSCRTBB8 (x1)	PSCRTBB12 (x1)	
PROTECTION					
Full Protection	Overload, discharge, thermal, short circuit and overcharge protection				
Surge Protection	1560Joules / 32500Amps				
COMMUNICATIONS & MANAGEMENT					
Interface	USB or RS232 as standard, Intelligent slot for PSSNMP, PSModbus or PSAS400 dry contact				
Software	PowerShield® NetGuard® software supports Windows®, Linux, Unix, and MAC				
HID	Supports Windows, Apple, Linux, NAS and various industrial controllers				
LCD Display/Alarm	AC mode, Batt. mode, Load Level, Input Voltage, Output Voltage, Overload, Fault, Low Batt., Batt. Time remaining				
Audible Alarm	Battery mode, low battery (batt. mode), fault, oveload				
PHYSICAL					
Dimension (D x W x H)	(380 x 438 x 88)mm	(480 x 438 x 88)mm	(600 x 438 x 88)mm	(480 x 438 x 88)mm	(600 x 438 x 88)mm
Weight (Net/Gross)	(15kg / 16kg)	(23kg / 25kg)	(32kg / 35kg)	(25kg / 27kg)	(35kg / 37kg)
OPERATING ENVIRONMENT					
Temperature	0 - 40°C				
Humidity	0 - 90% (RH Non-condensing)				
Noise Level	< 45dB				
COMPLIANCE					
Safety	EN62040 - 1 - 1 2003, IEC60950 - 1 - 1				
EMC	EN62040 - 2 2006				
RoHS	Directive 2011 / 65 / EU				

*Specifications are subject to change without prior notice. UPS output capacity is calculated at PF = 0.7

REAR VIEW

PSCRT1100 / PSCRT2000



PSCRT3000



No Power = No Security

A PowerShield UPS will protect against security breaches during power failures



Battery Backup



Surge Protection



Monitoring Software

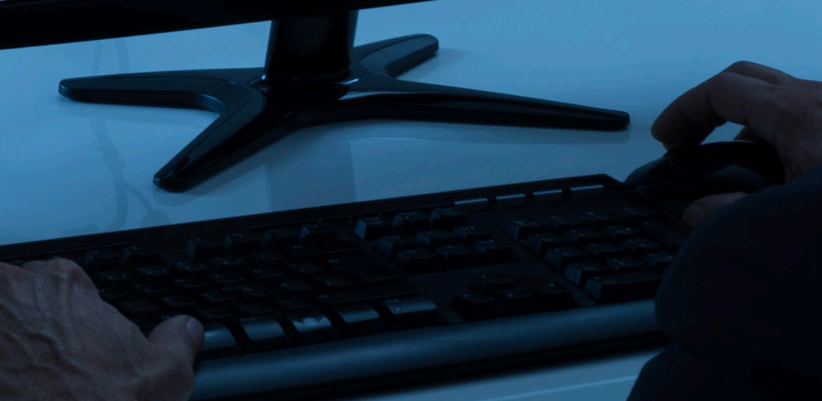


Smart Phone / Email Alerts



Computer Alerts





Centurion Tower

1000VA | 2000VA | 30000VA
6000VA | 10000VA

True Online Double Conversion UPS



The **Centurion** is a True Online Double Conversion UPS designed to provide comprehensive power protection for critical equipment. Versatile software management and hardware options offer the flexibility to build up a power protection solution to fit any application.

Meticulously developed by PowerShield engineers to be a world leading technology UPS, the Centurion Tower addresses absolutely all requirements and features as has been demanded by the sophisticated Australian power consumer and hence stands in a class of its own, as a world leading UPS technology.

Features



Exceptional Surge Protection

- Offering the best protection in its class to protect against damaging surges.

Output Power Factor

- The Centurion Tower is a high-density UPS with output power factor (PF=0.9) to provide higher performance and efficiency to critical applications.

Informative LCD display

- The front panel LCD display panel is readily viewable and displays all critical and noncritical parameters, including the estimated battery backup time remaining.

Programmable outlets

- This UPS comes with programmable power management outlets allowing the user to control the load segments, thereby extending battery backup times to mission critical devices by shutting down non-critical items.

Emergency Power Off Function (EPO)

- This feature can turn off and isolate the UPS in the event of fires or other emergencies.

Advanced ECO Mode

- It has an advanced ECO mode, which allows the UPS to operate at a very high efficiency, up to 98%. When the utility mains input voltage is within the ECO range the UPS saves energy by passing the mains supply directly through to the load, while the inverter continues to operate in a passive mode.

HID Communication via USB

- HID can be used for simple management with Windows, Apple, Linux and NAS devices and a large variety of industrial controllers that support HID
- HID ensures a safe and orderly shutdown in the event of a prolonged power outage

NetGuard software communication via USB

- The free, downloadable NetGuard software provides complete power monitoring. Parameters such as input/output voltage, battery capacity and load level are easily viewed. It also ensures a safe and orderly shutdown in the event of a prolonged outage

Battery Bank Extension Options

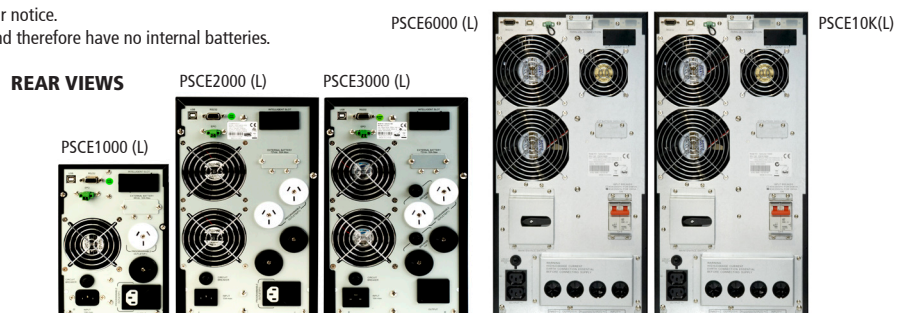
- The Centurion Tower provides the option to increase battery backup time by simply adding additional battery banks.
- To address the need for fast charging of multiple battery banks, PowerShield engineers have incorporated additional independent internal chargers into the PSCEBB18CH and PSCEBB60CH.

Optional Accessories

- PSSNMPV4 - SNMP card (option to connect a PSEMD)
- PSEMD - Environmental Monitoring Device for temperature humidity
- PSModbus - Modbus card
- PSAS400 - AS400 dry contact card
- N+X parallel redundancy available for 6K/10K models
- Battery Banks - Backup time for all models is easily extended by simply plugging additional battery banks PSCEBB6, PSCEBB12, PSCEBB18CH, PSCEBB40, PSCEBB60CH
- External Maintenance Bypass Switches - PSMB52k, PSMB53k, PSMB5WPB6k, PSMB5WPB10k,

CENTURION TOWER						
MODEL		Centurion Tower 1K	Centurion Tower 2K	Centurion Tower 3K	Centurion Tower 6K	Centurion Tower 10K
Model Number		PSCE1000L	PSCE2000L	PSCE3000L	PSCE6000L	PSCE10KL
Capacity		1000VA / 900W	2000VA / 1800W	3000VA / 2700W	6000VA / 5400W	10000VA / 9000 W
Topology		True online double-conversion				
INPUT						
Nominal Voltage		200 / 208 / 220 / 230 / 240 Vac			208 / 220 / 230 / 240 Vac	
Voltage Range		110-300 VAC ± 5% at 50% load 160-300 VAC ± 5% at 100% load			110-300 VAC at 50% load 176-300 VAC at 100% load	
Frequency Range		40Hz~70Hz			46Hz~54Hz or 56Hz~64Hz	
Input Power Factor Correction		> 0.99 @ 100% load				
OUTPUT						
Output Voltage		240Vac (200 / 208 / 220 / 230 / 240 Vac - Selectable)			240Vac (208 / 220 / 230 / 240 Vac - Selectable)	
Frequency Range (Synchronized Range)		47~53Hz or 57~63Hz (Auto detect)			46~54Hz or 56~64Hz (Auto detect)	
Frequency Range (Batt. Mode)		50Hz ± 0.1Hz or 60Hz ± 0.1Hz				
Current Crest Ratio		3:1				
Harmonic Distortion		> 2% THD (linear load) : > 4% THD (non-linear load)			= > 3% THD (linear Load) > 6% THD (non-linear Load)	
Transfer Time	AC Mode to Batt. Mode	Zero				
	Inverter to Bypass	4 ms (typical)			zero	
Waveform (Batt. Mode)		Pure Sinewave				
EFFICIENCY						
AC Mode		90%	91%		91%	92%
ECO Mode		98%			98%	
Battery Mode		89%		90%	88%	89%
BATTERY						
Standard	Battery Type	12V*9AH(x3)	12V*9AH(x6)	12V*9AH(x6)	12V*9AH(x20)	12V*9AH(x20)
	Typical Recharge Time	4 hours recover to 90% capacity			7 hours recover to 90% capacity	
	Charging Current (max)	1.5A			1A	
	Charging Current (max)	1A / 2A / 4A / 6A / 8A (selectable via LCD setting)			4.0A	
	Charging Voltage (nominal)	36 VDC	72 VDC		240 VDC	
PROTECTION						
Full Protection		1248 Joules / 39000 Amps			1080 Joules / 30000 Amps	
COMMUNICATIONS & MANAGEMENT						
Interface		USB and RS232 as standard. Intelligent slot for PSSNMPV4 or PSAS400 dry contact or PSMBUS				
Software		Power Shield Netguard® Software - supports Windows based operating Systems, Linux, Unix & Mac				
HID		Supports Windows, Apple, Linux, NAS and various industrial controllers				
LCD Display/ Alarm		UPS Status, Load Level, Battery Level, Input/Output Voltage, Battery Time Remaining and Fault Indicators				
Audible Alarm		Battery Mode, Low Battery, Overload, Fault				
PHYSICAL						
Standard	Dimensions D x W x H (mm)	396 x 145 x 240	425 x 190 x 335		592 x 250 x 576	
	Weight (kg)	12.5	25.8	27	75	78
Long-run	Dimensions D x W x H (mm)	396 x 145 x 240	425 x 190 x 335		592 x 250 x 576	
	Weight (kg)	5.8	12	13.8	23	25
OPERATING ENVIRONMENT						
Humidity x Temperature		20 - 95% (RH non-condensing) @ 0 - 40°C				
Noise Level		Less than 50dBA @ 1metre			Less than 55dB @ 1metre	
COMPLIANCE						
Safety		EN62040 - 1 - 1 2003, IEC60950 - 1 - 1				
EMS		EN62040 - 2 2006				
RoHS		Directive 2001 / 65 / EU				

- Specifications are subject to change without prior notice.
- L means long-run models with larger chargers and therefore have no internal batteries.



While unlimited numbers of batteries banks can be added, if large battery banks are installed and require fast charging it is recommended to add a battery bank that has an internal charger. Usually these should be added as the second, third or fourth battery bank depending on your requirements. The PSCEBB18CH and PSCEBB60CH battery banks have built-in chargers and more batteries than regular battery banks. PSCEBB18CH suits 2k & 3K. PSCEBB60CH suits 6k & 10K.

CENTURION TOWER LOAD VA

VA	LOAD	PSCE1000	PSCEBB6	PSCEBB6	PSCEBB6
1000VA	100%	13 minutes	52 minutes	97 minutes	125 minutes
500VA	50%	26 minutes	104 minutes	194 minutes	250 minutes



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VA	LOAD	PSCE2000	PSCEBB12	PSCEBB18CH	PSCEBB12
2000VA	100%	13 minutes	52 minutes	110 minutes	150 minutes
1000VA	50%	26 minutes	104 minutes	220 minutes	300 minutes



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VA	LOAD	PSCE3000	PSCEBB12	PSCEBB18CH	PSCEBB12
3000VA	100%	5 minutes	27 minutes	62 minutes	100 minutes
1500VA	50%	10 minutes	54 minutes	124 minutes	200 minutes



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VA	LOAD	PSCE6000	PSCEBB40	PSCEBB60CH	PSCEBB40
6000VA	100%	10 minutes	55 minutes	116 minutes	170 minutes
3000VA	50%	28 minutes	110 minutes	232 minutes	340 minutes



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VA	LOAD	PSCE10K	PSCEBB40	PSCEBB60CH	PSCEBB40
10KVA	100%	5 minutes	28 minutes	75 minutes	100 minutes
5000VA	50%	10 minutes	56 minutes	150 minutes	200 minutes



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TOWER MODELS BATTERY BANKS

Model Number	PSCEBB6	PSCEBB12	PSCEBB18CH	PSCEBB40	PSCEBB60CH
Suits UPS	PSCE1000	PSCE2000 / 3000	PSCE2000 / 3000	PSCE6000 / 10k / 20k	PSCE6000 / 10k / 20k

BATTERY

Type	12V*9AH				
Number	6	12	18	40	60
Charging Voltage (Nominal DC)	36Vdc	72Vdc	72Vdc	240Vdc	240Vdc
Charger	From UPS	From UPS	4Amps	From UPS	4Amps

PHYSICAL

Dimensions D x W x H (mm)	396 x 145 x 240mm	425 x 190 x 335mm	534 x 190 x 335mm	592 x 250 x 576mm	592 x 250 x 826mm
Weight Net/Gross (kg)	20 / 21	40 / 42	60 / 63	122 / 138	180 / 198

PROTECTION

DC Circuit Breaker

Fuses

VIRTUALLY UNLIMITED RUN TIMES CAN BE ACHIEVED BY ADDING BATTERY BANKS TO STANDARD MODELS

Power Protection for Medical & Laboratory Refrigeration



Peace of Mind

An Uninterruptible Power Supply Unit (UPS) will allow providers to continue to store vaccines and other items between recommended temperatures in the event of a power outage, offering protection and minimising loss.

There are a wide range of medical refrigeration options available for use in healthcare environments including hospitals, pharmacies, laboratories and other institutions. These refrigerators may be used for applications such as vaccine, laboratory and breast milk storage. Temperatures are electronically controlled and can detect and report any variances outside of defined ranges depending on the application. In most industries service providers must ensure plans are in place for responses to any breaches and power failures.

Power failures can occur for many reasons. How a power failure is managed in your organisation may depend upon the cause of the power outage, whether prior notice was given and the time of day that the outage occurs.

There are a range of options available to provide backup power and selecting the most appropriate choice requires a thorough examination of the facility's loads, power supply and energy management capacity.

How long will the refrigerator remain within the recommended temperature range in the event of a power failure?

In the event of a power failure a medical refrigerator may only remain within the recommended temperature for 20–30 minutes before the internal temperature rises above the maximum allowance for the contents.

A UPS Can:

- Allow providers to continue to store vaccines and other items between the recommended temperatures of in the event of a power outage, thereby minimising loss.
- Allow the fridge to continue to display the current temperature during a power failure. *Note: not all purpose-built refrigerators continue to display the current temperature during a power failure and require a separate battery-operated minimum/maximum thermometer to continually monitoring refrigerator temperatures during power outages.*
- A PowerShield UPS can be equipped to provide an email or SMS text message alerts for power outages

When power is returned a PowerShield UPS will ensure that there is minimal disruption to your business whilst on UPS power as you will not need to:

- Record the refrigerator temperature.
- Reset the temperature.
- Ensure the refrigerator temperature has returned to the ideal temperature before returning contents.
- If a breach has occurred, report it to the relevant state or territory health department.
- Monitor the refrigerator closely e.g. hourly, then as recommended twice daily.

Power Shield has been designing power protection solutions to meet Australian conditions since 2000 and has extensive knowledge in providing solutions for all business applications. Our dedicated team can assist with the best UPS selection for your medical fridge applications.

To correctly size a UPS to your fridge requirement we simply require a:

- Fridge make/model, or
- nameplate wattage or power consumption (e.g 3.69kWH/24h) and
- back-up time required

Centurion RT

1000VA | 2000VA | 3000VA

True Online Double Conversion UPS



The Centurion RT features true online double conversion. As our highest single phase power density UPS, this sophisticated range will provide the most comprehensive protection for mission critical devices such as sensitive networks, computers, servers, telecom applications, as well as industrial applications. Meticulously developed by PowerShield engineers to be a world leading technology UPS, the Centurion RT addresses absolutely all requirements and features as has been demanded by the sophisticated Australian power consumer and hence stands in a class of its own, as a world leading UPS technology.

Features



Exceptional surge protection

- Offering the best surge protection in its class to protect against damaging surges.

Output power factor

- The Centurion RT is high-density UPS with output power factor (PF = 0.9) to provide higher performance and efficiency to critical applications.

Informative & easy-shift LCD display

- The front panel LCD display panel is readily viewable whether the UPS is horizontal or vertical. It displays all critical and noncritical parameters, including remaining battery backup time.

Rack/Tower design

- The Centurion RT can be easily installed as a floor-standing tower or in a 19-inch rack.

Programmable outlets

- This UPS comes with programmable power management outlets allowing the user to control the load segments, thereby extending battery backup times to mission critical devices by shutting down non-critical items.

Emergency Power Off Function (EPO)

- This feature can turn off and isolate the UPS in the event of fires or other emergencies.

ECO & advanced ECO mode

- It has an advanced ECO mode, which allows the UPS to operate at a very high efficiency, up to 98%. When the utility mains input voltage is within the ECO range the UPS saves energy by passing the mains supply directly through to the load, while the inverter continues to operate in a passive mode.

HID Communication via USB

- HID can be used for simple management with Windows, Apple, Linux and NAS devices and a large variety of industrial controllers that support HID.
- HID ensures a safe and orderly shutdown in the event of a prolonged power outage.

NetGuard software communication via USB

- The free, downloadable NetGuard software provides complete power monitoring. Parameters such as input/output voltage, battery capacity and load level are easily viewed. It also ensures a safe and orderly shutdown in the event of a prolonged outage.

Hot swappable batteries

- Battery banks are hot-swappable. This keeps the UPS operational during battery replacement.

Expandable Backup Time

- Increase backup time by adding external battery banks.

Standard extra large charger

- The Centurion RT comes with a larger charger than other UPSs ensuring rapid recharge times.

Optional Accessories

- PSSNMPV4 - SNMP card (option to connect a PSEMD)
- PSEMD - Environmental Monitoring Device for temperature & humidity
- PSModbus - Modbus card
- PSAS400 - AS400 dry contact card
- PSRK - 1RU rail kit
- PSRTBB6, PSRTBB8, PSRTBB12 - Extra battery bank
- PSMB52k, PSMB53k - Maintenance Bypass Switches

CENTURION RT RANGE SELECTION GUIDE

MODEL		CENTURION RT 1KVA & 1KVA (L)		CENTURION RT 2KVA (SB)		CENTURION RT 2KVA & 2KVA (L)		CENTURION RT 3KVA & 3KVA (L)		RT BATTERY BANKS		
Model Number		PSCERT1000/PSCERT1000L		PSCERT2000SB		PSCERT2000/PSCERT2000L		PSCERT3000/PSCERT3000L		PSRTBB6	PSRTBB8	PSRTBB12
Capacity		1000VA/900W		2000VA/1800W				3000VA/2700W		Suits PS- CERT1000	Suits PS- CERT2000SB	Suits PS- CERT2000/ PSCERT3000
Topology		True online double- conversion, Pure Sine Wave										
INPUT												
Voltage Range	Low Line Transfer	160Vac / 140Vac / 120 / 110Vac ± 5 % (based on load percentage 100%-80% / 80%-70% / 70%-60% / 60%-0)										
	Low Line Comeback	175Vac / 155Vac / 135Vac / 125Vac ± 5 %										
	High Line Transfer	300Vac ± 5 %										
	High Line Comeback	290Vac ± 5 %										
Frequency Range		40Hz - 70Hz										
Phase		Single phase with ground										
Power Factor Correction		≥ 0.99 @ nominal voltage (100% load)										
OUTPUT												
Output Power Factor		0.9										
Output Voltage (AC Mode)		240Vac (Selectable 200/208/220/230/240Vac)										
Voltage Regulation (Batt. Mode)		± 1%										
Frequency Range (Batt. Mode)		50Hz or 60Hz ±1Hz										
Current Crest Ratio		3:1 (max.)										
Transfer	AC Mode to Batt. Mode	Zero										
	Inverter to Bypass	4ms (Typical)										
Waveform (Batt. Mode)		Pure Sine Wave										
EFFICIENCY												
ECO Mode (Advanced)		96%		97%		97%						
Battery Mode		86%		87%		87%						
BATTERY												
Battery Number (12 V*9AH)		x 3		x 4		x 6		x 6		x 6	x 8	x 12
Typical Recharge Time		4 hours recover to 90% capacity (for standard model only)										
Charging Current (max.)		Standard Models - 1.5Amp. Long Run Models - 1Amp / 2Amp / 4Amp / 6Amp selectable (factory default is 6Amp)										
PROTECTION												
Full Protection		Overload, discharge, thermal, short circuit and overcharge protection										
Surge Protection		984 Joules / 22000 Amps										
COMMUNICATIONS AND MANAGMENT												
Interface		USB or RS232 as standard, Intelligent slot for PSSNMP, PSModbus or PSAS400 dry contact										
Software		PowerShield® NetGuard® software - supports Windows, Linux, Unix and Mac based operating systems										
HID		Supports Windows, Apple, Linux, NAS and various industrial controllers										
LCD Display/Alarm		UPS Status, Load & Battery Level, Input/Output Voltage, Batt. Time Remaining and Fault Indicators										
Audible Alarm		Battery Mode, Bypass Mode, Low Battery (Batt. Mode), Fault, Overload										
PHYSICAL												
Dimension, (D x W x H) mm		380 x 438 x 88		480 x 438 x 88		600 x 438 x 88		600 x 438 x 88		480 x 438 x 88	480 x 440 x 88	600 x 438 x 88
Weight (kg)		15.2	8.4	19.5		25.6	10.5	26.8	11.6	24.8	29.1	42
OPERATING ENVIRONMENT												
Temperature		0 - 40°C										
Humidity		20 - 90% (RH Non-condensing)										
Noise Level		< 50dBA @ 1 Meter										
COMPLIANCE												
Safety / EMC / RoHS		EN62040-1-1 2003, IEC60950-1-1 / EN62040-2 2006 / Directive 2011/65/EU										

* Specifications are subject to change without prior notice. * Models ending in "L" are long run models with larger chargers and therefore have no internal batteries

Centurion RT 1000 (L) 10Amp IEC input socket



Centurion RT 2000/2000SB 10Amp IEC input socket



Battery Bank PSRTBB6



Centurion RT 2000 (L) 16Amp IEC input socket



Centurion RT 3000 (L) 16Amp IEC input socket



Battery Bank PSRTBB12



Centurion RT

6000VA | 10kVA

True Online Double Conversion UPS



The Centurion RT features true online double conversion. As our highest single phase power density UPS, this sophisticated range will provide the most comprehensive protection for mission critical devices such as sensitive networks, computers, servers, telecom applications, as well as industrial applications. Meticulously developed by PowerShield engineers to be a world leading technology UPS, the Centurion RT addresses absolutely all requirements and features as has been demanded by the sophisticated Australian power consumer and hence stands in a class of its own, as a world leading UPS technology.

Features



Exceptional surge protection

- Offering the best surge protection in its class to protect against damaging surges

Unity Output power factor (PF=1)

- The Centurion RT is a high-density UPS with unity output power factor (PF=1) to provide higher performance and efficiency to critical applications

Informative & easy-shift LCD display

- The front panel LCD display panel is readily viewable whether the UPS is horizontal or vertical. It displays all critical and noncritical parameters, including remaining battery backup time

Rack/Tower design

- The Centurion RT can be easily installed as a floor-standing tower or in a 19-inch rack
- High power density means that both the UPS and the battery bank are only 2RU height each

Emergency Power Off Function (EPO)

- This feature can turn off and isolate the UPS in the event of fires or other emergencies

ECO & advanced ECO mode

- It has an advanced ECO mode, which allows the UPS to operate at a very high efficiency, up to 98%. When the utility mains input voltage is within the ECO range the UPS saves energy by passing the mains supply directly through to the load, while the inverter continues to operate in a passive mode

Hot swappable batteries

- Battery banks are hot-swappable. This keeps the UPS operational during battery replacement. Additional battery banks can be added to increase battery backup time

HID Communication via USB

- HID can be used for simple management with Windows, Apple, Linux and NAS devices and a large variety of industrial controllers that support HID
- HID ensures a safe and orderly shutdown in the event of a prolonged power outage

NetGuard software communication via USB

- The free, downloadable NetGuard software provides complete power monitoring. Parameters such as input/output voltage, battery capacity and load level are easily viewed. It also ensures a safe and orderly shutdown in the event of a prolonged outage

Standard extra large charger

- The Centurion RT has been designed with a larger charger than other UPSs ensuring rapid recharge times when adding additional battery banks
- Larger charger allows for easy addition of extra battery banks

Optional Accessories

- PSSNMPV4 - SNMP card (option to connect a PSEMD)
- PSEMD - Environmental Monitoring Device for temperature & humidity
- PSModbus - Modbus card
- PSAS400 - AS400 dry contact card
- PSRK - 1RU rail kit
- PSRTBB16, PSRTBB20 - Extra battery modules
- PSMBSR10K - Maintenance Bypass Switches
- PSPDU10K - 10KVA PDU with 10A IEC 320 C13 (x8), 16A IEC 320 C19 (x4)

CENTURION RT RANGE (6K - 10K) SELECTION GUIDE

MODEL		CENTURION RT 6000L	CENTURION RT 10KL	STANDARD RT BATTERY BANK	OPTIONAL RACK BATTERY BANK
Model Number		PSCERT6000L	PSCERT10KL	PSRTBB16	PSCERBB20
Capacity		6000VA/6000W	10kVA/10kW	Suits PSCERT6000L & PSCERT10KL	
Topology		True online double-conversion, Pure Sine Wave			
INPUT					
Voltage Range	Line Loss	110~300Vac @ (0~60%) Load; 140~300V @ (60~80%) Load; 176~300Vac @ (80~100%) Load			
	Low Line Comeback	Low Line Loss Voltage + 10V			
	High Line Comeback	High Line Loss Voltage - 10V			
Frequency Range		46Hz ~ 54 Hz @ 50Hz system; 56Hz ~ 64 Hz @ 60Hz system			
Phase		Single phase with ground			
Input Power Factor Correction		≥ 0.99 @ nominal voltage (100% load)			
OUTPUT					
Output Voltage		240Vac (Selectable 208 / 220 / 230 / 240VAC)			
AC Voltage Regulation		± 1%			
Frequency Range (Synchronized Range)		46Hz ~ 54 Hz @ 50Hz system 56Hz ~ 64 Hz @ 60Hz system			
Frequency Range (Batt. Mode)		50 Hz ± 0.1 Hz or 60Hz ± 0.1 Hz			
Overload	AC Mode	100%~110%: 10min ; 110%~130%: 1min ; >130% : 1sec			
	Battery Mode	100%~110%: 30sec ; 110%~130%: 10sec ; >130% : 1sec			
Current Crest Ration		3:1 Max			
Harmonic Distortion		≥ 1 % @ 100% Linear Load; ≥ 4% @ 100% Non-linear Load			
Transfer Time	Line to Battery	0 ms			
	Inverter to Bypass	0 ms			
	Inverter to Eco	< 10 ms			
EFFICIENCY					
AC Mode		> 94%			
Battery Mode		> 93%			
BATTERY					
Battery Banks		PSRTBB16 (standard), PSCERBB20 (optional). Customised options available			
Battery Number		Batteries are 12Vdc. Customised optional strings of 16, 17, 18, 19, 20			x 16 x 20
Typical Recharge Time		4 hours for PSRTBB16 and PSCERBB20			
Charging Current (max.)		4 A ± 10%			
COMMUNICATIONS AND MANAGMENT					
Interface		USB and RS232 as standard			
Software		PowerShield® NetGuard® software - supports Windows, Linux, Unix and Mac based operating systems			
HID		Supports Windows, Apple, Linux, NAS and various industrial controllers			
Optional		Intelligent slot for PSSNMPV4, PSModbus or PSAS400 dry contact			
PHYSICAL					
Dimension, (D x W x H) mm		UPS Unit: 655 x 438 x 88 [2U] 17kg	UPS Unit: 655 x 438 x 88 [2U] 20kg	733 x 438 x 88 [2U]	580 x 438 x 133 [3U]
Weight (kgs)		13.5	16	54	57
OPERATING ENVIRONMENT					
Temperature		0 ~ 40°C			
Humidity		95% (RH Non-condensing)			
Altitude		<1000m			
Noise Level		Less than 55dB @ 1 Meter	Less than 58dB @ 1 Meter		

- Product specifications are subject to change without notice
- Derate capacity to 60% in CVCF mode
- Derate capacity to 90% when the output voltage is adjusted to 208VAC
- If the UPS is installed or used in a place where the altitude is above 1000m, the output power must be derated one percent per 100m
- Power Factor = 1 when using 20 battery string; Power Factor = 0.9 when using 18 to 19 battery string; Power Factor = 0.8 when using 16 to 17 battery string



Rear PSCERT 6000L and 10KL



Rear Battery Pack PSRTBB16

Centurion 3/1

10–20kVA

True Online Double Conversion UPS



The Centurion 3/1 UPS series provides outstanding protection in applications where only limited three phase power is available yet a large single phase power supply is necessary. In applications where a balanced load is essential, the 3/1 Series has all of the features of the Centurion Tower Range with the added ability of accepting three phase power to its input. It can also be configured to be a single phase in and single phase out UPS.

With the same user friendly LCD display as the Centurion Tower Range, operators can interrogate and program the UPS on the front panel as well as with the included software. These small footprint UPSs can fit tight space requirements and come standard with internal batteries. If longer backup time is needed, the long run models are available with extra large chargers.

Features

Exceptional Surge Protection

- Offering the best protection in its class to protect against damaging surges
- True online double-conversion

Emergency Power Off Function

- This feature can turn off and isolate the UPS in the event of fires or other emergencies

Efficiency

- DSP technology guarantees high performance
- Wide input voltage range (110-300Vac)
- Input power factor correction on all phases
- ECO mode operation for energy saving (ECO)

Versatility

- 50Hz/60Hz frequency converter mode
- Adjustable output voltages
- Includes Intelligent Slot, USB and RS232 connections
- Single phase configuration option
- Generator compatible
- Optional N+X parallel redundancy

LCD Display

- The Centurion 3/1 has an informative LCD Display with programmable features

Battery Bank Extension Options

- The Centurion 3/1 UPS provides the option to increase battery backup time by simply adding additional battery banks.
- To address the need for fast charging of multiple battery banks, PowerShield engineers have incorporated additional independent internal chargers into the PSCEBB40 and PSCEBB60CH.

Options

- PSSNMPV4 - SNMP card (option to connect a PSEMD)
- PSEMD - Environmental Monitoring Device for temperature and humidity
- PSModbus - Modbus card
- PSAS400 - AS400 dry contact card
- Battery Banks - Backup time for all models is easily extended by simply plugging additional battery banks PSCEBB40, PSCEBB60CH
- External Maintenance Bypass Switches - PS3-1MBSWPB10k or PS3-1MBSCPB10k, PS3-1MBSWPB20k or PS3-1MBSCPB20k



CENTURION 3/1 TRUE ONLINE UPS SELECTION GUIDE

MODEL		Centurion 10K 3/1	Centurion 20K 3/1	BATTERY BANKS	
Model Number		PSCE10K(L) 3/1	PSCE20K(L) 3/1	PSCEBB40	PSCEBB60CH
Capacity		10000 VA / 8000 W	20000 VA / 16000 W		
INPUT					
Nominal Voltage		240 / 415Vac (User Selectable)			240Vac (CH*)
Voltage Range		110-300 VAC ± 5% at 50% load 176-276 VAC ± 5% at 100% load			
Frequency Range		46~54Hz or 56~64Hz (Auto Sensing)			
Input Power Factor		0.99 @ 100% load			
OUTPUT					
Voltage (ac mode)		240Vac (208, 220, 230Vac - User Selectable)		240Vdc (nominal)	
AC Voltage Regulation (Batt. Mode)		± 1%			
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz			
Frequency Range (Batt. Mode)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz			
Current Crest Ratio		3:1 (max.)			
Harmonic Distortion		≤ 2 % THD (Linear Load); ≤ 5 % THD (Non-linear Load)			
Transfer Time	AC mode to Batt. Mode	zero			
	Inverter to Bypass	zero			
Waveform (Batt. Mode)		Pure Sine Wave			
EFFICIENCY					
AC Mode		89%			
Battery Mode		86%	87%		
BATTERY					
Standard Model	Battery Type	12V*9Ah		12V*9Ah	
	Numbers	20 pcs	40pcs	40pcs	60pcs
	Typical Recharge Time	9 hours recover to 90% capacity			
	Charging Current (Max.)	1A	2A	from UPS	4A (CH*)
Long-run Model	Battery Type /Numbers	Depending on the capacity of external batteries			
	Charging Current (Max.)	4A	8A		
	Charging Voltage	240Vdc (Nominal)			
PROTECTION					
Full Protection		Overload, discharge, thermal, short circuit and overcharge protection		Fuses	
Surge Protection		1320 Joules / 39000 Amps			
COMMUNICATIONS & MANAGEMENT					
Interface		USB or RS232 as standard, Intelligent slot for PSSNMPV4 or PSModbus or PSAS400 dry contact			
Software		Power Shield NetGuard software – supports Windows, Linux and Mac (Free Download)			
LCD Display/Alarm		UPS Status, Load & Battery Level, Input/Output Voltage, Battery Time Remaining & Fault Indicators			
Audible Alarm		Battery Mode, Low Battery, Overload, Fault			
PHYSICAL					
Standard Model	Dimension D x W x H (mm)	592 x 250 x 576	815 x 250 x 826	592 x 250 x 576	592 x 250 x 826
	Net Weight (kgs)	83	164	122	180
Long-run Model	Dimension, D x W x H (mm)	592 x 250 x 576	592 x 250 x 576		
	Net Weight (kgs)	28	40		
ENVIRONMENT					
Humidity & Temperature		0-95% RH @ 0-40°C (non-condensing)			
Noise Level		Less than 58dB @ 1 Meter			
COMPLIANCE					
Safety / EMC / RoHS		EN62040-1 -1 2003, IEC 60950-1 -1 / EN62040-2 2006 / Directive 2001/65/EU			

Specifications are subject to change without prior notice. Models ending in "L" are long run models with larger chargers and therefore have no internal batteries. *CH represents Charger.

BATTERY RUNTIMES	PSCE10K(L) 3/1	PSCE20K(L) 3/1
UPS Backup	12 minutes 50% / 6 minutes @ 100%	12 minutes @ 50% / 6 minutes @ 100%
UPS + PSCEBB40	56 minutes @ 50% / 28 minutes @ 100%	56 minutes @ 50% / 28 minutes @ 100%
UPS + PSCEBB40 + PSCEBB60CH	130 minutes @ 50% / 65 minutes @ 100%	130 minutes @ 50% / 65 minutes @ 100%
UPS + PSCEBB40 + PSCEBB60CH + PSCEBB40	320 minutes @ 50% / 110 minutes @ 100%	320 minutes @ 50% / 110 minutes @ 100%

Centurion 3/3

10–30kVA



True Online Double Conversion UPS



Centurion 3/3 UPS series provides powerful and overall protection to your sensitive devices accepting a wide input voltage range for harsh environments. It is the perfect solution for powering a wide range of devices such as servers, data centers, industrial processes, telecommunication and security systems.

This small footprint, high power density, double-conversion online UPS has an output power factor of 0.9. It features complete dual mains inputs ranging from 10kVA to 30kVA. It also includes Digital Signal Processing (DSP) technology and active input power factor correction design. This ensures a stable, superior output power quality.

Features



High Availability

- Accepts dual-mains inputs
- Generator compatible
- Optional N+X parallel redundancy

Protection

- True online double-conversion
- Sophisticated 3-stage extendable charging design for optimized battery performance
- Emergency power off function (EPO)

Efficiency

- DSP technology guarantees high performance
- Output power factor 0.9
- Active power factor correction on all phases
- ECO mode operation for energy saving (ECO)

Versatility

- Adjustable battery numbers
- 50Hz/60Hz frequency converter mode
- Adjustable output voltages
- Includes Intelligent Slot, USB and RS232 connections

LCD Display

The Centurion 3/3 has an informative LCD Display with programmable features

Battery Bank Extension Options

- The Centurion 3/3 UPS provides the option to increase battery backup time by simply adding additional battery banks.
- To address the need for fast charging of multiple battery banks, PowerShield engineers have incorporated additional independent internal chargers into the PSCEBB40 and PSCEBB60CH.

Options

- PSSNMPV4 - SNMP card (option to connect a PSEMD)
- PSEMD - Environmental Monitoring Device for temperature and humidity
- PSModbus - Modbus card
- PSAS400 - AS400 dry contact card
- Battery Banks - Backup time for all models is easily extended by simply plugging additional battery banks PSCEBB40, PSCEBB60CH
- External Maintenance Bypass Switches - PS3-1MBSWPB10k or PS3-1MBSCPB10k, PS3-1MBSWPB20k or PS3-1MBSCPB20k, PS3-1MBSWPB30k or PS3-1MBSCPB30k

CENTURION 3/3 TRUE ONLINE UPS SELECTION GUIDE

MODEL		Centurion 10K 3/3	Centurion 20K 3/3	Centurion 30K 3/3	BATTERY BANKS	
Model Number		PSCE10K(L) 3/3	PSCE20K(L) 3/3	PSCE30K(L) 3/3	PSCEBB40	PSCEBB60CH
Capacity		10000 VA / 9000 W	20000 VA / 18000 W	30000 VA / 27000 W		
INPUT						
Nominal Voltage		220/380, 230/400, 240/415 (3Ph + N)				240Vac (CH*)
Input Voltage Range		190-520 VAC (3-phase) @ 50% load; 305-478 VAC (3-phase) @ 100% load				
Frequency Range		46~54 Hz or 56~64Hz				
Power Factor		0.99 @ 100% load				
OUTPUT						
Output Voltage		220/380, 230/400, 240/415 (3Ph + N)			240Vdc (nominal)	
AC Voltage Regulation (Batt. Mode)		± 1%				
Frequency Range (Synchronized Range)		46~54Hz or 56~64Hz				
Frequency Range (Batt. Mode)		50 Hz ± 0.1 Hz or 60 Hz ± 0.1 Hz				
Current Crest Ratio		3:1 (max.)				
Harmonic Distortion		≤ 2 % THD (Linear Load); ≤ 5 % THD (Non-linear Load)				
Transfer Time	AC mode to Batt. Mode	zero				
	Inverter to Bypass	zero				
Waveform (Batt. Mode)		Pure Sine Wave				
EFFICIENCY						
AC Mode		91%	92%	92%		
ECO Mode		96%				
Battery Mode		87%	88%	89%		
BATTERY						
Standard Model	Battery Type	12V / 9AH			12V*9Ah	
	Numbers	20 pcs (18-20 adjustable)*	20 pcs (18-20 adjustable)* x 2 strings	20pcs (18-20 adjustable)* x 3 strings		
	Typical Recharge Time	9 hours recover to 90% capacity				
	Charging Current (Max.)	1A	2A	4A	From UPS	4A (CH*)
Long-run Model	Battery Type	Depending on the capacity of external batteries				
	Numbers					
	Charging Current (Max.)	4A	8A	12A		
COMMUNICATIONS & MANAGEMENT						
Interface		USB or RS232 as standard, Intelligent slot for PSSNMP or PSModbus or PSAS400 dry contact				
Software		Power Shield NetGuard software – supports Windows, Linux and Mac (Free Download)				
LCD Display/Alarm		UPS Status, Load & Battery Level, Input/Output Voltage, Batt. Time Remaining and Fault Indicators				
Audible Alarm		Battery Mode, Low Battery, Overload, Fault				
PHYSICAL						
Standard Model	Dimension D x W x H (mm)	815 x 250 x 826	815 x 250 x 826	815 x 300 x 1000	592 x 250 x 576	592 x 250 x 826
	Net Weight (kgs)	109	164	233	122	180
Long-run Model	Dimension, D x W x H (mm)	592 x 250 x 826	592 x 250 x 826	815 x 300 x 1000		
	Net Weight (kgs)	38	40	64		
ENVIRONMENT						
Humidity		0-95% RH @ 0-40°C (non-condensing)				
Noise Level		Less than 60dB @ 1 Meter	Less than 65dB @ 1 Meter			
COMPLIANCE						
Safety / EMC / RoHS		EN62040-1 -1 2003, IEC 60950-1 -1 / EN62040-2 2006 / Directive 2011/65/EU				

When using internal batteries from 16, 18 and 19, the unit will be de-rated according to the formula: P = rating X N/20. De-rating capacity to 90% when the output voltage is adjusted to 208VAC. Specifications are subject to change without prior notice. Models ending in "L" are long run models with larger chargers and therefore have no internal batteries. *CH represents Charger.

Extended battery options available for 10k and 20k models

BATTERY RUNTIMES	Centurion 10K 3/3	Centurion 20K 3/3
UPS Backup	17 minutes 50% / 5 minutes @ 100%	16 minutes @ 50% / 5 minutes @ 100%
UPS + PSCEBB40	60 minutes @ 50% / 25 minutes @ 100%	48 minutes @ 50% / 16 minutes @ 100%
UPS + PSCEBB40 + PSCEBB60CH	145 minutes @ 50% / 60 minutes @ 100%	80 minutes @ 50% / 35 minutes @ 100%
UPS + PSCEBB40 + PSCEBB60CH + PSCEBB40	200 minutes @ 50% / 95 minutes @ 100%	105 minutes @ 50% / 50 minutes @ 100%

Platinum

15 - 120kVA



True Online Double Conversion UPS



The Platinum UPS Range is designed with Australian conditions and requirements in mind. The technology is based on a tried and tested platform ensuring reliability and performance.

The Platinum is designed to be used in a wide range of applications from data centres to manufacturing, hospitals, military and mining environments to name a few. It provides the best power solution for your critical equipment.

Features



True Online Battery Configuration

- True online battery configuration eliminates the need for a DC to DC converter resulting in a higher reliability (MTBF) and much higher running efficiency. This also results in a reduced overall total cost of ownership, leading to huge dollar savings.

Technology

- True online double conversion technology with DSP control
- Output PF = 0.9 for increased power density
- Very low input harmonic distortion
- Configurable to 3/3, 3/1, 1/3, 1/1 (factory)

Colour Touch Screen/Mimic/LCD Display

- This sophisticated UPS comes with an easy to use colour touch screen, interactive LCD display which gives information on the unit's operation, alarm and control. The LCD also includes an informative mimic display.



Compact Footprint

- Its compact footprint allows installation in limited space environments. This is a natural choice for a centralised UPS solution.

Parallel redundant operation

- With up to four units

Comms Included

- SNMP, Modbus and Dry Contact cards as standard

Internal Batteries

- Available with internal batteries up to 40kVA.
- Option of 12V / 9AH or 12V / 12AH

Optional Accessories

- Optional Additional battery banks
- External Maintenance Bypass Switch (below)



PLATINUM TOWER SELECTION GUIDE								
MODEL	Platinum 15K	Platinum 20K	Platinum 30K	Platinum 40K	Platinum 60K	Platinum 80K	Platinum 100K	Platinum 120K
Model Number	PSP15K	PSP20K	PSP30K	PSP40K	PSP60K	PSP80K	PSP100K	PSP120K
Capacity	15kVA/13.5kW	20kVA/18kW	30kVA/27kW	40kVA/36kW	60kVA/54kW	80kVA/72kW	100kVA/90kW	120kVA/108kW
INPUT								
Nominal voltage (Vac)	220/380 230/400 240/415							
Input voltage range	+15% or -20%							
Frequency	50/60Hz							
Total harmonic distortion (THDi)	< 1.5% @ 100% load < 2.5% @ 50% load < 6.0% @ 10% load			< 1.0% @ 100% load < 2.0% @ 50% load < 5.0% @ 10% load			< 1.5% @ 100% load < 2.0% @ 50% load < 6.0% @ 10% load	
Power factor	1.0							
OUTPUT								
Nominal voltage (Vac)	220/380 230/400 240/415							
Precision	Stationary: ± 1%, Transitory: ± 2% (load variations 100-0-100%)							
Frequency	50/60Hz synchronised ± 4% With mains absent: ± 0.05%							
Waveform	Pure Sine Wave							
Total Harmonic Distortion (THDv)	< 0.5% (linear load), < 1.5% (non-linear load)							
Phase Displacement	120° ± 1% (balanced load) , 120° ± 2% (imbalances 50% of the load)							
Admissible overload	Phase Overload: 125% for 10 min, 150% for 60 sec; Total Overload: 112.5% for 10 min, 135% for 60 sec							
Load crest factor	3.4 : 1		3.2 : 1			2.8 : 1	3.2 : 1	
Admissible power factor	0.7 inductive to 0.7 capacitive							
Output voltage imbalance with a 100% unbalanced load	< 1%							
Current limit protection	High overload, short-circuit: RMS voltage limit; High crest-factor current: Peak voltage limit							
Efficiency AC-AC	90%	91%	92%	93%	93%	94%	94%	94%
Efficiency DC-AC	95%	95%	96%	96%	96%	96%	96%	96%
STATIC BYPASS								
Type	Solid state							
Activation criteria	Microprocessor control							
Transfer time	Zero							
Admissible staic bypass overload	400% for 10 sec							
INTERNAL MAINTENANCE BYPASS								
Type	Without interruption							
Nominal voltage	3 x 400V (3Ph + N)							
Frequency	50/60Hz							
PHYSICAL								
Dimensions D x W x H (mm)	700 x 450 x 1100					805 x 590 x 1320		
Weight without batteries (kg)	86	94	110	122	162	231	255	
Built-in batteries type (2x31)	12V/9AH or 12V/12AH				-			
Weight (Internal 12V/9AH) kg	253	261	277	289	-			
Weight (Internal 12V/12AH) kg	346	354	370	427	-			

EXTERNAL BATTERY CABINETS										
UPS	15KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	Battery Cabinet	Weight (kg)
Load PF = 0.8	12KW	16KW	24KW	32KW	48KW	64KW	80KW	96KW		
Minutes	10	7	4	3	-	-	-	-	62 x 12V*9AH in UPS	-
Minutes	15	10	6	4	-	-	-	-	62 x 12V*12AH in UPS	-
Minutes	28	20	11	8	4	3	-	-	PSBB62/18	435
Minutes	45	30	18	12	7	4	3	-	PSBB62/26	603
Minutes	60	40	23	16	9	6	5	3	PSBB62/33	870
Minutes	80	52	31	21	12	8	6	5	PSBB62/40	1070

* All specifications are subject to change without notice.

* Battery cabinet dimensions can be customised.

* Backup times are approximate and variances may occur.

Platinum Modular

20–240kVA

True Online Double Conversion UPS



The Platinum Modular UPS Range is Power Shield's Premium Range of modular UPSs designed with Australian conditions and high end requirements in mind. The technology is based on a tried and tested platform ensuring reliability and performance.

The Platinum Modular is designed to be used in a wide range of applications from data centres to manufacturing, hospitals, military and mining environments to name a few. It provides the best power solution for your critical equipment.

Features



Redundancy

- The modular N+1 / N+X topology provides for an ultra reliable uninterruptable power supply to the load.
- Modular design is applied in power module, static switch module and battery module. This simplifies maintenance and replacement with low Mean Time To Repair (MTTR).
- As a result of modular design the Mean Time Between Failure (MTBF) is significantly increased.

High scalability

- The UPS that grows with your business. As your power demand increases simply add more power modules.
- Digital Signal Processor (DSP) control provides a reliable solution with high performance.

High efficiency online double conversion

- The Platinum Modular utilises true online double conversion technology with an efficiency of up to 96%. This significantly reduces overall Total Cost of Ownership (TCO).

Ease of installation and maintenance

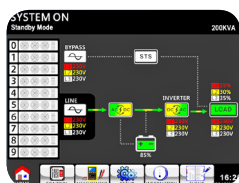
- Built-in maintenance bypass switch assures continuous power to critical loads during UPS maintenance. To facilitate installation and maintenance, all panel control connectors are accessible from the front.

5.7" LCD Screen



(standard)

10" Touch LCD Screen



Flexible battery configuration

- Allows for options of 32, 36 or 40 batteries per string.

Adjustable charging current

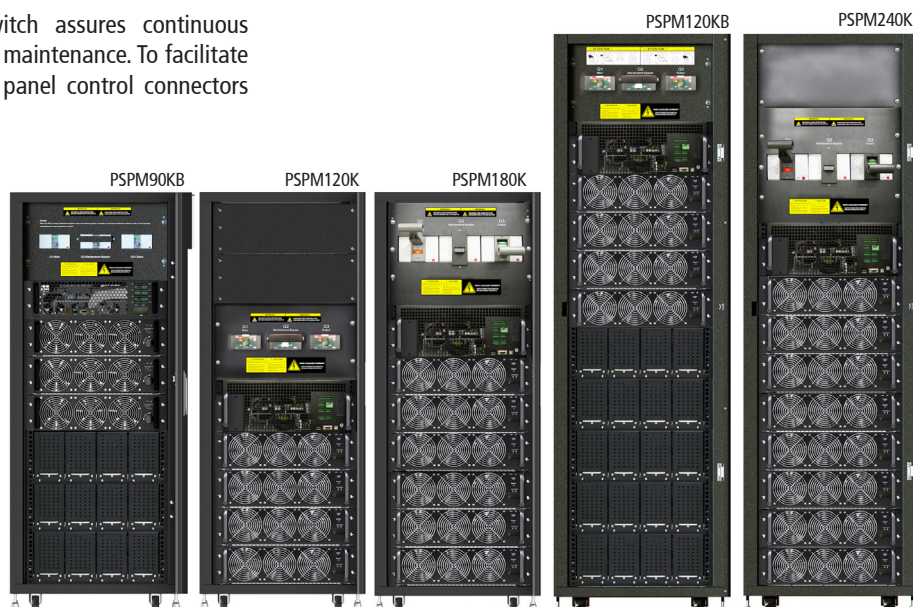
- Platinum Modular provides maximum 6A for 20kW and 8A for 30kW charging current for every power module and it is adjustable based on requirement

Graphic Screen/Mimic/LCD Display

- Designed for easy management, Platinum Modular is equipped with a 5.7" graphic LCD screen. This interactive LCD display gives information on the unit's operation, alarm and control. The LCD also includes an informative mimic display.
- Optional 10" colour, touch LCD display (factory fitted).

Unity output power factor

- Platinum Modular delivers unity output power (kVA=kW) providing the maximum power capacity to mission critical loads. It satisfies the requirements of the latest servers and optimises IT investment.



MODULAR PLATINUM UPS SELECTION GUIDE

MODEL	Platinum Modular 90KW	Platinum Modular 120KW	Platinum Modular 120KW	Platinum Modular 180KW	Platinum Modular 240KW
Model Number	PSPM90KB	PSPM120KB	PSPM120K	PSPM180K	PSPM240K
Phase	3 phase in / 3 phase out				
Max Cabinet Capacity	90KW	120KW	120 or 80 KW	180 or 120KW	210KW
One Power Module Capacity	30KVA / 30KW		30KVA / 30KW or 20KVA / 20KW		30KVA / 30KW
Max. Power Module No.	3	4	4	6	8
Battery Type	Built in battery		External battery		
Max. Battery Drawers PSBD10/9	12 x PSBD10/9 (120 x 12V*9Ah)	20 x PSBD10/9 (200 x 12V*9Ah)	-	-	-
INPUT					
Nominal voltage (Vac)	3 x 380 / 400 / 415 (3Ph + N)				
Voltage Range	305 ~ 478 VAC at 100% load; 208 ~ 304 VAC at <70% load				
Nominal Frequency	50/60Hz (Auto sensing)				
Frequency Range	40Hz ~70Hz				
Input Power Factor	> 0.99 at 100% load, >0.98 at 50% load				
Harmonic Distortion (THDi)	< 3% @ 100% load				
OUTPUT					
Nominal voltage (Vac)	3 x 380 / 400 / 415 (3Ph + N)				
Voltage Regulation (Steady state)	± 1% Typical (balanced load); ± 2% Typical (unbalanced load)				
Voltage Regulation (Transient)	± 5% Typical				
Nominal Frequency	50/60Hz				
Frequency Range (Synchronized range)	46Hz ~ 54Hz or 56Hz ~ 64Hz				
Overload Capability	1 hour for 110%, 10 mins for 125%, 1 min for 150% and 200ms for >150%				
Harmonic Distortion	1.5% THD (Linear Load); 4% THD (Non-linear Load)				
Efficiency	Up to 94.5%				
BATTERY/CHARGER					
Battery Options	32pcs or 36pcs or 40pcs (configurable)				
Temperature Compensation	Yes				
Maximum Charging Current	8A		8A for 30KW, 6A for 20KW power module		8A
ENVIRONMENT					
Operation Temperature	0 ~ 40oC (Note: De-rate output PF. 30-35°C PF = 0.9. 36-40°C PF = 0.8)				
Relative Humidity	0 ~ 95% non-condensing				
Altitude	<1000m for Nominal power (Note: UPS output power must be de-rated by 1% per 100m above 1000m)				
IP Class	IP 20				
MANAGEMENT					
RS232 / USB / Dry Contacts	RS232 & USB Supports Windows, Linux and MAC / Dry contacts included				
Optional SNMP	Power management from SNMP manager and web browser				
STANDARDS					
Safety	IEC/EN 60950-1; IEC/EN 62040-1				
EMC	IEC/EN 62040-2 Category C3				

MODULAR PARTS

MODEL	DESCRIPTION	DIMENSION D x W x H (mm)	WEIGHT (kg)
PSPM20	3P/3P 20KVA/20KW UPS module	650x440x132(3U)	34
PSPM30	3P/3P 30KVA/30KW UPS module	650x440x132(3U)	35
PSBD10/9	Battery drawer includes 10 pcs of 12V 9Ah batteries	735 x 107 x 155	26
PSPM90KB	Platinum Modular 90KW frame with battery option	1100x600x1475 (30U)	675
PSPM120KB	Platinum Modular 120KW frame with battery option	1100x600x2010 (42U)	932
PSPM120K	Platinum Modular 120KW frame	1100x600x1475 (30U)	333
PSPM180K	Platinum Modular 180KW frame	1100x600x1475 (30U)	435
PSPM240K	Platinum Modular 240KW frame	1100x600x2010 (42U)	549
PSBB280/9	Battery bank (30U). Includes 280pcs	1100x600x1475 (30U)	480
PSBB400/9	Battery bank (42U). Includes 400pcs	1100x600x2010 (42U)	760

Platinum Modular E



20KW | 40KW | 60KW

30KW | 60KW | 90KW

True Online Double Conversion UPS



The Platinum Modular E UPS Range is designed with Australian conditions and requirements in mind. The technology is based on a tried and tested platform ensuring reliability and performance.

The Platinum Modular E is designed to be used in a wide range of applications from data centres to manufacturing, hospitals, military and mining environments to name a few. It provides the best power solution for your critical equipment.

Features



High efficiency online double conversion

- The Platinum Modular E utilises true online double conversion technology with an efficiency of up to 96%. This significantly reduces overall Total Cost of Ownership (TCO).

High scalability

- Digital Signal Processor (DSP) control provides an improved solution with high performance. Integrated with modular design and parallel technology, the Platinum Modular E simplifies future power expansion.

Unity output power factor

- Platinum Modular E delivers unity output power ($kVA=kW$) providing the maximum power capacity to mission critical loads. It satisfies the requirements of the latest servers and optimises IT investment.

Modular design

- Modular design is applied in power module, static switch module and battery module. This simplifies maintenance and replacement with low Mean Time To Repair (MTTR).
- As a result of modular design the Mean Time Between Failure (MTBF) is significantly increased.

Ease of installation and maintenance

- Built-in maintenance bypass switch assures continuous power to critical loads during UPS maintenance.

Flexible battery configuration

- Allows for options of 32, 36 or 40 batteries per string.

Adjustable charging current

- Platinum Modular E provides maximum 6A for 20kW and 8A for 30kW charging current for every power module and it is adjustable based on requirement.

High overload capability

- Platinum Modular E supports 110% overload for 60 minutes, 125% for 10 minutes and 150% for 1 minute.

Graphic 5.7" Screen/Mimic/LCD Display

- Designed for easy management, Platinum Modular E is equipped with a 5.7" graphic LCD screen. This interactive LCD display gives information on the unit's operation, alarm and control. The LCD also includes an informative mimic display.

N+1 parallel redundancy

- Scalable architecture allows you to optimize cost expense to meet power demands by vertically expanding in a single rack enclosure from 20-60kW or 30-90kW and achieve N+1 redundancy in the same rack.

MODULAR PLATINUM E UPS SELECTION GUIDE		
MODEL	Platinum Modular E 20/40/60KW	Platinum Modular E 30/60/90KW
Phase	3 phase in / 3 phase out	
Max Cabinet Capacity	60KW	90KW
One Power Module Capacity	20KVA/20KW	30KVA/30KW or 20KVA/20KW
Max. Power Module No.	3	
INPUT		
Nominal voltage (Vac)	3 x 380 / 400 / 415 (3Ph + N)	
Voltage Range	305 ~ 478 VAC at 100% load; 208 ~ 478 VAC at <70% load	
Nominal Frequency	50/60Hz (Auto sensing)	
Frequency Range	40Hz ~70Hz	
Power Factor	> 0.99 at 100% load, >0.98 at 50% load	
Harmonic Distortion (THDi)	< 3% @ 100% load	
OUTPUT		
Nominal voltage (Vac)	3 x 380 / 400 / 415 (3Ph + N)	
Voltage Regulation (Steady state)	± 1% Typical (balanced load); ± 2% Typical (unbalanced load)	
Voltage Regulation (Transient)	± 5% Typical	
Nominal Frequency	50/60Hz	
Frequency Range (Synchronized range)	46Hz ~ 54Hz or 56Hz ~ 64Hz	
Overload Capability	1 hour for 110%, 10 mins for 125%, 1 min for 150% and 200ms for >150%	
Harmonic Distortion	1.5% THD (Linear Load); 4% THD (Non-linear Load)	
Efficiency	Up to 94.5%	
BATTERY/CHARGER		
Battery Options	32pcs or 36pcs or 40pcs (configurable)	
Temperature Compensation	Yes	
Maximum Charging Current	6A per 20KW power module (User-adjustable); 8A per 30KW power module (User-adjustable)	
Battery Cabinet Options	Optional - 15RU battery cabinet under UPS. Up to 120 pcs of 12V9Ah batteries	
ENVIRONMENT		
Operation Temperature*	0 ~ 40oC	
Relative Humidity	0 ~ 95% non-condensing	
Altitude**	<1000m for Nominal power	
IP Class	IP 20	
MANAGEMENT		
RS232 / USB	Supports Windows, Linux and MAC	
Optional SNMP	Power management from SNMP manager and web browser	
STANDARDS		
Safety	IEC/EN 60950-1; IEC/EN 62040-1	
EMC	IEC/EN 62040-2 Category C3	

* When temperature is above 30o, the output power factor will be de-rated, 0.9 at 31°C~35°C and 0.8 at 36°C~40°C.

** If the UPS is installed or used in a place where the altitude is above 1000m, the output power must be derated by one percent per extra 100m.

MODULAR PARTS			
MODEL	DESCRIPTION	DIMENSION D x W x H (mm)	WEIGHT (kg)
PSPM30	3P/3P 30KVA/30KW power module	650x440x132(3U)	35
PSPM20	3P/3P 20KVA/20KW power module	650x440x132(3U)	34
PSPM90KE	Platinum Modular E UPS Frame 90KW*	1000 x 514 x 760	80
PSPMBB	Optional. Battery cabinet under UPS. 120 pcs of 12V9Ah batteries**	1000 x 514 x 1370	100

* No modules. ** Without batteries.

Guarantee Your Power Source For All Your Applications

power protection *solutions*

We specialise in providing **power management and power protection solutions** for all applications, addressing all the major power problems within our **Uninterruptible Power Supply (UPS) Range, Surge Protection Products and Accessories.**

Whether you are needing to protect a stand-alone home computer or a critical system in a high-availability environment, our meticulously developed Line Interactive and True Online Double Conversion UPS's have been developed to meet your requirements.

From home office to large enterprise, industry, telecommunications, security, workstations, VoIP, modems/routers and electric gates, to medical refrigeration, marine and mining applications, PowerShield has a UPS to suit your needs.



ZapGuard® PSZ5U2

5 Way Surge Board with
Quick USB Charge



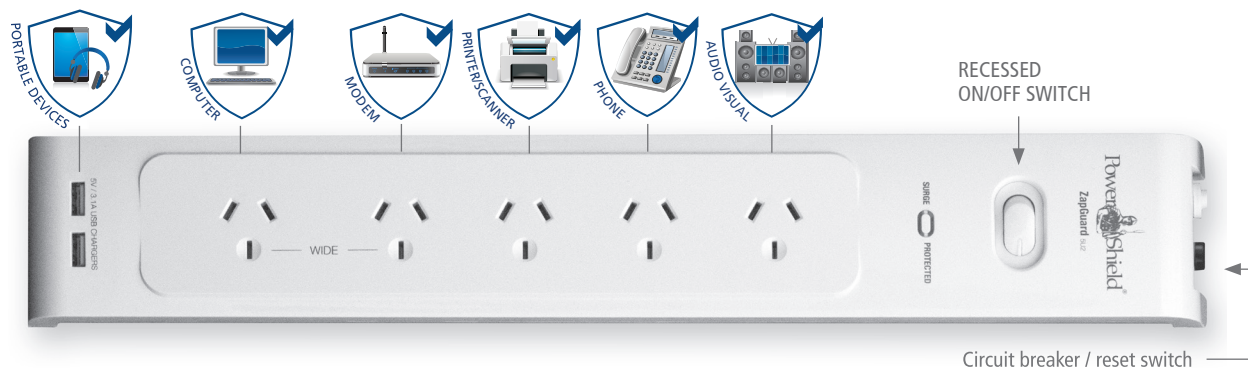
The **ZapGuard® PSZ5U2 Surge Board** Protects your home and office electronics from dangerous surges and spikes and is ideal for charging mobiles, laptops and other small USB powered devices.

It is highly rated to withstand power surges and spikes of up to 1,400 Joules / 40,000 Amps.

MASSIVE
40,000 Amps
1,400 Joules
Protection

Features

- High surge protection
- Recessed On/Off Switch
- Wide spaced socket to allow for plug packs
- 10A Circuit Breaker
- 2 x USB Sockets
- 5 x Surge-protected sockets supply complete, 3 line AC protection
- \$40,000 Connected Equipment Warranty - *terms and conditions apply.*
- Impact and scratch resistant Polycarbonate case
- Heavy-duty 1.2-meter power cord
- Wall mountable
- LED indicator shows that your wiring is properly earthed and protection is active and available



MODEL	ZAPGUARD PSZ5U2
Nominal Voltage / Frequency	240 Vac / 50 Hz
Maximum Current	10 Amp breaker
Maximum Power	2400 Watts
Protection Mode	700 Joules (L-N), 350 Joules (L-E), 350 Joules (N-E)
Maximum Surge Current	40,000 Amps
Maximum Surge Energy	1,494 Joules
Typical Response Time	< 1 nS (instantaneous)
USB Charging Current	3.1 Amps
Dimensions (mm)	430 (L) x 35 (H) x 66 (W)
Test Standards: AS/NZS 3105:2014 + A1:2017 Safety Elec Portable Outlet Devices EPOD AS/NZS 3112:2017 Safety Sockets and Plugs IEC 60950-1:2005 + A1:2009 + A2:2013 + AU Variations Safety IT Equipment AS/NZS 3100:2017 + A1:2017 Safety General	

VoltGuard

1500VA

Automatic Voltage Regulator



The **PowerShield VoltGuard AVR** (Automatic Voltage Regulator) will automatically maintain a safe voltage level to protect sensitive electronics. This cost effective, compact device will provide a constantly regulated output voltage, ensuring that your sensitive electronic equipment is always receiving voltage within an acceptable range. The VoltGuard also has over voltage and under voltage protection included as standard, which will turn off the supply to your equipment when the utility voltage moves out of the safe range.

The VoltGuard's compact design offers three power outlets together with a voltage regulator, ideal for protecting voltage sensitive equipment such as home office equipment. It is also designed for use with home electronics equipment such as televisions, stereos and home theatres as well as modems and telephone equipment.

The VoltGuard will provide stable power to connected devices by boosting and bucking the input power. It provides best surge protection in its class, to protect against transients.

Features



Input

- **Exceptional Surge Protection.**
Offering the best protection in its class, the VoltGuard protects against damaging surges.
- **Accepts Very Wide Input Voltage Range**
- **Protects against damaging over voltage and under voltage**
- **Extremely Fast Response** to input fluctuations



Output

- **Stable regulated output voltage** within 10% of nominal
- **Provides over-temperature and overload protection**
- **Three surge protected Australian outlet sockets**

Stylish and Compact Enclosure

- The VoltGuard features a stylish, compact design able to unobtrusively protect your most sensitive equipment

Applications Include:

- Small Office & home office equipment
- Stand-alone personal computers
- Telephone systems
- Home Theatres
- Data Processing Equipment
- *Ideal for small loads in rural areas with voltage fluctuations

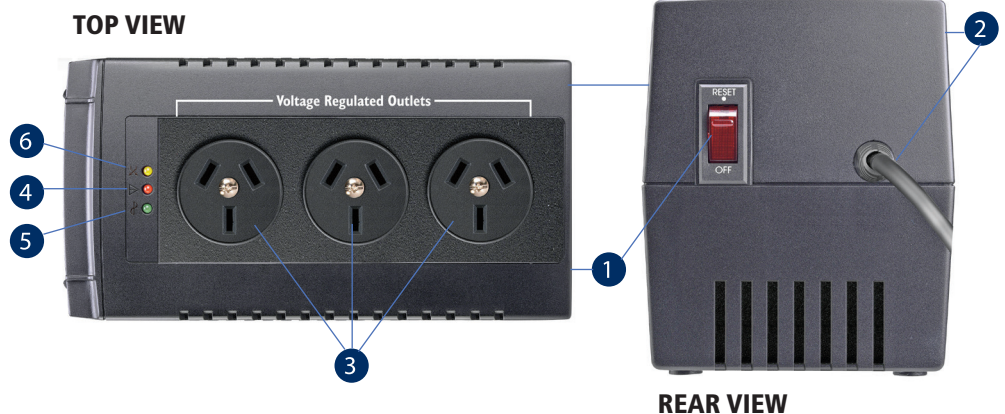
VOLTGUARD AVR

MODEL	VoltGuard 750
Model Number	PSVG1500
Capacity	1500 VA / 750 W
INPUT	
Voltage	240 VAC
Voltage Range	184 - 284 VAC
Frequency Range	50Hz
OUTPUT	
Voltage Regulation	240 VAC \pm 10%
Outlet Sockets	3 x Australian
INDICATORS	
Power LED	Green
AVR LED	Yellow
Over/Under Voltage LED	Red
PHYSICAL	
Dimension L x W x H (mm)	175 x 90 x 115
Net Weight (kgs)	1.96
ENVIRONMENT	
Temperature	0-40°C
Humidity	0-90% RH (Non-condensing)
Noise Level	Less than 5dB
PROTECTION	
Surge	312 Joules / 6500 Amps
Safety	EN62040 -1 -1 2003, IEC60950 -1 : 2001
EMC	EN62040 -2 2006

* Product specifications are subject to change without further notice



1. Overload circuit breaker / Power On/Off Switch
2. AC Input
3. AVR-protected output sockets
4. Over/Under voltage LED: red
5. Power LED: green
6. AVR LED: yellow



ZapGuard Pro Surge Filters



Designed to provide a high degree of secondary protection to critical circuits in harsh environments, the **PowerShield ZapGuard Pro Range** of surge filters is available for pluggable as well as hard wired installations. These devices are particularly suitable for use with UPS systems, servers and specialised industrial sites.

Portable Series

10A | 16A

The **ZapGuard** series of **portable filters** are designed to provide secondary protection and are particularly suitable for use with plug in UPS systems, servers, instrumentation, POS systems, specialised industrial and commercial portable equipment where a high degree of protection is required.

- IEC input and output
- 2 part display
- 3 stage, 3 mode protection
- LC filter network
- Rugged IP24 enclosure
- 10A and 16A versions
- Surge protection and EMI / RFI filter
- 40kA I_{max} L-N. 60kA all modes



Panel Mount Series

Single Phase 32A | 40A

The **32A and 40A panel mount models** are particularly suitable for use in 32A and 40A single phase circuits with critical equipment such as UPS, control systems, IT devices etc. Status of the unit is indicated by LED indicators on the top face.

- Panel mounted surge protection & filter
- Hardwired input/output terminals
- 2 part display
- Remote alarm contacts
- 3 stage, 3 mode protection.



Wall Mount Filter

Three Phase 63A

The **63A surge filter** is configured in a 3 stage, 7 protection mode topology. This model is designed to provide primary AND secondary protection to key circuits with multiple loads. This model provides a high degree of protection to dedicated single load devices such as UPS, servers etc which are directly connected to the filter.

- Panel mounted surge protection & filter
- 100kA I_{max} primary, 60kA secondary
- Surge counter
- Rugged IP20 enclosure
- 3 phase, 3 stage, 7 mode protection
- 63A series current rated
- 4 part led display
- Remote alarm contacts

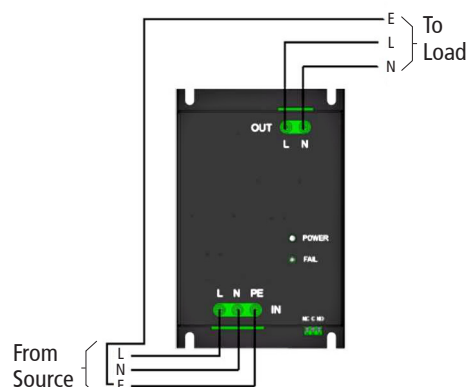


ZAPGUARD PRO PSZ PORTABLE AND PANEL MOUNTED SERIES

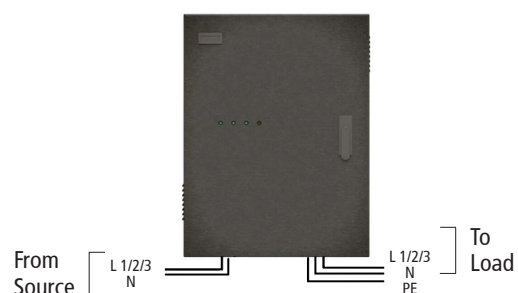
Service rating	10A & 16A	32A & 40A	63A - Three Phase
Model Number	PSZ10APF & PSZ16APF	PSZ32APF & PSZ40APF	PSZ363APF
Nominal voltage Un	200-250Vac, Single phase, 48-62Hz		200-250Vac, Three phase, 48-62Hz, TT, TN systems
Ports	2 ports series connected		
MCOV Uc	320Vac L-N, 255VAC N-E		
TOV	350Vac L-N		446Vac L-E each phase
Protection modes	L-N, N-PE, L-PE		L1, L2, L3-E, N-E primary L1, L2, L3-N secondary
I _{max} 8/20us	40kA L-N, 10kA L-E, 10kA N-E	50kA L-N, 10kA L-PE, 10kA N-E	Primary 100kA L1,L2,L3-E Common 50kA N-E Secondary 60kA L1,L2,L3-N
I _{nom} 8/20us	20kA L-N, 5kA, L-E, N-E	50kA L-N, 10kA L-PE, 10kA N-E	50kA each mode primary 30kA each mode secondary
I _{imp} 10/350us	Not applicable		20kA L-E primary
SCW (1 sec)	Not applicable	80A	29kA
Reponse time	<25ns		
Service type	1 Phase, Line/Neutral/Earth 10A or 15A IEC to IEC	1 Phase, Line/Neutral/Earth 32A or 40A CB	3 Phase, Line/Neutral/Earth 63A CB TT, TN systems
V _{pl} Up	<1.1kV L-N @3kA	<1.2kV L-N @3kA	
Leakage current	<5mA		
Filter attenuation	>40dB at 1MHz	>60dB @ 1MHz	>3dB@10kHz, >20dB@120kHz, >48dB @ 1MHz
Enclosure material	Powder coated steel		
Max external disconnecter	10A & 16A GPO	32A or 40A HRC fuse or MCB	63A AgL fuse, 500V, 50KAIC OR 63A MCB, C curve, 500V, 50KAIC
Internal protection	Series thermal fusing on primary MOVs		32A HRC fuse L-E each phase plus internal thermal fuses on all MOVs
Topology	Stage 1. L1, L2, L3-N MOV, N-E GA Stage 2. Low pass LC network Stage 3. L-N MOV.		Stage 1. L1, L2, L3-E MOV, N-E GA Stage 2. Low pass LC network Stage 3. L-N MOV.
Location category	Indoor		
Degree of protection	IP24	IP20	IP24
Thermal dissipation	Not applicable		120W each phase @ full load, 3 phase, 63A
Max termination size	Not applicable	Single-strand 35mm ² ; multi-strand 25mm ²	
Mounting	Portable	Wall mounting	
Operating temp	-10°C to +50°C	-10 to 60°C, 0 to 90%RH (non-condensing)	
Dimensions D x W x H (mm)	152 x 133 x 55	220 x 143 x 48	510 x 370 x 140
Weight (kg)	0.8	2	18
Indicators	2 x LEDs. Blue OK. Red Failure		4 part display. Blue OK
Alarms	Not applicable	Dry contact relay. NC/Com/NO. 250Vac/32Vdc, 5A	

Connection Diagrams

PSZ32APF and PSZ40APF



PSZ3/63APF



Maintenance Bypass Switches



Add High Availability To Your UPS

PowerShield offers MBS (Maintenance Bypass Switch) solutions for all types of UPS applications. A correctly designed MBS enables a technician to perform maintenance on a UPS at any time, without interruption to normal business operations with no need to shut down your critical electrical load. While in the "Bypass" position the UPS will still receive power from the mains (or alternative power source) so that the technician can perform maintenance procedures, without interruption to the load.

In the "Bypass and Isolate" position there is no voltage present at the input and output terminals of the UPS. Hence in this position, a trained technician can safely work on components within the UPS. Also, if need be the UPS can be safely removed and replaced, without danger to the technician and without interruption to the load.

MBS + Hot Swap & PDU

For PowerShield UPS 0-3KVA

Features

- No downtime. Routine maintenance can be performed at any hour
- A PDU (Power Distribution Unit) with 7 outlets for distribution to your load
- Rackmount - MBS can be mounted both horizontally or vertically (ORU) into a rack
- Wallmount option, vertically or horizontally
- UPS Mountable. Designed to attach to PowerShield Centurion RT and Commander RT ranges.
- Suitable for all UPS topologies including offline, line interactive and true online double conversion



PSMB52K and PSMB53K

MBS for Power Shield UPS 0-3KVA

Model Number	PSMB52K	PSMB53K
UPS Rating	0-2KVA	3KVA
Input connector - plug	10A IEC 320 C14	16A IEC 320 C20
Input lead (x1)	10Amp Australian Plug to IEC 320 C13	15Amp Australian Plug to IEC 320 C19
Output - sockets (Load)	10A IEC 320 C13 (x7)	10A IEC 320 C13 (x6) 16A IEC 320 C19 (x1)
UPS Input/Output leads	IEC 10A cable (x2)	IEC 16A cable (x2)
Dimensions D x W x H (mm)	80 x 440 x 50	80 x 440 x 50



Rack Mounted



Wall Mounted
Horizontal or Vertical



UPS Mounted

Rack Mount MBS & Optional PDU

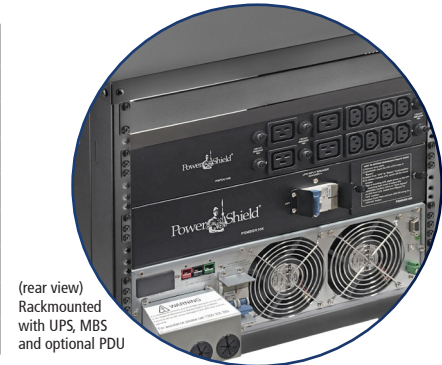
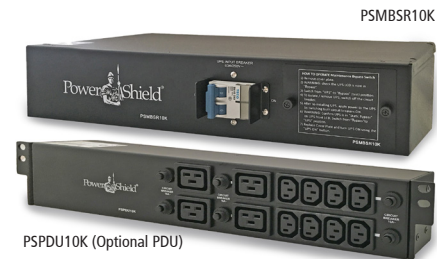
For PowerShield UPS 6-10KVA

Three modes of operation: UPS, Bypass and Bypass & Isolate

Features:

- Mechanical safety microswitch with static bypass activation is standard. This eliminates the possibility of incorrect switching sequences and hence possible damage to the UPS and injury to personnel
- Optional PDU available to connect 10A/15A devices through IEC distribution outlet sockets

MBS for Power Shield UPS 6-10KVA		(optional PDU)
Model Number	PSMBSR10K	PSPDU10K
UPS Rating	6 - 10KVA	6 - 10KVA
Input (Nominal)	240Vac	240Vac
Input plug	Hard Wire	
Output (Nominal)	240Vac	
Output sockets	Hard Wire	10A IEC 320 C13 (x8) , 16A IEC 320 C19 (x4)
Style	Rackmount	Rackmount
Dimensions (L x W x H) mm	254x433x88mm	254x433x88mm



(rear view)
Rackmounted
with UPS, MBS
and optional PDU

Wall Mount MBS

For PowerShield UPS 6-100KVA

Three positions: UPS, Bypass and Bypass & Isolate

Features:

- Mechanical interlock.

PSCEMBS6K
Wall mount



MBS for Power Shield UPS 6-20KVA				
	1 Phase in / 1 Phase Out		3 Phase in / 1 Phase Out	
Model Number	PS1MBSWPB6K	PS1MBSWPB10K	PS3-1MBSWPB10K	PS3-1MBSWPB20K
UPS Rating	6KVA	10KVA	10KVA	20KVA
Input (Nominal)	240Vac	240Vac	240/415Vac	240/415Vac
Input plug	Hard Wire			
Output (Nominal)	240Vac	240Vac	240Vac	240Vac
Output sockets	Hard Wire			
Style	Wallmount	Wallmount	Wallmount	Wallmount
Dimensions (L x W x H) mm	150x290x200	150x290x200	220x300x150	300x400x200

MBS for Power Shield UPS 6-120KVA							
	3 Phase in / 3 Phase Out						
Model Number	PS3MBSWPB10K	PS3MBSWPB20K	PS3MBSWPB30K	PS3MBSWPB40K	PS3MBSWPB60K	PS3MBSWPB80K	PS3MBSWPB100K
UPS Rating	10KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA
Input (Nominal)	240/415Vac (3Ph + N)						
Input plug	Hard Wire						
Output (Nominal)	240/415Vac (3Ph + N)						
Output sockets	Hard Wire						
Style	Wall Mount						
Dimensions (H x W x D) mm	310 x 240 x 160	310 x 240 x 160	400 x 300 x 210	300 x 300 x 210	400 x 400 x 300	500 x 500 x 210	500 x 500 x 210

Customised Maintenance Bypass Switch (MBS)

Because there are so many possible variations that can be applied to the way an MBS is to function, our engineering team will design a solution to suit you, our customer. Our customised solutions will include all options, eg Wrap Around or Change Over, 2, 3, 4 or 5 positions, mechanical interlock or solenoid - whatever is required. For customised solutions contact one of our dedicated engineers.

Network Management Cards



While PowerShield UPSs do their job of holding up critical electronic equipment, behind the scenes, PowerShield proprietary software and management cards are there to manage and record critical power events, so that managers can be aware and informed of problems in real time. The Communications cards and devices, together with the software solutions allow for automatic graceful shutdown of programs and devices in the event power outages last longer than their nominated time.

SNMP Card

The **SNMP** (Simple Network Management Protocol) card allows the UPS to be directly connected to the network, without the need of a local computer. Furthermore, the SNMP card contains an integrated web server CPU, allowing the IT Manager to view and control the UPS and power events with any standard internet browser. This card is easily configured for virtual machine environments such as VMware and HyperV.

PSEMD

The **PowerShield Environmental Monitoring Device** (PSEMD) is a PSSNMPV4 accessory suited for monitoring temperature and humidity. Email alerts and or system shutdown can be initiated if the user defined thresholds are exceeded. It offers two additional dry contact inputs for sensors such as smoke detectors and tamper switches.

Relay Card

PSAS400T (Terminal Strip) or
PSAS400D (D-type connector)

The **Relay Card** (PSAS400) provides VFC (Volt Free Contact) relays that change state upon UPS events. This type of card is often used when current loop communications are required for devices such as BMS (Building Management Systems), Access Control Alarm Panels or Industrial PLCs. User selectable normally open (default) or normally closed contacts.

Modbus Card

The **PowerShield Modbus Card** (PSMbus) facilitates UPS communication with industrial and building management systems using the Modbus RTU Protocol. PSMbus card provides real time monitoring and control of multiple UPS's via the RS485 communications port.

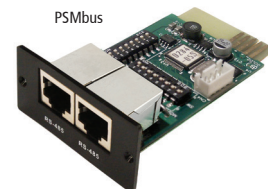
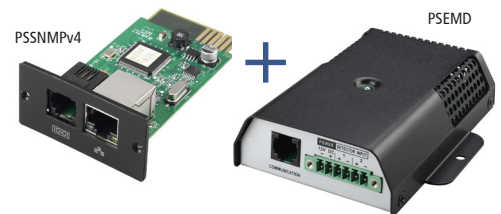
SNMP Agent Controller

NetAgent 9 DX630 supports USB to SNMP conversion to enable comprehensive, easy-to understand and secure remote monitoring and management for UPS equipment via the internet.

It is ideal support for PowerShield UPS models SafeGuard 750, Defender 650, Defender Rack 800, Defender 1200, Defender 1600 and more.

External Comms Box

The PowerShield external Comms Box (PSECB) allows two comms cards to be operational, whilst using the UPS intelligent slot and PSECB over UPS serial port simultaneously. Includes a 240Vac / 12Vdc power pack.



Optional Accessory

PowerShield External Comms Box
(PSSNMPv4, PSAS400, PSMbus)

Automatic Transfer Switch



The **PowerShield Automatic Transfer Switch (ATS)** is designed with two independent power inlets to supply power to the load from a primary or secondary power source. Should the primary power source fail, the secondary will automatically supply power to the connected equipment.

Another big advantage of this ATS is that it can also serve as both a Maintenance Bypass Switch (MBS) and a Power Distribution Unit (PDU). By simply transferring from one power source to the other it allows for maintenance or replacement of a UPS with no downtime to the load.

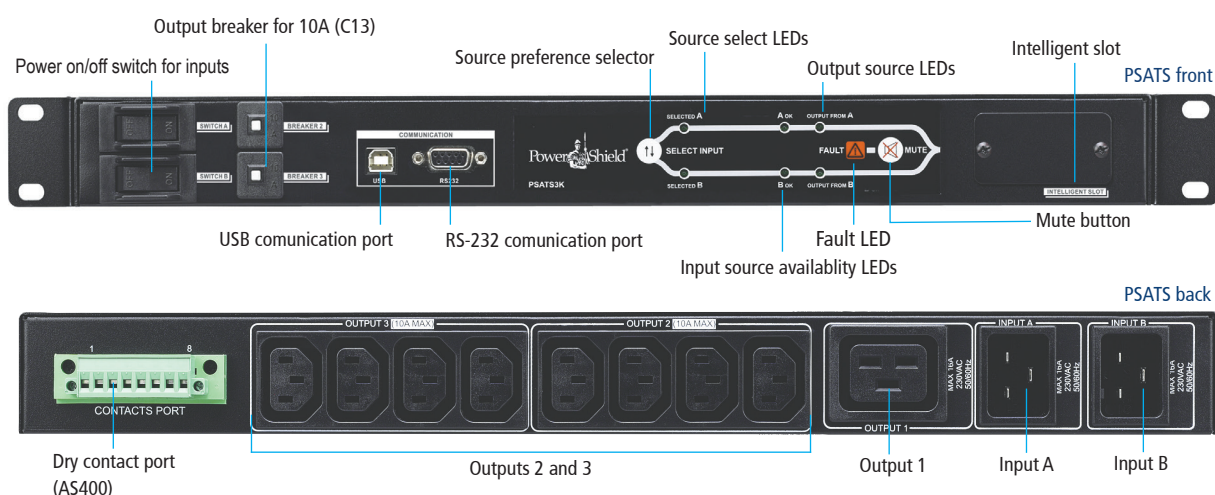
Features

- Critical load (server) has reliability of two independent power sources
- Ideal for ensuring reliable power to critical devices that have only a single power supply
- User selectable power source from front panel
- Can be both a MBS and a PDU
- Built in dual power supply for redundancy
- Failsafe design. In the event of a catastrophic failure the ATS will mechanically default to the secondary (bypass) supply
- 19" (1RU) rack design
- Built-in USB, RS232 and AS400
- SNMP option available for remote monitoring
- Two year warranty

AUTOMATIC TRANSFER SWITCH

Model Number	PSATS3K
INPUT	
Input Voltage	220/230/240Vac
Acceptable Input Voltage	180 - 270Vac (selectable ranges)
Input Frequency	50Hz / 60Hz
Maximum Input Current	16A
OUTPUT	
Output Voltage	220/230/240Vac
Transfer time	9 ms (typical)
CONNECTION	
Input	2 x 16A (C20)
Output	8 x 10A (C13), 1 x 16A (C19)
Communication Included	USB, RS232 and AS400
Communication Optional	SNMP card
PHYSICAL	
Dimensions (D x W x H)	(330 x 483 x 44) mm
Net Weight	5kgs

System Configuration



Power Distribution Units



Basic and Surge Protected Ranges

overview PowerShield offers two ranges of Power Distribution Units (PDUs). Our PDU's are highly reliable, multiple outlet power strips designed to deliver conditioned power to mission-critical networking, server or telecom equipment often used in conjunction with an uninterruptible power supply (UPS).

Basic PDU Range

Simple, highly reliable power distribution

The **Basic Range of PowerShield PDU's** offer simple but highly reliable power distribution to multiple pieces of equipment in a network application. A PDU of this type is important for the purpose of providing enough outlets for the many devices that are commonly installed into a rack enclosure from a conditioned power source such as a UPS or generator/centralised UPS power distribution scheme.

This durable range comes in a 6 way and 10 way horizontal power rail with a 10 amp reset button. Also available in a 20 way vertical model.

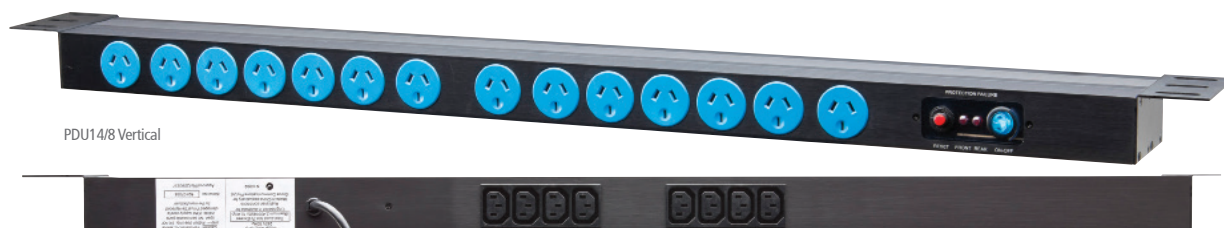


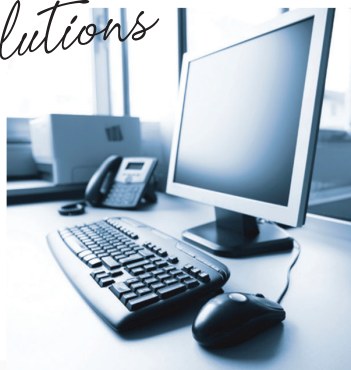
Surge Protected PDU Range

39,000 Amp surge protection

The range of **PowerShield Surge Protected PDU's** come standard with a mixture of Australian and IEC sockets, making it versatile while offering an indicator for each circuit showing a faulty condition.

The range is equipped with 1140 joules and 39,000 Amps of surge protection. With two circuits, the rail can partially operate after a surge event. This range is either front or rear rack mountable and comes in two sizes: Horizontal (7 Australian sockets with 4 IEC sockets) and vertical (14 Australian sockets with 8 IEC sockets).





Navigator Managed PDU



With Automatic Voltage Regulation



The PowerShield **Navigator Managed PDU** is an internet ready device designed to allow administrators to remotely and individually control the AC power for up to eight connected devices such as servers, routers, modems and telephone networks. Moreover, the user is able to pre-configure to turn on/off specific outlets when an event occurs.

The Navigator PDU offers easy set up and user-friendly communications and control methods. Once connected to an ethernet connection, the administrator will be notified of a web IP address and can manage and monitor the power of the devices from anywhere in the world via the web browser.

Features

Remote Access

- Remotely turn on/off/reset any or all NetSwitch outlets

Programmable

- Set sequential scheduled power on/off/reset to each outlet with durations
- Perform multiple PC shutdown when AC fails or battery is low

UPS Management

- Connect compatible UPSs for real-time remote monitoring, management and control and perform UPS self tests

Multi Platform

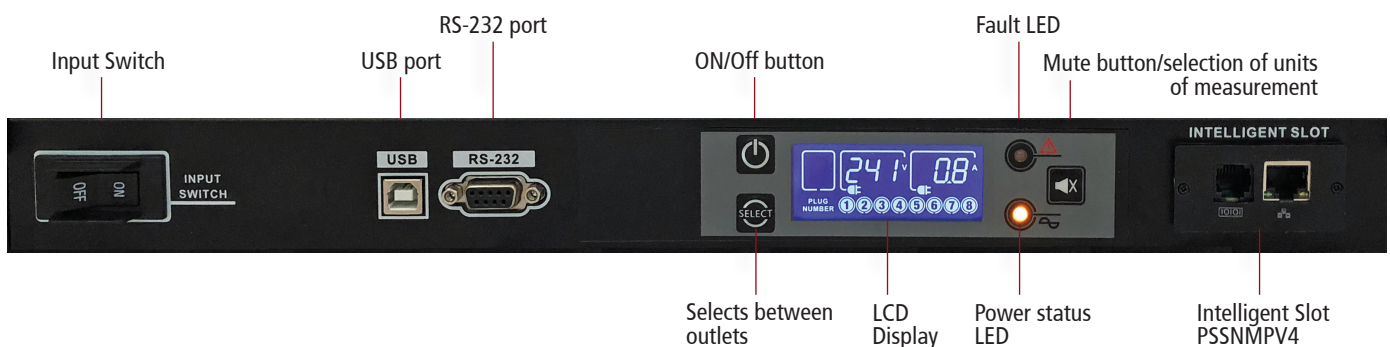
- Monitor individual outlets for AMPs, Kwh, Watts and Volts
- Support advanced encryption of HTTPS, SSL, SSH and SnMPv3

Notification

- Event notification via email, SMS or trap

Environmental Monitoring

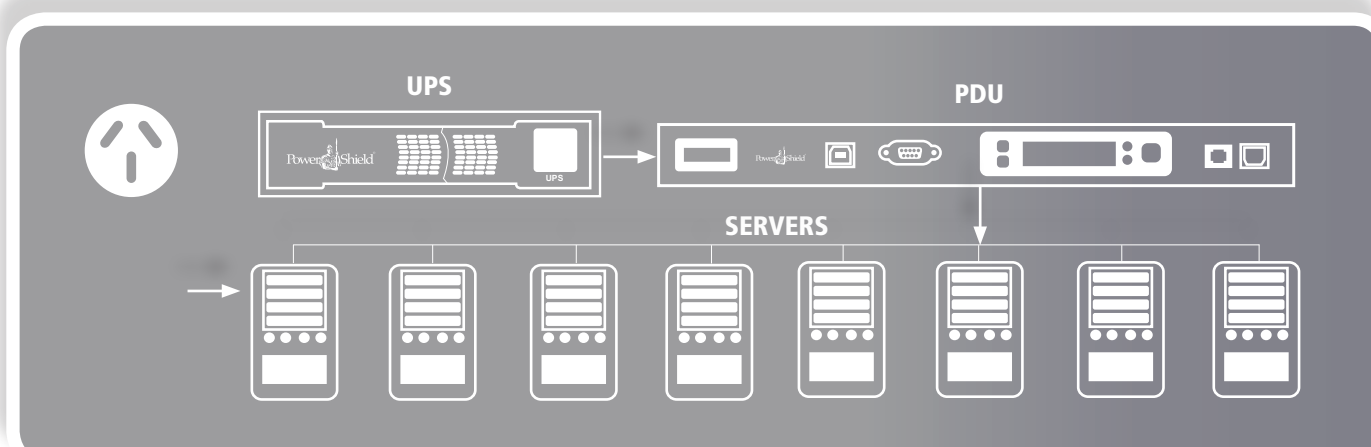
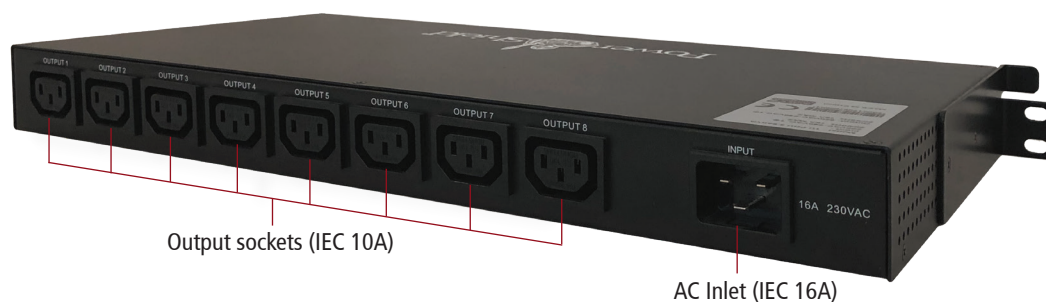
- Environmental monitoring option (PSEMB) to observe humidity and temperature



NAVIGATOR PDU SPECIFICATIONS

MODEL	PSNMPDU8
INPUT	
Nominal Voltage	220 / 230 / 240 VAC
Form Factor	1U
Input Plug Type	1 x IEC (16A) connector and 1 x plug cable
Cord Length	1.8mm
Output Receptacle	8 x IEC 10A sockets
Protection	624 Joules
INDICATORS	
LED Indicators	PDU power LED and fault LED
LCD Display	Indicates outlet On/Off status, input voltage and current, outlet current and fault/alarm mode
Communications	RS232 or USB or PSSNMP
PHYSICAL	
Dimension, D x W x H (mm)	250 x 430 x 44
Net Weight (kgs)	3.5
ENVIRONMENT	
Operating Temperature	20-90 % RH @ 0-50°C (non-condensing)

Rear View:



PowerShield® PRODUCT RUN CHART

UPS	UPS VA	Case	Style	100	200	300	400	500	600	700
Safe Guard 750 (PSG750)	750	PB	LI	52	21	13	8	6	4	3
Defender 650 (PSD650)	650	TW	LI	52	21	13	8	6	4	3
Defender 1200 (PSD1200)	1200	TW	LI	112	51	30	20	16	13	10
Defender 1600 (PSD1600)	1600	TW	LI	116	53	32	22	17	13	10
Commander Tower 1100 (PSCM1100)	1100	TW	LI	119	55	35	24	18	14	11
Commander Tower 2000 (PSCM2000)	2000	TW	LI	267	119	81	55	45	35	27
Commander (Rack Mount or Tower) (PSCRT1100)	1100	RT	LI	119	55	35	24	18	14	11
Commander RT 2000 (PSCRT2000)	2000	RT	LI	267	119	81	55	45	35	27
PSCRT2000 + 1 x PSRTBB8	2000	RT	LI	956	460	267	190	152	119	91
PSCRT2000 + 2 x PSRTBB8	2000	RT	LI		781	507	365	267	217	166
PSCRT2000 + 3 x PSRTBB8	2000	RT	LI		1081	706	527	426	325	253
Commander RT 3000 (PSCRT3000)	3000	RT	LI	460	190	119	95	67	55	42
PSCRT3000 + 1 x PSRTBB12	3000	RT	LI		664	460	302	235	190	147
PSCRT3000 + 2 x PSRTBB12	3000	RT	LI		1131	781	554	460	365	283
PSCRT3000 + 3 x PSRTBB12	3000	RT	LI			1081	831	595	527	414
Centurion Tower 1000 (PSCE1000)	1000	TW	TOL	190	95	55	42	29	24	18
PSCE1000 + 1 x PSCEBB6	1000	TW	TOL	664	302	190	140	111	95	72
PSCE1000 + 2 x PSCEBB6	1000	TW	TOL	1131	554	365	246	190	158	121
PSCE1000 + 3 x PSCEBB6	1000	TW	TOL		831	527	392	281	229	176
Centurion Tower 2000 (PSCE2000)	2000	TW	TOL	460	190	119	95	67	55	42
PSCE2000 + 1 x PSCEBB12	2000	TW	TOL		664	460	302	235	190	147
PSCE2000 + 1 x PSCEBB18CH	2000	TW	TOL		956	578	460	342	267	206
PSCE2000 + 2 x PSCEBB12	2000	TW	TOL		1131	781	554	460	365	283
PSCE2000 + 1 x PSCEBB12 + 1 x PSCEBB18CH	2000	TW	TOL			956	664	539	460	359
PSCE2000 + 2 x PSCEBB18CH	2000	TW	TOL			1081	831	595	527	414
Centurion Tower 3000 (PSCE3000)	3000	TW	TOL	460	190	119	95	67	55	42
PSCE3000 + 1 x PSCEBB12	3000	TW	TOL		664	460	302	235	190	147
PSCE3000 + 1 x PSCEBB18CH	3000	TW	TOL		956	578	460	342	267	206
PSCE3000 + 2 x PSCEBB12	3000	TW	TOL		1131	781	554	460	365	283
PSCE3000 + 1 x PSCEBB12 + 1 x PSCEBB18CH	3000	TW	TOL			956	664	539	460	359
PSCE3000 + 2 x PSCEBB18CH	3000	TW	TOL			1081	831	595	527	414
Centurion Tower 6000 (PSCE6000)	6000	TW	TOL		781	507	365	267	217	166
PSCE6000 + 1 x PSCEBB40	6000	TW	TOL				1131	956	781	609
PSCE6000 + 1 x PSCEBB60CH	6000	TW	TOL					1174	1043	810
PSCE6000 + 2 x PSCEBB40	6000	TW	TOL							1000
PSCE6000 + 1 x PSCEBB40 + 1 x PSCEBB60CH	6000	TW	TOL							
PSCE6000 + 2 x PSCEBB60CH	6000	TW	TOL							
Centurion Tower 10K (PSCE10k)	10kVA	TW	TOL		781	507	365	267	217	166
PSCE10K + 1 x PSCEBB40	10kVA	TW	TOL				1131	956	781	609
PSCE10K + 1 x PSCEBB60CH	10kVA	TW	TOL					1174	1043	810
PSCE10K + 2 x PSCEBB40	10kVA	TW	TOL							1000
PSCE10K + 1 x PSCEBB40 + 1 x PSCEBB60CH	10kVA	TW	TOL							
PSCE10K + 2 x PSCEBB60CH	10kVA	TW	TOL							
Centurion RT 1000 (PSCERT1000)	1000	RT	TOL	190	95	55	42	29	24	18
PSCERT1000 + 1 x PSRTBB6	1000	RT	TOL	664	302	190	140	111	95	72
PSCERT1000 + 2 x PSRTBB6	1000	RT	TOL	1131	554	365	246	190	158	121
PSCERT1000 + 3 x PSRTBB6	1000	RT	TOL		831	527	392	281	229	176
Centurion RT 2000 Short Base (SB) (PSCERT2000SB)	2000	RT	TOL	267	119	81	55	45	35	27
PSCERT2000SB + 1 x PSRTBB8	2000	RT	TOL	956	460	267	190	152	119	91
PSCERT2000SB + 2 x PSRTBB8	2000	RT	TOL		781	507	365	267	217	166
PSCERT2000SB + 3 x PSRTBB8	2000	RT	TOL		1081	706	527	426	325	253
Centurion RT 2000 (PSCERT2000)	2000	RT	TOL	460	190	119	95	67	55	42
PSCERT2000 + 1 x PSRTBB12	2000	RT	TOL		664	460	302	235	190	147
PSCERT2000 + 2 x PSRTBB12	2000	RT	TOL		1131	781	554	460	365	283
PSCERT2000 + 3 x PSRTBB12	2000	RT	TOL			1081	831	595	527	414
Centurion RT 3000 (PSCERT3000)	3000	RT	TOL	460	190	119	95	67	55	42
PSCERT3000 + 1 x PSRTBB12	3000	RT	TOL		664	460	302	235	190	147
PSCERT3000 + 2 x PSRTBB12	3000	RT	TOL		1131	781	554	460	365	283
PSCERT3000 + 3 x PSRTBB12	3000	RT	TOL			1081	831	595	527	414
Centurion Rack Mount 6000 (PSCER6000L + 1 x PSCERBB20)	6000	RM	TOL		781	507	365	267	217	166
Centurion Rack Mount 6000 (PSCER6000L + 2 x PSCERBB20)	6000	RM	TOL			1043	781	578	507	414
Centurion Rack Mount 10K (PSCER10KL + 1 x PSCERBB20)	10kVA	RM	TOL		781	507	365	267	217	166
Centurion Rack Mount 10K (PSCER10KL + 2 x PSCERBB20)	10kVA	RM	TOL			1043	781	578	507	414

(Load calculated at 0.7 power factor. Computations in minutes calculated under optimal conditions. Factors such as temperature and amount of discharges may influence backup times. Models ending in "L" are long run models with L

VA / LOAD																
700	800	900	1000	1500	2000	2500	3000	3500	4000	4500	5000	6000	7000	8000	9000	10000
3																
10	8	6	5													
11	9	7	6	3												
12	9	8	6													
28	24	20	18	10	6											
12	9	8	6													
28	24	20	18	10	6											
07	95	81	67	45	29											
79	158	138	119	81	55											
267	229	200	176	114	87											
48	42	35	29	18	12	9	6									
163	140	119	111	67	51	39	29									
287	246	217	190	119	95	67	55									
160	392	325	281	176	128	105	87									
19	16	14	12													
77	59	55	51													
132	114	105	95													
190	166	147	128													
48	42	35	29	18	12											
163	140	119	111	67	51											
224	190	168	152	101	67											
287	246	217	190	119	95											
281	302	267	235	152	111											
160	392	325	281	176	128											
48	42	35	29	18	12	9	6									
163	140	119	111	67	51	39	29									
224	190	168	152	101	67	53	45									
287	246	217	190	119	95	67	55									
281	302	267	235	152	111	91	67									
160	392	325	281	176	128	105	87									
79	158	138	119	81	55	45	35	28	24	20	18	14				
506	554	507	460	267	190	152	119	107	95	81	67	55				
012	781	650	578	401	267	207	168	143	119	110	101	81				
096	991	886	781	507	365	267	217	179	158	138	119	105				
	1131	1043	956	578	460	342	267	224	190	168	152	119				
		1156	1081	706	527	426	325	267	229	200	176	147				
79	158	138	119	81	55	45	35	28	24	20	18	14	12	9	8	6
506	554	507	460	267	190	152	119	107	95	81	67	55	48	42	35	29
012	781	650	578	401	267	207	168	143	119	110	101	81	60	55	50	45
096	991	886	781	507	365	267	217	179	158	138	119	105	90	73	59	55
	1131	1043	956	578	460	342	267	224	190	168	152	119	107	95	81	67
		1156	1081	706	527	426	325	267	229	200	176	147	119	109	98	87
19	16	14	12													
77	59	55	51													
132	114	105	95													
190	166	147	128													
28	24	20	18	10	6											
07	95	81	67	45	29											
79	158	138	119	81	55											
267	229	200	176	114	87											
48	42	35	29	18	12											
163	140	119	111	67	51											
287	246	217	190	119	95											
160	392	325	281	176	128											
48	42	35	29	18	12	9	6									
163	140	119	111	67	51	39	29									
287	246	217	190	119	95	67	55									
160	392	325	281	176	128	105	87									
79	158	138	119	81	55	45	35	28	24	20	18	14				
136	365	298	267	168	119	101	81	60	55	50	45	35				
79	158	138	119	81	55	45	35	28	24	20	18	14	12	9	8	
136	365	298	267	168	119	101	81	60	55	50	45	35	28	24	20	

arger chargers and therefore have no internal batteries.)



THE BEND

making life car
777
911
Hot Wheels
American Series
CAR CARE PRODUCTS

Wash It
1300 WASH IT

PLUMB BY DESIGN

PIRELLI

Wash It
CAR CARE PRODUCTS

The Bend Motorsport Park is one of the most significant developments in Australian motorsport history and is a state of the art, world-class motorsport facility. Developed and primarily funded by the Peregrine Corporation, South Australia's largest private company, construction started on The Bend in early 2016 with the main motor racing circuit completed in April 2018 in time for the first scheduled events.

The facility has a highly equipped main server room that supports an IT infrastructure throughout the Park. Uninterruptible Power Supply was considered a fundamental requirement to protect the overall infrastructure.

Power Shield, together with our valued Distribution Partner, worked to ensure that the UPS solution provided was adequate to meet the demands of the Park and also would cater for future expansion if required. As part of the solution our team worked together to ensure timely delivery, installation and commissioning of the full UPS package.

Two Centurion Tower 10kVA UPSs were installed in master/slave configuration for the redundancy power protection in the main server room and nine Centurion RT 3000VA UPSs were installed in racks at the various remote locations around the park for the protection and security of the network hubs.

These UPS systems are a vital part of the race track statistics data collection that is so important during any racing event. They are designed to protect and prevent data corruption and ensure continuous running during any power blackouts that may occur at the Park 24/7.

Power Shield UPS systems are designed for this type of rugged environment and have the advanced software compatibility necessary to talk to the IT manager, keeping him informed of the status of the system 24/7.

"POWER SHIELD HAS ALWAYS EXCELLED AT PROVIDING CUSTOM SOLUTIONS. IT WAS FANTASTIC TO BE A PART OF SUCH AN INTERESTING, IMPORTANT PROJECT HERE IN AUSTRALIA AND BE ABLE TO OFFER LOCAL, PROFESSIONAL SUPPORT FROM OUR FULL TEAM.

Glyn Dowding
IT Channel Manager NSW, VIC, SA, TAS