POWERSHIELD
TRAINING








Power Shield®

Australian Designed
Power Protection
Solutions

WHAT ARE WE COVERING?

- WHO ARE POWERSHIELD?
- WHY A UPS?
- THE 9 POWER PROBLEMS
- ADDRESSING THE PROBLEMS: POWERSHIELDS SHIELD SYSTEM
- HOW TO SIZE A UPS AND THE TOOLS TO HELP YOU
- THE POWERSHIELD RANGE
- POWERSHIELD CUSTOMER SUPPORT



WHO ARE POWERSHIELD?

- Australia's most innovative Power Protection Company
- Helping customers stay connected and avoid damage and downtime caused by power problems
- Local Australian Sales and Support for over 20 years
- Tech Help desk answered by those responsible for developing the products

Australian Designed Power Protection Solutions





Mark Nicol
ACCOUNTS MANAGER
WESTERN AUSTRALIA

Glynn Dowding
ACCOUNTS MANAGER
VICTORIA,
SOUTH AUSTRALIA
& TASMANIA





Steve Boehme
ACCOUNTS & PROJECTS
MANAGER
QUEENSLAND, NZ &
PACIFIC ISLANDS



Rob Steel
CHANNEL & PROJECTS
MANAGER
NSW & ACT

WHY IS POWER PROTECTION IMPORTANT?



Even the shortest of power outages can cause damage and require recalibration – which are costly.



As components become smaller they can fail to stand up to anomalies in power.



External Generators take time to kick in. Without a UPS, equipment will still experience a hard shutdown.



Connectivity to the cloud is very important. When equipment is down, businesses come to a standstill and processes stop.

WHY A UPS? PROTECT – BACKUP - CONNECT

A UPS protects IT equipment and other electrical loads from the problems that plague our electrical supply. It will:



PROTECT equipment hardware from major power problems.

A UPS extends the life of equipment.



Provide BACKUP power in case of power outages.



Keep CONNECTED to the internet and other equipment at all times.

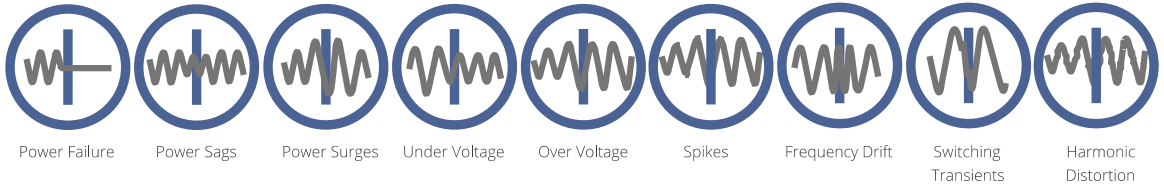


WHAT ARE THE PROBLEMS THAT PLAGUE OUR ELECTRICAL SUPPLY?

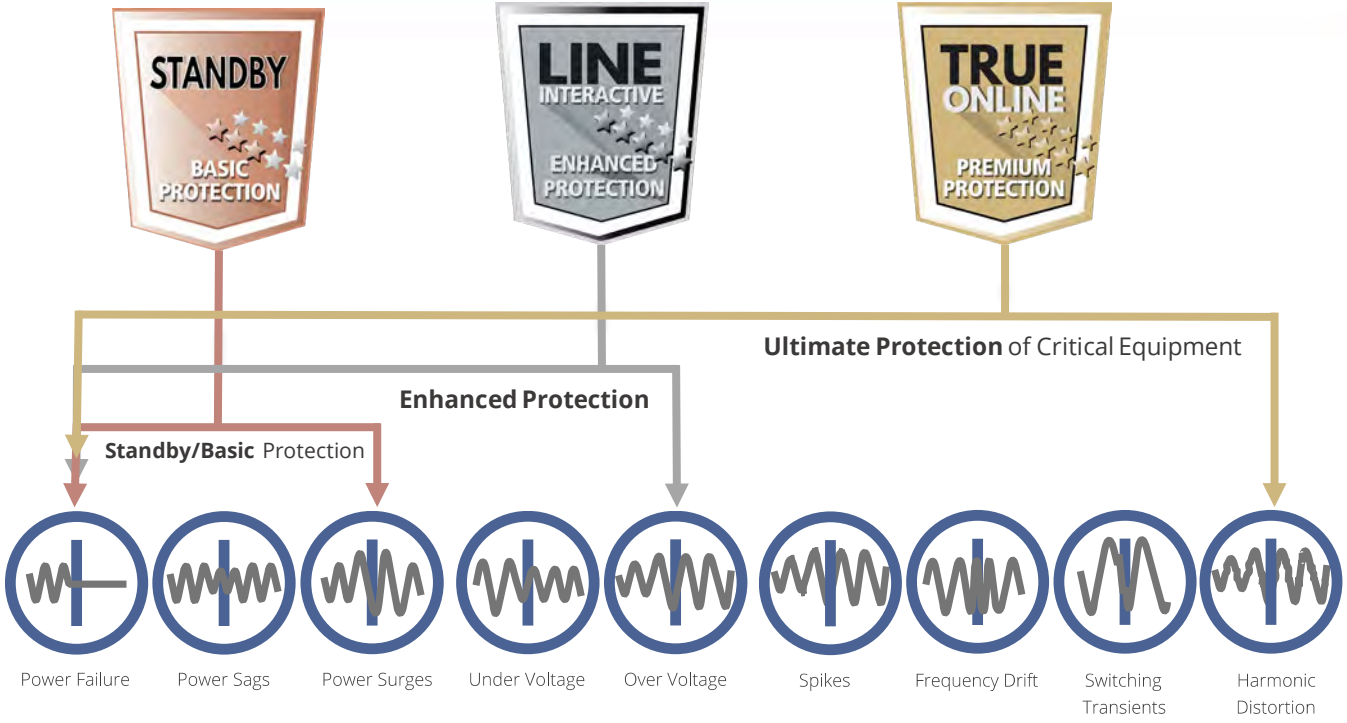
Ideally, the power coming through our devices through wall sockets would be perfect and unlimited, at a constant voltage and consistent cycles per second.

But it's not.

There are 9 major problems with our power that UPSs are designed to address:



POWERSHIELD'S SHIELD SYSTEM
3 SOLUTIONS FOR ALL 9 PROBLEMS



BACKUP / STANDBY UPS





Solves 3/9 major power problems

Allows equipment to run off utility power until the UPS detects a problem, at which point it switches to battery power to protect against sags, surges or outages.

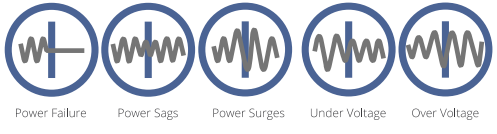
Offers No Voltage Regulation.

NINJA SLIMLINE UPS



NO POWERSHIELD = NO SECURITY

LINE INTERACTIVE / ENHANCED UPS





Solves 5/9 major power problems

- Automatic Voltage Regulation.
- Ideal for applications where protection from power anomalies is required, but the utility power is relatively clean.
- Perfect for Communication closets, non-centralised server and network rooms, and general IT enclosures.

SAFEGUARD SERIES



DEFENDER SERIES



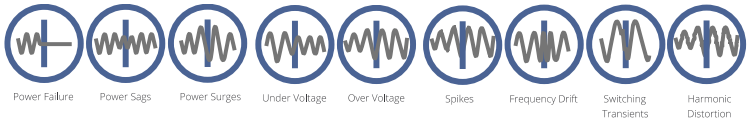
COMMANDER SERIES



GLADIATOR UPS



TRUE ONLINE DOUBLE CONVERSION / PREMIUM PROTECTION



TRUE ONLINE PREMIUM PROTECTION

NO POWERSHIELD = NO SECURITY

Solves all 9/9 major power problems

- Highest level of protection.
- Best for mission-critical equipment and locations where power generally is poor.
- 3 PHASE 3 Phase power options.

CENTURION SERIES
(3 PHASE OPTIONS AVAILABLE)

TOWER & RACKMOUNT MODELS





PLATINUM SERIES – 3 PHASE

3 PHASE

TOWER AND MODULAR MODELS

HOW DO YOU SIZE A UPS?
QUESTIONS TO ASK:





Where are they located - Metro or Regional?

(Is the power stable?)



Do they require a

RackMount or Tower Model?



What is the **electrical load? (Check Specs)**



How long do they need backup for?

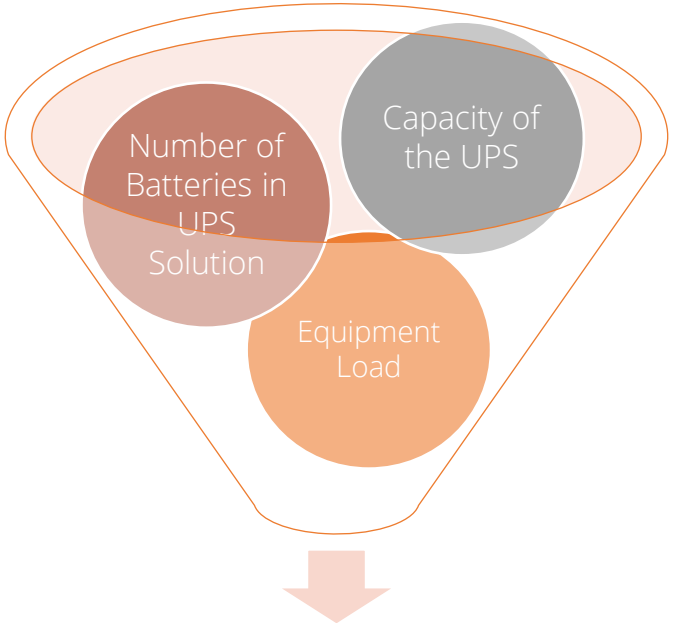
Backup Time



How **critical** is the equipment?

WHAT DETERMINES BACKUP TIME?

The backup time of a UPS depends on:





EXTENDING RUNTIMES - EXAMPLE

ADDING BATTERY BANKS TO UPSs TO EXTEND RUNTIMES

EXAMPLE:

1 x Centurion RT 2000 with 1500VA Load = **18 minutes backup time**

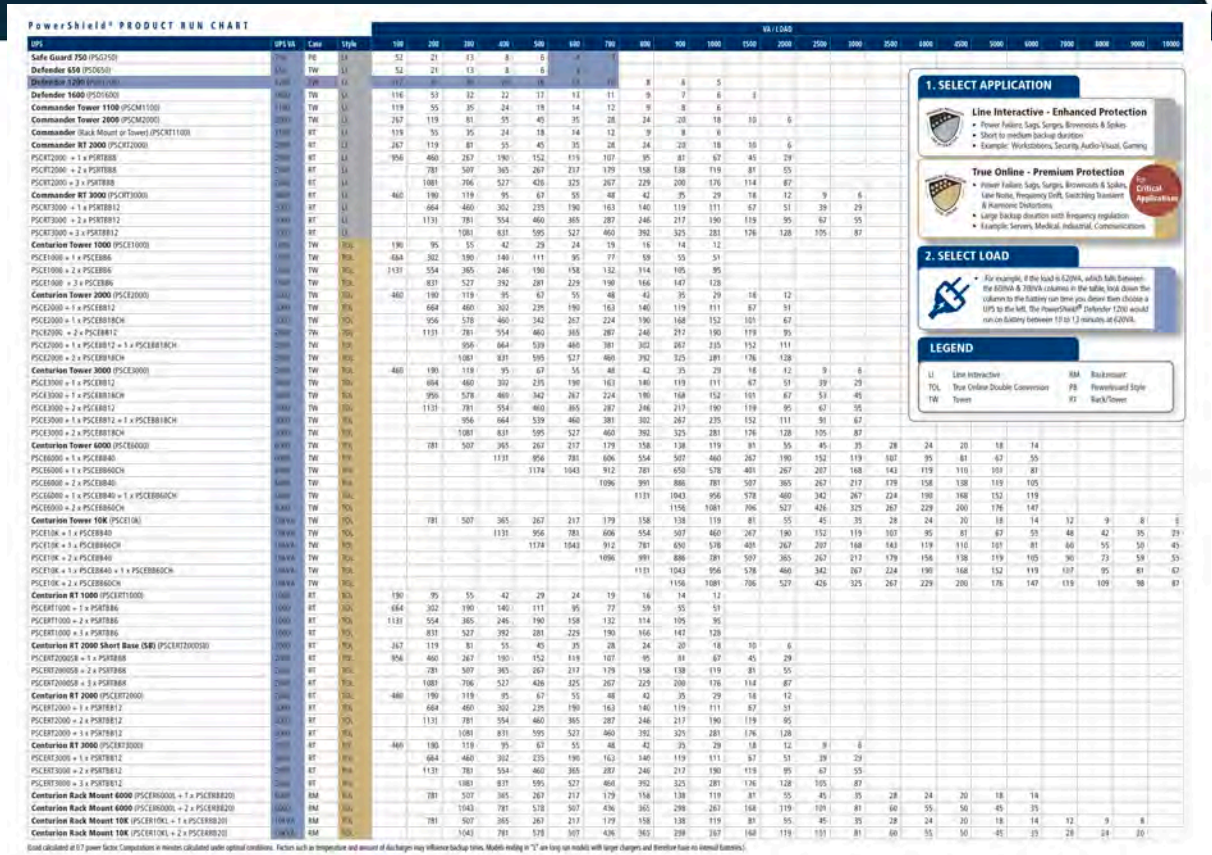
1 x Centurion RT 2000 + 1 x Battery Bank with 1500VA Load = **67 minutes backup time**

1 x Centurion RT 2000 + 2 x Battery Bank with 1500VA Load = **101 minutes backup time**



TOOLS – UPS SIZING MADE EASY

UPS Sizing Guide
(BACK PAGE OF CATALOGUE)



PowerShield® PRODUCT RUN CHART

UPS	UPS VA	Case	Style	VA / LOAD 100	200	280	400	500	600	700	800	900	1000	1500	2000	2500	3000	3500	4000	4500	5000	6000	7000	8000	9000	10000
Safe Guard 750 (PSG750)	750	PD	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	117	47	30	20	15	13	10	8	8	5													
Defender 1600 (PSD1600)	1600	TW	LI	116	53	32	22	17	13	11	9	7	6	3												
Commander Tower 1100 (PSCM1100)	1100	TW	LI	119	55	35	24	18	14	12	9	8	6													
Commander Tower 2000 (PSCM2000)	2000	TW	LI	267	119	81	55	45	35	28	24	20	18	10	6											
Commander (Black Mount or Tower) (PSCRT1100)	1100	RT	LI	119	55	35	24	18	14	12	9	8	6													
Commander RT 2000 (PSCRT2000)	2000	RT	LI	267	119	81	55	45	35	28	24	20	18	10	6											
PSCRT2000 + 1 x PSRTB8B	2000	RT	LA	956	460	267	190	152	119	107	95	81	67	45	29											
PSCRT2000 + 2 x PSRTB8B	2000	RT	LA		781	507	365	267	217	179	158	138	119	81	55											
PSCRT2000 + 3 x PSRTB8B	2000	RT	LA		1081	706	527	426	325	267	229	200	176	114	87											
Commander RT 3000 (PSCRT3000)	3000	RT	LI	460	190	119	95	67	55	48	42	35	29	18	12	9	6									
PSCRT3000 + 1 x PSRTB812	3000	RT	LI		664	460	302	235	190	163	140	119	111	67	51	39	29									
PSCRT3000 + 2 x PSRTB812	3000	RT	LI		1131	781	554	460	365	287	246	217	190	119	95	67	55									
PSCRT3000 + 3 x PSRTB812	3000	RT	LI			1081	831	595	527	460	392	325	281	176	128	105	87									
Centurion Tower 1000 (PSCE1000)	1000	TW	TOL	190	95	55	42	29	24	19	16	14	12													
PSCE1000 + 1 x PSCEB86	1000	TW	TOL	684	302	190	140	111	95	77	59	55	51													
PSCE1000 + 2 x PSCEB86	1000	TW	TOL	1131	554	365	246	190	158	132	114	105	95													
PSCE1000 + 3 x PSCEB86	1000	TW	TOL		831	527	392	281	229	198	166	147	128													
Centurion Tower 2000 (PSCE2000)	2000	TW	TOL	460	190	119	95	67	55	48	42	35	29	18	12											
PSCE2000 + 1 x PSCEB812	2000	TW	TOL		664	460	302	235	190	163	140	119	111	67	51											
PSCE2000 + 1 x PSCEB818CH	2000	TW	TOL		956	578	460	342	267	224	190	168	152	101	67											
PSCE2000 + 2 x PSCEB812	2000	TW	TOL		1131	781	554	460	365	287	246	217	190	119	95											
PSCE2000 + 1 x PSCEB812 + 1 x PSCEB818CH	2000	TW	TOL			956	664	539	460	381	302	267	235	152	111											
PSCE2000 + 2 x PSCEB818CH	2000	TW	TOL			1081	831	595	527	460	392	325	281	176	128											
Centurion Tower 3000 (PSCE3000)	3000	TW	TOL	460	190	119	95	67	55	48	42	35	29	18	12	9	8									
PSCE3000 + 1 x PSCEB812	3000	TW	TOL		694	460	302	235	190	163	140	119	111	67	51	39	29									
PSCE3000 + 1 x PSCEB818CH	3000	TW	TOL		956	578	460	342	267	224	190	168	152	101	67	53	45									
PSCE3000 + 2 x PSCEB812	3000	TW	TOL		1131	781	554	460	365	287	246	217	190	119	95	67	55									
PSCE3000 + 1 x PSCEB812 + 1 x PSCEB818CH	3000	TW	TOL			956	664	539	460	381	302	267	235	152	111	91	67									
PSCE3000 + 2 x PSCEB818CH	3000	TW	TOL			1081	831	595	527	460	392	325	281	176	128	105	87									
Centurion Tower 6000 (PSCE6000)	6000	TW	TOL		781	507	365	267	217	179	158	138	119	81	55	45	35	28	24	20	18	14				
PSCE6000 + 1 x PSCEB840	6000	TW	TOL				1131	956	781	606	554	507	460	267	190	152	119	107	95	81	67	55				
PSCE6000 + 1 x PSCEB860CH	6000	TW	TOL					1174	1043	912	781	650	578	401	267	207	168	143	119	110	101	81				
PSCE6000 + 2 x PSCEB840	6000	TW	TOL							1096	991	886	781	507	365	267	217	179	158	138	119	105				
PSCE6000 + 1 x PSCEB840 + 1 x PSCEB860CH	6000	TW	TOL								1131	1043	956	578	480	342	267	224	190	168	152	119				
PSCE6000 + 2 x PSCEB860CH	6000	TW	TOL									1156	1081	706	527	426	325	267	229	200	176	147				
Centurion Tower 10K (PSCE10K)	10kVA	TW	TOL		781	507	365	267	217	179	158	138	119	81	55	45	35	28	24	20	18	14	12	9	8	6
PSCE10K + 1 x PSCEB840	10kVA	TW	TOL				1131	956	781	606	554	507	460	267	190	152	119	107	95	81	67	55	48	42	35	29
PSCE10K + 1 x PSCEB860CH	10kVA	TW	TOL					1174	1043	912	781	650	578	401	267	207	168	143	119	110	101	81	66	55	50	45
PSCE10K + 2 x PSCEB840	10kVA	TW	TOL							1096	991	886	781	507	365	267	217	179	158	138	119	105	90	73	59	55
PSCE10K + 1 x PSCEB840 + 1 x PSCEB860CH	10kVA	TW	TOL								1131	1043	956	578	466	342	267	224	190	168	152	119	107	95	81	67
PSCE10K + 2 x PSCEB860CH	10kVA	TW	TOL									1156	1081	706	527	426	325	267	229	200	176	147	119	109	98	87
Centurion RT 1000 (PSCERT1000)	1000	RT	TOL	190	95	55	42	29	24	19	16	14	12													
PSCERT1000 + 1 x PSRTB86	1000	RT	TOL	684	302	190	140	111	95	77	59	55	51													
PSCERT1000 + 2 x PSRTB86	1000	RT	TOL	1131	554	365	246	190	158	132	114	105	95													
PSCERT1000 + 3 x PSRTB86	1000	RT	TOL		831	527	392	281	229	198	166	147	128													
Centurion RT 2000 Short Base (SB) (PSCERT2000SB)	2000	RT	TOL	267	119	81	55	45	35	28	24	20	18	10	6											
PSCERT2000SB + 1 x PSRTB8B	2000	RT	TOL	956	460	267	190	152	119	107	95	81	67	45	29											
PSCERT2000SB + 2 x PSRTB8B	2000	RT	TOL		781	507	365	267	217	179	158	138	119	81	55											
PSCERT2000SB + 3 x PSRTB8B	2000	RT	TOL		1081	706	527	426	325	267	229	200	176	114	87											
Centurion RT 2000 (PSCERT2000)	2000	RT	TOL	460	190	119	95	67	55	48	42	35	29	18	12											
PSCERT2000 + 1 x PSRTB812	3000	RT	TOL		664	460	302	235	190	163	140	119	111	67	51											
PSCERT2000 + 2 x PSRTB812	3000	RT	TOL		1131	781	554	460	365	287	246	217	190	119	95											
PSCERT2000 + 1 x PSRTB812	3000	RT	TOL			1081	831	595	527	460	392	325	281	176	128											
Centurion RT 3000 (PSCERT3000)	3000	RT	TOL	460	190	119	95	67	55	48	42	35	29	18	12	9	8									
PSCERT3000 + 1 x PSRTB812	3000	RT	TOL		684	460	302	235	190	163	140	119	111	67	51	39	29									
PSCERT3000 + 2 x PSRTB812	3000	RT	TOL		1131	781	554	460	365	287	246	217	190	119	95	67	55									
PSCERT3000 + 3 x PSRTB812	3000	RT	TOL			1081	831	595	527	460	392	325	281	176	128	105	87									
Centurion Rack Mount 6000 (PSCERM6000)	6000	RM	TOL		781	507	365	267	217	179	158	138	119	81	55	45	35	28	24	20	18	14				
Centurion Rack Mount 6000 (PSCERM6000) + 2 x PSCERMB20	6000	RM	TOL			1043	781	578	507	436	365	298	267	168	119	101	81	60	55	50	45	35				
Centurion Rack Mount 10K (PSCER10KL + 1 x PSCERMB20)	10kVA	RM	TOL		781	507	365	267	217	179	158	138	119	81	55	45	35	28	24	20	18	14	12	9	8	
Centurion Rack Mount 10K (PSCER10KL + 2 x PSCERMB20)	10kVA	RM	TOL			1043	781	578	507	436	365	298	267	168	119	101	81	60	55	50	45	35	28	24	20	

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 larger chargers and therefore have no internal batteries.

1. SELECT APPLICATION

Line Interactive - Enhanced Protection
- Power Failure, Sags, Surges, Brownouts & Spikes
- Short to medium backup duration
- Example: Workstations, Security, Audio-Visual, Gaming

True Online - Premium Protection
For Critical Applications
- Power Failure, Sags, Surges, Brownouts & Spikes, Line Noise, Frequency Shift, Switching Transients & Harmonic Distortions
- Large backup duration with frequency regulation
- Example: Servers, Medical, Industrial, Communications

2. SELECT LOAD

- For example, if the load is 620VA, which falls between the 600VA & 700VA columns in the table, look down the column to the battery run time you desire then choose a UPS to the left. The PowerShield® Defender 1200 would run on battery between 10 to 13 minutes at 620VA.

LEGEND

LI	Line Interactive	RM	Rackmount
TOL	True Online Double Conversion	PB	Powerboard Style
TW	Tower	RT	Rack/Tower

Power Shield

NO POWERSHIELD = NO SECURITY

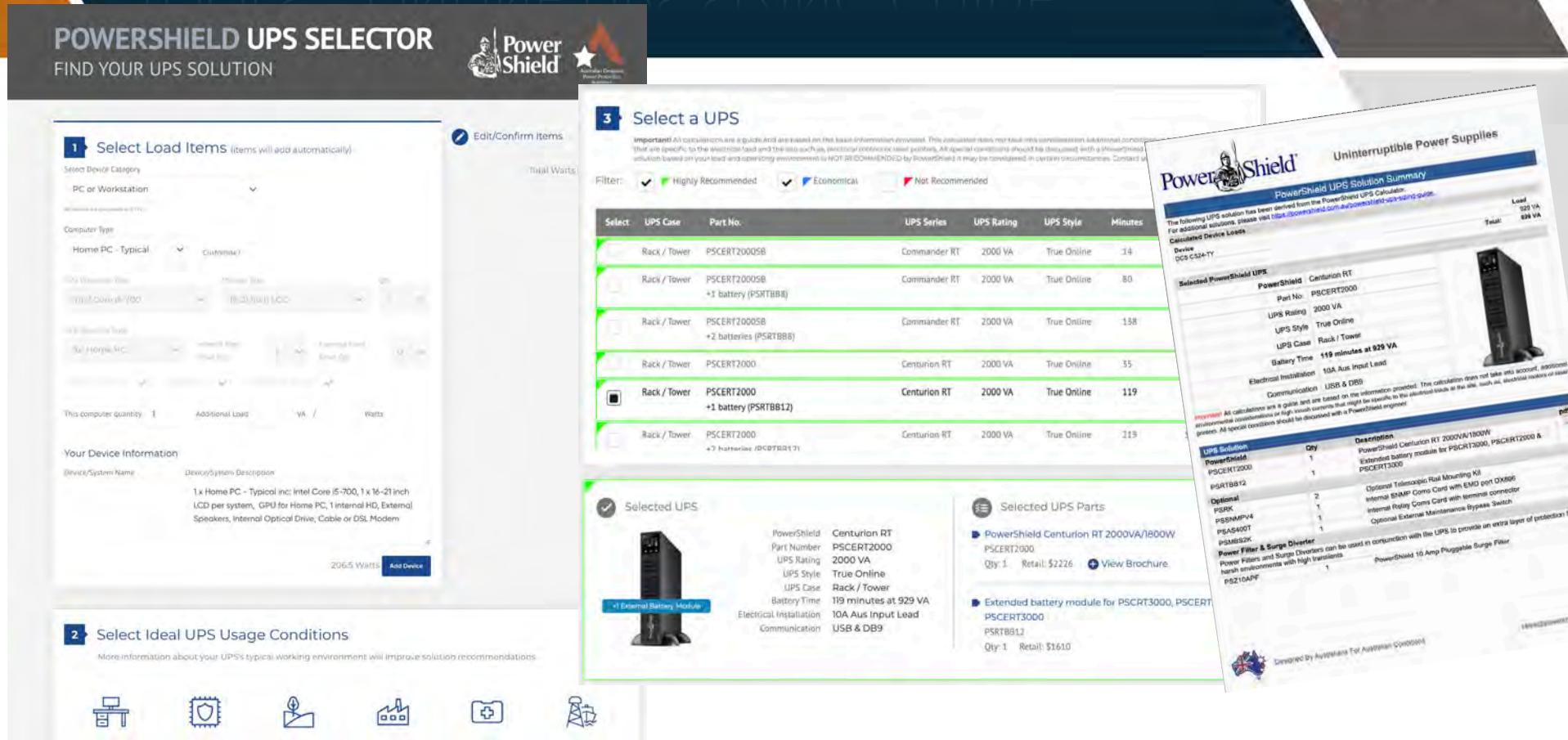
NO POWER = NO SECURITY

VIEW ONLINE CALCULATOR

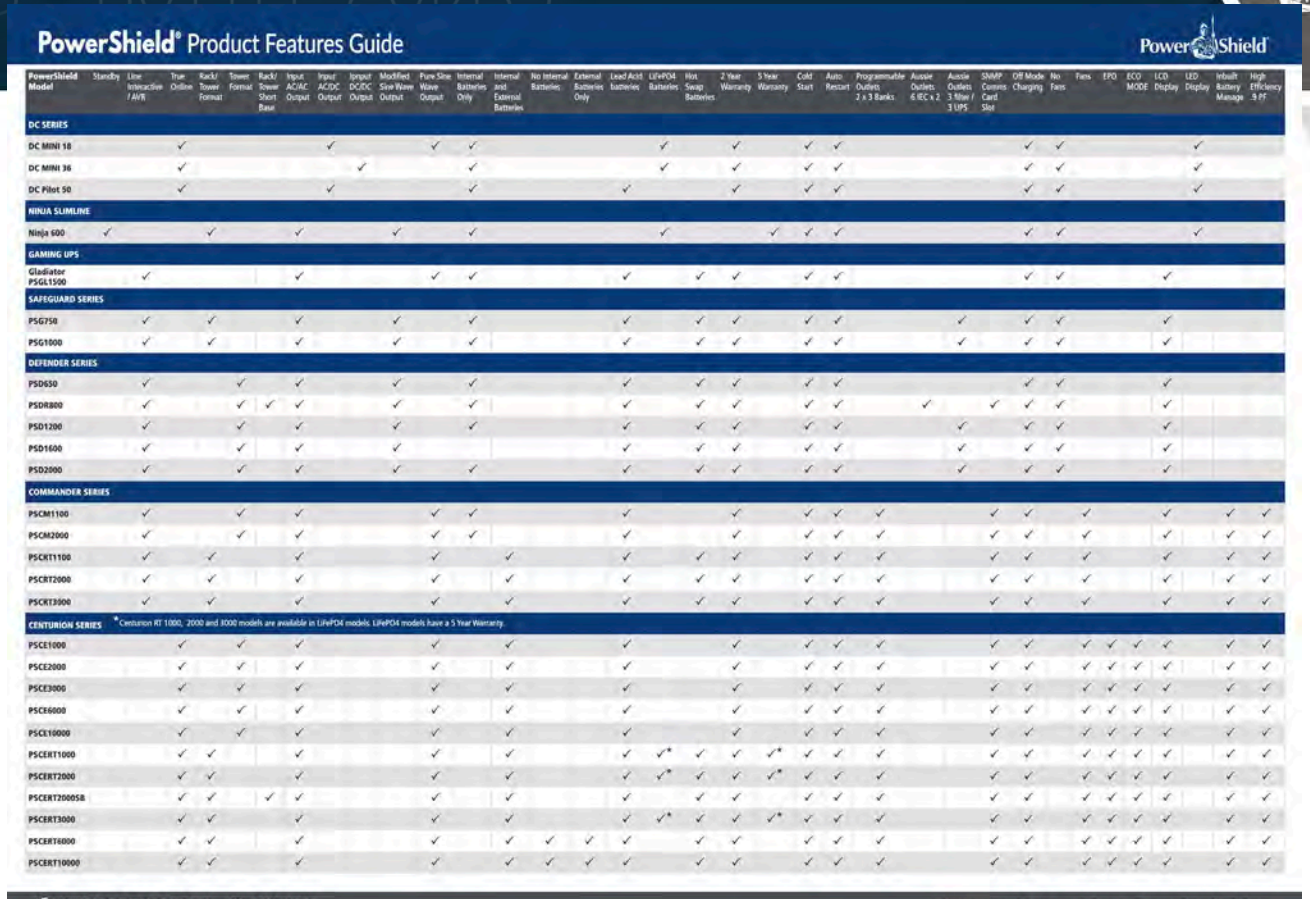
Turn Over for UPS CCTV Load Chart:



TOOLS – ONLINE UPS SIZING GUIDE



TOOLS – BATTLE CARDS



PowerShield® Product Features Guide

PowerShield Model	Standby	Line Interactive / AVR	True Online	Rack/ Tower Format	Tower Format	Rack/ Tower Short Base	Input AC/AC Output	Input AC/DC Output	Ipnput DC/DC Output	Modified Sine Wave Output	Pure Sine Wave Output	Internal Batteries Only	Internal and External Batteries	No Internal Batteries	External Batteries Only	Lead Acid batteries	LiFePO4 Batteries	Hot Swap Batteries	2 Year Warranty	5 Year Warranty	Cold Start	Auto Restart	Programmable Outlets 2 x 3 Banks	Aussie Outlets 6 IEC x 2	Aussie Outlets 3 filter / 3 UPS	SNMP Comms Card Slot	Off Mode Charging	No Fans	Fans	EPO	ECO MODE	LCD Display	LED Display	Inbuilt Battery Manage	High Efficiency 9 PF
DC SERIES																																		
DC MINI 18			✓				✓				✓	✓					✓		✓		✓	✓					✓	✓				✓		
DC MINI 36			✓					✓				✓					✓		✓		✓	✓					✓	✓				✓		
DC Pilot 50			✓				✓					✓				✓			✓		✓	✓					✓	✓				✓		
NINJA SLIMLINE																																		
Ninja 600	✓			✓			✓			✓		✓					✓			✓	✓	✓					✓	✓				✓		
GAMING UPS																																		
Gladiator PSGL1500		✓					✓				✓	✓				✓		✓	✓		✓	✓					✓	✓			✓			
SAFEGUARD SERIES																																		
PSG750		✓		✓			✓			✓		✓				✓		✓	✓		✓	✓			✓		✓	✓				✓		
PSG1000		✓		✓			✓			✓		✓				✓		✓	✓		✓	✓			✓		✓	✓				✓		
DEFENDER SERIES																																		
PSD650		✓			✓		✓			✓		✓				✓		✓	✓		✓	✓					✓	✓				✓		
PSDR800		✓			✓	✓	✓			✓		✓				✓		✓	✓		✓	✓		✓		✓	✓	✓				✓		
PSD1200		✓			✓		✓			✓		✓				✓		✓	✓		✓	✓			✓		✓	✓				✓		
PSD1600		✓			✓		✓			✓						✓		✓	✓		✓	✓			✓		✓	✓				✓		
PSD2000		✓			✓		✓			✓		✓				✓		✓	✓		✓	✓			✓		✓	✓				✓		
COMMANDER SERIES																																		
PSCM1100		✓			✓		✓				✓	✓				✓			✓		✓	✓	✓			✓	✓		✓			✓	✓	✓	✓
PSCM2000		✓			✓		✓				✓	✓				✓			✓		✓	✓	✓			✓	✓		✓			✓	✓	✓	✓
PSCRT1100		✓		✓			✓				✓		✓			✓		✓	✓		✓	✓	✓			✓	✓		✓			✓	✓	✓	✓
PSCRT2000		✓		✓			✓				✓		✓			✓		✓	✓		✓	✓	✓			✓	✓		✓			✓	✓	✓	✓
PSCRT3000		✓		✓			✓				✓		✓			✓		✓	✓		✓	✓	✓			✓	✓		✓			✓	✓	✓	✓
CENTURION SERIES	* Centurion RT 1000, 2000 and 3000 models are available in LiFePO4 models. LiFePO4 models have a 5 Year Warranty.																																	
PSCE1000			✓		✓		✓				✓		✓			✓			✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCE2000			✓		✓		✓				✓		✓			✓			✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCE3000			✓		✓		✓				✓		✓			✓			✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCE6000			✓		✓		✓				✓		✓			✓			✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCE10000			✓		✓		✓				✓		✓			✓			✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCERT1000			✓	✓			✓				✓		✓			✓	✓*	✓	✓	✓*	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCERT2000			✓	✓			✓				✓		✓			✓	✓*	✓	✓	✓*	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCERT2000SB			✓	✓		✓	✓				✓		✓			✓		✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCERT3000			✓	✓			✓				✓		✓			✓	✓*	✓	✓	✓*	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCERT6000			✓	✓			✓				✓		✓	✓	✓	✓		✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓
PSCERT10000			✓	✓			✓				✓		✓	✓	✓	✓		✓	✓		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓

PROTECT BACKUP CONNECT

Australian Designed Power Protection Solutions

THE POWERSHIELD UPS RANGE



DC MINI UPS SERIES

DC SERIES
BATTERY BACKUP

Power Shield

NO POWERSHIELD = NO SECURITY

STAY CONNECTED & KEEP EQUIPMENT RUNNING

- Versatile and Compact Small 'Mini' UPSs to fit limited spaces and protect DC powered equipment
- Up to 24 hours battery backup on small routers
- Emergency power backup to all kinds of DC powered equipment like VOIP phones and Wifi Repeaters



NINJA SLIMLINE

STANDBY
BASIC PROTECTION

ecoLiFePO4

Power Shield



Lithium Iron-Phosphate (LiFePO4) battery technology allows the UPS to operate continuously at up to 45ºC without reduction in battery life.

Perfect for limited spaces and protecting equipment such as electrical boards, irrigation and reticulation panels, switchboards, intelligent homes, lightboards, POS, menuboards and anywhere else that requires a compact solution.





ON POWERSHIELD = NO SECURITY

POWERBOARD STYLE PROTECTION

Popular UPS SafeGuard 750 and 1000VA

- PowerBoard Style UPS Series
- Automatic Voltage Regulation battery backup and surge protection
- Hot swappable batteries
- Convenient Wall Mountable, Compact Design
- Extra Surge Protected Sockets
- USB Charging Port (on SG 1000 model)

ZapGuard Power Boards



SafeGuard Series Equivalent to:
APC BackUPS / Eaton 3S Series

DEFENDER SERIES

- Silent Operation – No Fans
- AVR Battery Backup and Surge Protection
- Hot swappable batteries
- Short depth Rack Mount UPS, **perfect for comms racks**
- RackMount 800 features SNMP Slot

LINE INTERACTIVE
ENHANCED PROTECTION

Power Shield

NO POWERSHIELD = NO SECURITY



GLADIATOR UPS

- UNIQUE TO AUSTRALIA
- Real-time CPU temperature, speed and load level
- Remote LCD panel
- Pure sine wave output with Built-in AVR
- Two x USB charger ports for mobile devices (C and B)
- Battery backup and surge protected outlets
- User replaceable battery design

LINE INTERACTIVE
ENHANCED PROTECTION



Power Shield

NO POWERSHIELD = NO SECURITY

Equivalent to:
No Comparison Available

CENTURION Series (Rack or Tower)

- Highest surge rating
- Programmable outlets ensure longer backup for critical equipment
- Hot swappable batteries
- Simply Add Battery Banks to Extend Run Times



Equivalent to:
APC Smart UPS RT / Eaton 9PX RT Series

CENTURION RT
LiFePO4 Series

The Lithium-Iron Phosphate Advantage:

- High Safety: non-flammable batteries
- 3 x Faster: Fast recharge rate
- 50% Savings: over the life of the UPS
- Lightweight: 1/3 Lighter
- Longer Warranty: 5 Years

ecoLiFePO4



Equivalent to:
APC SmartUPS SRT/ Eaton 5P Li-Ion Series

Power Shield

ON POWERSHIELD = NO SECURITY

COMMS RACK SOLUTIONS

Shorter depth equipment for shallow comms racks

- Very high surge ratings
- Shallow Depths (Defender 800 230mm depth - shallowest rackmount UPS in the market)
- Extra sockets for all COMMS equipment



Power Shield

NO POWERSHIELD = NO SECURITY

PLATINUM Series

TRUE ONLINE PREMIUM PROTECTION

Power Shield

ON POWERSHIELD = NO SECURITY

- Flexible Battery Configuration
- Scalability – Rather than replacing a UPS, simply add more modules
- Low mean time to repair as module replacement takes less than ten minutes
- Redundancy – Additional modules automatically kick in if another module fails

3 PHASE



Platinum Modular Series Equivalent to:
APC Symettra PX / Eaton 9PXM modular Series

RUGGEDISED SOLUTIONS



TRUE ONLINE UPS



RUGGED AND MILITARY TRUE ONLINE UPS SYSTEMS TO SUIT ANY MILITARY, COMMERCIAL OR INDUSTRIAL APPLICATION.

View Range

PURE SINEWAVE DC/AC INVERTERS



RUGGED PURE SINEWAVE DC-AC INVERTER SYSTEMS TO SUIT ANY MILITARY, COMMERCIAL OR INDUSTRIAL APPLICATION.

View Range

FREQUENCY CONVERTERS



RUGGED SOLID STATE FREQUENCY CONVERTER SYSTEMS TO SUIT ANY MILITARY, COMMERCIAL OR INDUSTRIAL APPLICATION.

View Range

NOVA ELECTRIC

www.defence.powershield.com.au

COMMUNICATIONS



NetGuard® Software comes standard with every PowerShield UPS which allows:

- Local UPS Monitoring
- Graceful shutdown in case of extended power outage
- Recording of any power event.

Communications Cards Provide:

- Remote Access via web browser
- VMware compatibility
- Environmental monitoring
- Various alarm monitoring with Dry Contact cards
- SNMP cards available in standard form or High Security grade as approved by the Australian Defence Force

CYBER-SECURE SNMP



- The most powerful UPS, SNMP and IT infrastructure solution on the market.
- Made in Germany and the USA
- Radius and LDAP Support
- Specially developed to meet the IT- compliance regulations in Germany, and North America
- Follows the latest Cyber-Security Protocols & the regulations of the Department of Defence & Australian Signals Directorate



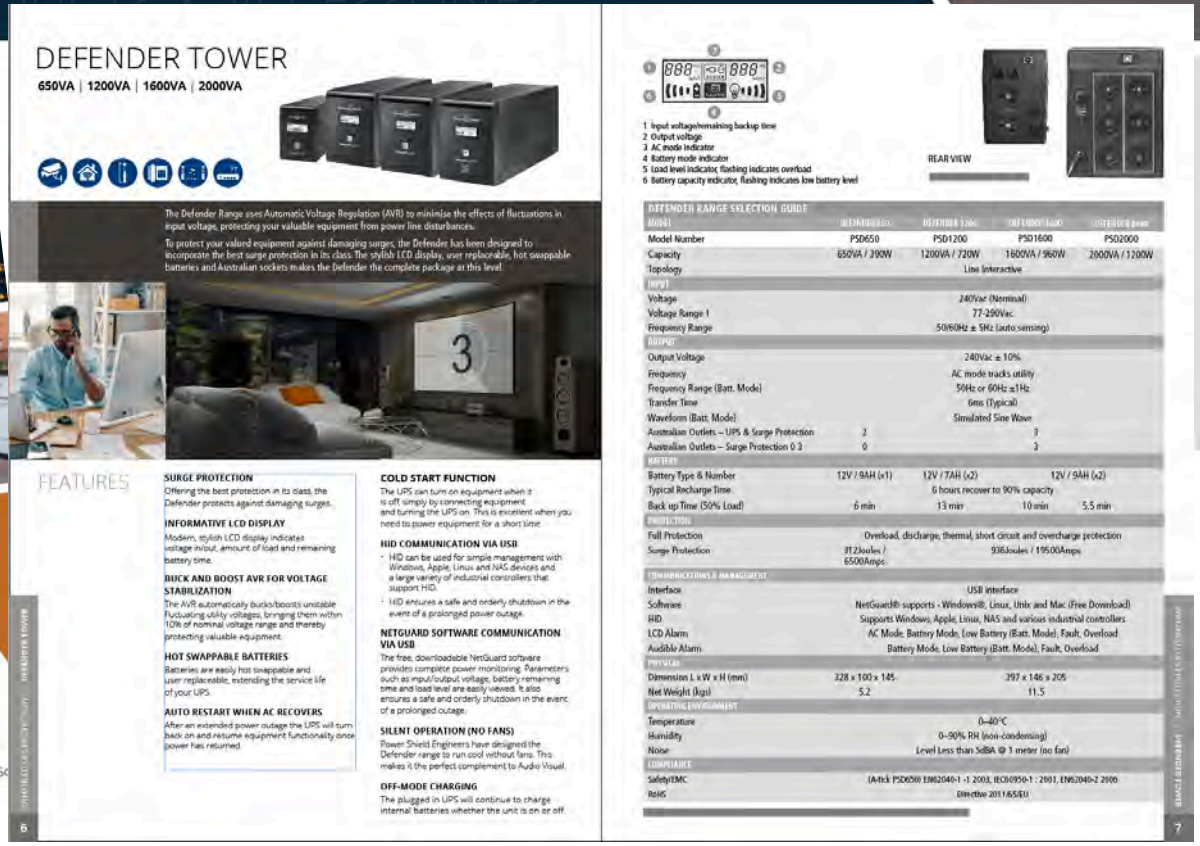
Power Shield

NO POWERSHIELD = NO SECURITY

PRODUCT CATALOGUE

FULL RANGE OF PRODUCTS & ACCESSORIES





DEFENDER TOWER

650VA | 1200VA | 1600VA | 2000VA

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.

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

DEFENDER RANGE SELECTION GUIDE

MODEL	DEFENDER 650	DEFENDER 1200	DEFENDER 1600	DEFENDER 2000
Model Number	PSD650	PSD1200	PSD1600	PSD2000
Capacity	650VA / 390W	1200VA / 720W	1600VA / 960W	2000VA / 1200W
Topology	Line Interactive			
INPUT				
Voltage	240Vac (Nominal)			
Voltage Range 1	77-290Vac			
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 Only	0	3		
BATTERY				
Battery Type & Number	12V / 9AH (x1)	12V / 7AH (x2)	12V / 9AH (x2)	
Typical Recharge Time	6 hours recover to 90% capacity			
Back up Time (50% Load)	6 min	13 min	10 min	5.5 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)	328 x 100 x 145	297 x 146 x 205		
Net Weight (kgs)	5.2	11.5		
OPERATING ENVIRONMENT				
Temperature	0–40°C			
Humidity	0–90% RH (non-condensing)			
Noise	Level Less than 5dBA @ 1 meter (no fan)			
COMPLIANCE				
Safety/EMC	(Article PSD650) EN62040-1 -1 :2003, IEC60950-1 : 2001, EN62040-2 2006			
RoHS	Directive 2011/65/EU			

SOLUTIONS FOR ALL INDUSTRIES

MYKI (Vic Transport)

PowerShield was selected to provide UPS protection for each of the communications cabinets for the wide-spread Myki public transport ticketing system in the state of Victoria that must be available at all times to thousands of customers.

PowerShield's Centurion RT, Lithium-Iron Phosphate UPSs, were able to meet the strict criteria of the project:

- Fitting perfectly into existing 2RU rack spaces
- Rack/Tower configurable
- Long-life battery backup with long run-times
- True online double conversion topologies
- SNMP communication capabilities.

ecoLiFePO4



PowerShield

NO POWERSHIELD = NO SECURITY

SOLUTIONS FOR ALL INDUSTRIES

BMS System – Circular Project

The Circular Quay Tower building in NSW utilises cutting edge systems integration solutions.

PowerShield Solutions installed throughout the building to support a wide range of function include:

- PowerShield Centurion tower and rack model UPSs ranging from 1000VA to 6000VA
- External battery packs to extend UPS battery backup times
- SNMP monitoring



SECURITY SYSTEM PROTECTION

NO POWERSHIELD = NO SECURITY

PowerShield

Ensure 24/7 System Functionality



- Fire Detection & Alarm
- Security Access & Control
- Digital Video
- Smoke Control
- Intrusion Detection
- Perimeter & Carpark

PowerShield UPSs will support critical security management functions throughout complete sites.



CUSTOMER SUPPORT



2 Year Standard Warranty (Battery Inclusive):

DC, SafeGuard & Defender Series

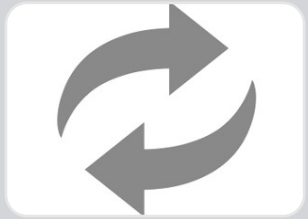
3 Year Standard Warranty (Battery Inclusive): Commander, Centurion Ranges



5 Year Warranty on LifeP04 models (Additional Extra Year Warranty Available)



Simple Online RMA Process



Advance Replacement



Conformal Coating Solutions Available