



# Backup and Power Protection Products



*Powering Business Worldwide*

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## Power quality management & services

Increase efficiency without sacrificing uptime

Eaton offers a comprehensive portfolio of backup power and distribution equipment to help clients maintain business continuity and prevent downtime.

Our solutions protect against a host of threats, from power outages, surges and lightning strikes to cyber security attacks. Eaton also provides a suite of power management services and solutions to enable you to monitor and control your power infrastructure.

Our expertise and technology have led to the development of industry leading solutions that make the most efficient use of our client's own resources. With Eaton, you can rely on product compatibility with key applications from leading IT innovators including VMware, Red Hat and Microsoft, amongst others, to adapt your solutions to accommodate future IT technologies.

## Segments



## Offerings & Solutions



Backup Power UPS



DC Power Systems



Network Connectivity



Power Management Software

# UPS SELECTOR GUIDE

**Simplify, Innovate**  
**& Connect with Eaton**

## 3 SERIES STANDBY UPS

Extended Service Plans (ESP) Available

3S	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	Form	Comms	Warranty	Applications
	3S600AU	600/360	(8) AUS 3 pin 10A	Fixed line cord 3 pin 10A AUS	Fixed line cord 3 pin 10A AUS	Power Board	USB	2 years	
	3S850AU	850/510							

## 5 SERIES LINE-INTERACTIVE UPS

Compatible Racks, ePDU's, Software & Extended Service Plans (ESP) Available

5E	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	Form	Comms	Warranty	Applications
	5E650IUSB-AU	650/360	(2) AUS 3 pin 10A						
	5E850IUSB-AU	850/480	(2) AUS 3 pin 10A						
	5E1100IUSB-AU	1100/660	(3) AUS 3 pin 10A	Fixed line cord 3 pin 10A AUS	None	Tower	USB	2 years	
	5E1500IUSB-AU	1500/900	(3) AUS 3 pin 10A						
	5E2000IUSB-AU	2000/1200	(3) AUS 3 pin 10A						

5S	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	Form	Comms	Warranty	Applications
	5S550AU	550VA/330W							
	5S700AU	700VA/420W							
	5S850AU	850VA/510W	(6) AUS 3 pin 10A	Fixed line cord 3 pin 10A AUS	USB	Tower	USB	2 years	
	5S1200AU	1200VA/750W							
	5S1600AU	1600VA/1000W							

5SC (Rack)	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	EBM	Form	Comms	Warranty	Applications
	5SC1500IR-AU	1500/1050	(8) IEC C13 10A	IEC C14 10A	(2) IEC 10A jumper, (1) AU 10A Input cable, USB, Serial	Yes (4)	Rack	USB/RS232/Minislot	2 years	

5SX	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	EBM	Form	Comms	Warranty	Applications
	5SX1250RAU	1250	(8) IEC C13 10A	10Amp	AU 10A Input cable					
	5SX1750RAU	1750	(8) IEC C13 10A	10Amp	USB, Serial	Yes (4)	Tower/Rack	USB/RS232/Remote On/Off, Remote Power Off	2 years	
	5SX3000RAU	3000	(8) IEC C13 10A (1) IEC C19 16A	16Amp	AU 16A Input cable USB, Serial					

5P	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	Form	Comms	Warranty	Applications
	5P650AU (T)	650/420	Tower:	Tower:	Tower:	Tower/Rack	USB/RS232/Minislot	3 years	
	5P650IR (R)		(2) AUS 3 pin 10A - Remotely controlled						
	5P850AU (T)	850/600	Rack:	Rack:	Rack:	Rack/Rack	USB/RS232/Minislot	3 years	
	5P850IR (R)		650VA & 850VA						
	5P1150AU (T)	1150/770	Rack:	Rack:	Rack:	Rack/Rack	USB/RS232/Minislot	3 years	
	5P1150IR (R)		(2) Remotely controlled						
	5P1550AU (T)	1550/1100	Rack:	Rack:	Rack:	Rack/Rack	USB/RS232/Minislot	3 years	
5P1550IR (R)	1150VA & 1550VA		IEC C14 10A						
5P1550AU (T)	1550/1100	Rack:	Rack:	Rack:	Rack/Rack	USB/RS232/Minislot	3 years		
5P1550IR (R)		(6) IEC C13 10A							IEC C14 10A
5P1550AU (T)	1550/1100	Rack:	Rack:	Rack:	Rack/Rack	USB/RS232/Minislot	3 years		
5P1550IR (R)		(3) Remotely controlled							IEC C14 10A

5P Lithium Ion	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	Form	Comms	Warranty	Applications
	5P1550GR-L	1550/1100	(6) IEC C13 10A. (3) Remotely controlled	IEC C14 10A	(2) IEC 10A jumper, USB, Serial	Rack	USB/RS232/Minislot	5 years	

5PX	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	EBM	Form	Comms	Warranty	Applications
	5PX1500IRT2UAUG2	1500/1500	(8) IEC C13 (10A)	IEC C14 (10A)	(2) IEC 10A Jumper, USB, Serial					
	5PX2000IRT2UAUG2	2000/2000	(4) Remote Controlled							
	5PX2200IRT2UAUG2	2200/2200	(8) IEC C13 (10A) (2) IEC C19 (16A)	IEC C20 (16A)	15 A AUS-IEC Input	Yes(4)	Rack/Tower	USB/RS232/Minislot	3 years	
	5PX3000IRT2UAUG2	3000/3000	Remote Controlled 2 x IEC C13 (10 A)		(2) IEC 10A jumper USB, Serial					
	5PX3000IRT3UAUG2		(2) IEC C13 (10 A) + 1 x IEC C19 (16A)							

## 9 SERIES ONLINE UPS

Compatible Racks, ePDU's, Software & Services Available

9E	Part Number	VA/Watts	Outlet type	Input	Cables	EBM	Form	Comms	Warranty	Applications	
	9E1000IAU	1000/800	(4) IEC C13 10A	IEC C14 10A	USB, Serial		Tower	USB/RS232/Minislot			
	9E2000IAU	2000/1600	(6) IEC C13 10A	IEC C14 10A	USB, Serial		Tower	USB/RS232/Minislot	1 year		
	9E3000IAU	3000/2400	(6) IEC C13 10A, (1) IEC C19 16A	IEC C20 16A	AU 16A Input cable, USB, Serial		Tower	USB/RS232/Minislot			
	9E6KI	6000/4800									
	9E10KI	10000/8000									
	9E10KIXL	10000/8000	HW	HW	USB	Yes	Tower	USB	2 years		
	9E15KI	15000/12000									
9E20KI	20000/16000										
9E20KIXL	20000/16000										

9SX Tower	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	Form	Comms	Warranty	Applications
	9SX700I-AU	700/630	(4) AUS 3 pin 10A	IEC C14 10A	AU 10A Input cable, USB, Serial				
	9SX1000I-AU	1000/900	(4) AUS 3 pin 10A	IEC C14 10A	AU 10A Input cable, USB, Serial				
	9SX1500I-AU	1500/1350	(4) AUS 3 pin 10A	IEC C14 10A	AU 10A Input cable, USB, Serial	Tower	USB/RS232/Minislot	2 years	
	9SX2000I-AU	2000/1800	(5) AUS 3 pin 10A, (1) IEC C19 16A	IEC C14 10A	AU 10A Input cable, USB, Serial				
	9SX6KI-AU	3000/2700	(5) AUS 3 pin 16A, (1) IEC C19 16A	HW	AU 16A Input cable, USB, Serial				

9SX Rack/Tower	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	Form	Comms	Warranty	Applications
	9SX15KPM AU + (2) 9SXEBM480RT6U	15000/15000	HW, (6) IEC C13 10A, (3) IEC C19 16A with optional MBP	HW	USB, Serial	Rack/Tower	USB/RS232/Minislot	2 year	
	9SX20KPM AU + (2) 9SXEBM480RT6U	20000/20000	HW, (6) IEC C13 10A, (3) IEC C19 16A with optional MBP	HW	USB, Serial	Rack/Tower	USB/RS232/Minislot		

9PX Small	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	EBM	Form	Comms	Warranty	Applications
	9PX1000IRT2U	1000	(8) IEC C13 (10A)	10Amp						
	9PX1500IRT2U	1500	(8) IEC C13 (10A)	10Amp	USB Serial Ext. Batt Comms cable	Yes (4)	Rack/Tower	USB/RS232/Remote On/Off, Remote Power Off/Output Relay	3 years	
	9PX2000IRTAU	2000	(6) IEC C13 (10A), (2) AUS GPO (10A)	10Amp						
	9PX2200IRT2U	2200	(8) IEC13 (10A), (2) IEC C19 (16A)	16Amp						
	9PX2200IRT3U	2200	(8) IEC13 (10A), (2) IEC C19 (16A)	16Amp						
	9PX3000IRT2U	3000	(8) IEC13 (10A), (2) IEC C19 (16A)	16Amp						
	9PX3000IRT3U	3000	(8) IEC13 (10A), (2) IEC C19 (16A)	16Amp						

9PX Lithium Ion	Part Number	VA/Watts	Outlet Qty & Type	Input	Cables	EBM	Form	Comms	Warranty	Applications
	9PX1500IRTANZ-L	1500	(8) IEC C13 (10A)	10Amp	USB Serial AUS Input cable 10A	Yes (4)	Rack/Tower	USB/RS232/Remote On/Off, Remote Power Off/Output Relay	5 years	
	9PX2000IRTAU-L	2000	(8) IEC C13 (10A), (2) AUS GPO (10A)	10Amp						
	9PX3000IRTANZ-L	3000	(8) IEC C13 (10A), (2) IEC C19 (16A)	16Amp	USB Serial AUS Input cable 16A					

9PX Large	Part Number	kVA/kW	Outlet Qty & Type	Input	Cables	EBM	Form	Comms	Warranty	Applications
	9PX5Ki	5000	HW (2) IEC C19 (8) IEC C13	HW	USB Serial Cable retention bracket (6kVA)	Yes (4)	Tower / Rack			
	9PX6Ki	6000/5400	HW (2) IEC C19 (8) IEC C13	HW	USB Serial Cable retention bracket (6kVA)	Yes (4)	Rack/ Tower	USB/RELAY/RS232/Minislot DB9 (4) Dry Contacts / DB15 Parallel	3 years (2 years battery)	
	9PX8KiPM + 9PXEBM240	8000/7200	HW HW + (4) IEC C19 16A with optional MBP	HW	USB Serial Cable retention bracket (6kVA)	Yes (12) (with supercharger module)	Rack/ Tower			
	9PX11KiPM + 9PXEBM240	11000/10000	HW HW + (4) IEC C19 16A with optional MBP	HW	USB Serial Cable retention bracket (6kVA)	Yes (12) (with supercharger module)	Rack/ Tower			

### Simplify

#### From Desktop to Datacentre

Eaton has solutions to cover any application with their 3-tiered range of UPS products to cater for every budget.

Essential

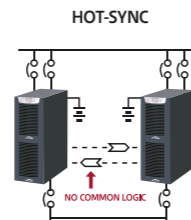
Superior

Premier

### Innovate

#### Hot-Sync Technology

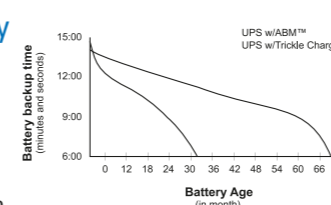
offers true wireless parallel capability and the elimination of a system-level single point of failure, resulting in higher system-level reliability.



#### ABM® Technology

Advanced Battery Management (ABM®) involves cyclic charging that reduces overcharging of battery and increases battery life.

BATTERY SERVICE LIFE WITH ABM®



### Connect

Visit our website for comprehensive product and service support. Just look for the icons on the right hand side bar or contact your sales rep for more information.

- Select a UPS
- Become an Eaton Partner
- Register a Product (Warranty)
- Download Software, Drivers & Firmware
- Designer Tool-Kit
- Order a Catalogue

### POWER ADVANTAGE

Rewards Program  
Become an Eaton Partner and start enjoying the benefits. Sign up today by visiting: [www.poweradvantage.eaton.com](http://www.poweradvantage.eaton.com)

# Selecting the Right UPS

Eaton's power management solutions are based on protecting the nine most common power problems present in any environment. This unique approach makes your product selection decisions about power protection much simpler. The nine power problems listed below are potentially harmful to both your data and your hardware. Eaton's products offer three levels of power protection:

Series 3, Series 5 and Series 9. Based on the parameters defined by your application, you can select an uninterruptible power system (UPS) from the series that best matches your power protection needs.

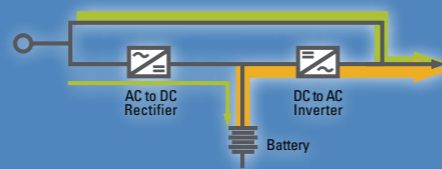
To provide maximum power protection, Eaton offers a full line of Series 9 UPSs with both single-phase and three-phase models in the Series 9 family.

Within each Series, Eaton has created 3 classes of products; to provide "Good, Better and Best" levels of features and performance and enable the best product fit for any application and budget.

## Series 3 Standby UPS: Backup power



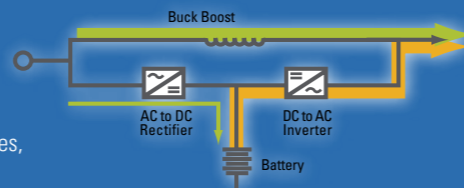
The Eaton's series 3 UPS primarily protects against three of the nine power problems including power failures, power sags and power surges. This essential, cost-effective protection is necessary in order to prevent damage such as data loss, file corruption, hardware damage and equipment shutoff. For example, if your utility fails you could lose all of your work-in-progress. The Series 3 UPS offers a degree of protection against the remaining power problems and is most commonly used to protect single workstations and point-of-sale (POS) equipment.



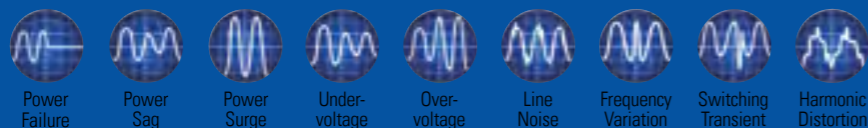
## Series 5 Line Interactive UPS: Keeping it smooth



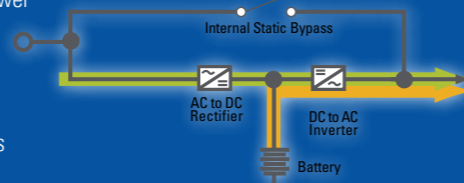
Eaton's series 5 UPS are most effective against five power problems (power failures, power sags, power surges, under-voltage and over-voltage) and offer a degree of protection against other power problems. Some of the damages you risk by not using a Series 5 UPS include premature hardware failure, data loss and corruption, data error, keyboard lockup, storage loss and system lockup. Series 5 UPSs are recommended for small network systems - all the way up to enterprise networking environments.



## Series 9 On Line Double Conversion UPS: Total Protection



Eaton's series 9 UPSs protect against all nine power problems: power failures, power sags, power surges, under-voltage, over-voltage, line noise, frequency variation, switching transients and harmonic distortion. Eaton's series 9 comprehensive protection minimises the opportunity for component stress, burnt circuit boards, data crashes and program failures. Series 9 UPSs offer the highest level of power protection available and are always recommended for mission-critical applications like server farms, hospitals and Voice Over Internet Protocol (VOIP) applications.



# Service

**Only Eaton can offer you the support from our factory-trained and certified service technicians located near you.**

Only Eaton is authorised to perform service using Eaton diagnostic software to calibrate start-up, reset communications, and perform critical service repairs. Service contracts are your best value compared to the cost and risk of time and material.

Downtime and lost data are priceless. Please do not wait until there is an emergency to realise the value of having a service contract.

Place your confidence with Eaton, a global leader with:

- A long history of technology leadership to give you the best protection
- The most complete line of hardware and software products to fit your needs
- A world-class services organisation to provide you with peace of mind

We have a range of service contract offers, that start from a basic preventative maintenance program and range to a comprehensive program including all parts and labour. These programs offer support to satisfy all your business requirements, options include business or after hours support and on-site technical response within 2 or 4 hours, supported 24 hours 7 days a week. We also offer a customer service support number and remote monitoring service to satisfy your on demand needs.

These programs can extend to 5 years and beyond so this gives you peace of mind that your initial investment will be supported in the coming months and years.

Please do not hesitate to contact your local sales representative to discuss your service requirements.



**24-hour telephone support:** 24-hour, 365-days-a-year access to Eaton's support engineers for immediate help on your UPS system. Available free of charge to all Service plan customers.

**Battery analysis and replacement:** Because batteries are the most important part of a UPS, we pay particular attention to their condition. Only rigorously tested, high-quality batteries are used in Eaton UPSs. Battery life is optimised through our ABM® battery charging method. Eaton's service engineers keep your batteries as good as new, changing them when necessary and disposing of the old batteries in an environmentally sound fashion. When the batteries are changed, all cabling is also replaced to prevent problems through oxidation. Finally, the battery system is tested under normal operating conditions.

**Extended warranty:** For a small fee, you can extend the warranty of your UPSs incrementally up to 5 years, for all single phase product range.

**Installation:** Eaton's service engineers can help you set up and configure your entire UPS, including its connections to your monitoring system and, if desired, to remote monitoring system.

**On line Remote Service:** Your UPSs can link directly to Eaton's regional Service Centre via the Web. Remote monitoring software residing on Eaton's computers will keep an eye on your UPS status, sounding an alarm immediately if its monitored parameters are out of the ordinary. The remote monitoring system can only link into your UPS. It has absolutely no access to your business data. Alarms received are relayed by mobile phone to Eaton's duty engineer who takes action immediately. The remote monitoring is an ideal enhancement to your service package. Ask your Eaton representative for details.

**Power quality analysis:** As time goes by, the loads on both your UPS and the mains may change. Eaton's service engineers can analyse the quality of the power being fed to your equipment and suggest remedies if necessary.

**Preventative maintenance:** Equipment cleaning, inspection of installation and operation environment, mechanical inspection, measurements and adjustments, battery condition check, system check, event log analysis, necessary action and eventual repairs. Usually performed once a year, unless otherwise agreed.

**Reports:** After each maintenance visit, whether regular or emergency, you receive a full written report on the fault and steps undertaken to repair it.

**Site inspections:** Consultative service that aims at securing the best possible operational environment for your UPS to ensure its fault-free operation.

**Spare parts:** Entering an Eaton service agreement guarantees you the use of only the best quality, factory-approved spare parts. Authorised Eaton's service representatives stock the most often needed spares, and their stocks are quickly replenished from Eaton's strategically located regional logistics centres. The cost of spares is included in all Powertrust Service Plan options.

**System upgrades:** During maintenance visits, our service engineers analyse the load and performance of your UPS and, if necessary, suggest changes to accommodate new needs. You will never find yourself running an obsolete or undersized system.

## Eaton Service Helpdesk

### Emergencies - Three phase products and Single phase greater than 6kVA

For emergencies you can call our 24 Hour Hotline where a service technician can be dispatched to attend site.

**AUST 1300 303 059**      **NZ 0508 697 378**

(Callout fees are reduced or do not apply depending on the service contract level you hold with Eaton)

## General Service Enquires

### You can reach us by calling our 24 Hour Hotline

**AUST - 1300 303 059**  
Hours: 8.30am to 6.00pm AEST on business days  
Email: [eeshelpdesk@eaton.com](mailto:eeshelpdesk@eaton.com)

**NZ - 0508 697 378**  
Hours: 8.30am to 5.00pm NZT on business days  
Email: [eeshelpdesk@eaton.com](mailto:eeshelpdesk@eaton.com)



## Eaton's Extended Warranty and Service Plans

Eaton's Extended Warranty and Service Plans (ESP) provides customers with a cost effective and hassle-free warranty uplift and service enhancements for Eaton's single phase UPS products.

Available in two options, the Standard offer covers up to the 5th year and business hour support. Strategically designed for the most critical IT assets, our Premium offer includes start up, commissioning and 24/7 support.

Contact our Service Support team at **1300 877 877** or email [Eatonanz@eaton.com](mailto:Eatonanz@eaton.com) for more information.

Inclusions	Standard	Premium
Applicable products 3S, 5E, 5S, 5SC, 5SX, 5P, 5PX, 9E, 9SX, 9PX	Single Phase UPS (exclude 9155, 91PS)	Hardwired Single Phase UPS (exclude 9155, 91PS)
Warranty Uplift	3rd, 4th or 5th year	3rd, 4th or 5th year
Same business day dispatch and advance replacement of UPS, power modules, and battery packs <sup>1</sup>	• Included	• Included
Next business day response onsite <sup>2</sup>	• Included	• Included
Collection and disposal of faulty unit <sup>3</sup>	• Included	• Included
Start-up/commissioning <sup>4</sup>	-	• Included
Access to Eaton Customer Service Support centre	8x5	24/7

### Terms and Conditions

- Same business day dispatch of Eaton UPS with single phase output (excludes 9155 and 91PS) with Advance Replacement and all logistics nationally.
  - Softwired Eaton UPS ≤3kVA is the customers responsibility to re-install.
  - Hardwired Eaton UPS >3kVA with single phase output (excludes 9155 & 91PS) replacement parts will be dispatched to site in advance or taken with the Service technician at the next business day onsite response<sup>2</sup>.
  - The cut off time for dispatch is 2:00 p.m. AEST/AESDT, Mon-Fri.
- Next Business Day response by Eaton Technician/Authorised Agent for hardwired Eaton UPS >3kVA with single phase output (excludes 9155 & 91PS) to attend to fault is only applicable for locations up to 60km from a metro state capital. Additional travel charges apply for areas outside this range. Includes basic disconnect/re-connect of UPS power tails as required. Please contact your Eaton Representative for travel charges for a selected area.
- Disposal collection will take place during the time of delivery of a new unit or next business day. Clients are to have Eaton products appropriately packaged and ready for collection to avoid additional transport charges.
- Initial start up to be conducted during normal business hours.
- All Eaton UPS systems must be installed and operated in accordance with manufacturers documented operating procedures. Failure to adhere to these procedures may void warranties.
- Extended Warranty registration can be done via [www.pqproductregistration.eaton.com/au/en-au/login.html](http://www.pqproductregistration.eaton.com/au/en-au/login.html). Registration will be required within 30 days from date of Warranty Uplift purchase. A confirmation email will be provided to the customer upon registration, for further information and scheduling details where applicable.

Download [Eaton's Standard Warranty Statement](#)



# Single Phase UPS

Critical protection for:  
Healthcare, Education, IT Networks,  
Small Data Centres, Home Offices,  
Commercial, and SMB

# Eaton 3S UPS



Technology: Series 3 (Standby)  
 Rating: 600 & 850VA  
 Voltage: 240V  
 Runtime: Typically 5 min  
 Configuration: Powerboard style

### Full protection

- Eaton 3S supplies battery backup power during outage and advanced surge protection to prevent damage from lightning strikes or accidental grid surge
- If power outage lasts longer than expected, Eaton software will gracefully shutdown your computer without losing any data
- Eaton 3S also integrates RJ11/xDSL connection to protect Internet gateways from perturbation through data line (850VA models).

### Modern usage and easy integration

- Compact and appealing design with glossy finish will perfectly fit in any modern residential or office environment
- Eaton 3S 850VA offer two 2A USB ports to charge any mobile devices (mobile phone, tablet, etc..)
- To facilitate installation, wall mounting system is implemented on all models.

### Peace of mind

- Surge protection circuits are compliant with IEC 61643-11 international standard
- 10A circuit breaker protects your equipment from overload (all models).

### Ideal for protecting

- Computers, peripherals and multimedia
- TV, video and Hi-Fi equipment: Home cinema, NAS, digital decoders, etc.
- Internet gateways
- Gaming console
- Broadband modems (Internet and TV) & IP telephony
- Household goods, etc

3S UPS Technical Specifications	Eaton 3S 600	Eaton 3S 850
Rating (VA/W)	600VA/360W	850VA/510W
<b>Connection</b>		
Output connection	4 outlets with battery backup and surge protection + 4 outlets with surge protection	
<b>Electrical characteristics</b>		
Nominal input voltage	220 - 240 V	
Input voltage range	Up to 168-295 V (adjustable)	
Output voltage	240V (adjustable to 220V/230V/240V)	
Input frequency range	50 / 60 Hz (46 - 65 Hz working range)	
Input protection	10A resettable circuit breaker	
<b>Battery</b>		
Battery type	Compact, sealed lead acid battery (replaceable)	
Battery test	Yes	
Cold start (no mains power)	Yes	
Deep-discharge protection	Yes	
Battery replacement indicator	LED	
Desktop PC*	16 min	20 min
Gaming PC / Workstation*	6 min	9 min
<b>Features</b>		
Communication	USB port (HID-compliant) for automatic integration with most common operating systems (Windows & Mac OS)	
USB charge	-	2 USB ports (2A max)
Phone/xDSL line protection	-	Yes
<b>Operating conditions, standards and approvals</b>		
Operating temperature	0 to 40°C	
Operating elevation	0 to 3000m	
Compliances	IEC 62040-1; IEC 62040-2 C2; IEC 62040-3; IEC 62040-4; IEC 61643-11	
Conformity	CE / RCM	
<b>Dimensions W x H x D / weight</b>		
UPS dimensions (mm)	325 x 86 x 140	335 x 86 x 170
UPS weight (kg)	3.2	4.3

\* Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

# Eaton 5E



Technology: Series 5 (Line Interactive)  
 Rating: 650 / 850 / 1100 / 1500 /  
 Voltage: 2000VA 230V  
 Backup Time: Typical 5 min  
 Configuration: Tower

The 5E line interactive uninterruptible power system (UPS) provides affordable power protection for your personal computers, home, office and other electronic devices. While packed with valuable features such as ANZ power receptacles and USB communications, the compact size is ideal for limited office and home working spaces.

### Features

- Automatic Voltage Regulation (AVR) stabilises fluctuating power sources
- Microprocessor control design ensures high reliability
- Up to three ANZ receptacles, allowing easy equipment connection
- Eaton UPS Companion software monitors power conditions and gracefully shuts down computer applications prior to battery depletion
- User replaceable batteries allow easy maintenance
- Start-on-battery provides portable power capability

### Ideal for protecting

- Computers and peripherals
- POS equipment



650-850VA

1100-2000VA

5E Series Technical Specifications					
Technology	Line Interactive (Automatic Voltage Regulation)				
<b>Rating, VA/Watts</b>	650VA / 360W	850VA / 480W	1100VA / 660W	1500VA / 900W	2000VA / 1200W
Model numbers	5E650IUSB-AU	5E850IUSB-AU	5E1100IUSB-AU	5E1500IUSB-AU	5E2000IUSB-AU
<b>Characteristics - input/output</b>					
Input voltage window	170-280 Volts				
Output voltage on battery	230V				
Frequency	50/60Hz, auto detection				
Output receptacles	2 x ANZ 3 pin 10A sockets		3 x ANZ 3 pin 10A sockets		
Input connection	Fixed 1.5M 10A ANZ 3 pin input cord included				
<b>Battery run time (minutes)</b>					
Typical backup times for 1 PC*	16	20	45	50	50
Typical backup times for 2 PC*	6	8	20	26	26
Typical backup times for 3 PC*	-	-	7	10	10
Typical backup times for 4 PC*	-	-	-	-	5
Start-On-Battery	Unit can be started without being connected to AC utility power, battery recharged is maintained even when UPS is off, whilst connected to mains.				
<b>User Interface</b>					
Visual	1 On / Off Green LED button, AC mode = Steady on, Battery mode = flashing				
Audible	Five audible alarms indicate operating modes; refer user manual				
<b>Communications / management</b>					
Power management software	Eaton UPS Companion power management software, downloadable via internet				
Connection type	1 x USB port to front panel				
Approvals	CE Marking, RCM				
<b>Dimensions and weights</b>					
Dimensions (H x W x D)	148 x 100 x 288 mm		180 x 133 x 330 mm		
Weight	4.6 kg	5.1 kg	9.3 kg	10.5 kg	10.5 kg
<b>Warranty</b>	2 years				
Warranty+	Optional warranty uplifts				

\* Battery run times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

# Eaton 5S



Technology: Series 5 (Line Interactive)  
 Rating: 550-1600VA  
 Voltage: 240 Vac  
 Backup time: Typical 4 min  
 Configuration: Tower



The Eaton 5S UPS provides effective power protection, even in disturbed electrical environments. Voltage fluctuations are automatically corrected using an AVR device (booster/fader), without needing the batteries.

The 5S not only provides a supply with battery backup to keep equipment operating during power cuts, but also provides effective protection against damaging surges.

The 5S protects networked equipment from 'back door' power surges coming through Ethernet, internet or telephone lines. The 5S's periodic automatic battery testing ensures early detection if a battery needs to be replaced. The easy-to-replace battery helps to extend the UPS service life.

The 5S can be installed vertically over or under a desk, or horizontally under a screen. Its compact, slimline form factor even allows it to be easily integrated into environments with space constraints. The 5S features an HID-compliant USB port, for automatic integration with common operating systems (Windows/ Mac OS/Linux). The 5S is also compatible with Eaton UPS Companion power management software. All models come bundled with a USB cable for PC connection.

Reduce wasted energy consumption from standby power drain of connected peripheral equipment with ECO Control function (850-1600VA models)

### Ideal for protecting

- Workstations
- Business telephony
- Network devices
- Point-of-sale equipment



5S Technical Specifications					
Rating (VA/W)	550VA/330W	700VA/420W	850VA/510W	1200VA/750W	1600VA/1000W
<b>Electrical characteristics</b>					
Technology	Technology Line-Interactive (AVR with Booster + Fader)				
Input voltage range	175V-275V				
Output voltage	240 V				
Frequency	50-60 Hz autoselect				
<b>Connections</b>					
Number of AUS outlets	6				
Outlets with surge protection and battery backup / outlets with surge protection only	3 / 3				
<b>Batteries</b>					
Typical backup times at 50 and 70% load*	10/6 min	9/5 min	9/5 min	9/5 min	9/5 min
Battery management	Automatic battery test, deep-discharge protection, cold-start capable, replaceable batteries				
<b>Communication</b>					
User Interface	LED		LCD		
Communication Port	HID-compliant USB port for automatic integration with most common operating systems (Windows Vista, 7 & 8, Linux, Mac OS X), cable supplied				
Data line protection	Tel/Fax/Modem/Internet and Ethernet				
<b>Standards</b>					
Safety & EMC	IEC/EN 62040-1, IEC/EN 62040 -2, CB Report, CE mark, RCM				
<b>Dimensions and weight</b>					
Dimensions H x W x D	250 x 87 x 260 mm		250 x 87 x 382 mm		
Weight	4.96kg	5.98kg	6.50kg	9.48kg	11.08kg
<b>Customer service and support</b>					
Warranty	2 years				
<b>Part numbers</b>					
5S	5S550AU	5S700AU	5S850AU	5S1200AU	5S1600AU

Battery run times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

# Eaton 5SC Short Depth Rack UPS



Technology: Series 5 (Line Interactive)  
 Rating: 1500VA  
 Voltage: 240 V  
 Backup time: Typical 6 min  
 Configuration: 2RU rack mount

### Ideal for protecting

- Rack or tower servers
- NAS, network equipments
- ATMs, ticket machines, kiosks

### Manageability

- The LCD interface provides clear status of the UPS key parameters such as input and output voltage, load and battery level, and estimated runtime. Essential configuration capabilities are also offered for output voltage, audible alarm and sensitivity.
- The 5SC offers USB and serial connectivity. USB port is HID compliant for automatic integration into Windows, Mac OS and Linux.
- A slot for an optional communication card (including SNMP/ Web card or relay contact card) is available on rack and R/T models. Eaton's Intelligent Power® Software Suite insures compatibility with all major OS including virtualisation software.

### Reliability

- Pure sinewave output: When operating in battery mode the 5SC provides a high quality output signal for any sensitive equipment connected, such as active PFC (power factor corrected) servers
- Buck and Boost operation corrects a wide range of input voltage variations through continuous regulation, without the use of batteries
- Stronger, longer battery life: Eaton ABM® battery management technology uses an innovative threestage charging system that extends battery life by up to 50%.

### Flexibility

- Designed to fit into short depth wall enclosures down to 500mm, 2 post racks or to be wall mounted
- Rail kits and ANZ Input cord are included as standard
- Easy battery replacement from front panel to extend UPS life.

5SC Short Depth Rack UPS Technical Specifications	
Rating (VA/W)	1500VA/1050W
Format	Rack 2U
<b>Electrical characteristics</b>	
Technology	Line Interactive High Frequency (Sinewave, Booster, Fader)
Input voltage range	184 to 276 V
Output voltage and frequency	230V (-10/+6 %) (Adjustable to 220/230/240 V), 50/60 Hz ± 1Hz (Autosensing)
<b>Connections</b>	
Input	1 IEC C14 (10A)
Outputs for Rack or R/T models	8 IEC C13 (10A)
<b>Batteries</b>	
Typical backup times at 50 and 70% load*	13/8 min
Battery management	ABM, automatic battery test, deep discharge protection
<b>Communication</b>	
Communication ports	1 USB port + RS232 serial port (USB and RS232 cannot be used simultaneously) ROO/RPO + card slot for Network-M2 card or Relay-MS card
<b>Operating conditions, standards and approvals</b>	
Operating temperature	0 to 40°C
Noise level	<45dB
Safety	IEC/EN 62040-1, UL1778
EMC	IEC/EN 62040-2
Approvals	CE /CB report (TUV), cTUVus ,RCM
<b>Dimensions and weight</b>	
Dimensions H x W x D	86.2 x 440 x 405 mm
Weight	17.8kg
<b>Customer service and support</b>	
Warranty	2 years

\* Runtimes are shown @ 0.7 power factor. Backup duration is approximate and may vary with equipment, configuration, battery age, temperature, etc. In the interests of continuous product improvement all specifications are subject to change without notice.

# Eaton 5P



Technology: Series 5 (Line Interactive)  
 Rating: 650-1550VA  
 Voltage: 230 Vac  
 Backup time: 5-10 minutes  
 Configuration: Rack and tower mount

## Manageability

The graphical LCD display provides clear information on the UPSs status and measurements on a single screen (in seven languages). Enhanced configuration capabilities are also available with easy-to-use navigation keys.

Meters energy consumption and provides kWh values through the LCD and Intelligent Power® Software. Load segment control enables prioritised shutdowns of nonessential equipment to maximise battery runtime for critical devices. Load segment control can also be used to remotely reboot locked-up network equipment or to manage scheduled shutdowns and sequential start-ups.

The 5P offers Serial and USB connectivity, plus an extra slot for an optional communication card (including SNMP/Web card or relay contact card). Eaton's Intelligent Power® Software Suite compatible with all major OS including virtualisation software such as VMware and Hyper-V is included with each UPS.

## Availability and flexibility

5P is available as a tower or rack form factor to cater for varied deployment applications. Stronger, longer battery life: Eaton ABM® battery management technology uses an innovative three-stage charging technique that only recharges the battery when necessary, so the battery experiences less corrosion and service life is prolonged by up to 50%.

Batteries can be hot-swapped without ever having to shut down connected equipment. With an optional, hot-swap maintenance bypass module, you can even replace the entire UPS.

## Performance and efficiency

With an optimised electrical design, the 5P can provide up to 98% efficiency, contributing to lower cooling and utility costs. When operating in battery mode the 5P provides a high quality output signal for any sensitive equipment connected, such as active PFC (power factor corrected) servers.

## Advanced protection for:

- Servers
- Switches
- Routers
- Storage devices



# Eaton 5P

5P Technical Specifications				
Rating (VA/W)	650VA / 420W	850VA / 600W	1150VA / 770W	1550VA / 1100W
Format	Tower or 1U Rack			
<b>Electrical characteristics</b>				
Technology	Line-Interactive High Frequency (Pure Sinewave, Booster + Fader)			
Input voltage and frequency without using batteries	160V-294V (adjustable to 150V-294V) 47 to 70 Hz (50 Hz system), 56.5 to 70 Hz (60 Hz system), 40 Hz in low-sensitivity mode			
Output voltage and frequency	230 V (+6/-10 %) (Adjustable to 200V / 208V / 220V / 230V / 240V), 50/60 Hz +/- 0.1 % (autosensing)			
<b>Connections</b>				
Input	Tower: Fixed line cord 10A AU 1.8mtr Rack: IEC C14 (10A) socket	Tower: Fixed line cord 10A AU 1.8mtr Rack: IEC C14 (10A) socket	Tower: Fixed line cord 10A AU 1.8mtr Rack: IEC C14 (10A) socket	Tower: Fixed line cord 10A AU 1.8mtr Rack: IEC C14 (10A) socket
Outputs	Tower: 2 x AU 10A, 3 x IEC Rack: 4 x IEC C13 (10A) C13 (10A)	Tower: 2 x AU 10A, 3 x IEC C13 (10A) Rack: 4 x IEC C13 (10A)	Tower: 2 x AU 10A, 3 x IEC C13 (10A) Rack: 6 x IEC C13 (10A)	Tower: 2 x AU 10A, 3 x IEC C13 (10A) Rack: 6 x IEC C13 (10A)
Remotely controlled sockets	Tower: 2 x 10A AU individually switched Rack: 2 x IEC C13 (10A) individually switched	Tower: 2 x 10A AU individually switched Rack: 2 x IEC C13 (10A) individually switched	Tower: 2 x 10A AU individually switched Rack: 2 x IEC C13 (10A) individually switched	Tower: 2 x 10A AU individually switched Rack: 2 x IEC C13 (10A) individually switched
<b>Batteries</b> Typical backup times for 50 and 70% load*				
5P	9/5.5 mins	12/7.5 mins	12/7.5 mins	13/8.5 mins
Battery management	ABM & temperature compensated charging method (user selectable), Automatic battery test, deep discharge protection, to automatic recognition of external battery units.			
<b>Interfaces</b>				
Communication ports	1 USB port + 1 RS232 serial port and relay contacts (USB and RS232 ports cannot be used simultaneously) + 1 mini terminal block for remote ON/OFF or Remote Power Off			
Communications card slots	1 slot for NETWORK-M2, INDGW-M2 or RELAY-MS cards			
<b>Operating conditions, standards and approvals</b>				
Operating temperature	Models 650, 850 & 1550 = 0°C to +35°C, Model 1550 = 0°C to +40°C			
Noise level	< 40dBA			
Performance - Safety - EMC	IEC/EN 62040-1-1 (Safety), IEC/EN 62040-2 (EMC), IEC/EN 62040-3 (Performance)			
Approvals	CE, CB Report(TUV), RCM			
<b>Dimensions W x D x H / weight</b>				
UPS dimensions (mm) & weight (kg) - Tower	150 x 345 x 230mm / 7.8kg	150 x 345 x 230mm / 10.4kg	150 x 345 x 230mm / 11.1kg	150 x 445 x 230mm / 15.6kg
UPS dimensions (mm) & weight (kg) - Rack	438 x 364 x 43.2mm(1RU) / 8.6kg	438 x 509 x 43.2mm(1RU) / 13.8kg	438 x 509 x 43.2mm(1RU) / 14.6kg	438 x 554 x 43.2mm(1RU) / 19.4kg
<b>Customer service &amp; support</b>				
Warranty	3 years			
<b>Part numbers</b>				
5P Tower	5P650AU	5P850AU	5P1150AU	5P1550AU
5P Rack	5P650iR	5P850iR	5P1150iR	5P1550iR

\* Runtimes are shown at 0.7 power factor. Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

# Eaton 5P Lithium-ion rackmount UPS



Technology: Series 5 (Line Interactive)  
 Rating: 1550VA  
 Voltage: 240V  
 Battery type: Lithium Ion Internal only  
 Configuration: 1U rack mount

Progression in battery technology and remote management come together to make the 5P Lithium-ion rackmount UPS a necessity for edge computing environments. The lithium-ion UPS' "set it and forget it" value proposition allows IT managers to easily deploy the 5P without the maintenance and refresh challenges of a UPS utilising lead-acid batteries.

Building on the success of the 5P UPS platform, Eaton has reduced the weight, improved battery life and lengthened our warranty. These added benefits, in combination with the extended life of the product, provide IT managers with the opportunity to align their UPS refresh cycles with the rest of the IT stack, saving time and money spent on labor and replacement batteries.

## Value-added benefits for the 5P Lithium-ion:

### Performance

**2-3X longer battery lifespan** allows users to "set it and forget it" — a perfect value-add for remote edge environments.

### Resiliency

**3X faster recharge** following power disruptions reduces vulnerability and improves uptime.

### Safety

**On-board battery management system (BMS)** monitoring in combination with proven Lithium Iron Phosphate (LiFePO4) chemistry provides a reliable and safe offering.

### Intelligence

**BMS provides up-to-date insight** into battery performance, charge cycles and active temperature monitoring to keep the user informed on the lifecycle of their UPS battery.

### Installation

**Lightweight design** that is 20% less weight than a comparable lead-acid UPS in combination with versatile mounting options allow for ease of deployment.

### Guarantee

**5 year all-inclusive** (electronics and battery) warranty, provides peace of mind for customers.

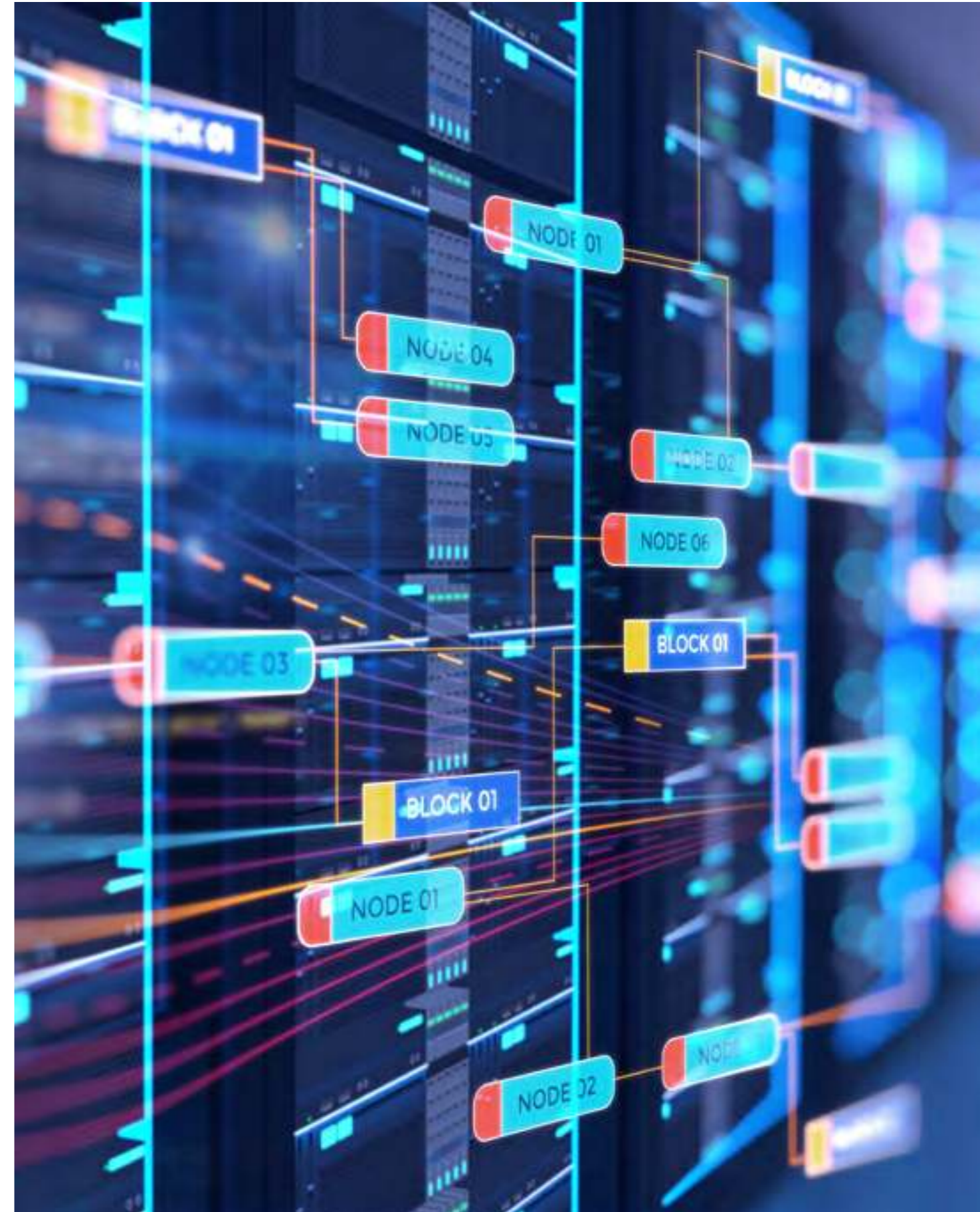
## 5P Lithium-ion Rackmount Selection Guide

Catalogue number	Description	Rating (VA/watts)	Input connection	Output receptacles	Dimensions (H x W x D), mm	Net weight, kg
<b>1U Global Rackmount, 208V/230V, 50/60Hz model</b>						
5P1550GR-L	5P 1550VA Lithium-ion UPS	1550/1100	C14	(6) C13	43.18 (1U) x 436.88 x 553.72	16.33

\* Due to continuous product improvement programs, all specifications are subject to change without notice. Please visit Eaton.com/5Pm to view complete and updated product specifications, including complete battery runtimes.

## 5P Lithium-ion Options

Connectivity	Description
NETWORK-M2	Gigabit Network Card
EMPDT1H1C2	Environmental Monitoring Probe (EMP) Gen 2 for use with Network-M2
RELAY-MS	Relay / Serial Interface Card
<b>Mounting hardware</b>	
5PRACKIT1U	1U two-post rail kit (optional)



# Eaton 5SX UPS



1. Graphical LCD display
2. Panel for batteries replacement (Hot swappable)
3. USB port + Serial port
4. 8 IEC 10A (+1 IEC 16A outlets for 3000VA models)
5. Communication card slot (Rack and R/T models only)
6. ROO/RPO terminal (Rack and R/T models only)



## Manageability

- The LCD interface provides clear status of the UPS key parameters such as input and output voltage, load and battery level, and estimated runtime. Essential configuration capabilities are also offered for output voltage, audible alarm and sensitivity.
- The 5SX offers USB and serial connectivity. USB port is HID compliant for automatic integration into Windows, Mac OS and Linux.
- A slot for an optional communication card (including SNMP/Web card or relay contact card) is available. Eaton's Intelligent Power® Software Suite insures compatibility with all major OS including virtualisation software.

## Flexibility

- R/T models authorises either tower or rack installation - pedestals are included, rail kits are an optional extra.
- Easy battery replacement from front panel to extend UPS life.
- Up to 4 EBM's can be added for longer runtimes

## Reliability

- Pure sinewave output: When operating in battery mode the 5SX provides a high quality output signal for any sensitive equipment connected.
- Buck and Boost operation corrects a wide range of input voltage variations through continuous regulation, without the use of batteries.
- Stronger, longer battery life: Eaton ABM® battery management technology uses an innovative three-stage charging system that extends battery life by up to 50%.

## Ideal for protecting

- NAS, network equipment
- ATMs, ticket machines, kiosks

## Eaton 5SX

5SX Technical Specifications			
Technical specifications	5SX1250AU	5SX1750AU	5SX3000AU
Rating (VA/W)	1250VA/1125W	1750VA/1575W	3000VA/2700W
Format	Tower selectable, Rack (5SXRACKKIT2U)		
<b>Electrical characteristics</b>			
Technology/output	Line Interactive, pure sine wave output		
Input voltage ranges without using batteries	160V - 290V		
Output voltage	240V		
Output frequency	Auto sensing, 50Hz default		
<b>Connections</b>			
Input	IEC C14-AU 10A	IEC C14-AU 10A	IEC C20-AU 16A
Outputs	8*IEC C13 outlets	8*IEC C13 outlets	8*IEC C13 outlets + 1*IEC C19 outlets
<b>Batteries**</b>			
EBM	5SXEBM48R2U	5SXEBM48R2U	5SXEBM72R2U
1UPS	5min	3.7min	2.4min
1UPS+1EBM	23min	19.4min	16.8min
1UPS+2EBM	47min	35min	33.7min
Battery management	ABM		
<b>Power management</b>			
Communication ports	1 USB port +1 RS232+ 1 communication slot		
Connectivity cards	NETWORK-MS, relay card		
Software	IPSS		
<b>Operating conditions, standards and approvals</b>			
Operating temperature	0-40°C		
Noise level	<40db		
Regulations	EN62040-2, EN61000-4		
<b>Dimensions D x H x W / weight</b>			
Dimensions (mm)	522*441.2*86.2(2U)		647*441.2*86.2(2U)
Weight (kg)	25.4	26.6	35.3
<b>Customer service &amp; support</b>			
Warranty	2 years		

\* Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

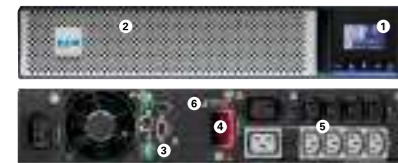
\*\* Based on 100% load

# Eaton 5PX Gen 2 UPS

1500W, 2000W, 2200W, 3000W



Rack/Tower versatility



Eaton 5PX Gen 2 2200i RT2U

- 1 Graphical LCD display :
  - Clear information on UPS status and measurements
  - Enhanced configuration capabilities
  - Available in 9 languages
- 2 Panel for batteries replacement (Hot-swappable)
- 3 1 USB port + 1 serial port + remote ON/OFF and remote power OFF inputs +output relay
- 4 External battery (EBM) connector
- 5 8 IEC 10 A + 2IEC 16 A sockets with energy metering (including 5 remote controlled sockets)
- 6 Communication card slot



Intuitive LCD display for ease of configuration and management



#### Advanced protection for:

- Servers
- Switches
- Routers
- Storage devices

#### Availability and flexibility

- 5PX Gen 2 3000VA are available in RT2U format (optimised for rack mounting) or RT3U (for tower or short-depth racks). Pedestal and rail kits are included with all models.
- 5PX Gen 2 Load segment control enables prioritised shutdowns of non-essential equipment to maximise battery runtime for critical devices (2 groups).
- Eaton ABM<sup>®</sup> battery management technology uses a three-stage charging technique that optimises battery health and extends lifetime by up to 50%.
- Up to 4 external hot-swappable battery modules can be added for longer power availability.

## Exceptional efficiency, manageability and energy metering capabilities for IT managers

### Performance and efficiency

- With unity power factor output (W=VA), Eaton 5PX Gen 2 provides 11% more power than other UPS in its class, protecting more servers with a single unit.
- Energy Star 2.0 certified, 5PX Gen 2 offers best-in-class efficiency performance to reduce energy consumption and cooling costs.
- When operating in battery mode the 5PX provides a high-quality output signal for any sensitive equipment connected, such as active PFC (power factor corrected) servers.
- Each 5PX Gen 2 battery configuration provides the best size/ runtime ratio.

### Management and Cybersecurity

- Innovative graphical LCD display brings all operating information at a glance. It also enhances commissioning and configuration capabilities.
- 5PX Gen 2 is compatible with Eaton's Gigabit network management card, which provides Dual cybersecurity certifications (UL 2900-1 & IEC 62443-4-2) and enables connection to remote monitoring solutions safely.
- Together with 5PX Gen 2, Eaton Gigabit network management card allows both remote UPS settings and remote firmware upgrade to ensure easy deployment (fleet management) and reduced maintenance cost.
- 5PX Gen 2 monitors energy consumption right down to the managed outlet groups. kWh values can be monitored using the LCD or Eaton's Intelligent Power Software.
- Eaton's Intelligent Power Software seamlessly integrates with leading virtualisation environments and cloud orchestration tools.

## Eaton 5PX Gen 2 UPS

Technical Specifications	1500	2000	2200	3000
Rating (VA/W)	1500VA/1500W	2000VA/2000W	2200VA/2200W	3000VA/3000W
Format	RT2U (tower/rack 2U)	RT2U (tower/rack 2U)	RT2U	RT2U or RT3U

Electrical Characteristics	
Technology	Line-Interactive High Frequency (Pure Sinewave, Booster + Fader)
Input voltage range without batteries	160V-294V (adjustable to 150V-294V)
Input frequency range without batteries	47 to 70 Hz (50Hz system), 56.5 to 70Hz (60Hz system), 40Hz in low-sensitivity mode
Output voltage	230V (+6/-10%)(Adjustable to 200V*/208V/220V/230V/240V), 50/60 Hz +/-0.1 Hz (autosensing)

Connections	
Input	IEC C14 (10A) IEC C14 (10A) IEC C20 (16A) IEC C20 (16A)
Output	(8) IEC C13 (10A) (8) IEC C13 (10A) (8) IEC C13 (10A) (2) IEC C19 (16A) (8) IEC C13 (10A) (2) IEC C19 (16A)
Remote controlled sockets	2 groups of (2) IEC C13 (10A) 1 group of (2) IEC C13 (10A) + (1) IEC C19 (16A)

Batteries	
Typical Backup Times**	300W 500W 800W 1200W 1800W 2500W
5PX 1500	44 24 13 7
5PX 1500 + 1 EBM / 4 EBM	164/611 92/346 53/199 33/123
5PX 2000	50 28 16 9 4
5PX 2000 + 1 EBM / 4 EBM	242/958 138/551 80/319 49/197 30/121
5PX 2200	50 28 16 9 4
5PX 2200 + 1 EBM / 4 EBM	242/958 138/551 80/319 49/197 30/121
5PX 3000	68 39 23 13 7 4
5PX 3000 + 1 EBM / 4 EBM	255/950 146/546 86/323 54/201 33/124 22/84

Battery management	ABM <sup>®</sup> Temperature compensated charging method (user selectable). Automatic battery test, deep discharge protection, automatic recognition of external battery units
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Interfaces	
Communication ports	1 USB port + 1 serial RS232 port + 1 mini-terminal block for Remote ON/OFF + 1 mini-terminal block for Remote Power OFF + 1 mini-terminal block for output relay
Communication slot	1 slot for Network-M2, INDGW-M2, or RELAY-MS cards

Operating conditions, standards and approvals	
Operating temperature	0 to 40°C
Noise level	<40 dB @ typical load
Safety	IEC/EN 62040-1, UL1778, CSA22.2
EMC, Performance	IEC/EN 62040-2, FCC Class B, CISPR22 Class B
Approvals	CE / CB report (TUV) / cTUVus / EAC / UKCA / Ukr / Cm / RCM

Dimensions W x D x H / Weight	
UPS Dimensions (mm)	438x448x85.5 438x603x85.5 438x603x85.5 (RT2U) 438x603x85.5 (RT2U) 438x483x129 (RT3U)
UPS Weight (kg)	22.4 28 28.2 (RT2U) 31.7 (RT2U) / 31.1 (RT3U)
EBM dimensions (mm)	438x448x85.5 438x603x85.5 (RTU2) 438x603x85.5 (RT2U) 438x483x129 (RT3U) 438x483x129 (RT3U)
EBM weight (kg)	27.8 40.4 (RT2U)/39.7 (RT3U) 40.4 (RT2U)/39.7 (RT3U) 40.4 (RT2U) / 39.7 (RT3U)

Customer Service & Support	
Warranty	3 years (See ANZ Warranty Statement)

\*5% derating @ 200V

\*\*Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

Part Numbers*	1500	2000	2200	3000
UPS RT2U	5PX1500IRT2UAUG2	5PX2000IRT2UAUG2	5PX2200IRT2UAUG2	5PX3000IRT2UAUG2
UPS RT3U				5PX3000IRT3UAUG2
EBM RT2U	5PXEBM48RT2UG2	5PXEBM72RT2UG2	5PXEBM72RT2UG2	5PXEBM72RT2UG2
EBM RT3U			5PXEBM72RT3UG2	5PXEBM72RT3UG2

In the interest of continuous product improvement, all specifications are subject to change without notice.

\* All 5PX UPS and EBM are delivered with rack kit

# Eaton 9E UPS



9E 10kVA



LCD display for clear information on the UPS' status and measurements

## Essential Online UPS

### Reliability and performance

- The Eaton 9E constantly monitors power conditions and regulates voltage and frequency due to the online double conversion topology.
- Power more servers than most similar UPSs due to a 0.8 power factor.
- Trust a leading manufacturer with decades of experience and high quality standards: CE compliance certified by external agency (CB report from the TUV).

### Manageability

- Get clear information on the UPS' status and measurements (load level, battery level, input/output voltage and frequency) on a single screen with the new LCD interface.
- Easily communicate with the UPS through USB, RS232 serial or over the network with the optional network card (Network-M2). Relay cards or ModBus cards are also available.
- Integrate 9E into all software environments. The Eaton 9E is delivered with Eaton's Intelligent Power™ Software and is compatible with all major OS including advanced integration in VMware vCenter and Microsoft Hyper-V.

### Flexibility

- The internal bypass allows service continuity in case of an internal fault. A maintenance bypass is also available at 6kVA and above as standard for easy maintenance of the UPS without powering down critical systems.
- Make your installation more flexible with a combo input (3:1 and 1:1) on the 10kVA, 15kVA, and 20kVA.
- Extend runtime as you like by adding up to 4 external battery modules (EBM) for 2kVA and above. For extra-long runtime, XL models with internal supercharger are also available at 3kVA, 10kVA and 20kVA.

### Advanced protection for:

- ATM
- Infrastructure
- Industrial and Medical IT
- Networking
- Storage
- Telecom
- Transportation

## 9E 1-3kVA

Technical Specifications	1500VA	2000VA	3000VA	3000VA XL
Rating (VA/W)	1000VA/800W	2000VA/1600W	3000VA/2400W	3000VA/2400W
Format	Tower			
<b>Electrical Characteristics</b>				
Technology	Online double conversion			
Input Voltage	208/220/230/240V			
Input voltage range without using batteries	176-300V without derating (up to 100-300V with derating)			
Output Voltage	208/220/230/240V±1 %			
Output THDU	THDU: <2% for 100% linear load, <6% for 100% non-linear load			
Input frequency range	40Hz-70Hz, 50/60Hz autoselection			
Efficiency	up to 91% in online mode, up to 97.5% in high efficiency mode(ECO mode)			
Overload capacity (in on-line mode)	105%-130% : 60s, 130%-150% : 10s, >150% : ≥300ms			
Recharge time to 90% battery capacity	4 hours	4 hours	4 hours	depends on external battery
Extendable backup time	NA	YES	YES	YES
Compatible EBM type	NA	9EEBM72	9EEBM72	9EEBM72

## 9E 1-3kVA Continued

<b>Connections</b>				
Input	IEC C14	IEC C14	IEC C20	IEC C20
Output	4 x IEC C13	6 x IEC C13	6 x IEC C13 + 1 x IEC C19	6 x IEC C13 + 1 x IEC C19
<b>Typical backup times at 50%/100% Load (minutes)</b>				
9E	11/4.5	16/6.4	13.4/4.7	NA
9E + 1 EBM	NA	78/35	49/22	31/12
9E + 4 EBM	NA	243/119	173/83	152/73
<b>Communication</b>				
Communication ports	1 USB port + 1 RS232 serial port (USB and RS232 ports cannot be used simultaneously)			
Communication slot	1 slot for Network-M2, INDGW-M2 or Relay-MS cards			
Software	Intelligent Power Software			
<b>Operating conditions, Standards and Approvals</b>				
Operating temperature	0 to 40°C			
Noise level	37dB @ typical load	40dB @ typical load	40dB @ typical load	40dB @ typical load
Safety	IEC/EN 62040-1			
EMC, Performance	IEC/EN 62040-2			
Approvals	CE, CB report (TUV), RCM			
<b>Dimensions D x H x W / Weight</b>				
UPS Dimensions (mm)	356 x 228 x 144	399 x 330x 190	399 x 330x 190	399 x 330x 190
UPS Weight (kg)	9.5	22.4	24.2	7.9
EBM dimensions (mm) (for 2000/3000VA)	399 x 327 x 190			
EBM weight (kg)	35.8			

## 9E 6-20kVA

Technical Specifications	6kVA 1:1	10kVA 1:1 and 3:1	15kVA 1:1 and 3:1	20kVA 1:1 and 3:1
Rating (VA/W)	6kVA/4.8kW	10kVA/8kW	15kVA/12kW	20kVA/16kW
Format	Tower			
<b>Electrical Characteristics</b>				
Technology	Online double conversion			
Input voltage	220/230/240V			
Input voltage range without using batteries	176-276V without derating (up to 110-276V with derating)			
Output voltage/THDU	220V/230V/240V ±1 %, THDU<3%			
Input frequency range	45Hz-66Hz, 50/60Hz autoselection			
Efficiency	Up to 93% in Online mode, 97% in ECO mode			
Short circuit current	82A	137A	205A	273A
Overload capacity	105%-110% : 5min, 110%-130% : 1min, 130%-150% : 10s, >150% : 100ms			
<b>Connections</b>				
Input	Terminal block			
Outputs	Terminal block			
<b>Typical backup times at 50% and 75% load</b>				
9E	20/12	15/9	16/9	15/9
9E + 1 EBM	75/47	60/36	38/26	27/19
9E + 4 EBM	222/140	170/110	117/76	82/54
<b>Communication</b>				
Communication ports	1USB port + 1 RS232 serial port (USB and RS232 ports cannot be used simultaneously)			
Communication slot	1 slot for Network-M2, INDGW-M2 or Relay-MS cards			
Software	Intelligent Power Software			
<b>Operating conditions, Standards and Approvals</b>				
Operating temperature	0 to 40°C			
Noise level	<55dB			
Safety	IEC/EN 62040-1			
EMC, Performance	IEC/EN 62040-2			
Approvals	CE, CB report (TUV), RCM			
<b>Dimensions D x H x W / Weight</b>				
UPS Dimensions (mm)	612.9 x 708.5 x262.4	612.9 x 708.5 x262.4	706 x 815.5 x 350	706 x 815.5 x 350
UPS Weight (kg)	68	85.4	145.3	159.9
EBM dimensions (mm)	579.4 x 708.5 x 262.4	579.4 x 708.5 x 262.4	579.4 x 708.5 x 262.4	579.4 x 708.5 x 262.4
EBM weight (kg)	105.5	132	132	132
UPS with supercharger (and no batteries) dimensions (mm)	-	612.9 x 708.5 x 262.4	-	706 x 815.5 x 350
UPS with supercharger (and no batteries) weight (kg)	-	28.9	-	47.8

# Eaton 9SX UPS

Technology: Series 9, (Double Conversion On Line)  
 Rating: 700 - 6000VA  
 Voltage: 208-240V  
 Configuration: Tower



Combining reliable double-conversion topology, internal static bypass and an easy-to-read LCD menu display, the Eaton 9SX UPS provides the highly efficient and reliable power you expect from a 9-series UPS in a convenient tower form factor. Network, Modbus, Relay and signal input functionality enables integration into a variety of IoT and IIoT applications.

## Protect the business you've worked hard to grow:

### Reliable power for critical systems

The 9SX offers the robust double-conversion, online power protection needed for medical, light industrial, automation and mission critical IT applications. With zero transfer time to battery, continuous filtering of power, and an internal, automatic static bypass, the 9SX ensures performance and compatibility.

### Increased battery life

Eaton offers ABM technology that increases battery service life by 50 percent. ABM uses advanced charging techniques to extend battery life and provides advanced notice before batteries fail.

## Get more so you can do more

### More power

By providing up to 28 percent more wattage compared to traditional UPSs, the 9SX allows you to connect more devices and leave room for expanding IT systems.

### More control

Automate power delivery by utilising switchable, programmable outlets, without the need of a third party device or PDU. Programmable signal input through the RPO port also enables the UPS to change operating modes in reaction to external events.

## Gain efficiencies in your operations

### Integrate and standardise communications

Maximise uptime with remote monitoring and management of your 9SX via an Eaton connectivity and software. SNMP, serial, USB, Modbus, and relay options enable integration regardless of the system architecture. Remote Power Off/Remote On Off signal input also manages UPS On/Off state preserving battery life during process shutdown.

### Advanced LCD interface

Simplify UPS monitoring with Eaton's advanced LCD display. Easy access to UPS alarm history, energy logs, unit serial numbers and firmware versions enable first time issue resolution right at the source. Eight, user-selectable languages ensure success for global deployments.

## Eaton 9SX UPS

9SX UPS Tower Technical Specifications						
Technical specifications	700 VA	1000 VA	1500 VA	2000 VA	3000 VA	6000 VA
Rating (VA/W)	700VA/630W	1000VA/900W	1500VA/1350W	2000VA/1800W	3000VA/2700W	6000VA/5400W
Format	Tower					
<b>Electrical characteristics</b>						
Technology	ON-LINE double conversion with automatic bypass and Power factor correction system					
Nominal voltage	200/208/220/230/240V					
Input voltage range	190-276V without derating (up to 120-276V with derating)			200-276V without derating (up to 140-276V with derating)		180-276V without derating (up to 120-276V with derating)
Input frequency range	40-70Hz, 50/60Hz autoselection, frequency converter mode					
<b>Connections</b>						
Input	1 IEC C14 (10A)	1 IEC C14 (10A)	1 IEC C14 (10A)	1 IEC C14 (10A)	1 IEC C20 (16A)	Ph+N+E Terminal block
Output	4 AU (10A) sockets	4 AU (10A) sockets	4 AU (10A) sockets	5 AU (10A) sockets	5 AU (13A) sockets 1 IEC C19 (16A) socket	Ph+N+E Terminal block 1 IEC C19 (16A) socket
Switched outlet group	2 group programmable outlets					None for 6kVA
<b>Batteries</b>						
Typical backup times*	<b>300W</b>	<b>500W</b>	<b>800W</b>	<b>1200W</b>	<b>1800W</b>	<b>2500W</b>
9SX700I-AU	14	7,5				
9SX1000I-AU	24	14	7			
9SX1000I-AU + 1 EBM/+4 EBM	90/320	56/200	33/120			
9SX1500I-AU	39	23	12	7		
9SX1500I-AU + 1 EBM/+4 EBM	142/520	85/310	50/179	31/115		
9SX2000I-AU	62	36	22	13	7	
9SX2000I-AU + 1 EBM/+4 EBM	280/1050	165/620	100/390	65/250	40/160	
9SX3000I-AU	78	45	29	17	10	6
9SX3000I-AU + 1 EBM/+4 EBM	290/1100	175/630	108/421	68/255	45/168	30/112
	<b>900W</b>	<b>1800W</b>	<b>2700W</b>	<b>3600W</b>	<b>4500W</b>	<b>5400W</b>
9SX6KI-AU	66	28	18	11.5	8	6
9SX6KI-AU + 1 EBM/+4 EBM	250/1016	111/478	67/250	46/180	35/143	28/112
Battery management	ABM® and Temperature compensated charging method (user selectable), automatic battery test, deep discharge protection, automatic recognition of external battery units					
<b>Communication</b>						
Communication ports	1 USB port + 1 serial RS232 port + 1 mini-terminal block for Remote Power Off + mini-terminal block for Output relay					
Communication slot	1 slot for Network-M2, Network-MS, ModBus-MS or Relay-MS cards					
<b>Operating conditions, standards and approvals</b>						
Operating temperature	0 to 40°C					
Typical noise level	40dB	41dB	43dB	45dB	45dB	46dB
Safety	IEC/EN 62040-1					IEC/EN 62040-1
EMC	IEC/EN 62040-2 (Emissions, Category C1)					IEC/EN 62040-2 (Emissions, Category C2)
Approvals & markings	CE / CB report (TUV) / RCM					CE / CB report (TUV) / RCM
<b>Dimensions H x W x D in mm / weight</b>						
UPS	252x160x357/11.5kg	252x160x387/14.8kg	252x160x437/18.5kg	346x214x412/33.3kg	346x214x412/33.4kg	575x244x542/65.5kg
EBM		252x160x387/19kg	252x160x387/24.5kg	346x214x412/48.7kg	346x214x412/48.7kg	75x244x542/104.9kg
<b>Customer service and support</b>						
Warranty	2 years					

\* Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

# Eaton 9PX UPS 2kVA/1800W



1. Graphical LCD display :  
- Clear information on UPS status and measurements  
- Enhanced configuration capabilities
2. Panel for batteries replacement (Hot swappable)
3. Slot for Management card
4. Outputs: IEC 10A, AUS GPO 10A with energy metering (including 2 prog'able groups G1 & G2)
5. USB port, 1 serial port, Remote ON/OFF, Remote power OFF and Relay output
6. External battery (EBM) connector



## Performance and efficiency

- 9PX 2kVA UPS is designed to provide 0.9 power factor powering more servers with equivalent VA ratings and lower power factors
- Energy Star qualified, the 9PX provides the highest efficiency level to reduce energy and cooling costs
- Double conversion topology. The Eaton 9PX constantly monitors power conditions and regulates voltage and frequency
- With a versatile Rack/Tower form factor.

## Availability and flexibility

- 9PX 2000 is available in RT2U format (optimised for rack mounting), pedestal and rail kits are included with all models
- The internal bypass allows service continuity in case of internal fault, for easy replacement of the UPS.
- Stronger, longer battery life: Eaton ABM® battery management technology uses an innovative three-stage charging technique that extends battery life by up to 50%
- More runtime can be added with up to 4 external hot-swappable battery modules, able to run systems for hours if necessary.

## Manageability

- The graphical LCD display provides clear information on the UPS's status and measurements on a single screen. Enhanced configuration capabilities are also available
- 9PX can meter energy consumption right down to the managed outlet groups. kWh values can be monitored using the LCD or Eaton's Intelligent Power® Software
- Load segment control enables prioritised shutdown of non-essential equipment to maximise battery runtime for critical devices
- 9PX offers Serial and USB connectivity, plus an extra slot for an optional communication card. Eaton's Intelligent Power® Software seamlessly integrates with leading virtualisation environments and cloud orchestrations tools.

## Eaton 9PX UPS 2kVA/1800W

9PX UPS Technical Specifications	2000VA		
Rating (VA/W)	2000VA/1800W		
Format	RT2U (tower/rack 2U)		
<b>Electrical characteristics</b>			
Technology	On-line double conversion with Power Factor Correction (PFC) system		
Nominal voltage	200/208/220/230/240V		
Input voltage range	176-276V without derating (up to 100-276V with derating)		
Input frequency range	40-70Hz, 50/60Hz auto-selection, frequency converter mode		
Efficiency	up to 93% in online mode (up to 98% in Hi-efficiency mode)		
<b>Connections</b>			
Input	(1) IEC C14 (10A)		
Outputs	(4) IEC 13 (10A) + (2) AUS GPO (10A)		
Switched outlet group	2 outlet groups		
Switched outlet	(2) IEC C13 (10A) + (2) AUS GPO (10A)		
<b>Batteries</b>			
Typical backup times (minutes)*	500W	900W	1800W
9PX 2000	23	12	4
9PX 2000 + 1 EBM	114	65	29
9PX 2000 + 4 EBM	453	261	118
Battery management	ABM® & temperature compensated charging method (user selectable), automatic battery test, deep discharge protection, automatic recognition of external battery units		
<b>Communication</b>			
Communication ports	1 USB port + 1 serial RS232 port + 1 mini-terminal block for remote ON/OFF + 1 mini-terminal block for Remote Power Off + 1 mini-terminal block for output relay		
Communication slot	1 slot for Network-MS card, ModBus-MS or Relay-MS cards		
<b>Operating conditions, standards and approvals</b>			
Operating temperature	0 to 40°C		
Typical noise level	40dB		
Safety	IEC/EN 62040-1, UL 1778, CSA 22.2		
EMC	IEC/EN 62040 -2 , FCC Class B, CISPR22 Class B		
Approvals & markings	CE /CB report (TUV) / cULus / EAC / RCM / KC / Energy Star		
<b>Dimensions H x W x D in mm / weight</b>			
UPS	2U version: 86,5*440*605/27.4kg		
EBM	2U version: 86,5*440*605/39.2kg		
<b>Customer service and support</b>			
Warranty	3 years		

\* Backup times are approximate and may vary with equipment, configuration, battery age, temperature etc.

Parts number*	9PX 2000VA
UPS RT2U	9PX2000iRTAU
EBM	9PXEBM72RT2U
2m battery connection cable	EBMCBL72
Battery integration system	BINTSYS

\*All 9PX UPS and EBM are delivered with rack kit

# Eaton 9PX UPS 1-3 kVA



1. Graphical LCD display :
  - Clear information on UPS status and measurements
  - Enhanced configuration capabilities
2. Panel for batteries replacement (Hot swappable)
3. Slot for management card
4. Outputs: 8 x IEC 10A + 2 x IEC 16 A with energy metering (including 2 program able groups)
5. USB port, 1 serial port, Remote ON/OFF, remote power OFF and relay output
6. External battery (EBM) connector



## Performance and efficiency

- 9PX is the first UPS in its class to provide Unity power factor (VA=W). It delivers 11% more power than any other UPS as well as powering more servers with equivalent VA ratings and lower power factors.
- Energy Star qualified, the 9PX provides the highest efficiency level to reduce energy and cooling costs
- Double conversion topology. The Eaton 9PX constantly monitors power conditions and regulates voltage and frequency.
- With a versatile rack/tower form factor, the 9PX is the most compact solution delivering up to 3000W in only 2U.

## Availability and flexibility

- 9PX 2200 & 3000 are available in RT2U format (optimised for rack mounting) or RT3U (for tower or short-depth racks), pedestal and rail kits are included with all models
- The internal bypass allows service continuity in case of internal fault, a maintenance bypass is also available (as standard on HotSwap version) for easy replacement of the UPS
- Stronger, longer battery life: Eaton ABM<sup>®</sup> battery management technology uses an innovative three-stage charging technique that extends battery life by up to 50%
- More runtime can be added with up to 4 external hot-swappable battery modules, able to run systems for hours if necessary.

## Manageability

- The graphical LCD display provides clear information on the UPS's status and measurements on a single screen. Enhanced configuration capabilities are also available
- 9PX can meter energy consumption right down to the managed outlet groups. kWh values can be monitored using the LCD or Eaton's Intelligent PowerTM Software.
- Load segment control enables prioritised shutdowns of non-essential equipment to maximise battery runtime for critical devices
- 9PX offers Serial and USB connectivity, plus an extra slot for an optional communication card. Eaton's Intelligent Power
- Software seamlessly integrates with leading virtualisation environments and cloud orchestrations tools.

Parts Numbers*	9PX 1kVA	9PX 1.5kVA	9PX 2.2kVA	9PX 3kVA
UPS RT3U			9PX2200IRT3UANZ	9PX3000IRT3UANZ
UPS RT2U	9PX1000IRT2UANZ	9PX1500IRT2UANZ	9PX2200IRT2UANZ	9PX3000IRT2UANZ
EBM	9PXEBM48RT2U	9PXEBM48RT2U	2U: 9PXEBM72RT2U 3U: 9PXEBM72RT3U	2U: 9PXEBM72RT2U 3U: 9PXEBM72RT3U
2m battery connection cable	EBCMCL48	EBCMCL48	EBCMCL72	EBCMCL72
Battery integration system	BINTSYS			

## Eaton 9PX UPS 1-3 kVA

9PX UPS Technical Specifications	1000	1500	2200	3000VA		
Rating (VA/W)	1000VA/1000W	1500VA/1500W	2200VA/2200W	3000VA/3000W		
Format	RT2U (tower/rack 2U)		RT2U (tower/rack 2U) and RT3U (tower/rack 3U)			
<b>Electrical characteristics</b>						
Technology	On-line double conversion with Power Factor Correction (PFC) system					
Nominal voltage	200 / 208 / 220 / 230 / 240V					
Input voltage range	176-276V without derating (up to 100-276V with derating)					
Input frequency range	40-70Hz, 50/60Hz autoselection, frequency converter mode					
Efficiency	up to 91.5% in online mode (up to 97.5% in Hi-efficiency mode)	up to 92.5% in online mode (up to 97.5% in Hi-efficiency mode)	up to 93.5% in online mode (up to 98% in Hi-efficiency mode)	up to 94% in online mode (up to 98% in Hi-efficiency mode)		
<b>Connections</b>						
Input	1 IEC C14 (10A)		1 IEC C20 (16A)			
Outputs	8 IEC C13 (10A) sockets		8 IEC C13 (10A) sockets + 2 IEC C19 (16A) sockets			
Switched outlet group	2 outlet groups					
<b>Communication</b>						
Communication ports	1 USB port + 1 serial RS232 port + 1 mini-terminal block for remote ON/OFF + 1 mini-terminal block for remote power off + 1 mini-terminal block for output relay					
Communication slot	1 slot for Network-M2 card, INDGW-M2 or Relay-MS cards					
<b>Operating conditions, standards and approvals</b>						
Operating temperature	0 to 40°C					
Typical noise level	35dB		40dB			
Safety	IEC/EN 62040-1, UL 1778, CSA 22.2					
EMC	IEC/EN 62040 -2, FCC Class B, CISPR22 Class B					
Approvals & markings	CE /CB report (TUV) / cULus / EAC /RCM / KC / Energy Star					
<b>Dimensions H x W x D in mm / weight</b>						
UPS	86.5*440*450/17.4kg	86.5*440*450/18.9kg	2U version: 86.5*440*605/25kg 3U version: 130*440*485/24.5kg	2U version: 86.5*440*605/27.6kg 3U version: 130*440*485/27.4kg		
EBM	86.5*440*450/29.8kg					
<b>Customer service and support</b>						
Warranty	3 years on electronics					
<b>Batteries</b>						
Typical backup times*	300W	500W	800W	1200W	1800W	2500W
9PX 1000	28	16	9			
9PX 1000 + 1 EBM/+4 EBM	134/530	79/316	47/188			
9PX 1500	38	23	13	7		
9PX 1500 + 1 EBM/+4 EBM	143/536	86/319	52/192	32/120		
9PX 2200	43	25	15	9	5	
9PX 2200 + 1 EBM/+4 EBM	206/818	123/491	74/297	47/189	29/118	
9PX 3000	60	36	22	13	7	4
9PX 3000 + 1 EBM/+4 EBM	221/824	135/504	83/307	52/194	33/122	22/82
Battery management	ABM <sup>®</sup> & temperature compensated charging method (user selectable), automatic battery test, deep discharge protection, automatic recognition of external battery units					

# Eaton 9PX Lithium-ion UPS

1500VA-3000VA



9PX Lithium-ion UPS

## Advanced protection for:

- Small and Medium Datacentre
- IT, Networking, Storage and Telecom
- Infrastructure, Industrial and Medical



## Lithium-ion Online Double conversion UPS

### Longer life

- 9PX lithium-ion UPSs features an expanded battery life of 8–10 years compared to the usual 3-5 years with VRLA batteries.
- Lithium-ion batteries eliminates the needs for battery replacement and attached costs (planning, labor, shipping).
- This longer life is backed by a five-year factory warranty including UPS electronics, internal batteries and EBMs.

### Management and Cybersecurity

- Eaton Gigabit network management card provide Dual cyber security certifications (UL 2900-1 & IEC 62443-4-2).
- Eaton's Intelligent Power Software seamlessly integrates with leading virtualisation environments and cloud orchestrations tools.
- 9PX Lithium-ion can meter energy consumption right down to the managed outlet groups. kWh values can be monitored using the LCD or Eaton's Intelligent Power Software.
- Load segment control enables prioritised shutdowns of non-essential equipment to maximise battery runtime for critical devices.

### High Performance

- Double conversion topology. The Eaton 9PX Lithium-ion constantly monitors power conditions and regulates voltage and frequency.
- Energy Star qualified, the 9PX Lithium-ion provides the highest efficiency level to reduce energy and cooling costs.
- Internal bypass allows service continuity in case of internal fault, a maintenance bypass is also available for easy replacement of the UPS.
- More runtime can be added with up to 4 external hot-swappable battery modules, able to run systems for hours if necessary.

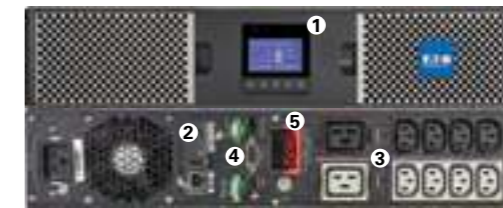
### Easy installation and upgrade

- Lighter weight: UPS weight reduced up to 20% and EBM weight reduced more than 40%.
- Smaller size: Battery extension size reduced to 1U saving space for IT equipment.
- Firmware upgrade can be done locally or remotely through the Gigabit Network management card.
- All models delivered with all necessary hardware for tower or rack-mounting.



## Eaton 9PX Lithium-ion UPS technical specifications

- 1 Graphical LCD display :
  - Clear information on UPS status and measurements
  - Enhanced configuration capabilities
- 2 Slot for Management card (Network card delivered as standard on netpack version)



Eaton 9PX  
3000VA

- 3 Outputs: 8 x IEC 10A + 2 x IEC 16A with energy metering (including 2 programmable groups)
- 4 USB port, 1 serial port, Remote ON/OFF, Remote power OFF and Relay output
- 5 External battery (EBM) connector

Technical Specifications	1500	2000	3000			
Rating (VA/W)	1500VA/1500W	2000VA/1800W	3000VA/2400W (3000VA/3000W with EBM)			
Format	RT2U (tower/rack 2U)					
<b>Electrical characteristics</b>						
Technology	On-line double conversion with Power Factor Correction (PFC) system					
Nominal voltage	200/208/220/230/240V					
Input voltage range	176-276V without derating (up to 100-276V with derating)					
Input frequency range	40-70Hz, 50/60Hz autoselection, frequency converter mode					
Efficiency	up to 92.5% in online mode (up to 97.5% in Hi-efficiency mode)	up to 93.5% in online mode (up to 98% in Hi-efficiency mode)	up to 94% in online mode (up to 98% in Hi-efficiency mode)			
<b>Connections</b>						
Input	1 IEC C14 (10A)	1 IEC C14 (10A)				
Outputs	8 IEC C13 (10A) sockets	6 IEC C13 (10A) + 2 AU GPO (10A) sockets	8 IEC C13 (10A) + 2 IEC C19 (16A) sockets			
Switched outlet group	2 outlet groups					
<b>Batteries</b>						
Typical backup times*	300W	500W	800W	1200W	1800W	2400W
9PX 1500	45	30	20	13		
9PX 1500 + 1 EBM/4EBM	114/321	76/210	52/145	33/92		
9PX 2000	66	45	30	21	14	
9PX 2000 + 1 EBM/4EBM	170/475	112/305	78/205	52/148	35/98	
9PX 3000	68	46	30	21	14	10.5
9PX 3000 + 1 EBM/4EBM	184/516	120/320	80/215	54/153	37/104	28/78
Battery	Lithium-ion battery (LFP) with 8 to 10 years service life, automatic recognition of external battery modules (EBM)					
<b>Communication</b>						
Communication ports	1 USB port + 1 serial RS232 port + 1 mini-terminal block for remote ON/OFF + 1 mini-terminal block for remote power off + 1 mini-terminal block for output relay					
Communication slot	1 slot for Gigabit Network management card, Industrial Gateway Card (Modbus TCP/RTU), or Relay card.					
<b>Operating conditions, standards and approvals</b>						
Operating temperature	0 to 40°C					
Typical noise level	35dB			40dB		
Safety	IEC/EN 62040-1, UL 1778, CSA 22.2					
EMC	IEC/EN 62040 -2, FCC Class B, CISPR22 Class B					
Approvals & markings	CE /CB report (TUV) / EAC / Energy Star / RCM					
<b>Dimensions H x W x D in mm/ weight</b>						
	1.5kVA	2.0kVA	3kVA			
UPS	86.5x440x450/15.8Kg	86.5x440x605/22.1Kg	86.5x440x605/22.8Kg			
EBM	42.9x438x448/12Kg	42.9x438x603/17.4Kg	42.9x438x603/17.4Kg			
<b>Customer service and support</b>						
Warranty	5 years full warranty (electronics, internal batteries and EBM)					

\* Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

Parts numbers*	1.5kVA	2.0kVA	3kVA
UPS RT2U	9PX1500IRTANZ-L	9PX2000IRTAU-L	9PX3000IRTANZ-L
EBM RT1U	9PXEbm48RT1U-L	9PXEbm72RT1U-L	9PXEbm72RT1U-L

\*All 9PX Lithium-ion UPS and EBM are delivered with rack kit

# Eaton 9PX 5-11 kVA



1. Remote Off/On and Remote Power Off connectors
2. Slot for Network-MS, ModBus-MS or Relay-MS cards
3. Parallel operation port (DB15)
4. External battery module (EBM) connector with automatic detection (RJ11)
5. 8 IEC 10A sockets (2 groups of 4 manageable sockets) with cable retention system
6. 2 IEC 16A sockets with cable retention system
7. DB 9 with output contacts
8. USB and serial ports
9. Input/Output connection



## Performance and efficiency

- Double conversion topology. The Eaton 9PX constantly monitors power conditions and regulates voltage and frequency.
- With up to 95% efficiency in online double conversion mode and 98% in high-efficiency mode, the 9PX provides the highest efficiency level in its class to reduce energy and cooling costs
- With a 0.9 power factor, the 9PX delivers 28% more power than other UPSs in its class. It powers more servers than other UPSs with equivalent VA ratings and lower power factors.
- With a RT (Rack/tower) versatile form factor, the 9PX is the most compact solution in its class delivering up to 5400W in only 3U and 10kW in only 6U.

## Manageability

- The new graphical LCD provides clear information on the UPS's status and measurements on a single screen (in seven languages). LCD display position can be adjusted to offer the best viewable angle for tower and rack usage
- The 9PX can meter energy consumption. kWh values can be monitored using the LCD or Eaton's Intelligent Power® Software Suite.
- Load segment control enables prioritised shutdowns of non-essential equipment to maximise battery runtime for critical devices. It can also be used to remotely reboot locked-up network equipment or to manage scheduled shutdowns and sequential start-ups.
- The 9PX offers Serial, USB and relay connectivity, plus an extra slot for an optional card (Network card delivered as standard on Netpack version). Eaton's Intelligent Power® Software Suite compatible with all major OS including virtualisation software such as VMware and Hyper-V is included with each UPS.

## Availability and flexibility

- The internal bypass allows service continuity in case of internal fault, a Maintenance ByPass is also available (as standard on HotSwap version) for easy replacement of the UPS without powering down critical systems
- The Eaton 9PX can be paralleled to achieve twice the power of unitary product using HotSync technology, without extra cost on the initial purchase
- Stronger, longer battery life: Eaton ABM® battery management technology uses an innovative three-stage charging technique that extends battery life by up to 50%
- More runtime can be added with up to 12 external hotswappable battery modules, able to run systems for hours if necessary. The additional battery modules are automatically recognised by the UPS.

## Eaton 9PX 5-11 kVA

9PX Technical Specifications	5kVA	6kVA	8kVA	11kVA
Rating (kVA/kW)	5kVA/4.5kW	6kVA/5.4kW	8kVA/7.2kW	11kVA/10kW
<b>Electrical characteristics</b>				
Technology	On-line double conversion with Power Factor Correction (PFC) system			
Nominal voltage	200 / 208 / 220 / 230 / 240V		200 / 208 / 220 / 230 / 240 / 250V	
Input voltage range	176-276V without derating (up to 100-276V with derating)			
Output voltage/THDU	200/208/220/230/240V +/- 1%; THDU <2%		200/208/220/230/240/250V +/- 1%; THDU <2%	
Input frequency range/THDI	40-70Hz, 50/60Hz autoselection, frequency converter as standard, THDI < 5%			
Efficiency	Up to 94% in Online mode, 98% in Hi-Efficiency mode		Up to 95% in Online mode, 98% in Hi-Efficiency mode	
Crest factor/short circuit current	3:1/90A	3:1/90A	3:1/120A	3:1/150A
Overload capacity	102-110% : 120s, 110-125% : 60s, 125-150% : 10s, >150% : 500ms		102-110% : 120s, 110-125% : 60s, 125-150% : 10s, >150% : 900ms	
<b>Connections</b>				
Input	Terminal block (up to 10 mm <sup>2</sup> )		Terminal block (up to 16mm <sup>2</sup> )	
Outputs	Terminal block + 2 controlled groups of 4 IEC C13 (10A) + 2 IEC C19 (16A)		Terminal block	
Outputs with HotSwap Maintenance Bypass	Terminal block + 3 IEC C13 (10A) + 2 IEC C19 (16A)		Terminal block + 4 IEC C19 (16A)	
<b>Batteries</b>				
Typical backup times at 50 and 70% load*				
9PX	13/10 min	11/8 min	20/15 min	13/9min
9PX + 1 EBM	60/40 min	48/34 min	48/32 min	32/21 min
9PX + 4 EBM	220/150 min	170/120 min	140/100 min	100/70 min
Battery management	ABM® and temperature compensated charging method (user selectable), automatic battery test, deep discharge protection, automatic recognition of external battery units.			
<b>Communication</b>				
Communication ports	1 USB port, 1 RS232 serial port (USB and RS232 ports cannot be used simultaneously), 4 dry contacts (DB9), 1 minmi teinral block for remote On/Off and 1 for remote power Off, 1 DB15 for parallel operation.			
Communication slot	1 slot for Network-M2 card, INDGW-M2 or Relay-MS cards.			
<b>Operating conditions, standards and approvals</b>				
Operating temperature	0 to 40°C continuous			
Noise level	<45dB	<45dB	<48dB	<50dB
Safety	IEC/EN 62040-1, UL 1778, CSA 22.2			
EMC, performance	IEC/EN 62040 -2 , FCC Class A, IEC/EN 62040-3 (Performance)			
Approvals	CE, CB report (TUV), UL, RCM			
<b>Dimensions H x W x D / weight</b>				
UPS	440(19")*130(3U)*685mm/48kg	440(19")*130(3U)*685mm/48kg	440(19")*260(6U)*700mm/84kg	440(19")*260(6U)*700mm/86kg
EBM	440(19")*130(3U)*645mm/68kg	440(19")*130(3U)*645mm/68kg	440(19")*130(3U)*680mm/65kg	440(19")*130(3U)*680mm/65kg
Power module	-	-	440(19")*130(3U)*700mm/19kg	440(19")*130(3U)*700mm/21kg
<b>Customer service and support</b>				
Warranty	3 years			

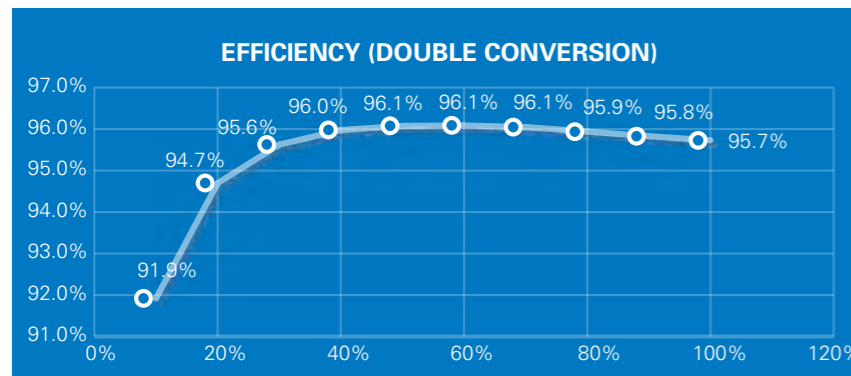
\* Runtimes are shown at 0.7 power factor. Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc

# Eaton 9SX 15kVA/20kVA UPS



## High Efficiency

Double conversion efficiency up to 96%.



9SX reduces energy usage & CO2 emissions to help IT Managers save costs on power and cooling.

## High Power Density

- The 15kVA/20kVA power model is only 3U rack space
- Short depth chassis suitable to be deployed in cabinets as shallow as 800mm deep
- 438mm width for standard 19" rack mounting.

## High Power Factor

### Unity power factor VA=Watt

Powers more servers than similar UPSs with equivalent VA ratings with lower power factors.

## Versatile Installation

Can be easily deployed as a rack mount or free standing (tower) unit.

## Parallel Operation

For redundancy and expanded power rating.

## Large Coloured Touch Screen LCD

Built-in gravity sensor that automatically rotates the screen based on UPS deployment orientation.

## ESS Mode

Achieve up to 98.8% efficiency in ESS mode. System switches to online mode on demand in less than 2ms response time.

## Battery Management

Eaton's exclusive ABM® technology increases battery service life by 50%. ABM uses an advanced, three-stage charging technique and closely monitors battery health to provide advanced notice when batteries need replacement.

Variable charging current ranges from 0-13A, suitable for recharging larger battery banks.

## Endure Harsh Environment

- Operation temperature up to 50 °C
- Maximum operation altitude up to 4000m
- Line mode overload capacity up to 10min at 125% rated load.

## Professional HMI for Operation, Configuration and Setting

Multi connectivity port – RS232, USB, dry in/out, EPO, intelligent slot.

## EBM

Connect up to 6 sets (2\*6 modules) of EBMs for extended runtime.

Minimum deployment is 1 set (2 modules) per UPS.

Each increment must be a complete set.

## Eaton 9SX 15kVA/20kVA UPS

UPS Power Module	9SX15KPM	9SX20KPM
<b>Input</b>		
Rated input voltage	1 phase 220/230/240V; 3 phase 380/400/415V	
Input voltage range	160V~300V full load; 100~160V linear derating	
Rated input frequency	50Hz/60Hz	
Input frequency range	40 Hz– 70 Hz	
Input frequency phase lock range	50Hz system:45 Hz– 55 Hz; 60Hz system:54 Hz – 66 Hz	
System compatibility	TN-S / IT	
Input power factor (PF)	>0.995 both 1 phase and 3 phases	
THDi	3% linear load; 5% non-linear load	
<b>Output</b>		
Input-output phase connection	Input-output 3-1, 3-3, 1-1	
Rated output voltage	1 phase 220/230/240V; 3 phase 380/400/415V	
Rated output frequency	50Hz/60Hz	
Rated output appearance power	15kVA	20kVA
Rated output active power	15kW	20kW
Max PF	1	
Voltage variation	±1%	
THDV	1% linear load; 3% non-linear load	
Load crest ratio	3:1	
Output connection	Terminal block	
Overload capacity line mode (at rated voltage)	105%<Load 125%: 10min 125%<Load 150%: 1min >150% :0.5s	
<b>Battery and charger</b>		
Internal batteries	None. 2 x modules (1 set) as minimum to provide backup time.	
Max. quantity	6 sets (2*6 modules)	
Battery voltage	±240V (adjustable to ± 192V, use with correct battery)	
Charging current	0~13A adjust	
Recharging time	3 hours to 90% (1 set of EBMs)	
<b>Efficiency</b>		
Online mode	up to 96%	
ECO or ESS mode	up to 98.8%	
<b>Other working mode</b>		
CVCF (constant voltage and constant frequency)	No derating at 3-3, 3-1 mode; Detaring to 60% at 1-1 mode	
Parallel mode	maximum 3	
<b>Interface</b>		
Display	Coloured touch LCD with gravity sensor	
Connectivity port	RS232 DB9; USB 2.0 type-B; programmable dry contacts in/out; 1 x Mini-Slot for comms cards	
<b>Physical dimension</b>		
Dimension (H*W*D)	129mm*438mm*589mm	
Net weight (Kg)	23.7	
<b>Environment</b>		
Operation temperature	0°C ~ 50 °C (0~40 no derating 40°C~ 50°C derating to 50%)	
Storage temperature	-25°C~60°C	
Relative humidity	0 ~ 95%	
Operating altitude	0~4000m (0~1000m no derating, 1000m~4000m the load derating 1 % every up 100m)	
Noise level	55dB	
Warranty	2 years	
<b>Certification</b>		
Safety	CE/TLC/RCM	
Energy saving	CQC	
<b>EBM</b>		
Dimension (H*W*D)	129*438*589 mm per module (multiply height by 2 for dimension of complete set)	
Net weight (Kg)	62.1 per module (multiply by 2 for weight of a complete set)	
<b>MBP (maintenance bypass)</b>		
Dimension (H*W*D)	129mm*438*489mm	
Net weight (Kg)	21.5	



# Three Phase UPS

Critical protection for:  
Hyperscale, Multi-tenanted and  
Colocation Data Centres, Mining,  
Infrastructure, and Institutions

# Eaton 93PS & 91PS



Lowest total cost of ownership and maximum availability – taking scalability, resiliency, safety and efficiency to the next level. The most advanced UPS in its power range, the Eaton 93PS & 91PS is ideal for small data centres and other mission critical applications where efficiency, reliability, safety and scalability are essential.

## Future-ready

The rapid adoption of the cloud, constant evolution of IT technologies, increased focus on environmental footprint and sophistication of mission critical applications is demanding even more efficient, resilient, scalable and safe power protection solutions.

The new levels of efficiency and scalability offered by the 93PS & 91PS minimise Total Cost of Ownership while the safety and resiliency, both in infrastructure and IT layers, maximise availability and ensure business continuity.

## Efficiency

With high efficiency being translated into reduced electrical and cooling losses, the 93PS & 91PS helps to minimise operational expenditure costs, in addition to addressing the cost pressures resulting from commoditisation of IT services. Increased efficiency also leads to higher sustainability, through reduced carbon emissions.

## Scalability

Scalability helps to optimise capital expenditure on deploying additional equipment when necessary and providing additional flexibility to respond to your changing needs. The scalability of the 93PS also provides increased flexibility to accommodate the changing requirements of rapidly evolving technologies.

## Resiliency, virtualisation and cloud-readiness

The ability of a system to absorb faults and still remain in its desired operational state is paramount to minimising costly downtime. The 93PS & 91PS takes resiliency to the next level by providing high fault clearing capabilities.

## Safety

Ensuring safety in any electrical installation is a must, not only to comply with local electrical regulations and protect personnel, but also to maximise availability. The 93PS & 91PS design simplifies and facilitates the compliance with local regulation and easy installations.

## Applications:

- Small data centres
- Commercial buildings and industrial complexes
- Transportation systems
- Hospitals
- Finance and banking critical infrastructure
- Security operations
- Telecommunications installations
- Process control equipment

Normal operation



Alarm



## Eaton 93PS user display

For user safety and convenience, the 93PS displays a range of coloured LED indicators as operating status alerts. These are displayed both on the cabinet door of the UPS and on screen.



## Hot swappable

A module can be replaced while the other continues protecting the load.



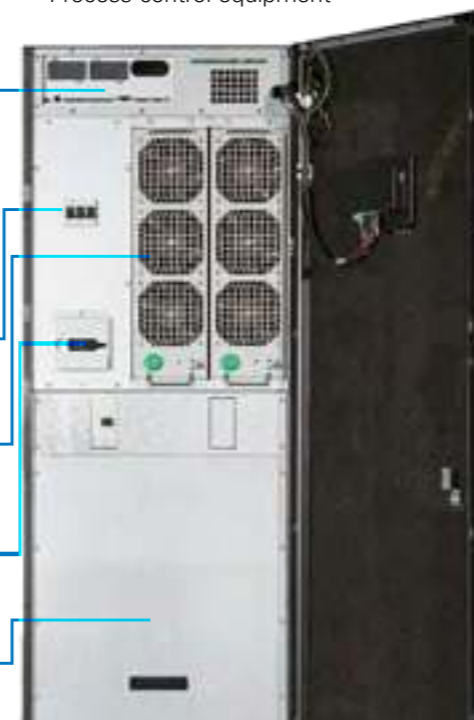
Maintenance bypass switch MBS

Communication ports

Input switch

Power module UPM

Internal battery



93PS & 91PS Technical Specifications	8-20 kW		8-40 kW			
UPS output power rating (1.0 p.f.)	8, 10, 15, 20		8, 10, 15, 20, 30, 40, 8+8, 10+10, 15+15, 20+20			
Model catalogue reference	93PS-XX(20)-YY-		93PS-XX(40)-YY-			
Number of internal batteries	0 to 2 x 32 blocks		0 to 4 x 32 blocks			
UPS options	Internal maintenance bypass switch (MBS)		External maintenance bypass switch			
Upgradability	Yes, up to 20 kW		Yes, up to 40 kW			
External paralleling	Up to 4 units with HotSync technology					
UPS topology	Double conversion					
Efficiency in Double conversion mode	>96%					
Efficiency in Energy Saver System (ESS)	Up to 99%					
UPS dimensions (width x depth x height)	335 x 750 x 1300 mm		480 x 750 x 1750 mm			
UPS Degree of protection	IP 20					
Acoustic noise at 1 m, in	< 60 dBA in double conversion		< 47 dBA in ESS			
Maximum service altitude	1000 m (3300 ft) above sea level at 40 °C		Maximum 2000 m (6600 ft) with 1% derating per each add. 100 m			
<b>Internal Battery</b>						
Battery technology	12 V, VRLA					
Battery design life	5 or 10 years					
Battery quantity	32 blocks, 192 cells per battery string					
Battery voltage	384 V					
Nominal Ah capacity (C10)	9 Ah or 7 Ah Long life					
Charge current limit	Default 5 A, configurable Maximum 25 A		Default 10 A, configurable Maximum 50 A			
Battery start option	Yes					
<b>Input</b>						
Rated input voltage	220/380 V; 230/400 V; 240/415 V					
Voltage tolerance:						
Rectifier input	187 to 276 V					
Bypass input	rated voltage -15% / +10%					
Rated input frequency	50 or 60 Hz, user configurable					
Frequency tolerance	40 to 72 Hz					
Input wiring	3 phases + neutral					
Input power factor	0.99					
Input ITHD	8 kW	10 kW	15-40 kW	<		
	< 5%	< 4%	3%			
Rated input r.m.s. current	8 kW	10 kW	15 kW	20 kW	30 kW	40 kW
380V	13 A	16 A	24 A	32 A	48 A	63 A
400V	12 A	15 A	23 A	30 A	46 A	61 A
415V	12 A	15 A	22 A	29 A	44 A	58 A
Soft start capability	Yes					
Back feed protection	Yes, for rectifier and bypass lines					
<b>Output</b>						
Output wiring	3 phases + neutral					
Rated output voltage	220/380 V; 230/400 V; 240/415 V, configurable					
Total voltage harmonic distortion						
100% linear load	< 1%					
100% non-linear load	< 5%					
Overload capability On inverter On bypass	10 min 102-110% load 60 sec 111-125% load 10 sec 126-150% load 300 ms >150% load Continuous < 125% load 20 ms 1000% load					
Load power factor - rated	1					
Load power factor - permitted range	0.8 lagging to 0.8 leading					
<b>Communication circuits</b>						
MiniSlot	2 communication bays					
Network/SNMP interface	Yes, standard					
Standard connectivity ports	Mini-slot ports for optional cards, device USB and host USB, RS-232 service port, relay output, 5 building alarm inputs and a dedicated EPO, Web and SNMP card					
<b>Compliance with standards</b>						
Safety (CB certified)	IEC 62040-1					
EMC	IEC 62040-2					
Performance	IEC 62040-3					

For information on product warranty, please visit <http://powerquality.eaton.com/Products-services/Backup-Power-UPS/93PS.aspx?cx=22>

# Eaton 93E



Technology: Series 9 (Double Conversion On Line)  
 Rating: 20-200kVA at 0.9 p.f.  
 Voltage: 230/400VAC 50/60 Hz  
 Backup: Typical 5-60 min (extendable up to several hours)  
 Configuration: Cabinet

The Eaton® 93E UPS delivers superior power protection for ever-expanding loads in today's space-constrained data centres. Facilitating a lower total cost of ownership (TCO) through a combination of energy-efficiency, high reliability and a compact footprint the 93E is an ideal solution for small - to medium - sized data centres and other applications desiring highly reliable power protection.

### Real compatibility

Active power factor correction (PFC) provides 0.99 input power factor and <5% ITHD, thus eliminating interference with other critical equipment in the same network and enhancing compatibility with generators. The 93E is optimised for protecting modern 0.9 p.f. rated IT equipment without the need to oversize.

### True reliability

Patented Eaton Hot Sync® technology makes it possible to parallel up to four UPSs to increase availability or add capacity. The technology enables load sharing without any communication line, thus eliminating single point of failure.

### User interface

Large LCD graphically displays UPS status and offers easy access to measurements, controls and settings.

### Energy-efficient design

With a transformer-free design and sophisticated sensing and control circuitry the 93E is capable of achieving up to a 98% efficiency rating, making it one of the most energy-efficient UPSs in its class - and it still provides maximum load protection. Unlike most high efficiency UPSs, the 93E:

- Provides surge suppression for the load
- Detects the location of faults (utility or load) and takes the appropriate action
- Switches to double-conversion operation in less than 4ms. High system efficiency reduces utility cost, extends battery run times and ensures cooler operating conditions.

### Connectivity

With Eaton® Mini-Slot connectivity cards, you can monitor, manage and remotely shutdown UPSs across the network.

- Network Card-MS Web/SNMP Card allows you to connect your 93E UPS directly to the Ethernet network and the Internet
- Network and MODBUS Card-MS provides remote monitoring of a UPS system through a Building Management System (BMS) or Industrial Automation System (IAS)
- Relay Card-MS enables provides the essential dry-contact interface between your Eaton UPS and any relay-connected computer as well as a variety of industrial applications.

### Compact & serviceable design

Small footprint occupies minimal floor space:

- Up to 35% smaller than similar competitive solutions
- 600mm wide UPS cabinet (80-200kVA models) enables seamless in-row" integration with IT racks.

The 93E is easily and quickly serviced to provide the highest level of availability with Mean Time to Repair (MTTR) <30 minutes. With its Easy Capacity Test feature the 93E can test its entire power train under full load stress without the requirement of an external load.

### Software

Eaton's Intelligent Power® Software Suite incorporates two important applications for ensuring quality power and uptime: monitoring and management of power devices across the network combined with automatic, graceful shutdown when faced with an extended power outage.

- Monitor and manage multiple power devices across your network
- Extend the uptime of dual-powered servers with redundancy capabilities
- Enable server shutdown and live migration events
- To learn more, please visit [www.eaton.com/intelligentpower](http://www.eaton.com/intelligentpower)

### Applications:

- Small to medium data centres
- Corporate
- Telecom
- Healthcare
- Banking
- Industrial
- Education
- Government

### System accessories

Battery cabinets & battery circuit breakers (60-200kVA)  
 Maintenance Bypass Switches (MBS) (100-200kVA, standard on 15-80kVA)  
 System parallel modules (60-200kVA)

## Eaton 93E

93E Technical Specifications		
<b>Power</b>		
Ratings	15kVA/13.5kW 30kVA/27kW 60kVA/54kW 100kVA/90kW 160kVA/144kW	20kVA/18kW 40kVA/36kW 80kVA/72kW 120kVA/108kW 200kVA/180kW
Topology	Double-conversion online UPS	
Operating frequency	50/60 Hz (40 to 72 Hz)	
Input power factor	>0.99 typical	
<b>Electrical input</b>		
Input current distortion	5% THD	
Nominal input voltage	400/230V, 4 wire (380/415V selectable)	
Input voltage range	-15%, +20% from nominal (400V) at 100% load without depleting battery	
<b>Electrical output</b>		
Nominal output voltage	400/230, 4 wire (380/415V selectable)	
Output voltage regulation	+1% Static; <5% dynamic at 100% resistive load change, <20 ms response time	
<b>Battery</b>		
Battery	192 to 240 cells (continual selectable for 15-80kVA) 216/222/228/234/240 cells (selectable for 100-400kVA)	
General		
Charging method	ABM cyclic charging	
Efficiency	Up to 98% high-efficiency mode (15-80kVA) Up to 98.5% High-efficiency mode (100-400kVA) Up to 94% double-conversion mode	
Overload	150% for 1 minute, 125% for 10 minutes, >150% for 150ms	
UPS bypass	Automatic on overload or UPS failure	
Parallel technology	Powerware Hot SyncR Technology	
Dimensions W x D x H (mm)	500 x 710 x 960 600 x 800 x 1876 600 x 800 x 1876 600 x 800 x 1876	15-20kVA (with internal battery) 30kVA (with internal battery) 40kVA (with internal battery) 60-200kVA
Cabinet rating	IP20 with standard washable dust filters	
Weights without internal battery	15/20kVA-72 kg, 30kVA-91kg, 40kVA-120kg, 60kVA-202kg, 80kVA-245kg, 100kVA-283kg, 120kVA-311kg, 160/200kVA-457kg	
Weights with internal battery	15/20kVA-272kg,30kVA-376kg,40kVA-490kg	
<b>Communications</b>		
Display	Graphical LCD with blue backlight	
LEDs	(4) LEDs for notice and alarm	
Audible alarms	Yes	
Communication ports	(1) RS-232, (1) USB, (1) EPO	
Communication slots	(2) Mini-slot communication bays	
<b>Environmental</b>		
Operating temperature	0°C to +40°C Batteries recommended max. +25°C	
Storage temperature	-25°C to +55°C without batteries +15°C to +25°C with batteries	
Relative humidity	5-95%, non-condensing	
Audible noise	15-20kVA.55dBAat1m typical 30-40kVA.62dBAat1m typical 60-120kVA.65 dBA at 1m typical 160-200kVA.70 dBA at 1m typical	
Altitude	<1000m at +40°C	
<b>Certifications</b>		
EMI standards	EN55022/EN55024	
EMC compliance	IEC 62040-2	
Quality	ISO 9001: 2000 and ISO 14001:1996	
<b>Communication accessories</b>		
Network-MS	Web/SNMP Card	
Modbus-MS	Web/SNMP and Modbus Card	
Relay-MS	Relay (dry contact) card -DB9 connection	
Industrial relay	Relay (dry contact) card -terminal connection	
116750224-001	Environmental Monitor Probe (EMP) kit (need to plug into Web/SNMP Card or Web/SNMP and Modbus Card to work)	

For information on product warranty, please visit <http://powerquality.eaton.com/Products-Services/backup-power-ups/9PHD-Industrial.aspx?cx=22>

# Eaton 93PM



**Technology:** Series 9 (double conversion on line)  
**Rating:** 30-100kW at 1.0 p.f.  
**Voltage:** 230/400VAC 50/60 Hz  
**Backup:** 10-20 min internal (extendable up to several hours)  
**Configuration:** Cabinet

Introducing the Eaton 93PM UPS, helping you to combat the costs of energy and the ever-increasing power demands of IT infrastructure. Featuring industry-leading operating efficiency of 96.7% and world-class intelligent software solutions, the 93PM is the surest way to secure the continuity of your mission-critical applications. All this compactly in 0.5 m<sup>2</sup>.

On-line double conversion topology ensures the UPS output is not affected by any abnormalities in the utility power and keeps critical load equipment protected against all common power problems. With Eaton 93PM UPS, modern multi-level converter technology ensures that in double conversion no energy is wasted and the UPS operating efficiency is top-of-market 96.7% resulting in significant savings in operational costs.

Energy Saver System delivers superior > 99% efficiency. Even small increases in UPS efficiency can quickly translate into thousands of dollars, realised in more real power and lower cooling costs. Energy Saver System enables > 99% efficiency across the typical UPS operating range. In ESS, the load is powered securely through the static bypass line with double conversion available on-demand with typical 2 ms transition time in the event of any abnormality on supply source. When operating in ESS mode, the load is protected with inherent surge suppression.

When utility power quality is high, ESS can reduce UPS power losses by 75% as it runs on double conversion only when needed. The Eaton 93PM UPS is a high power density solution. In a footprint of just 0.5 m<sup>2</sup>, it can provide full rated power and standard backup time with internal batteries.

Eaton's advanced charging algorithm prolongs battery service life significantly compared to traditional charging methods. Automatic battery tests ensure any defects on batteries are detected and any failed blocks replaced on time. Battery health data is available for viewing easily through the display. By being able to monitor the condition of batteries and view a history log of test data, system maintenance can be better planned and scheduled ahead.

## Product highlights:

- 96.7% efficiency in double conversion
- > 99% efficiency with Energy Saver System (ESS)
- Standard 10-20 minutes full load runtime with internal batteries
- Intelligent Power Manager® allows you to monitor and manage your UPS system as an integral part of power infrastructure
- Plugs into leading virtualisation management systems like VMware vCenter, Microsoft SCVMM and Citrix XenCenter
- Display shows power quality, energy consumption and efficiency trends
- Data logging feature allows easy measurement, monitoring and managing

## Options:

- Variety of connectivity card options
- Environmental Monitoring Probe
- Extended runtimes with line-and-match external battery cabinets
- External maintenance bypass (wall mountable)
- System parallel modules

## Typical applications:

- Data centres with rack mount blade servers
- Telecommunications



Door LEDs provide "at-a-glance" status indication



An Eaton Green Solution



## Eaton 93PM

### 93PM Technical Specifications

#### General

UPS output power rating (1.0 p.f.)	30, 40, 50, 80, 100 kW
Efficiency in double conversion mode	Up to 97%
Efficiency in Energy Saver System (ESS)	> 99%
Field upgradeable	Yes
Inverter/rectifier topology	Transformer-free IGBT with PWM
Audible noise	30-50 kW: < 60 dBA, 80-100 kW: < 65 dBA, ESS operation: < 47 dBA
Altitude (max)	1000 m without derating (max 2000 m)

#### Input

Input wiring	3ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz
Input voltage range	High +20% rectifier input, 10% bypass input, Low -15% at 100% load, -40% at 50% load without battery discharge
Input frequency range	40-72 Hz
Input power factor	0.99
Input ITHD	30 kW: < 4.5%, 40-100 kW: < 3%
Soft start capability	Yes
Internal backfeed protection	Yes

#### Battery

Battery type	VRLA
Charging method	ABM technology or Float
Temperature compensation	Optional
Battery nominal voltage (VRLA)	432 V (36 x 12 V, 216 cells) or 480 V (40 x 12 V, 240 cells) Note: Strings with different battery voltage may not be paralleled!
Charging current maximum	30-50 kW 16.5 A, 80-100 kW 33 A
Battery start capability	Yes

#### Output

Output wiring	3ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz
Output UTHD	< 1% (100% linear load), < 5% (reference non-linear load)
Rated output power factor	1.0
Permitted load power factor	0.8 lagging - 0.8 leading
Overload on inverter	10 min 102-110%; 60 sec 111-125%; 10 sec 126-150% 300 ms > 150%. On battery mode 300 ms > 126%
Overload when bypass available	Continuous < 125%, 10 ms 1000% Note: Bypass fuses may limit the overload capability!

#### Accessories options

External battery cabinets with long-life batteries, External maintenance bypass switch, integrated manual bypass (up to 150kW) and MiniSlot connectivity (Web/SNMP, ModBus/Jbus, Relay)

#### Communications

MiniSlot	3 communication bays
Network/SNMP interface	Yes, standard
Serial ports	Built-in host and device USB
Relay inputs/outputs	5 relay inputs and dedicated EPO 1 relay output

#### Environmental

Operating temperature	0°C to +40°C
Storage temperature	-25°C to +55°C
Altitude	1000m without derating (Maximum 2000m)
Audible noise at 1 metre	55dB @ 75% Load, 60dB @ 100% Load

#### Compliance with standards

Safety (CB certified)	IEC 62040-1
EMC	IEC 62040-2
Performance	IEC 62040-3

For information on product warranty, please visit <http://powerquality.eaton.com/Products-services/Backup-Power-UPS/93PM.aspx?cx=22>

# Eaton 93PR



The most advanced UPS in its power range, the Eaton 93PR is ideal for small to mid-sized data centres and other mission critical applications where efficiency, reliability, safety and scalability are essential.

Available in 75kW & 200kW frame sizes, the modular design of the 93PR enables it to suit a wide range of requirements. And, whichever one you choose, you can be sure it will provide the lowest Total Cost of Ownership combined with maximum availability, for cost-efficient business continuity. Ensuring that you can always access the power your mission critical application requires – under all circumstances – without compromising business performance or safety, the 93PR is the most efficient, scalable, Cloud-ready and safe UPS you can choose.

### Efficiency

With high efficiency being translated into reduced electrical and cooling losses, the 93PR helps to minimise operational expenditure costs, in addition to addressing the cost pressures resulting from commoditisation of IT services. Increased efficiency also leads to higher sustainability, through reduced carbon emissions.

### Scalability

Scalability helps to optimise capital expenditure by only deploying additional equipment when necessary and providing additional flexibility to respond to your changing needs. The scalability of the 93PR also provides increased flexibility to accommodate the changing requirements of rapidly evolving technologies.

### Safety

Ensuring safety in any electrical installation is a must. Safe hot-swappable design and inbuilt back-feed protection ensures safety and compliance with regulations.

### Modular batteries

Eaton 93PR 75kVA model comes with modular internal batteries which can be easily replaceable on site. Modular battery provides the advantage of sensationalising the battery string voltage to a much safer voltages.

Due its modular design, a 93PR power module can be replaced or added while another module continues protecting the load. This eliminates the need to go to bypass for module replacement or upgrading (MTTR: 0 minutes). Replacement and upgrade (N+1) operations typically take less than 10 minutes.

The centralised topology of the 93PR is ideal for scalable systems, as it provides full bypass capacity from day one, whereas modular designs with static switches in every power module can have a severe negative impact on the selectivity of the system due to undersized static bypass. This can compromise the availability of the overall system.

### Easy management

The 93PR provides easier access to detailed status information through its large, user-friendly 7" LCD touchscreen interface.

With the 93PR's graphical LCD interface you can track stats on energy savings, battery time, outage tracking, load profiling and much more.

The green/yellow/red LED light-bars make system status visible from a distance in data centres.



Green light bar showing healthy UPS



Red light bar showing alerts on system

Part Number	Description	Rating	Dimensions (WxDxH)mm	Weight(kg)
730-80492-00P	Eaton 93PR 25kW (UPM) Uninterruptible Power Module	25kW	460 x 600 x 130	28
9106-42218-00P	Eaton 93PR 200kW Frame, internal back-feed	200kW max	603 x 1013 x 2050	310
9106-42217-00P	Eaton 93PR 200kW Frame, internal back-feed, MBS	200kW max	603 x 1013 x 2050	368
9016-9295	Eaton 93PR 75kW Frame, internal back-feed, internal battery	75kW max	603 x 1013 x 2050	468

Due to continuous product improvement programmes, specifications are subject to change without notice.

## 93PR Technical Specifications

### General

UPS output power rating (1.0 p.f.)	25, 50, 75, 100, 125, 150, 175, 200kW
Efficiency in double conversion mode	> 96%
Efficiency in Energy Saver System (ESS)	> 99%
Static bypass rating	200kW or 75kW
External paralleling	up to 4 units with HotSync technology
UPS topology	Double conversion
UPS degree of protection	IP20
Acoustic noise at 1 m, in 25 °C ambient temperature	< 70 dBA in double conversion, < 55 dBA in ESS
Altitude (max)	1000m above sea level at 40 °C. Maximum 2000m with 1% derating per each add. 100 m

### Input

Rated input voltage	220/380 V, 230/400 V, 240/415 V 50/60 Hz							
Voltage tolerance - Rectifier input	187 to 276 V							
Voltage tolerance - Bypass input	rated voltage -15% / +10%							
Rated input frequency	50 or 60 Hz, user configurable							
Frequency tolerance	40 to 72 Hz							
Input wiring	3 phase + neutral							
Input power factor at 100% load	> 0.99							
Input ITHD	< 3%							
Rated input r.m.s current	25kW	50kW	75kW	100kW	125kW	150kW	175kW	200kW
380V	40 A	80 A	120 A	159 A	199 A	239 A	278 A	318 A
400V	38 A	76 A	114 A	151 A	189 A	227 A	264 A	302 A
415V	37 A	73 A	110 A	146 A	182 A	219 A	255 A	291 A
Soft start capability	Yes							
Internal backfeed protection	Yes							

### Output

Output wiring	3 phase + neutral							
Rated output voltage rating	220/380 V, 230/400 V, 240/415 V, configurable							
Total voltage harmonic distortion	< 1% (100% linear load); < 5% (100% non-linear load)							
Output power factor	1							
Permitted load power factor	0.8 lagging to 0.8 leading							
Overload on inverter	10 min 102-110%, 60 sec 111-125%, 10 sec 126-150%, 300 ms > 150%.							
Overload on bypass	Continuous < 125%, 20 ms 1000%							

### Battery

Battery type	12V, VRLA							
Charging method	ABM technology or Float							
Temperature compensation	Optional							
Battery nominal voltage (VRLA)	480 V							
Battery quantity	36 to 40 blocks. Default is 40 blocks							
Charge current limit	Default 5A, configurable maximum 25A per UPM							
Battery start capability	Yes							

### Communications

Minislot	3 communication bays							
Network/SNMP interface	Yes, optional							
Serial ports	Built-in host and device USB							
Standard connectivity ports	Mini-slot ports for optional cards, Device USB and Host USB, RS-232 service port, relay output, 5 building alarm inputs and a dedicated EPO							

### Accessories

MiniSlot connectivity (Web/SNMP, ModBus/Jbus, Relay)
External Battery Cabinet(EBC)
Parallel Tie Cabinet(PTC)
External Maintenance Bypass Switches(EMBS)
External Battery Cabinet Breaker(EBCB)

### Compliance with standards

Safety	IEC 62040-1
EMC	IEC 62040-2
Performance	IEC 62040-3

For information on product warranty, please visit <http://powerqualityeaton.com/Product-services/Backup-Power-UPS/93PR.aspx?cx=22>

# Eaton 9395P



## 10% more power

- Complete isolation of output power from all input power anomalies, to deliver 100% conditioned, perfect sine-wave output – even during severe power disturbance
- High efficiency even when UPS load levels are low, optimised by Variable Module Management System (VMMS)
- Energy Saver System (ESS) improves efficiency levels to 99% by suspending power modules when double conversion is not required. Switches to double conversion mode in less than 2 milliseconds in event of pre-set input limits being exceeded. Filtering against fast low-energy transients provided by ESS.
- Producing 18% less heat helps reduce the need for cooling. Designed for continuous operation at ambient temperatures up to 40°C without de-rating. Can also deliver safe power in higher temperatures without shutting down.

## Scalability and flexibility

- Number of power modules per UPS can be specified
- Layout can be chosen to suit installation: back-to-back, L-shaped etc. Front-accessible design minimises installation costs and saves valuable data centre space.
- Preferred bypass topology can be specified. Additional modules can be added as power load increases.
- Centralised multi-module paralleled 9395P systems are supported by the Eaton System Bypass Module (SBM). Available in ratings from 2000 A to 5000 A as standard, the SBM includes a continuous-duty centralised static switch, backfeed protection device and centralised bypass systems.
- Service disconnect in each power module allows easy maintenance while the UPS is supporting the load in double conversion mode
- More than 90% of materials used can be recycled, decreasing end-of-life impact.

## Ultimate resiliency

- HotSync® patented load-sharing technology enables parallel operating of static converters without communication or loadshare signals. Eliminating the communication link eliminates risk of single point of failure.
- One static switch per UPS enables the full bypass capacity to be achieved from day one. Power modules can be added as loads increase.
- Wide power factor range meets rapidly changing load power factor without de-rating
- Intelligent battery charging through Advanced Battery Management prevents unnecessary charging and significantly retards battery wear rate.

## Applications

- Large data centres, infrastructure projects, industrial complexes and other buildings
- Process control equipment
- Finance and banking infrastructure
- Healthcare
- Transportation systems
- Security operations
- Telecommunications installations



# Eaton 9395P

## 9395P Technical Specifications

UPS output power rating								
kVA	250	300	500	600	750	900	1000	1200
kW	250	300	500	600	750	900	1000	1200
General								
Efficiency in double conversion mode (full load)	95.60%							
Efficiency in double conversion mode (half load)	96.30%							
VMMS (double conversion)	Significantly increased efficiency at low loads							
Efficiency in Energy Saver System (ESS)	Up to 99.3%							
Distributed parallelling with Hot Sync technology	Up to 8							
Internal N+1 redundancy capable	In 600 kVA: 300 kVA In 900 kVA: 600 kVA In 1200 kVA: 900 kVA							
Field upgradable	Yes							
Inverter/rectifier topology	Transformer-free IGBT with PWM							
Audible noise	78 dB (300 kVA); <81 dB (600 kVA); <83 dB (900 kVA); <85 dB (1200 kVA)							
Altitude (max)	1000 m without derating (max 2000 m)							
Input								
Input wiring	3 ph + N + PE							
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz							
	+15% / -15% for 400 V or 415 V							
Input voltage range	+15% / -10% for 380 V							
	+10% / -10% for bypass							
Input frequency range	45-65 Hz							
Input power factor	0.99							
Input ITHD	<3% on nominal load in double conversion mode							
Soft start capability	Yes							
Internal backfeed protection	Yes, standard							
Output								
Output wiring	3 ph + N + PE							
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz							
Output UTHD	<2% (100% linear load), <5% (non linear load)							
Output power factor	0.1							
Permitted load power factor	0.7 lagging - 0.8 leading							
Overload on inverter	10 min 100-110%; 30 sec 110-125%; 10 sec 125-150%; 300 ms >150%							
Overload when bypass available	Continuous <115%, 20 ms 1000% Note! Bypass fuses may limit the overload capability							
Battery								
Type	VRLA, AGM, Gel, Wet Cell, Lithium							
Charging method	Current limited constant voltage charging, or Eaton Advanced Battery Management (ABM)							
Temperature compensation	Optional							
Battery nominal voltage (lead-acid)	480 V (40 x 12 V, 240 cells)							
Charging current / Model	300	600	900	1200				
Max* A	120	240	360	480				
Communications								
X-Slot	4 communication bays							
Relay inputs/outputs	5/1 programmable							
Compliance with standards								
Safety (CB certified)	IEC 62040-1							
EMC	IEC 62040-2							
Performance	IEC 62040-3							
Dimensions and weights (wxdxh)				Charging current (max A)				
300 kVA	1350 x 880 x 1880 mm		830 kg	120				
600 kVA	1890 x 880 x 1880 mm		1440 kg	240				
900 kVA	3710 x 880 x 1880 mm		2680 kg	360				
1200 kVA	4450 x 880 x 1880 mm		3120 kg	480				

\*Limited by maximum UPS input current rating

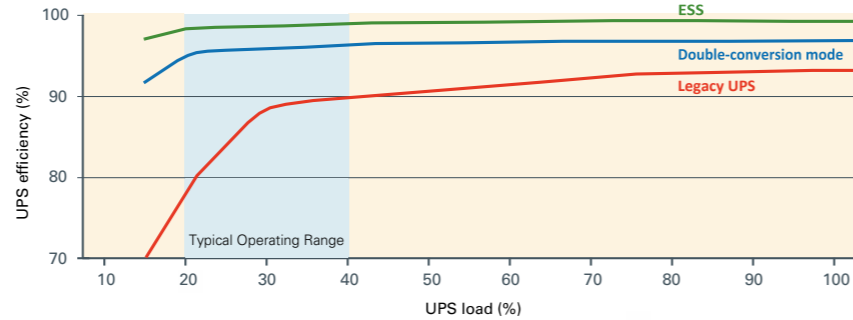
For information on product warranty, please visit <http://powerquality.eaton.com/Products-services/Backup-Power-UPS/9395P.aspx?cx=22>

# Eaton 93PR 300-1200kW UPS



## Features and Benefits

The Eaton 93PR UPS combines unprecedented efficiency and reliability with an eye-catching design. A space-saving, scalable and flexible device that's as easy to deploy as it is to manage, it's the perfect three-phase white or grey space solution for today's data centre.



- Up to 50% footprint saving
- Flexible ventilation options
- On-line replaceable UPM & STSW & Communication module, MTTR as low as 5 mins
- Robust components using oil-filled capacitors & IGBT modules
- Perfect integration with Lithium battery, compatible with multiple Lithium-ion BMS
- High efficiency UPM module, efficiency up to 97%
- Complete power isolation options (Input/ Output/ Bypass/ MBS)



Enhanced efficiency and reliability with SIC Hybrid IGBT Module



Long life oil-filled capacitor

## Easy management

Provides easier access to detailed status information through its large, userfriendly LCD touchscreen interface

With the 93PR's graphical LCD interface you can track stats on energy savings, battery time, outage tracking, load profiling and much more.

The green/yellow/red LED light-bars make system status visible from a distance in data centres.

## Connectivity options:

- Power Xpert Gateway Minislot UPS Card
- Industrial Relay Card - MS
- Industrial Gateway Card
- Gigabit Network Card (Network-M2)
- SNMP



Connectivity Cards



LED light bars

Red light bars showing alerts on system. Yellow light bars indicate battery and bypass status.

# Eaton 93PR 300-1200kW UPS

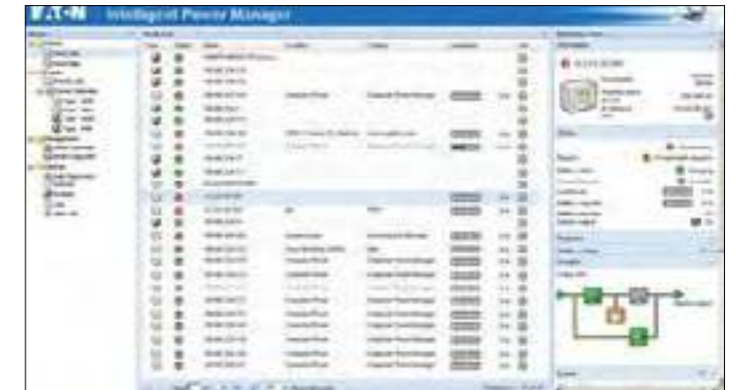
## Easy management

Integrates with the leading virtual platforms through its full suite of power management and connectivity software

Designed for the most advanced IT environments, the 93PR supports optional communication cards that allow remote access via the HTTP(S), SNMP, MODBUS TCP/IP, Modbus RTU and BACnet IP protocols. In addition, Eaton's Power Xpert® software and Intelligent Power® Software Suite give you all the tools you need to manage power devices in your physical or virtual environment.

Learn more at [Eaton.com/intelligentpower](http://Eaton.com/intelligentpower).

Intelligent Power Manager® (IPM) is a world class power management software platform. It seamlessly monitors power and environmental conditions while providing business continuity for workloads using VMware®, Citrix® and Microsoft® platforms. IPM also optimises power and environmental conditions for data centres using OpenStack® or HPE OneView®.



## Lithium-ion battery

### Power on demand

Eaton's lithium-ion battery systems provide a reliable and flexible solution that ensures 24/7 system uptime while delivering significant total-cost-of-ownership (TCO) savings. Capable of providing mega-watts of power in a small footprint, this battery solution comprises of lightweight battery strings designed to seamlessly connect to a Power Xpert™ 9395 or 93PM UPS.

### Why lithium?

Lithium-ion chemistry demonstrates superior characteristics in UPS applications, this results in high energy density, long life, flexible installation, improved cycle life and a lower TCO.

### Backup battery runtimes

Contact Eaton for backup times and configurations. A wide range of runtimes from 3 minutes to an hour + are available.

### Management and monitoring system

The lithium-ion battery integrates a powerful battery management system (BMS), providing cell protection (temp, current, over/under voltage), cell balancing, state of charge and health and alarms/ reports.

**Protection:** The BMS processes critical parameters such as voltage levels, temperature, and current at the module and solution levels. Abnormal conditions (warnings and alarms) are quickly detected and, if necessary, the BMS will protect the system from damage by disconnecting the affected battery.

**Performance optimisation:** The BMS incorporates cell and module balancing controls. This function optimises the voltages of each module to maximise performance and increase service life.

## EnergyAware upgrade

With Eaton's EnergyAware kits upgrade, UPS with lithium battery can do much more beyond UPS.

To find out more about EnergyAware, visit [Eaton.com/EnergyAware](http://Eaton.com/EnergyAware)

## Benefits of lithium-ion

Save money	10 year performance warranty	15 year design life	[Dollar sign icon]	
Save space	up to 8x cycle	40% smaller	60% lighter	[Battery icon]
Reduce risk	24/7 BMS monitoring		[Monitor icon]	

For more information on Lithium-ion battery, visit [Eaton.com/Lithium](http://Eaton.com/Lithium)

<b>Demand charge management</b> User avoids demand charges by discharging at peak times.	<b>Frequency regulation</b> Charge or discharge battery on command to stabilise the grid.
<b>Time-of-use optimisation</b> Shifts energy consumption to avoid peak energy usage.	<b>Aggregation services</b> Manage multiple assets in a building or campus to work as a single entity.
<b>Demand response</b> Utility company requests reduction in power usage.	

## Eaton 93PR 500-600 kW UPS

Technical Specifications	300kVA	600kVA	1200kVA	
<b>Power modules</b>				
Power offering (kW)	300kVA	600kVA	1200kVA	
<b>General characteristics</b>				
Efficiency in Energy Saver System (ESS)	Up to 99%			
Efficiency in double-conversion mode	Up to 97.5%			
Parallel capability	Maximum 8 units external parallel			
Cold start	Supported			
Softstart	Rectifier ramp up, compatible with generator, ramp up rate configurable			
<b>Input characteristics</b>				
Voltage	380/400/415V			
Voltage range:	301~478V L-L 175~276V L-N			
Frequency range	50/60 Hz			
Power factor	> 0.99			
Input current distortion	< 3% @ 100% load capacity			
<b>Battery</b>				
Battery type	Lithium, VRLA, Ni-Cad			
Charging method	BMS, ABM or constant float charge			
Battery voltage	360V - 700VDC			
Battery connection	Support common battery			
<b>Output</b>				
Voltage	380/400/415V 4 wire			
Frequency range	50/60 Hz			
Regulation	±1% steady state			
Voltage THD	< 1% (100% linear load) < 5% (non-linear load)			
Overload	125% 10 mins			
<b>Certification</b>				
Safety	IEC62040-1			
EMC	IEC62040-2			
Performance	IEC62040-3			
Certificate	CE			
<b>Optional accessories</b>				
• SNMP Card	• X-Slot Modbus RTU Card	• INDRELAY-MS Card	• Network-M2	• INDGW-M2
• PXGMSUPS Card	• External Sync Control Box	• Lithium battery cabinet	• Top exhaust kits	
<b>UPS dimensions (mm)</b>				
Height	2000	2069	2069	
Depth	1100	1100	1100	
Width	600	1200	1200	
<b>UPM dimensions (mm)</b>				
Height	173.4 (4U)			
Depth	700			
Width	439			
<b>Weight (kg)</b>				
UPS (w/o UPM)	375	766	1528	
UPM	39			

Due to continuous improvement, specifications are subject to change without notice.



# Industrial and Marine UPS

# 1-3kVA Range 1P Industrial and Marine UPS



## Industrial grade UPS

Industrial grade UPS are designed to protect mission critical equipment where a clean and controlled environment for the UPS is not always available. These environments include but not limited to, mining, rail, utilities plants, and medical facilities. High quality silicon-based coating on PCB boards are done at the manufacturing level to reduce chances of defects and handling errors. Conformally coated boards provides the UPS properties such as dust-proof, hydrophobic, and resistance to oxidation, thermal, as well as moisture. All units go through vigorous tests that includes vibration test (to IEC 60068-2-6 Class A). Industrial units also have a high ambient temperature tolerance (40°C-55°C with derating to 60% nominal load).



## Marine grade UPS

Eaton's marine UPS are specially engineered for shipping environments and applications, built to meet and exceed industry standards. These units are designed to protect critical onboard functions and processes, such as navigation, communication, bridge equipment, lighting, and automation. Marine UPS come as a kit, and includes: Industrial grade UPS, Marine Filter, and an installation bolt down kit (for tower mount UPS only). When deployed as a complete kit, your system will be DNV-GL Type Approved.

# 1-3kVA Range 1P Industrial and Marine UPS

	Rack Mount (9PX)		Tower (9SX)	
	1500VA	3000VA	1000VA	3000VA
Rating (VA/W)	1500VA/1500W	3000VA/3000W	100VA/900W	300VA/2700W
Format	RT2U	RT3U	Tower	
<b>Electrical characteristics</b>				
Technology	Online double conversion with Power Factor Correction (PFC) system)			
Nominal voltage	200/208/220/230/240V			
Input voltage range	176-276V without derating (100-276V with derating)		190-276V without derating (120-276V with derating)	200-276V without derating (140-276V with derating)
Input frequency range	40-70Hz, 50/60Hz auto selection, frequency converter mode			
Efficiency (online)	up to 92.5%	up to 94%	up to 90%	up to 91%
Efficiency (high efficiency mode)	up to 97.5%	up to 98%	up to 95%	up to 96%
<b>Connections</b>				
Input	1 x IEC C14 (10A)	1 x IEC C20 (16A)	1 x IEC C14 (10A)	1 x IEC C20 (16A)
Outputs	8 x IEC C13 (10A) sockets	8 x IEC C13 (10A) sockets + 2 x IEC C19 (16A) sockets	6 x IEC C13 (10A) sockets	8 x IEC C13 (10A) sockets + 1 x IEC C19 (16A) sockets
<b>Communication</b>				
Communication ports	1 x USB + 1 x serial RS232 port + 1 mini-terminal block for remote On/Off + 1 x mini-terminal block for remote power off + 1 x mini-terminal block for output relay			
Communication slot	1 x slot for NETWORK-M2/INDGW-M2/RELAY-MS cards			
<b>Operating conditions, standards, and approvals</b>				
Operating temperature	0°C to 40°C			
Typical noise level	35dB	40dB	41dB	45dB
Safety	IEC/EN 62040-1, UL 1778 (Marine), CSA 22.2 (Marine)			
EMC	IEC/EN 62040-2, FCC Class B (Marine), CISPR22 Class B (Marine)			
Approvals & markings	DNV-GL Type approved (Marine) / CE / CB report (TUV) / cULus / EAC / RCM / KC (9PX) / Energy Star (9PX)			
<b>Dimensions H x W x D in mm / weight</b>				
UPS	86.5*440*450/18.9kg	130*440*485/27.4kg	252*160*387/15kg	346*214*412/34kg
EBM	86.5*440*450/29.8kg	130*440*485/38.2kg	252*160*387/19kg	346*214*412/48.7kg
<b>Customer service and support</b>				
Warranty	3 years		2 years	
<b>Part numbers</b>				
Industrial units (conformal coated)	9PX1500IRTCC	9PX3000IRTCC	9SX1000ITCC	9SX3000ITCC
Marine bundle (inc. filter & inst. kit (for tower)	9PX1500IRTMR	9PX3000IRTMR	9SX1000ITMR	9SX3000ITMR
Marine UPS only	9PX1500IRTM	9PX3000IRTM	9SX1000IM	9SX3000IM
Marine filter	9PXMf3KI	9SXMf3KI		
Marine installation kit	N/A	N/A	9SXIK1KI	9SXIK3KI
Other accessories	Communication cards, EBMs, and additional rail kits share the same part number as the respective 9PX/9SX standard models			

# Eaton 9PHD Marine UPS



## Easy deployment for optimising installation costs

- Front access for installation and service
- Cabinet supports use of halogen free cables, double cables and large cables for installation
- Lifting lugs included for easier unit handling during installation
- Suitable for 3-wire and 4-wire networks and voltage range 380V-480V without transformers
- Small footprint due compact power electronics and internal transformer options.

## Designed for marine and offshore environments

- Marine certificate from any marine classification society
- Marine vibration tested units
- Halogen free cables
- IP23 protection
- Conformally coated PCB boards
- Cable area designed to support marine cabling practices
- Vibration dampers and installation brackets for floor and wall
- Door handle, stopper and triangle key included.

## Smart technology for minimising operating costs

- The 9PHD UPS sets new standards with an operating efficiency level up to 97% in double conversion mode
- > 99% superior efficiency is delivered in Energy Saver System mode (ESS)
- Power factor 1 increases unit power by 10-20% compared to average UPS.

## Smart technology for maximising reliability

- Large touch screen display for easy operation and reduced risk of human error
- Modular design allows building fault tolerant N+1 units
- Redundant monitored cooling fans in each power module
- Battery start feature.

## Strong design for demanding environments

- Protection against dirt, dust, water and moisture with cover options up to IP54
- 1.5mm cover plates for robust use
- Protection for touch screen display.

## Eaton 9PHD Marine UPS

9PHD Technical Specifications	
UPS output power rating (1.0 p.f.)	30, 40, 50, 80, 100, 120, 150, 160, 200 kW
Efficiency in double conversion mode	Up to 97%
Efficiency in Energy Saver System (ESS)	> 99%
Inverter/rectifier topology	Transformer-free IGBT with PWM
Audible noise	30-50 kW: < 60 dBA
	30-50 kW: < 65 dBA
	ESS operation: < 47 dBA
Ambient temperature	0°C to 45°C at sea level, higher temperatures are optional
Ingress protection	IP23, Optional: IP33; IP54
<b>Input</b>	
Input wiring	3ph + N + PE / 3ph + PE
Nominal voltage rating (configurable)	380 V-480 V, 50/60 Hz
With optional transformer	208 V- 690 V, 50/60 Hz
Input voltage range	Rectifier input + 20%, if voltage > 440 V +10% Low -15% at 100% load, -40% at 50% load without battery discharge Bypass +10% - (-15%)
Input frequency range	40-72 Hz
Input Power Factor	0.99
Input ITHD	30 kW: < 4.5%
	40-200 kW: < 3%
Soft start capability	Yes
Internal backfeed protection	Yes
<b>Output</b>	
Output wiring	3ph + N + PE/ 3ph + PE
Nominal voltage rating (configurable)	380 V-480 V, 50/60 Hz
With optional transformer	208 V- 690 V, 50/60 Hz
Output UTHD	< 1% (100% linear load)
	< 5% (reference non-linear load)
Rated output power factor	1.0
Permitted load power factor	0.8 lagging - 0.8 leading
	10 min 102-110%;
	60 sec 111-125%;
Overload on inverter	10 sec 126-150%
	300 ms > 150%.
Overload when bypass available	On battery mode 300 ms > 126%
<b>Communications</b>	
MiniSlot	4 communication bays
Serial ports	Built-in host and device USB
Relay inputs/outputs	5 relay inputs and dedicated EPO 1 relay output
<b>Compliance with standards</b>	
Safety (CB certified)	IEC 62040-1
EMC	IEC 62040-2
Performance	IEC 62040-3
Marine class certificates are available from any class example: DNV, ABS, Lloyds Register Bueray Veritas etc	
<b>Battery</b>	
Battery type	VRLA, Ni-Cd
Charging method	ABM technology or Float
Temperature compensation	Optional
Battery nominal voltage (VRLA)	From 432 V (36 x 12 V, 216 cells) to 480 V (40 x 12 V, 240 cells) (Note: Strings with different battery voltage may not be paralleled)
Charging current maximum*	30-50 kW 29.3 A
	80-100 kW 58.6 A
	120-150 kW 87.9 A
	160-200 kW 117.2 A
Battery start capability	Yes

\* when load level ≤ 40 kW/UPM

# Eaton 93PS Marine UPS 8-40 kW



## Ease of deployment

- Spacious power cabling area at the bottom of the unit
- Factory installed and tested internal transformers reduce footprint and cabling at site by 50%
- Best in class footprint and power density for easier floor planning and space saving
- Possibility to design inherently redundant systems in one frame
- Back feed protection and bypass fuses included by default for easier planning and secured safety
- Ships with any classification society certificate as requested
- Engineering package to help planning in 3D or 2D environment
- Pre- and after-sales support assisting you from quoting to decommissioning.

## Ease of maintenance

- Hot Swap power modules means typical MTTR=0h
- Training + pre-defined spare part kits for basic UPS service
- Fully front serviceable
- Mini Slot extension cards for remote monitoring and management
- No replacement of DC caps during the product design life
- Easy Capacity Test to do full load test without the need for load bank
- Eaton Advanced Battery Management (ABM) maximises the battery life while providing automatic diagnostics of battery health
- Worldwide coverage of Eaton service at your service 24/7.

## Economical to operate

- Minimal losses and associated costs due to market leading efficiency reaching above 96%
- Cuts down operational costs by up to 50% compared to a legacy UPS
- Saves up to 650 barrels of marine diesel per UPS
- Flat efficiency curve means high efficiency regardless of the load level
- Compatibility with VRLA, Ni-Cd, Li-Ion or super capacitors allows for choosing the optimal energy or power reserve for your application.

## Key applications:

- Navigation
- Communication
- Automation and monitoring systems
- Auxiliary power systems
- Safety systems
- Distributed UPS systems
- Peak shaving
- EPOS

# Eaton 93PS Marine UPS 8-40 kW

Technical Specifications	
<b>General</b>	
Output power rating	(PF 1.0) 8, 10, 15, 20, 30, 40 kW
External paralleling	Up to 4 units with HotSync technology
Inherent redundancy	Up to 20 kW with HotSync technology
Efficiency in double-conversion mode	Up to 96.0%
Efficiency in Energy Saver System mode	Up to 98.8%
UPS topology	Double conversion
UPS performance classification	VFI-SS-111
Degree of ingress protection	IP23
Standard UPS colour	Industrial grey; RAL 7035
Ambient service temperature range	0°C to 45°C
Maximum service altitude	1000 m (3300 ft) above sea level at 40 °C
Acoustic noise at 1m, in 25 °C ambient temperature, without transformers	< 60 dBA in double conversion < 47 dBA in ESS
Mean Time To Repair (MTTR)	< 8 minutes (UPM) / < 15 minutes (UPS)
RoHS/WEEE compliancy	Yes
<b>Input</b>	
Nominal voltage rating	380 V, 400 V, 415 V
Input voltage with internal transformers	208 V - 690 V
Input frequency range	40 - 72 Hz
Input wiring	3ph+N+PE (3ph+PE with input transformer)
Input power factor	0.99
Input THDi 100% linear load	< 3%
Soft start for generators	Yes
Internal back feed protection	Yes, for rectifier and bypass lines
<b>Output</b>	
Output wiring	3ph+N+PE / 3ph+PE
Rated output voltage	380 V, 400 V, 415 V
Output voltage with internal transformers	208 V - 690 V
Output frequency	50 Hz / 60Hz configurable
Output UTHD	< 1.5% (100% linear load), < 3.5% (100% non-linear load)
Inverter overload capacity	10 min 102 – 110% load 60 s 111 – 125% load 10 s 126 – 150% load 300 ms > 150% load
Static bypass capacity	Continuous < 125% load, 20 ms 1000% load
Short-circuit capability at rated voltage	Up to 144 A / 300 ms
Rated output power factor	1.0
Load power factor range	0.8 lagging to 0.8 leading

Technical Specifications	
<b>Battery</b>	
Battery technology	VRLA, Li-Ion, NiCd, Eaton Super Capacitors
Nominal battery voltage	336 V - 480 V
Charge current limit	Up to 50 A, configurable
Load ≤80%	Up to 30 A, configurable
Load >80%	Up to 30 A, configurable
Charging method	Eaton ABM technology or float
Boost charge function	Yes
Temperature compensation	Yes
Battery start option	Yes
<b>Communications</b>	
MiniSlots	2 communication bays for Web/SNMP, ModBus/Jbus & Industrial realy
Standard connectivity ports	Device USB and Host USB, RS-232 service port, relay output, 5 building alarm inputs, 1 relay output and a dedicated EPO
<b>Accessories</b>	
Accessories for UPS	Internal transformers; Single feed kit; Earth fault monitoring; 24V Emergency Power Off (EPO); Custom system and battery voltages; Custom ds
<b>Compliance with standards</b>	
Safety (CB certified)	IEC 62040-1
EMC	IEC 62040-2
Performance	IEC 62040-3
RoHS	EU directive 2011/65/EU
WEEE	EU directive 2012/19/EU
Environmental aspects - requirements and reporting	IEC 62040-4, EN 50581

Due to continuous product improvement programmes, specifications are subject to change without notice. For product specific specifications, contact Eaton sales representatives.



ePDU, PDU and  
Maintenance  
Bypass, Enclosures

# ePDU



### Maximise your available power

- Utilise all available power, through Intelligent Power® monitoring
- Ensure you have the power you need, where you need it
- Combinations of IEC C13, C19 and local sockets
- Manage your moves and changes in the data centre and redistribute your power
- Know what power is available for you to add servers or capacity, or if you are reaching capacity.

### Maximum availability

- Designed for the data centre environment and to fit in any industry standard rack
- Rugged Aluminium chassis, with multiple mounting options
- Available in 0U Vertical, and 1U or 2U horizontal options
- High quality components and state-of-the-art technology and circuitry.

### Basic ePDU

Designed for reliable and cost effective power distribution, Basic ePDUs have the form factor and outlet choices to meet your needs.

Designed for the Data Centre: All ePDUs, including basic ePDUs, are made of rugged aluminium or steel chassis and incorporate fully shrouded circuit breakers and switches, they are designed to be highly reliable, and designed to last.

### Transfer Switch

The STS source transfer switch is a simple and effective solution to manage the redundancy provided by two independent power sources. STS handles the automatic or manual transfer of your loads between two independent power sources without interrupting the supply of power (< 6 milliseconds). Either of the two sources may be designated as the preferred source with the other becoming the alternate source. In the event of a failure, transfer from one to the other is automatic and instantaneous.

### Monitored ePDU

Monitored ePDUs monitor the current draw to allow for provisioning and load balancing of servers, and to ensure current draw is not approaching breaker limits.

- Monitoring: Monitor current on input and each branch circuit to ensure accurate load balancing
- Control: Monitor and measure remotely over Ethernet or via LED interface on unit.

### Advanced Monitored ePDU

Advanced Monitored ePDUs give the data centre manager the detailed information and understanding they need to efficiently and effectively run their data centre.

- Monitoring: Highly accurate individual outlet monitoring, branch circuit monitoring and the ePDU as a whole, for V, W, A and kWhrs. Also monitor temperature and humidity in the rack via optional sensors.

Control: Monitor and measure key properties and alerts remotely over Ethernet or via Advanced LCD screen on the unit. Communication protocols include HTTP / HTTPS, DHCP, SNMP v1 and v3, SNMP, SMTP, Telnet, IPv4 & IPv6.

### Switched ePDU

Switched ePDUs give control to the Data Centre manager – be able to remotely shut off or restart equipment, and ensure that it starts up in the correct sequence with the correct delays.

- Switching: on and off control of individual outlets, together with cycling and sequencing of outlets, branch circuits and the ePDU as a whole
- Monitoring: Highly accurate monitoring of the ePDU as a whole for V, W, A and kWhr. Also monitor and humidity in the rack via optional sensors

Control: Monitor over Ethernet or via Advanced LCD screen on the unit, control via Ethernet. Communication protocols include HTTP / HTTPS, DHCP, SNMP v1 and v3, SMTP, Telnet, IPv4 & IPv6

### Managed ePDU

Managed ePDUs offer the data centre managers the maximum functionality – fully Intelligent Power distribution for – complete understanding and control, of Data Centre power distribution, including:

- Monitoring: highly accurate individual outlet, branch circuit, and full ePDU monitoring for V, W, A and kWhrs. Also monitor temperature and humidity in the rack via optional sensors
- Switching: individual outlet, sequencing of outlets with delays or cycling enables remote reboot of equipment

Control: Monitor and control remotely over Ethernet and via Advanced LCD screen on the unit. Communication protocols include HTTP / HTTPS, DHCP, SNMP v1 and v3, SMTP, Telnet, IPv4 & IPv6

### Manage your power consumption

- Control your operating costs by monitoring and tracking consumption from rack to branch, right down to the individual server
- Easily identify physical branch sections and related breakers through Colour-coded sections
- Accurate V, W, A and kWhr measurement enables analysis and tracking
- Enables you to see what your servers are doing Complete control and understanding
- Control your power distribution and consumption
- Build knowledge base of what is going on
- Switch, sequence outlets and outlet groups as well as individually monitor – you have complete control

## PDU and Maintenance Bypass

# Eaton FlexPDU, Eaton HotSwap MBP



1. Flexible system for 19" rack-mounting or on Eaton RT UPSs
2. 3x3 pin ANZ outlets or IEC 10 A sockets
3. IEC 16 A output for cascading
4. IEC 16 A input socket
5. Retaining clip
6. Rotary bypass switch
7. Colour coded input and output sockets for connecting the UPSNB: hard-wired version available



The no hassle solution for improving availability and adding flexibility for single phase UPSs.

### Eaton FlexPDU

Having the right connectors just where you need them.

- FlexPDUs (Power Distribution Units) are flexible mounting multiway socket blocks for easy connection of multiple loads either as free-standing or on rack-mounted UPSs
- FlexPDUs have a large number of sockets (3x3 pin ANZ outlets, 12 IEC 10 A sockets) which fit into a very compact unit (1U - 19")
- FlexPDUs are easy to implement into any type of installation: they can be rack mounted horizontally (1U) or vertically or directly onto all Eaton RT format (rack/tower) UPSs.

### Eaton HotSwap MBP

- High availability for all UPSs up to 11 kVA
- HotSwap MBP provides a maintenance bypass for all UPSs. UPSs can be hot swapped or upgraded without interrupting the power supply.
- HotSwap MBP are available with multiple power ratings: 3000 VA, 6000 VA, 11000 VA, 11000 VA (3 ph Input)
- HotSwap MBP provides compatibility with any UPS now and in the future from Eaton or any other supplier
- The HotSwap MBP 3000 VA is available with different output connectors: 3x3 pin ANZ outlets, IEC or terminal blocks (Hard-Wired version). When used with a 9PX or 9SX the HotSwap MBP 6000 VA and above are providing information on the Bypass status through the UPS LCD screen.
- HotSwap MBP units can be installed as required; at the back, side, top of the UPSs, or rack-mounted.

Technical Specifications	Eaton FlexPDU	Eaton HotSwap MBP 3000	Eaton HotSwap MBP 6000	Eaton HotSwap MBP 11000
Maximum power	3000 VA	3000 VA	6000 VA	11000 VA
Nominal Voltage	220 - 240 V	220 - 240 V	220 - 240 V	200-240 V (350 - 430 V for 3 ph version)
<b>Installation</b>				
Format	1U 19" rack-mounting with multi-position mountings	>1U 19" rack-mounting with multi-position mountings	3U 19" rack	3U 19" rack
Installation	19" rack, wall mounting or on Eaton RT UPSs	19" rack, wall mounting or on Eaton 9PX/SX UPSs		
Dimensions H x W x D	44 x 483 x 80 mm	52 x 483 x 120 mm	52 x 483 x 120 mm	89 x 483 x 90 mm
<b>Connection</b>				
Inputs	1 IEC C20 (16 A) connector and 2 cables (1 IEC 16 A - 16 A cable and 1 IEC 10 A - 16 A cable) for connection to any UPS	IEC models: 1 IEC C20 (16 A) connector and 1 IEC 16 A - 16 A cable (1 HW (Hard-Wired): terminal block	Hardwired terminal block	Hardwired terminal block
<b>Outputs</b>				
IEC	(12) IEC C13 + (1) IEC C19 Or (6) AU 10A GPO + (1) IEC C19	(6) IEC C13 + (1) IEC C19 Or (3) AU 10A GPO + (1) IEC C19	3 IEC 10 A outlets + 2 IEC 16 A outlets (with 3 circuit breakers) + Terminal blocks "	4 IEC 16 A outlets (with 4 circuit breakers) + Terminal blocks
HW	NA		Terminal Block (0.5-10mm <sup>2</sup> )	Terminal Block (4-25mm <sup>2</sup> )
Cascading	Yes, IEC 16 A output outlet			
Retaining clips	Retaining clips on the IEC output outlets			
<b>Operating conditions and approvals</b>				
Operating temperature	0°C to 45°C continuous		0°C to 40°C continuous	
Approvals	CE			

# RE series enclosures



Eaton offers multiple RE Series configurations, making it easy to choose the solution that best fits your needs. These include solutions for server, networking and colocation installations. Through its high-quality and flexible design, the RE Series Enclosure minimises installation time and reduces costs while serving as the foundation of a complete data centre infrastructure solution.

As more companies shift mission-critical IT systems to virtualised infrastructures, data centre professionals face increasing pressure to consolidate resources and lower costs.

The RE Series Enclosure meets these challenges by providing flexible configurations across a range of environments, from network closets to Data Centres.

### Save time

ePDU and cable management mounting support tool-less installation of full or half-height 0U ePDU's.

- Toolless ePDU mounting  
Fast installation for all Eaton 0U ePDU's
- Fully Configured Enclosures Save time installing accessories with pre-installed rack options
- Easy Access to Equipment Split side panels offer greater access and easy removal.

### Save money

With cable and airflow management options available in each RE Series configuration, you can save money on heating and cooling costs, as well as cable management accessories.

- In-field Modification A wide-range of cable, airflow management and top panel options allow you to configure each rack in-field
- Configured Enclosures Create your own configuration to the exact specifications of your applications
- Bundled Solutions Minimise data centre cost by purchasing the full Eaton power and enclosure system.

### Reduce risk

The highly secure combination lock protects valuable IT resources from internal and external threats. High load capacity and airflow ensures maximum equipment performance and safety.

- Key & Combo Lock Standard handle offers single and 3-point locking options
- High-flow doors Front doors feature a 78% open perforation pattern for max air intake and exhaust
- High Load Capacity Enhanced structural stability with 1500kg static rating (Server Racks).

## RE Series Enclosure Technical Specifications

Product	Application	Dimension	Configuration	Colour
<b>Server</b>				
Server enclosure	Server (1500kg)	H (RMU) = 42 W (mm) = 600 D (mm) = 1070	Frame, rails (flush), locking sides, casters, top, full front door with swing handle, split rear doors with swing handle; PDU brackets	Black
	Server (1500kg) – No sides	H (RMU) = 42 W (mm) = 600 D (mm) = 1070	Frame, rails (flush), casters, top, full front door with swing handle, split rear doors with swing handle; PDU brackets	Black
<b>Colocation</b>				
Colocation enclosure	Colocation (1500kg)	H (RMU) = 42 W (mm) = 600 D (mm) = 1070	Frame, rails, locking sides, casters, top, full front door with combo lock, split rear door with combo lock, PDU brackets	Black
<b>Key Accessories</b>				
Air dams	800mm W enclosures	H = 42	Air dam with blanking panels and grommets	Black
PDU brackets	All enclosures	H = 24, 42	Additional PDU brackets for mounting on second side or for half height rack PDUs	Black
Vert. cable mgr	800mmW enclosures	H = 42	Cable rings, high density cable managers	Black
Horiz. cable mgr	All enclosures	19"W, 1U, 2U	Cable rings, high density cable managers	Black
Shelving	All enclosures	D = 600mm	Fixed, Telescopic	Black
Fan tray	Network enclosures	D = 800mm, 1000mm, 1100mm	4-6 Fans per kit	Black
Bottom plate	Server enclosures	W = 600mm D = 1100mm, 1200mm	Steel, fully contained	Black
Blanking panel	All enclosures	1U, 2U, 3U, 4U	Tool-less metal, tool-less plastic	Black

# DC Solutions and Cabinets



## DC Product Solutions

### Smarter energy. Smarter solutions

Eaton offers highly efficient, highly reliable, modular DC power systems, with built-in redundancy and secure, always on-line, battery backup. Our smaller compact DC solutions are well suited to rack mount indoor and outdoor enclosures and other space limited installations. Expert advice is available on the system that will best suit your needs, from small and medium private enterprise DC power systems, through to any situation in a large-scale core Telecom network or Industrial facility. We can also provide support with alternative energy solutions such as off grid solar and hybrid solar/diesel power sources. Eaton DC systems feature advanced remote monitoring & control, and we have available complimentary sealed lead acid and lithium batteries.

Rectifier module	24V & 48V, 0.9kW to 5.8kW
Solar charger module	48V, 2kW
Inverter modules	48V > 110V & 230V, 1.0kVA to 3.5kVA
DC-DC converters	12V, 24V, 48V, 0.5kW
Rectifier systems	48V, 0.9kW to 384kW 24V, 1.4kW to 179kW
Inverter systems	48V > 110V, 230V 2kVA standalone 48V > 110V, 230V 18kVA, modular 48V > 230V 35kVA, modular
Solar systems	48V, 24kW
Sealed LA batteries	12V, 55Ah, 100Ah, 150Ah FT
Lithium batteries	48V, 100Ah tray or 19" Mount
Outdoor enclosures	Single & Double Bay. Power + Equip HEX, DX, Forced Air



Eaton industrial offering

## Eaton 93PS IP42 Industrial Upgrade Kit

To harden the 93PS for harsh environmental Eaton have a IP42 kit available. The kit helps to prevent ingress of foreign materials & water into the unit increase its service life in harsh environments, while maintaining the benefits of a commercial UPS.

### 93PS 8 to 40kVA - 3 Phase In, 3 Phase Out.

- IP42 Classifications
- Dust filters
- Modular Redundancy
- Low Mean Time to Repair
- Class Leading Efficiency
- Low THDi
- 2 Year Standard warranty.

Normal operation



Alarm



### Eaton 93PS user display

For user safety and convenience, the 93PS displays a range of coloured LED indicators as operating status alerts. These are displayed both on the cabinet door of the UPS and on screen.



Eaton industrial offering

## Eaton ExoCab series outdoor cabinets

The Eaton ExoCab series of outdoor power system cabinets, are a versatile range of solutions for housing UPS, DC systems, batteries and customer equipment in harsh and open outdoor situations. These cabinets are designed to resist the rigors of nature, yet provide a secure and controlled environment for the electronics associated with UPS or DC systems. Various cooling options are available to best suit the environment and equipment being housed.

### ExoCab34

- UPS, DC power, battery and other equipment options
- Cost effective
- 34U of equipment space
- High level of protection from the environment
- Durable aluminium exterior & stainless steel internal parts.
- Three-point locking. Lock to customer requirements, including triangle key, lock barrels compatible with other Eaton cabinets, etc.
- Anti-graffiti finish
- Options:
  - Sealed
  - Fresh air
  - Heat exchanger
  - Air conditioned

### ExoCab18

- UPS, DC power, battery and combined options
- Cost effective and compact
- High level of protection from the environment
- Durable aluminium exterior & stainless steel internal parts.
- Two-point locking. Lock to customer requirements, including triangle key, lock barrels compatible with other Eaton cabinets, etc.
- Anti-graffiti finish
- Battery bay gas vents
- Generator secure point eyebolt
- Optional:
  - Generator connection
  - Rear door
  - Heat exchanger
  - Air conditioner



## Brightlayer Data Centre Suite

# Intelligent Power Manager (IPM)

Integrated power management software for virtual environments



A part of Eaton's [Brightlayer Data Centers suite](#), Intelligent Power Manager (IPM) software for disaster avoidance application provides the tools needed to monitor and manage power equipment in physical or virtual environments to keep IT devices running during a power or environmental event.

This innovative HTML5-based solution ensures system uptime and data integrity by allowing you to remotely monitor, manage and control devices on your network. IPM provides a solution that is easy to use, maintains business continuity and allows you to do more with less.

Achieve more with less: Reduce capital expenses	Maintain business continuity: Minimize operating expenses	Protect remote sites: Automate business continuity at the edge
<ul style="list-style-type: none"> <li><b>Less initial upfront batteries:</b> Increase your runtime via software limiting the hardware to be purchased and deployed.</li> <li><b>Reduced battery replacement required:</b> Use fewer batteries to minimize future battery maintenance and replacement.</li> <li><b>Promote a greener environment:</b> Consume less energy and recycle fewer batteries.</li> </ul>	<ul style="list-style-type: none"> <li><b>Intelligent load shedding:</b> Increase system uptime while extending battery runtime and minimizing generator load by suspending non-critical virtual machines.</li> <li><b>Site Recovery Manager failover:</b> Reduce data recovery expenses by synching primary and disaster recovery sites prior to power failures.</li> <li><b>Power capping on demand:</b> Keep critical workloads running longer during a power outage by limiting server power consumption.</li> </ul>	<ul style="list-style-type: none"> <li><b>Within cluster:</b> Host IPM within your cluster to avoid needing additional IT equipment for your power management software.</li> <li><b>Complex system protection:</b> Configure IPM to gracefully shutdown all your IT equipment in the order required to assure safe and quick recovery from power or environmental outages.</li> <li><b>Automated protection:</b> IT personnel not required on site; remote sites can be set up and managed from a central location.</li> </ul>

Features	IPM Monitor	IPM Manage	IPM Optimize
Contextual visibility of power metrics and constraints	✓	✓	✓
Monitor Eaton and third-party power devices	✓	✓	✓
Manage and update Eaton power devices		✓	✓
Define basic business continuity automations with host level actions		✓	✓
Simple Wizard-based automation configuration		✓	✓
Define advanced business continuity automations with VM and cluster level actions			✓

## IPM dashboard



## IPM rack view



## Eaton alliance partners

Eaton understands that power protection is only one aspect of IT environments. By partnering with the industry's leading global IT providers, Eaton helps harness the full power of data centers. Together with alliance partners, Eaton aims to solve even the most complex IT challenges, while continuing to provide the ultimate in power protection.



# Visual Power Manager (VPM)



Eaton Visual Power Manager (VPM) software provides IT managers of data centres and distributed IT environments the tools to remotely monitor their power devices—including all UPSs and PDUs. An HTML5-based platform, VPM is easy-to-deploy, simplifies day-to-day monitoring and helps maintain business continuity. VPM offers two levels of licenses: VPM Essential is a self-installable, subscription-based license that offers users essential power management capabilities in a simplified interface for a competitive price; VPM Professional offers the ability to visualise infrastructures with asset management and location-based analytics to take necessary actions for continuous uptime of critical applications.

## VPM key features:

### Power infrastructure monitoring

Up-to-the-minute statistics and reporting provides a quick way to identify potential issues, allowing you to quickly take corrective action.

With VPM, you receive:

- Real-time alarms** to help with power infrastructure monitoring
- Increased awareness** with reports, trends and dashboards
- Remote access** to monitor and control your devices from anywhere
- Customizable user access** for multitenancy and feature access limitation
- Control of rack PDU outlets** and UPS load segments
- Customer billing/chargeback reports**
- View outlet and rack power capacity**, as well as power events
- View your phase balancing** at rack level
- Predefined trend charts** for anomaly identification and analysis
- Simplified budget planning** with integrated battery replacement reports

## Compare VPM licences

Features	VPM Essential	VPM Professional
Maximum monitored devices supported Note: Based on standard architecture, more can be achieved with evaluation by Eaton.	Up to 1,000	Up to 500,000
Fully HTML5 web interface	✓	✓
Auto discovery	✓	✓
Mass firmware upgrade tool	✓	✓
Mass node-settings configuration tool	✓	✓
Send email notifications	✓	✓
Monitor third-party devices	✓	✓
List-based asset catalog	✓	✓
Event-based automation	✓	✓
Integrated reporting engine	✓	✓
Microsoft active directory integration	✓	✓
Supports LDAP authentication	✓	✓
Dashboard with trend analysis	✓	✓
Multi-tenant user access control	✓	✓
Self installable virtual appliance	✓	
Location based navigation		✓
Visual, map-based alarm status		✓
3D rack elevation builder		✓
Rack group aggregated data analytics		✓
Intelligent single click, remote device power cycling		✓
Power aggregation through the power chain		✓
ITSM integration (ServiceNow, Remedy, etc.)		✓



Auto-Discover your networked power devices with SNMP Protocols for quick and easy monitoring and management



Trend your data points over configurable periods of time to identify changes and irregularities in your power infrastructure

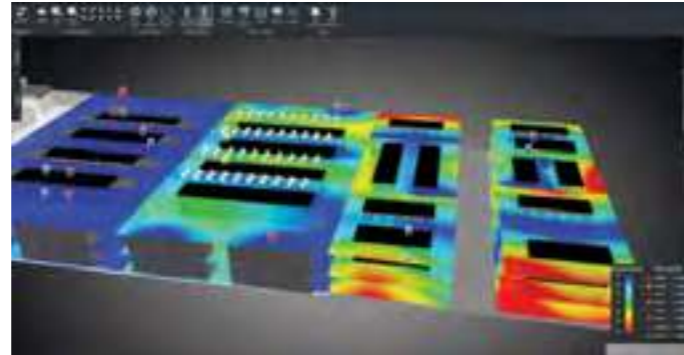


View all of your user configurable power device alarms and actions at a glance

# Visual Capacity Optimization Manager (VCOM)



VCOM, Eaton's data centre system optimisation (DCSO) platform, is an intuitive remote monitoring and management software that provides you with valuable information to make better business decisions. The HTML5-based platform features capabilities designed to reduce data centre operational expenses, improve system and application reliability and mitigate risk through data analysis. You gain the unique ability to not only easily track usage, utilisation, capacity limits and more, but also the advantage of reacting quicker to address any related concerns.



Temperature data from throughout the data centre can be used to create a temperature cloud map identifying hot spot and over-cooling

## VCOM features

VCOM is a complete software solution for data centre monitoring and management that provides insights and control features to save time, save money and reduce risk—all within a singular, intuitive platform. There is no need to buy costly add-on modules, which increases your total cost of ownership and slows your ROI. Simply count the number of floor-mounted assets (FMAs\*) and install the license to benefit from:



Rack dashboard provides all the needed data for a rack while visually showing the A/B fail-over analytics and load balancing of the rack PDUs



Port mapping allows users to view power, network and fiber connection throughout the data centre to quickly perform failure and impact analysis



View real-time data on every monitored device in your infrastructure to keep track of trends and thresholds for maximum uptime

### Virtualisation and monitoring

View 3D renderings at all levels of the data centre as well as across the enterprise (power, space, environment, IT networking, virtualisation) and identify problems for a wide array of IT assets including physical servers, VM hosts, VM guests, switches, rack PDUs, UPS and large facility devices.

### Asset management

Centralise your device data repository and utilise limitless attribute tracking to ease management of distributed locations Custom reporting and dashboards Examine multilevel reports, role-based dashboards, KPI tracking, trending and predictive analytics

### Integrated rack building tool

Build each rack using our repository of over 20,000 devices to deliver an accurate and visual display of your data centre

### Capacity planning

Utilise "what-if" scenarios to understand current usage to ensure capacity is present for upcoming projects

### Environmental monitoring

Create real-time thermal imaging profiles of your environment using temperature, humidity, leak detection, door closure and air pressure data

### HTML5 interface

Improved speed, searching, security, and overall functionality with the new HTML5 web interface for user-friendly mobile and desktop experience.

### Change/workflow management

Reduce time to deploy and increase accuracy of implementation with fully integrated and native capability to generate projects, tasks and work orders

### Multitenancy

Support more than one customer/user type by presenting separate and distinct data that pertains solely to each tenant

# Brightlayer Data Centres suite comparison



Features	Intelligent Power Manager (IPM)			Visual Power Manager (VPM)		Visual Capacity Optimization Manager (VCOM)
	Monitor	Manage	Optimize	Essential	Professional	
Maximum monitored devices supported <sup>1</sup>	Contact Eaton for details.			Up to 1,000	Up to 500,000	Up to 500,000
Fully HTML5 web Interface	✓	✓	✓	✓	✓	✓
Auto discovery	✓	✓	✓	✓	✓	✓
Send email notifications	✓	✓	✓	✓	✓	✓
Monitor third-party devices	✓	✓	✓	✓	✓	✓
List based asset catalog	✓	✓	✓	✓	✓	✓
Virtual appliance	✓	✓	✓	✓	✓	✓
Microsoft™ Active Directory integration	✓	✓	✓	✓	✓	✓
Supports LDAP authentication	✓	✓	✓	✓	✓	✓
Power aggregation through the power chain	✓	✓	✓	✓	✓	✓
2D rack view	✓	✓	✓			
Event-based automation		✓	✓	✓	✓	✓
Mass node-settings configuration tool		✓	✓	✓	✓	✓
Mass firmware upgrade tool		✓	✓	✓	✓	✓
Virtualized host shutdown		✓	✓		✓	✓
Gracefully shutdown compatible storage		✓	✓			
Graphical automation wizard		✓	✓			
Power capping of compatible servers		✓	✓			
Cluster shutdown with IPM in cluster			✓			
Shut down VxRail, Nutanix, vSAN VMware HA			✓			
Targeted virtual machine migration			✓		✓	✓
Targeted virtual machine graceful shutdown			✓		✓	✓
Trigger actions from third-party devices			✓		✓	✓
Integrated reporting engine				✓	✓	✓
Dashboard with trend analysis				✓	✓	✓
Multi-tenant user access control				✓	✓	✓
Enhanced data visualization via PowerBI™ integration				✓	✓	✓
Data extraction through RESTful API				✓	✓	✓
Location based navigation					✓	✓
Visual, map based alarm status					✓	✓
3D rack elevation builder					✓	✓
Rack group aggregated data analytics					✓	✓
Intelligent single click, remote device power cycling					✓	✓
ITSM integration (ServiceNow™, Remedy™, etc.)					✓	✓
Integrated controls and monitoring of TANLock™ Electronic Access Control System					✓	✓
Full end-to-end facilities monitoring (utility entrance to IT application)					✓	✓
Power port mapping					✓	✓
Advanced port mapping (network and fiber)						✓
Workflow management (project, task, work order)						✓
Security Studio – cameras, sensors, etc.						✓
3D visualization – facilities equipment, IT rack and hardware, office space, chilled water, cable tray						✓
Project planner (IT and facilities deployment tracking)						✓
Capacity planner / "what if" scenarios (by project or ad hoc scenarios)						✓
Impact/root cause analysis						✓
Asset warranty/service deployment tracking maintenance log						✓
Site level dashboards and business intelligence						✓

<sup>1</sup> Based on standard architecture, more can be achieved with evaluation by Eaton.

# Foreseer®

Foreseer connects your operation's vast array of devices, giving them the ability to be monitored — regardless of manufacturer or model — to help you reduce energy consumption and avoid unplanned downtime due to the failure of critical systems.

## Power quality analysis

- Powerful tools to analyze waveform captures and phasor diagrams.

## Operational insights

- Comprehensive system monitoring, including emergency power availability, facility efficiency, environmental impact, facility cooling, outside weather conditions, and security, fire, and building management systems.

## Custom user interfaces

- Dynamic one-line views, dashboards, 3D renderings, equipment elevations and virtually any custom view can be created.

## WAGES support

- Monitor and analyze multiple building subsystems known as WAGES (water, air, gas, electricity, steam) to quickly make informed decisions.

## Nationwide, local field service

- Experts where you need them for rapid response, custom programming and turnkey implementations.

## Derived equations

- Write complex formulas, allowing for real-time custom metric calculations without the need to export and manipulate data.

## Advanced reporting

- Transform complex data from a multitude of sources into concise, graphical reports and automatically deliver via email or network storage.

## Scalable

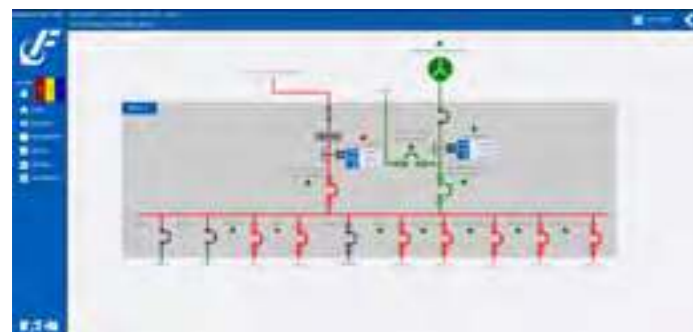
- Purchase only what you need through tailored monitoring capabilities for different sites.

## Alarm notifications

- Users stay informed 24/7 by receiving alarms via email, text message and dashboard notifications.

## Maintenance manager

- Suppress nuisance notifications while still logging activity.



# Connectivity Cards and Surge Protection Devices

# UPS Connectivity Cards

Eaton's full range of network connectivity devices enables you to remotely monitor and manage your power quality equipment. From outlet by outlet energy consumption reports to temperature and humidity readings, connectivity devices give you full control of your IT environment from offsite. This high level of awareness and control allows you to take full advantage of helping ensure business continuity.

## Network Management Cards

### NETWORK-M2

With faster speed and enhanced cybersecurity, the Gigabit Network Card improves power system reliability by providing warnings of pending issues to administrators and helping to perform orderly graceful shutdown of servers and storage. The new network card works with Intelligent Power Manager (IPM) v 1.61 or higher to improve business continuity by triggering policies configured to keep mission critical applications running in the event of power or environmental anomalies, including virtual machine relocation or automated disaster recovery action.



## Industrial Network Cards

### INDGW-M2

Industrial Gateway Card is compatible with the MODBUS communications protocol. The card enhances the protection given by the UPS by providing real-time monitoring of the UPS system and environment through a Building Management System (BMS) or Industrial Automation System (IAS). The card allows facility managers to monitor the state of the UPS, power conditions, temperature and humidity within the UPS network, enabling early warning of any threats to the system.



## Industrial Gateway Card

### INDGW-X2

#### Eaton Gigabit Industrial Gateway X2 Card

The Eaton Gigabit Industrial Gateway X2 Card (INDGW-X2) is Eaton's latest UPS connectivity device that delivers industrial professionals with new and exciting capabilities and features. The first UPS network card to meet both UL 2900-1 and IEC 62443-4-2 cybersecurity standards, the Gigabit Industrial Gateway X2 Card improves power system reliability by providing warnings of pending issues to administrators and helping to perform orderly graceful shutdown of servers and storage.



- **Gigabit speed:** compatible with better performing, cost effective and widely deployed gigabit network switches
- **Compliance** with Gigabit only data center networks
- **Cybersecurity** enhancements for UL 2900-1 and IEC 62443-4-2 certifications, including stronger encryption, configurable password policy and X.509 Public Key Infrastructure
- **Real-time clock** with battery backup and linkage to NTP (Network Time Protocol) server
- **Increased memory** for improved operation and larger data storage
- **Advanced Management** with RESTful API over HTTPS
- **Secure SMTP** for email alerts

# UPS Connectivity Cards

## Relay Cards

### Relay card MS (Relay-MS)

Provides communication through voltage free relays or RS-232.

- Installation in Eaton Mini-Slot Enhancement Bay
- 1 x 9-pin Dsub connector
- 1 x RS232 or 5 x Relay output / 1 x Input



### Industrial relay card MS (INDRELAY-MS)

Provides communication through voltage free relays.

- Installation in Mini-Slot Enhancement Bay
- Terminal connectors, 250 VAC/5A rating
- 5 x Relay output / 1 x Input



## X-slot Cards

### X-Slot Industrial Relay Card (XSLOTINDRELAY)

Provides communication through voltage free contacts.

- Installation in Eaton X-Slot Enhancement Bay
- Terminal blocks
- 4 Switching Relays (both NO and NC)
- 250 Vac, 30Vdc@5A. Terminal block wire size range 16-24 AWG



### X-Slot MODBUS Card (103005425-5591)

Provides MODBUS RTU communication.

- Installation in Eaton X-Slot Enhancement Bay
- MODBUS/JBUS (RTU, RS232 & RS485)
- 3 x 9-pin Dsub connectors; 5 wire terminal block
- Configuration through RS232 and DIP switches



## Other devices

### Monitoring Probe

The new EMP maintains all the functionality of the previous generation of sensors (temperature, humidity and dry-contact monitoring) while adding the ability to be daisy-chained (up to 3 per host), allowing multiple sensor connection to a single host.



### Eaton UPS status indicator panel

The UPS Status Indicator (UPSSI) has been specifically designed to provide remote indication of the UPS Status in a medical environment and is suitable for installation in Operating theatres, Intensive care, Recovery wards, Isolation rooms, Nursing stations, Treatment rooms, and other Special care areas.

The equipment is suitable for wall mounting in a standard Australian electrical accessory bracket.



### Environmental Monitoring Probe (EMP001)

not compatible with Network-M2 or INDGW-M2  
Accessory to Web cards and select ePDUs, adds monitoring of temperature, humidity and two digital inputs.

- External device
- Connects to Eaton Web cards and select ePDUs through RJ45 Cat 5 patch cable (1,5 m provided, 20 m max)
- Alarm limits for temperature and humidity can be set in Web cards
- Two potential free digital inputs
- Used as the temperature probe in temperature compensated charging
- Facilitates graceful shutdown of servers in case of unacceptable environmental conditions or contact closure change
- Compatible with Eaton Intelligent Power Software through supported Web cards or ePDUs



# Surge protection devices

In nanoseconds a power surge can do major damage to sensitive equipment and data. It can come from anywhere, and like a bullet, you only know it has been by the destruction left behind. That's why surge protection is so critical. And why Eaton builds so much quality into our full line of surge protection products. Eaton has a world beating reputation for Power Quality and a full range of surge protection solutions, covering every eventuality.



**Eaton SPDV60/T60**  
Shunt Surge Diverter, 1 Pole 60kA



**Eaton SPDi**  
Shunt Surge Diverter, 1 and 3 Phase, 40kA and 100kA



**Eaton SPD3200**  
Shunt Surge Diverter, 3 Phase 200kA



**Eaton DSFi**  
Series Filter with Shunt Surge Diverter, 1 Phase 5-32A, 40kA Primary



**Eaton CSFi**  
Series Filter with Shunt Surge Diverter, 1 Phase 3-25A, 25kA Primary



**Eaton PPFi**  
Series Power and Noise Filter with Shunt Surge Diverter 3 Phase, 100-800A, 80-240kA



**Eaton Quickmov™**  
Integrated Surge Protection Device (Internally HRC Fused) 1 Pole 60kA



**Eaton ESFi**  
Series filter with Shunt Surge Diverter Class II/Cat C & B, 1 & 3 Phase 63-80A, 100kA Series Surge Filters



**Eaton PSFi**  
Portable Surge Filter, 1 Phase 10A & 16A, 25kA Primary and 140kA Primary



**Eaton SF8RM**  
Single Phase Rack Mounted Filter /PDU



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June 2022

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