

Power Quality Solutions up to 40 kVA



UPS product catalogue

EATON

Powering Business Worldwide

Power Quality

Eaton Power Quality Division, a part of the Electrical Sector, has more than 45 years of experience in designing and producing innovative power quality products. The result is an expansive portfolio of products, which help to protect our customer's business processes, critical applications and systems from all power problems and failures.



Eaton product and service range

- AC UPS from 350 VA up to 4000 kVA
- DC systems of all sizes
- A broad portfolio of rack-based power distribution units (ePDU®)
- Software and connectivity products for power management and remote control
- Technical support and maintenance
- Complete power quality solutions

Eaton products are manufactured in Finland, USA, China, Taiwan, India, Brazil, UK and New Zealand.

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Eaton 3105 UPS

350 – 500 VA



Power protection for:

- Computers, peripherals and multimedia
- Broadband modems (Internet and TV)
- IP telephony
- Household goods, etc.



Passive standby (off-line) UPS

In a perfect world, your incoming utility power would be smooth, steady, and completely reliable. In the real world, however, public power is plagued with sags, surges, and outages. A typical power customer experiences disturbances in utility power daily, and several complete outages a year.

Protection against main's power problems

- The 3105 UPS helps to protect your home appliances in case of everyday events such as lightning strikes, storms, over-demand on the utility grid, accidents, and natural disasters knocking out power without warning.
- In the event of total blackout, the unit runs on battery so that you have time to save your work.
- The shutdown software installation makes it possible to automatically save your work and shut down your application without doing anything. Once power resumes, you can start exactly where you left off, without losing any data.

Two models – all included

- The 3105 UPS comes in two models with either Schuko outlets or with IEC outlets and two power ratings 350/500 VA.
- The bundled software for automatic data saving and shut-down (compatible with Windows)
- Both IEC and Schuko models are bundled with a USB cable, as well as RJ 11 cable.
- With the Schuko model you get the power cable bundled while with the IEC model you get two IEC-IEC load cables.

Eaton 3105 UPS



- 1 4 IEC outlets with battery backup and surge protection + 4 IEC outlets with surge protection
- 2 3 Schuko outlets with battery backup and surge protection + 3 Schuko outlets with surge protection
- 3 USB port
- 4 Dataline protection
- 5 ON/OFF button + LED user interface

TECHNICAL SPECIFICATIONS

Rating	350VA Schuko	500VA Schuko	350VA	500VA
Part number	103004343-5591	103004344-5591	103004249-5591	103004250-5591
Capacity (VA/Watts)	350/210	500/300	350/210	500/300
Dimensions W*D*H (mm)	280*180*125 mm	280*180*125 mm	280*180*115 mm	280*180*115 mm
Weight (kg)	6 kg	6 kg	6 kg	6 kg
Input connection	IEC320/ 10A	IEC320/10A	IEC320/10A	IEC320/10A
Output connection	3*Schuko + 3*Schuko surge only	3*Schuko + 3*Schuko surge only	4*IEC320 10A + 4 IEC320 10A surge only	4*IEC320 10A + 4 IEC320 10A surge only
Typical runtime	4 min full load 10 min half load	3 min full load 8 min half load	4 min full load 10 min half load	3 min full load 8 min half load
Bundled with	Schuko Power cable Software & USB cable RJ 11 cable	Schuko Power cable Software & USB cable RJ 11 cable	(2) IEC-IEC cables Software & USB cable RJ 11 cable	(2) IEC-IEC cables Software & USB cable RJ 11 cable

Operational

Nominal Input voltage (VAC)	230 VAC
Input voltage range	184-265 VAC
Operating frequency	50/60 Hz auto sensing
Nominal Output voltage	230 VAC
Output voltage regulation	Same as input
Overload capacity	120%+/- 10%
Efficiency	95%, normal mode

User interface

LED	UPS On, UPS on Battery, Overload, Alarm
Standard communication ports	USB

Environmental

Operating temperature	0°C - +40 °C
Altitude	< 3000 m
Audible noise at 1 meter	< 40 dB

Certification

Markings	CE
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3105 runtimes

Load	3105 350VA/210W	3105 500VA/300W
50W	30 min	40 min
100W	15 min	17 min
150W	8 min	10 min
200W	4 min	6 min
250W		4 min
300W		3 min



Eaton 5110 UPS

500, 700 and 1000 VA



Line interactive UPS

Highest power performance

- The 5110 UPS offers an appropriate level of power protection for office computers and workstations.
- The UPS does not only offer backup when power is totally lost, it also regulates the voltage and thereby offers protection against five of nine typical power problems: power failures, sags, surges, undervoltage and overvoltage.
- All 5110 models have four battery backup protected outlets as well as four "surge-protection" only outlets for the load not needing battery backup.

Unmatched reliability

- Buck and Boost operation corrects a wide range of input voltage variations through continuous regulation, without the use of batteries.
- Extend UPS service life with user-replaceable batteries.
- Protect networked equipment from "back door" power surges coming through LAN or telephone lines.

Outstanding versatility

- The 5110 occupies a small footprint and can be placed on its side under the monitor.
- The UPS is equipped with a USB port and if you choose to install the bundled shutdown software it automatically manage your operating system graceful shutdown in case of extended power outages.
- All models come bundled with the shutdown software, USB cable and two IEC-IEC load cables as well as a RJ-11 cable your Tele/DSL line from surges.

Power protection for:

- Workstations
- Office computers
- Office equipment



Eaton 5110 UPS



- 1 LED user interface
- 2 Panel for replacing batteries
- 3 USB port
- 4 Dataline protection
- 5 4xIEC 10A + 4xIEC 10A surge only
- 6 Circuit breaker reset button



TECHNICAL SPECIFICATIONS

Rating	500 VA	700 VA	1000 VA
Part number	103004261-5591	103004262-5591	103004263-5591
Capacity (VA/Watts)	500/300	700/420	1000/600
Dimensions W*D*H (mm)	87*260*270 mm	87*260*270 mm	87*384*270 mm
Weight (kg)	6 kg	8 kg	12 kg
Input connection	IEC320/ 10A	IEC320/10A	IEC320/10A
Output connection	4*IEC320 10A + 4 IEC320 10A surge only	4*IEC320 10A + 4 IEC320 10A surge only	4*IEC320 10A + 4 IEC320 10A surge only
Typical runtime	3 min full load 8 min half load	3 min full load 8 min half load	5 min full load 15 min half load
Bundled with	(2) IEC-IEC cables Software & USB cable RJ 11 cable	(2) IEC-IEC cables Software & USB cable RJ 11 cable	(2) IEC-IEC cables Software & USB cable RJ 11 cable

Operational

Nominal Input voltage (VAC)	230 VAC
Input voltage range	178-275 VAC
Operating frequency	50/60 Hz auto sensing
Nominal Output voltage	230 VAC
Output voltage regulation	230 V +/- 10%
Overload capacity	130%+/- 10% immediate shutdown 105% shutdown after 5 min
Efficiency	95%, normal mode

User interface

LED	UPS On, UPS on Battery, Overload,
Standard communication ports	USB

Environmental

Operating temperature	0°C - +40 °C
Altitude	< 3000 m
Audible noise at 1 meter	< 40 dB

Certification

Markings	CE
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BACKUP TIME TABLE

Load	500 VA	700 VA	1000 VA
50W	40 min	50 min	80 min
100W	17 min	20 min	60 min
150W	10 min	14 min	40 min
200W	6 min	9 min	25 min
250W	4 min	7,5 min	20 min
300W	3 min	6 min	17 min
350W		4 min	14 min
400W		3 min	12 min
450W			10 min
500W			8 min
550W			6 min
600W			5 min



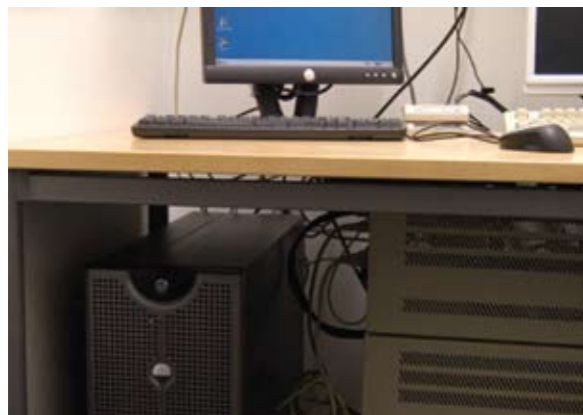
Eaton 5115 UPS

500 – 1400 VA



Power protection for:

- Small servers
- Network devices
- Storage systems



Line interactive UPS

Highest power performance

- The 5115 UPS protects critical equipment from five of nine typical power problems: power failures, sags, surges, under-voltage and overvoltage.
- The UPS guarantees pure sine wave output during battery operations. The connected load continues to receive high quality electrical wave and operates smoothly event during power outages.

Unmatched reliability

- Buck and Boost operation corrects a wide range of input voltage variations through continuous regulation, without the use of batteries, and ensures consistent input voltage to the loads protected
- ABM 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..

Outstanding versatility

- Incorporating both serial and USB communications ports, the Eaton 5115 is well-equipped to meet today's communication requirements
- The 5115 comes complete with the Eaton Software Suite CD, where wizard guides you through the installation process and helps you choose components that are compatible with your systems to make the installation of the shutdown software as easy as possible.
- LanSafe® shutdown software monitors the UPS and in the event of an extended power failure shuts down the entire network in predefined order.

Eaton 5115 UPS



- 1 LED user interface
- 2 Panel for replacing batteries
- 3 1 USB port + 1 serial port
- 4 Dataline (network) protection
- 5 4 to 6 IEC 10A sockets

TECHNICAL SPECIFICATION

Rating	500 VA	750 VA	1000 VA	1400 VA
Part number	05146549-5591	05146555-5591	05146561-5591	05146567-5591
Capacity (VA/watts)	500/320	750/500	1000/670	1400/950
Dimensions WxDxH (mm)	150x268x185	150x333x185	150x333x185	150x388x185
Weight (kg)	8	12	13	17
Input connection	IEC320/10A	IEC320/10A	IEC320/10A	IEC320/10A
Output connection	4xIEC320/10A	4xIEC320/10A	6xIEC320/10A	6xIEC320/10A
Typical runtime (full load)	5 min	6 min	5 min	5 min
(half load)	15 min	17 min	15 min	15 min

Operational	
Nominal input voltage (Vac)	220/230/240 Vac
Input voltage range	184-276 VAC(± 20% of nominal)
Operating frequency	50/60 Hz auto sensing
Input power factor	Same as load
Nominal output voltage	220/230/240 Vac
Output voltage regulation	-10%/+6% of selected nominal voltage
Overload capacity	110% 3 min; 150% 10 cycles
Efficiency	95%

User interface	
LED	Four LEDs; UPS on, UPS on battery, overload, alarm
Standard communication ports	RS232 & USB
Optional	External SNMP adapter

Environmental	
Operating temperature	0°C - +40°C
Storage temperature	-15°C -+55°C
Altitude	<3000 m
Audible noise at 1 metre	<40 dB

Certification	
Markings	CE
Safety	IEC 62040-1-1, UL 1778
EMC	IEC 62040-2

EATON 5115 RUNTIMES FOR TYPICAL APPLICATIONS

Load VA / W	500 VA	750 VA	1000 VA	1400 VA
200 VA / 128 W	17	38	41	58
300 VA / 192 W	11	27	28	41
500 VA / 320 W	5	14	15	28
600 VA / 400 W		9	10	19
750 VA / 500 W		6	8	14
900 VA / 600 W			6	10
1000 VA / 670 W			5	8
1200 VA / 800 W				6
1400 VA / 950 W				5



Eaton 5115 RM UPS

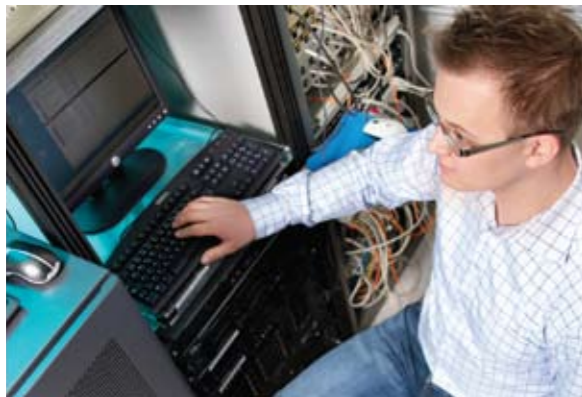
500 – 1500 VA



5115 RM front panel

Power protection for:

- Small rack servers
- Rack network devices
- Small storage equipment



Line interactive UPS

Highest power performance

- The 5115 RM UPS protects critical equipment from five of nine typical power problems: power failures, sags, surges, undervoltage and overvoltage.
- The UPS guarantees pure sine wave output during battery operations. The connected load continues to receive high quality electrical wave and operates smoothly event during power outages.

Unmatched reliability

- Eaton ABM 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.
- The load segment control makes it possible to optimize the runtime of critical devices by shutting down non essential devices first and saving battery capacity for the most critical ones.

Outstanding versatility

- The 5115 design provides high power density, occupying only 1U (45 mm), which conserves valuable space in the rack for other equipment.
- USB and RS232 communication is offered as standard plus an extra slot for optional communication card (including SNMP/Web card).
- The UPS comes complete with the Eaton Software Suite CD, where wizard guides you through the installation process and helps you choose components that are compatible with your systems to make the installation of the shutdown software as easy as possible.
- LanSafe shutdown software monitors the UPS and in the event of an extended power failure shuts down the entire network in predefined order.

Eaton 5115 RM UPS



- 1 Led user interface
- 2 Panel for replacing batteries
- 3 1 USB port + 1 serial port
- 4 Data line protection
- 5 Load segments
- 6 Communication card slot

TECHNICAL SPECIFICATIONS

Rating	500 VA	750 VA	1000 VA	1500 VA
Part number	103003267-6591	103003270-6591	103003273-6591	103003276-6591
Capacity (VA/watts)	500/320	750/500	1000/670	1500/1000
Dimensions WxDxH (mm)	440x580x45	440x580x45	440x580x45	440x580x45
Weight (kg)	9	15	15	19
Input connection	IEC320/10A	IEC320/10A	IEC320/10A	IEC320/10A
Output connection	4xIEC320/10A	4xIEC320/10A	4xIEC320/10A	4xIEC320/10A
Typical runtime (full load)	5 min	6 min	5 min	5 min
(half load)	15 min	17 min	15 min	15 min
Operational				
Nominal input voltage (Vac)	220/230/240 Vac			
Input voltage range	(± 20% of nominal)			
Operating frequency	50/60 Hz auto sensing			
Nominal output voltage	220/230/240 Vac			
Output voltage regulation	-10%/+6% of selected nominal voltage			
Overload capacity	110% 3 min; 150% 10 cycles			
Efficiency	95%			
User interface				
LED	Four LEDs; UPS on, UPS on battery, overload, alarm			
Standard communication ports	RS232/USB and X-slot			
Optional	Internal SNMP adapter			
Environmental				
Operating temperature	0°C - +40°C			
Storage temperature	-15°C -+55°C			
Altitude	<3000 m			
Audible noise at 1 metre	<40 dB			
Certification				
Markings	CE			
Safety	IEC 62040-1-1 & UL 1778			
EMC	IEC 62040-2, EN 6100-3-2			

Eaton 5115 RM runtimes for typical applications

Load VA / W	500 VA	750 VA	1000 VA	1500 VA
200 VA / 128 W	17	38	41	76
300 VA / 192 W	11	27	28	58
500 VA / 320 W	5	14	15	28
600 VA / 400 W		9	10	19
750 VA / 500 W		6	8	14
900 VA / 600 W			6	10
1000 VA / 670 W			5	8
1200 VA / 800 W				6
1500 VA / 1000 W				5



Eaton 5125 UPS

1000, 1500, 2200 VA



Line interactive UPS

Highest power performance

- The 5125 UPS protects IT network from five of nine typical power problems: power failures, sags, surges, undervoltage and overvoltage.

Unmatched reliability

- Buck and Boost operation corrects a wide range of input voltage variations through continuous regulation, without the use of batteries, and ensures consistent input voltage to the loads protected.
- The UPS enables prolonged runtime of essential equipment during power outages by allowing for orderly, remote shutdown of non-critical systems and processes thanks to a capability to control load segments.
- The 5125 offers extended runtime capability courtesy of the external battery cabinets.
- With hot-swappable batteries the battery module can be replaced without disrupting server room operations or power to protected equipment.
- ABM 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%.

Outstanding versatility

- The 5125 offers a slot for optional communication card (including SNMP/Web card, relay contact card) allowing remote monitoring in a variety of networking environments.
- The 5125 comes complete with the Eaton Software Suite CD, where wizard guides you through the installation process and helps you choose components that are compatible with your systems to make the installation of the shutdown software as easy as possible.
- LanSafe shutdown software monitors the UPS and in the event of an extended power failure shuts down the entire network in predefined order.

Power protection for:

- Small network servers
- Small storage equipment
- Network devices



Eaton 5125 UPS



- 1 Led user interface
- 2 Panel for replacing batteries
- 3 1 serial port
- 4 Dataline (network) protection
- 5 6 to 9 IEC 10A sockets
- 6 6 EBM connector



TECHNICAL SPECIFICATIONS

Rating	1000 VA	1500 VA	2200 VA
Part number	05146630-5591	05146633-5591	05146637-5591
Capacity (VA/watts)	1000/700	1500/1050	2200/1600
Dimensions WxDxH (mm)	162x401x250	162x467x250	205x493x250
Weight (kg)	16	23	31
Input connection	IEC320/10A	IEC320/10A	IEC320/16A
Output connection	6xIEC320/10A	6xIEC320/10A	9xIEC320/10A
Typical runtime (full load)	5 min	6 min	6 min
(half load)	15 min	20 min	20 min

Operational	
Nominal input voltage (Vac)	220/230/240 Vac
Input voltage range	166-276 VAC (+20/-30% of nominal)
Operating frequency	50/60 Hz auto sensing
Input power factor	Same as load
Nominal output voltage	220/230/240 Vac
Output voltage regulation	-10%/+6% of selected nominal voltage
Overload capacity	110% 3 min; 150% 10 cycles
Efficiency	95%

User interface	
LED	Informative LED display
Standard communication ports	RS232
Optional	SNMP/WEB card, USB card

Environmental	
Operating temperature	0°C - +40°C
Storage temperature	-15°C -+55°C
Altitude	<3000 m
Audible noise at 1 metre	<45 dB normal mode <50 dB battery mode

Certification	
Markings	CE/GS/UL
Safety	IEC 62040-1-1 & UL 1778
EMC	IEC 62040-2

5125 runtime Load VA / W	internal batteries (internal batteries + 1 EBM)		
	1000 VA	1500 VA	2200 VA
250/175	30 (180)	60 (240)	100 (360)
500/350	15 (100)	35 (150)	60 (180)
750/525	10 (60)	20 (100)	45 (115)
1000/700	5 (48)	13 (60)	28 (75)
1250/875		8 (40)	19 (55)
1500/1050		6 (30)	15 (40)
1750/1225			12 (35)
2000/1400			10 (30)
2200/1600			6 (28)



Eaton 5130 UPS

1250, 1750, 2500, 3000 VA



2U rackmount installation

Power protection for:

- IT and networking environments
- Servers, networking gear
- Telecommunications, VoIP, security systems



Line interactive UPS

Highest power performance

- The 5130 protects connected equipment from five of the most common power anomalies: failures, surges, sags, under-voltage and overvoltage.
- 0.9 power factor: more real power to your protected load. By delivering more real output power, the 5130 powers more servers than another UPS of equivalent VA rating with a lower power factor. 5130 is compatible with all modern IT equipment.

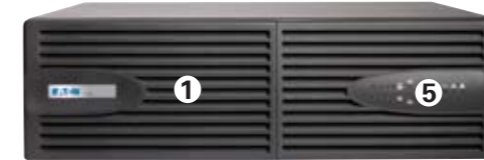
Unmatched reliability

- Load segment control enables prioritized shutdown of non-essential equipment during outages to maximize battery runtime for critical devices. Load segment control can also be used to remotely re-boot locked-up network equipment or manage scheduled shutdowns and sequential startups.
- You can extend the runtime to several hours by adding up to four external battery modules. Each external battery module occupies only 2U for most models (3U for reduced depth, 3000 VA models).
- With hot-swappable batteries, you can replace a battery module without disrupting server room operations or power to protected equipment. With an optional, hot-swap maintenance bypass module, you can even replace the entire UPS.

Outstanding versatility

- The UPS offers the choice of rackmount or tower installation. Pedestal and rail kits are included in all models at no extra charge.
- The 2U model is optimized for rack mounting but is easily deployed as a tower. The 3U unit is optimized for tower deployment or short-depth racks, which makes it especially suitable for telecom equipment racks
- The 5130 offers Serial and USB communication plus an extra slot for optional communication card (including SNMP/Web card, relay contact card) allowing remote monitoring in a variety of networking environments.
- The UPS comes complete with the Eaton Software Suite CD, including SNMP compatible power management software.

Eaton 5130 UPS



- 1 Panel for replacing batteries
- 2 Load segments
- 3 USB & Serial ports + RPO/ROO connector
- 4 Communication card slot
- 5 LED user interface
- 6 EBM connector



TECHNICAL SPECIFICATIONS

General	
LEDs	13 status-indicating LEDs
Topology	Line interactive
Diagnostics	Full system self-test at power up
Transfer time	1-4 ms typical
ROO/RPO	Rear deck emergency stop connector (for remote on/off and power off)
Rail kit/tower stand	Included with all units
Electrical Input	
Nominal voltage	230 Vac
Voltage range*	160-294 V
Frequency	50/60 Hz
Frequency range	47-70 Hz for 50 Hz operation 56.5-70 Hz for 60 Hz operation
Dedicated circuit breaker rating	700-2000 VA: 10A 3000 VA: 16A
Electrical Output	
Power factor	0.9
On utility voltage regulation	184-265 Vac
On battery voltage regulation	-10%, +6% of nominal
Efficiency	Normal or line mode: >94%
Over current protection	Electronic current limit
Load crest factor	3:1
Load segments	Two groups of two individually controlled output receptacles

Battery	
Battery replacement	Hot-swappable internal batteries
Start-on-battery	Allows start of UPS without utility input
Communications	
Serial port	RS-232 (RJ45) port
USB port	As standard (HID), for communicating with Windows XP/Vista
Optional communication cards	ConnectUPS-MS Network Management Card, Relay/Serial Management Card -MS
Cables	RS 232 and USB communications cables included
Power management software	Eaton Software Suite CD-ROM (bundled with UPS)
Environmental	
Safety markings	CE; C-Tick; TUVus
Safety conformance	IEC/EN 62040-1-1, UL 1778
EMC compliance	IEC/EN 62040-2 EN 50091-2 class B
Operating temperature	0°C to +40°C
Storage temperature	-15°C to +50°C
Relative humidity	20-95% non-condensing
Audible noise	Max 45 dBA

Heat dissipation table (battery fully charged)

Description	Part number	Rating (VA/Watts)	Input connection	Output receptacles	Dimensions H x W x D, mm	Weight, kg
PW5130i1250-XL2U	103006590-6591	1250/1150	IEC C14-10A	(8) IEC-C13-10A	86 x 441 x 509	24,3
PW5130i1750-XL2U	103006591-6591	1750/1600	IEC C14-10A	(8) IEC-C13-10A	86 x 441 x 509	26,6
PW5130i2500-XL2U	103006592-6591	2500/2250	IEC C20-16A	(1) IEC-C19-16A (8) IEC-C13-10A	86 x 441 x 634	33,8
PW5130i3000-XL2U	103006593-6591	3000/2700	IEC C20-16A	(1) IEC-C19-16A (8) IEC-C13-10A	86 x 441 x 634	33,8
PW5130i3000-XL3U	103006594-6591	3000/2700	IEC C20-16A	(1) IEC-C19-16A (8) IEC-C13-10A	131 x 441 x 484	34,3
Extended Battery Modules						
PW5130N1750-EBM2U	103006587-6591	NA	NA	NA	86 x 441 x 509	30,4
PW5130N3000-EBM2U	103006589-6591	NA	NA	NA	86 x 441 x 634	41,7
PW5130N3000-EBM3U	103006588-6591	NA	NA	NA	131 x 441 x 484	41,7

BATTERY RUNTIMES*	Internal batteries		+1 EBM		+2 EBMs		+3 EBMs		+4 EBMs	
	75% Load	50% Load	75% Load	50% Load	75% Load	50% Load	75% Load	50% Load	75% Load	50% Load
PW5130i1250-XL2U	13	20	52	105	90	175	125	225	175	300
PW5130i1750-XL2U	9	14	33	60	55	100	80	145	105	180
PW5130i2500-XL2U	10	17	50	85	80	130	130	210	180	290
PW5130i3000-XL2U/3U	9	15	38	60	70	100	90	150	120	210



Eaton 9120 UPS

5000 - 6000 VA



Advanced power protection for:

- Small networks
- Critical servers
- Other critical IT applications
- Process automation and control equipment
- Telecom applications
- Security equipment



Double conversion UPS

Highest power performance

- Double conversion topology provides the highest level of protection available by isolating the output power from all input anomalies.
- The exceptional electrical performance of the 9120 ensures that the UPS can be used in almost any application.

Unmatched reliability

- Due to a wide input voltage window the 9120 is capable of working with mains power in most conditions without discharging batteries, thus saving battery capacity for when it is really needed.
- ABM 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%.
- Internal batteries can be hot-swapped without ever having to shut down connected equipment.
- The 9120 can be equipped with External Battery Cabinets to extend the runtimes to hours.
- The ups can be installed with an External Bypass option which enables "swap" or service without powering down the critical load.
- The UPSs can be installed using a separate input cable for the internal bypass. This feature not only provides redundancy for the input, but also enables a system with UPSs to increase power availability. The critical load is powered by the first UPS and in the case of a failure the load is transferred to the bypass source which is supplied by another UPS. This configuration enables redundant operation with standard UPS units.

Outstanding versatility

- The UPS features an informative user interface with LCD, four LED and audible alarms. This enables easy configuration of your UPS by changing UPS settings using the LCD panel.
- The 9120 comes complete with the Eaton Software Suite CD including SNMP-compatible power management software providing control and visibility over all your UPS systems.
- LanSafe included on the software package monitors all network devices and provides an orderly shutdown in the event of extended power outage.
- The 9120 offers Serial and USB communication plus an extra slot for optional communication card (including SNMP/Web card, relay contact card) allowing remote monitoring in a variety of networking environments.
- The 9120 is also equipped with an EPO port enabling shutdown of the connected equipment from a remote location in an emergency.

Eaton 9120 UPS

- 1 Multilingual graphical LCD display
- 2 Panel for replacing batteries
- 3 1 USB port + 1 serial port + EPO connector
- 4 EBM battery unit connector
- 5 Communication card slot



TECHNICAL SPECIFICATIONS

Rating	5000 VA	6000 VA	
Part number	1026103	1026104	
Capacity (VA/watts)	5000/3500	6000/4200	
Dimensions WxDxH (mm)	280x580x570	280x580x570	
Weight (kg)	91	91	
Input connection	Hardwired	Hardwired	
Output connection	Hardwired	Hardwired	
Typical runtime (full load) (half load)	10 min 22 min	8 min 20 min	
Operational			
Nominal input voltage (Vac)	220/230/240 Vac		
Input voltage range	120/140/184-276 Vac		
Operating frequency	50/60 Hz auto sensing (± 3 Hz, adjustable)		
Input power factor	>0.99		
Nominal output voltage	208/220/230/240 Vac		
Output voltage regulation	± 2% online; ± 3% on battery mode		
Overload capacity	Up to 125 % for minute, 125-150% for 10 sec		
Efficiency	>90% (Online mode) >95% (High efficiency mode)		
User interface			
LCD display	LCD display showing both UPS meters and UPS settings		
LED	Four LEDs; UPS on, UPS on battery, UPS on bypass, alarm		
Standard communication ports RS232 and USB as standard on all models			
Optional	Connectivity slot for SNMP/Web card and relay card		
Environmental			
Operating temperature	0°C - +40°C		
Storage temperature	-15°C -+40°C		
Altitude	<3000 m		
Audible noise at 1 metre	<55 dB		
Certification			
Markings	CE/GS		
Safety	IEC 62040-1-1		
EMC	IEC 62040-2		
External battery cabinets			
9120	Backup time*	Dimensions	Weight
BAT 5000/6000	Approx 45/30 min	280x580x570 mm	125 kg



Eaton 9130 UPS

700 – 3000 VA



Multilingual LCD

Advanced power protection for:

- IT and networking environments
- Servers, networking gear
- Telecommunications, VoIP, security systems
- Medical systems
- Diagnostics and medical screening
- Patient record archives
- Manufacturing systems
- Chip fabrication
- Pharmaceutical production
- Chemical processing



Double conversion UPS

Highest power performance

- Double conversion topology. The 9130 constantly monitors power conditions and regulates voltage and frequency. Even when presented with the most severe power problems, UPS's output remains within 3% of nominal voltage.
- More real power. High 0,9 output power factor enables the 9130 to provide its full power capability to modern IT equipment.
- Highest efficiency to reduce utility and cooling spending. When power conditions are within acceptable limits, the 9130 can operate in a high-efficiency mode providing 95 percent efficiency.

Unmatched reliability

- The internal bypass allows service continuity in case of internal fault, a maintenance bypass is also available (as option) for easy replacement of the UPS without powering down critical systems.
- Stronger, longer battery life. ABM 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.
- Possibility to add more runtime at any time with up to four external hot-swappable battery modules to run systems for hours if necessary.
- Enables prolonged runtime of essential equipment during power outages by allowing for orderly, remote shutdown of non-critical systems and processes thanks to a capability to control load segments.

Outstanding versatility

- One platform, two factors, dozens of choices. Up to 3000 VA of UPS power is packed into only 2U of rack space. The tower option is about the size of a modern, compact PC.
- Enhanced configuration capability through easily navigated multilingual graphical display.
- Remote monitoring. The 9130 comes complete with the Eaton Software Suite CD including SNMP-compatible power management software providing control and visibility over all your UPS systems.
- Connectivity options are available for almost any network environment.

Eaton 9130 UPS



- 1 Multilingual graphical LCD display
- 2 Panel for replacing batteries
- 3 1 USB port + 1 serial port
- 4 1 Relay Output + 1 EPO connector
- 5 EBM battery unit connector
- 6 Load segments
- 7 Communication card slot



TECHNICAL SPECIFICATIONS

General	
User interface	Graphical LCD with blue backlight and text in English, French, German, Russian and Spanish
LEDs	Four status-indicating LEDs
Topology	True online, double-conversion
Diagnostics	Full system self-test
UPS bypass	Automatic bypass
Rail kit	Included with all rackmount units
Electrical Input	
Nominal voltage	220–240V
Voltage range	160–276 Vac (with load PF of 0.7)
Frequency range	45–65 Hz (50/60 Hz)
Electrical Output	
Power factor	0.9
Voltage	±3 % of nominal regulation (on utility and battery)
Frequency regulation	±3 Hz online
Load crest factor	3 to 1

Communications	
Ports	RS-232 and USB HID port as standard
Relay output	Common alarm standard
Optional communication cards (BD Slot)	SNMP/Web card for monitoring in SNMP-based networks, monitoring through Web browser interface. Relay card for integration to industrial environment and BMS, remote shutdown for IBM AS/400 systems
Environmental	
Safety and EMC markings	CE (per IEC/EN62040-2: Emissions, Category C1; Immunity, Category C2), GS
Audible noise	<50 dB
Ambient operating	0°C to +40°C
Storage temperature	-20°C to +40°C with batteries and -25°C to +55°C without batteries
Relative humidity	5–90% non-condensing

Description	Part number	Rating (VA/Watts)	Input connection	Output receptacles	Dimensions H x W x D, mm	Weight, kg
Tower Models						
PW9130i700T	103006433-6591	700/630	C14	(6) C13	230 x 160 x 350	12.2
PW9130i1000T-XL	103006434-6591	1000/900	C14	(6) C13	230 x 160 x 380	14.5
PW9130i1500T-XL	103006435-6591	1500/1350	C14	(6) C13	230 x 160 x 430	19.0
PW9130i2000T-XL	103006436-6591	2000/1800	C14	(8) C13, (1) C19	325 x 214 x 410	34.5
PW9130i3000T-XL	103006437-6591	3000/2700	C20	(8) C13, (1) C19	325 x 214 x 410	34.5
Tower Extended Battery Modules						
PW9130N1000T-EBM	103006438-6591	NA	NA	NA	230 x 160 x 380	18.5
PW9130N1500T-EBM	103006439-6591	NA	NA	NA	230 x 160 x 430	24.3
PW9130N3000T-EBM	103006440-6591	NA	NA	NA	325 x 214 x 410	50.0
Rack Models						
PW9130i1000R-XL2U	103006455-6591	1000/900	C14	(6) C13	86.5 x 438 x 450	16
PW9130i1500R-XL2U	103006456-6591	1500/1350	C14	(6) C13	86.5 x 438 x 450	19
PW9130i2000R-XL2U	103006457-6591	2000/1800	C14	(8) C13, (1) C19	86.5 x 438 x 600	29
PW9130i3000R-XL2U	103006463-6591	3000/2700	C20	(8) C13, (1) C19	86.5 x 438 x 600	29.5
Rack Extended Battery Modules						
PW9130N1000R-EBM2U	103006458-6591	NA	NA	NA	86.5 x 438 x 450	22.1
PW9130N1500R-EBM2U	103006459-6591	NA	NA	NA	86.5 x 438 x 450	28.1
PW9130N3000R-EBM2U	103006460-6591	NA	NA	NA	86.5 x 438 x 600	41.1

BATTERY RUNTIMES*	Internal batteries		+1 EBM		+2 EBMs		+3 EBMs		+4 EBMs	
	75% Load	50% Load	75% Load	50% Load	75% Load	50% Load	75% Load	50% Load	75% Load	50% Load
Rack models										
PW9130i1000R-XL2U	13	22	55	82	103	186	151	250	223	312
PW9130i1500R-XL2U	11	18	47	81	83	143	126	208	195	262
PW9130i2000R-XL2U	13	24	63	95	118	190	170	242	221	345
PW9130i3000R-XL2U	8	14	34	62	70	92	96	156	130	211
Tower models										
PW9130i700T-XL	12	19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PW9130i1000T-XL	13	22	55	82	103	186	151	250	223	312
PW9130i1500T-XL	11	18	47	81	83	143	126	208	195	262
PW9130i2000T-XL	21	34	81	130	145	198	184	293	248	431
PW9130i3000T-XL	12	20	49	79	90	143	134	180	165	240

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



Eaton 9135 UPS

5000 – 6000 VA



Hot swappable batteries LCD rotatable display

Advanced power protection for:

- Medium-density data centers
- Banking and security systems
- Manufacturing process control
- Retail point-of-sale systems
- Telecommunications/VoIP equipment



Double conversion UPS

Highest power performance

- The 9135 is constantly monitoring power conditions—regulating both voltage and frequency. Even when presented with the most severe power problems, this UPS's output remains within two percent of nominal voltage.
- Under normal power conditions, the 9135 can operate in high-efficiency mode at up to 97 percent efficiency thus decreasing utility and cooling bills. In double conversion mode, the UPS operates at up to 91 percent efficiency.

Unmatched reliability

- With a wide range of acceptable input voltages, this UPS does not depend on batteries to smooth out power fluctuations. Batteries are conserved for those times when utility power is highly unstable or completely out.
- The 9135 features hot-swappable components and an automatic internal bypass. Users can even remove and replace the battery and power modules without powering down the UPS or interrupting power to loads.
- Up to four external battery modules (EBMs) can be added to deliver more than an hour of extended runtime at full load—or hours under lighter loads. Each EBM occupies only 3U of rack space.
- With load segments users can also remotely re-boot locked-up network equipment. During a power outage, you could shut down power to less essential loads to extend battery backup time for more critical devices.

Outstanding versatility

- The 9135 increases power density, delivering 5000 - 6000 VA/4200W in only 3U of rack space, freeing more rack space for IT and telecom equipments.
- The UPS offers deployment versatility through rack and tower installation options with rail kits and pedestals provided.
- This UPS is even more user-friendly than its predecessors offering greater distribution capabilities, with eight IEC 10A & two IEC 16A outlets to power multiple pieces of equipment without a PDU.
- An intuitive LCD interface provides detailed information and menu-driven functions for UPS management. The blue, backlit LCD screen displays four lines of alphanumeric information. LEDs clearly display UPS status.
- The 9135 comes complete with the Eaton Software Suite CD, including SNMP compatible LanSafe power management software. LanSafe & Netwatch provide control and visibility over multiple UPSs, using an intuitive, graphical interface.

Eaton 9135 UPS



- 1 Multilingual graphical LCD display
- 2 Panel for replacing batteries
- 3 USB & Serial ports, Contact port, EPO connector
- 4 EBM battery unit connector
- 5 Load segments
- 6 Communications card slot

TECHNICAL SPECIFICATIONS

General	
User interface	Graphical LCD with blue backlight and text in English, French, German, Portuguese, Italian and Spanish
LEDs	Four status-indicating LEDs
Topology	Double-conversion
Diagnostics	Full system self-test
UPS bypass	Automatic bypass
Rail kit	Included with all units
Electrical Input	
Nominal voltage	230V (220V-240V user selectable)
Voltage range	156–280 Vac (output PF 0.7)
Power draw of UPS (full load)	5000VA: 21.7A @230V 6000VA: 26A @230V
Recommended input-breaker rating	35A
Frequency	50/60 Hz autoselect
Frequency range	40–70 Hz
Electrical Output	
Power factor	0.7
On utility voltage	±2% of nominal regulation
On battery voltage	±2% of nominal regulation
Efficiency	>97% in high-efficiency mode; 91% in normal mode
Frequency regulation	±3 Hz online
Load crest factor	3 to 1
Battery	
Internal battery type	5.5 Ah, sealed, lead-acid; maintenance free
External battery modules	Up to four per 9135, rail kits included for rack mounting
EBM battery type	5.5 Ah, sealed, lead-acid; maintenance free

Battery recharge time	Six (6) hours to recover 90 percent of nominal backup time after 100 percent RCD load discharge		
Battery replacement	Hot-swappable internal and external batteries		
Start-on-battery	Allows start of UPS without utility input		
Communications			
Serial port	RS-232 standard, RS-232 cable provided		
USB port	HID standard, for communicating with Windows XP/Vista		
Relay output	DB-9 Dry Contact-common alarm standard		
Software	LanSafe & NetWatch monitoring and management software		
Optional communication cards	ConnectUPS-MS Network Management Card for direct control and monitoring in SNMP networks ConnectUPS-MS Card with ModBus RTU interface Serial Management Card-MS for integration to industrial environment and building management systems, remote shutdown for IBM AS/400 systems		
Environmental			
Safety markings	CE, GS		
EMC	IEC/EN 62 040-2 class A		
Audible noise	Max 46 dB		
Ambient operating	0°C to +40°C		
Storage temperature	-20°C to +40°C with batteries and -25°C to +55°C without batteries		
Relative humidity	5–90% non-condensing		
Heat dissipation (BTUs/hr)			
Operating mode	Efficiency	5 kVA	6 kVA
Normal	91%	1150	1350
Battery	86%	1650	1960
High efficiency	97%	370	450

Description	Part number	Rating (VA/Watts)	Input plug	Output receptacles	Dimensions H x W x D, mm	Weight, kg
Rack Tower Models						
PW9135G5000-XL3UEU	103006721-6591	5000/3500	Hardwired	Hardwired + (2) C19, (8) C13	130 x 444 x 741	57
PW9135G6000-XL3UEU	103006722-6591	6000/4200	Hardwired	Hardwired + (2) C19, (8) C13	130 x 444 x 741	57
Extended Battery Modules						
PW9135N6000-EBM3U	103006723-6591	NA	NA	NA	130 x 444 x 650	77.5

BATTERY RUNTIMES*	Internal batteries		+1 EBM		+2 EBMs		+3 EBMs		+4 EBMs	
	70% Load	50% Load	70% Load	50% Load	70% Load	50% Load	70% Load	50% Load	70% Load	50% Load
PW9135G5000-XL3UEU	8	13	33	50	62	91	93	134	124	177
PW9135G6000-XL3UEU	7	10	27	40	51	74	76	110	101	146

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



Eaton 9140 UPS

7.5 - 10 kVA



Double conversion UPS

Highest power performance

- Double conversion topology provides the highest level of protection available by isolating the output power from all input anomalies.
- 9140 protects mission-critical rackmount applications from downtime, data loss/corruption, and process interruption and delivers efficient, reliable power protection in only 6U of rack space, including batteries.

Unmatched reliability

- ABM 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.
- Possibility to add more runtime at any time with up to four external hot-swappable battery modules to run systems for hours if necessary.
- An internal automatic bypass feature allows the 9140 to continuously provide power to critical equipment while the system is serviced – even when the electronics are removed. A manual bypass switch in the chassis eliminates transfer time and allow for module repair and replacement without shutting down the load.

Outstanding versatility

- All 9140 UPS models and corresponding EBM's come with pre-installed rackmount hardware for easy installation in standard equipment racks (compatible with seismic requirements).
- The 9140 conserves valuable rack space with up to 10 kVA of power in only 6U of height, including batteries.
- Modular lightweight design facilitates installation and improves service time.
- The UPS is blade servers compatible with standard IEC receptacles.
- The 9140 features both LEDs and an intuitive, multilingual LCD screen on the front of the unit. This relays more in-depth operational information, communicates specific alarms and predictive service needs, and can be used to program certain features.
- LanSafe shutdown software monitors the UPS and in the event of an extended power failure shuts down the entire network in predefined order.

Advanced power protection for:

Wire closets, server rooms



Eaton 9140 UPS



- 1 Multilingual graphical LCD display
- 2 Panel for replacing batteries
- 3 1 USB port + 1 serial port
- 4 1 REPO connector
- 5 EBM battery unit connector
- 6 Hardwired output + 3xIEC 16A and 2xIEC 10A
- 7 Communication card slot



TECHNICAL SPECIFICATIONS

Rating	7,5 kVA	10 kVA
Part number	103005093-6591	103004728-6591
Capacity (kVA/kW)	7.5 / 6	10 / 8
Dimensions HxWxD (mm)	263x430x760	263x430x760
Weight		
UPS	115 kg	115 kg
EBM	79 kg	79 kg
Battery modules	17 kg	17 kg
Power module	18 kg	18 kg
Input connection	Hardwired	Hardwired
Output connection	Hardwired + 3xIEC320 16A & 2xIEC320 10A	Hardwired + 3xIEC320 16A & 2xIEC320 10A
Battery runtime	65 minutes with 4 EBMs at full load	45 minutes with 4 EBMs at full load
Operational		
Nominal input voltage (Vac)	Single phase 200-208 V (for 200-208 V nominal output): 220-240 V Three phase 380 / 220 V, 400 / 230 V, 415 / 240 V	
Input voltage range	Single phase 160-253 V (for 200-208 nominal output); 174-288 V (for 220-240 V nominal output) Three phase 301-499 V / 174 -288 V	
Operating frequency	50/60 Hz auto-sensing	
Input power factor	0,99	
Input current distortion	< 5% THD	
Nominal output voltage	200 V / 208 V / 220 V / 230 V / 240 user selectable	
Output voltage regulation	±2% static, ±10% dynamic	
Overload capacity	±10% of 112 to 130% for 60 sec, transfer to bypass	
Permitted load power factors	0,7 lag – 0,8 leading	
Efficiency	> 90%	
User interface		
LCD display	Multilingual graphical LCD with blue backlight	
LED	4 LED	
Standard communication ports	1 x USB, 1 x RS232 serial, 1 x REPO	
Communication Slot	1 x XSlot communication bay	
Power management software	Bundled software suite CD Eaton 9140 is HID-compliant	
Optional	Extended battery modules 3U EBM Slot connectivity: Web/SNMP, Modbus/Jbus, Relay, RS 232 cards	
Environmental		
Operating temperature	0°C to +40°C	
Storage temperature	-20°C to +50°C	
Altitude	Operating 3000 m, transit 15000 m	
Audible noise	< 55 dB(A) at 1,5 metres	
Certification		
Markings	CE, GOST	
Safety	IEC/EN 62040-1-1, CE, UL, cULus, NOM, TUV	
EMC	IEC/EN 62040-2, CE, FCC, VCCI, C-tick	

Eaton 9155 and 9355 UPS

8 - 15 kVA



Advanced power protection for:

- Banking
- Small server and computer rooms
- Healthcare
- Network communications
- Security systems
- Automation systems



Double conversion UPS

Premium power performance

- Double conversion topology provides the highest level of protection available by isolating the output power from all input anomalies.
- With a transformer-free design and sophisticated sensing and control circuitry the 9155/9355 delivers an efficiency of up to 92%.
- Active power factor correction (PFC) provides unbeatable 0,99 input power factor and less than 4,5% ITHD, thus eliminating interference with other critical equipment in the same electrical network and enhancing compatibility with generators.
- With 0.9 output power factor, UPS is optimized to protect modern IT equipment without need to oversize.

True reliability

- HotSync technology enables paralleling of two or more UPS modules to increase availability or add capacity. The technology enables load sharing without any communication line, thus eliminating single point of failure.
- ABM technology charges batteries only when necessary, reducing batteries corrosion and prolonging batteries service life by up to 50%.
- Internal batteries in all standard configurations provide an extended runtime with the smallest footprint.

Extensive configurability

- Further runtime extension is possible with external battery cabinets.
- A multilingual graphical LCD display makes possible to monitor the UPS status easily.
- The 9155/9355 can also be integrated into network management, industrial automation and building management systems.
- Bundled Eaton Software Suite provides an orderly network shut-down in an event of extended power outage.

Cost savings and sustainability

- The 9155/9355 features high up to 92% efficiency, thus reducing utility costs, extending battery runtimes and producing cooler operating conditions.
- Compact space efficient tower design offers smaller footprint enabling easy data centre space-planning and preserving valuable raised-floor real estate.
- Included internal batteries eliminate the need for costly and space-consuming external battery cabinets.
- A single technical platform used in Eaton's three-phase UPS products guarantee easy upgrades and similarity in service, thus lowering total cost of ownership.
- A range of service agreement options can be easily customized for customers' needs and budget.
- Eaton uses sustainable materials and highly efficient manufacturing technology, thus generating dramatic savings in carbon footprint as compared to competitive UPS systems.

Eaton 9155/9355 UPS 8-15 kVA

TECHNICAL SPECIFICATIONS

UPS output power rating (0,9 p.f.)	
kVA	8 10 12 15
kW	7,2 9 10,8 13,5
General	
Efficiency in double conversion mode (full load)	92%
Efficiency in double conversion mode (half load)	90%
Efficiency in high efficiency mode	up to 98%
Distributed paralleling with Hot Sync technology	4
Field upgradeable	yes
Inverter/rectifier topology	transformer-free IGBT with PWM
Audible noise	<50 dB
Altitude (max)	1000 m without derating (max 2000 m)
Input	
Input wiring	1 ph or 3 ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz
Input voltage range	±20% from nominal at 100% load, 50%, +20% from nominal at 50% load
Input frequency range	45-65 Hz
Input power factor	0,99
Input ITHD	less than 4,5%
Soft start capability	Yes
Internal backfeed protection	Yes
Output	
Output wiring	1 ph or 3 ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz

Output UTHD	<3% (100% linear load); <5% (standard non linear load)
Output power factor	0,9 (e.g. 9 kW at 10 kVA)
Permitted load power factor	0,7 lagging - 0,8 leading
Overload on inverter	10 min 100-110%; 1 min 110-125%; 5 sec 125-150%; 300 ms >150%
Overload when bypass available	60 min 100-110%, 10 min 110-125%; 1 min >125-150%

Battery	
Type	Maintenance free VRLA batteries, NiCD
Charging method	ABM technology or Float
Temperature compensation	Optional
Battery nominal voltage (lead-acid)	384 V (32x12 V, 192 cells)
Charging current / Model	Default 3 A *Max 30 A

*Limited by maximum UPS input current rating

Accessories	
	Isolation transformer, long-life batteries, external battery cabinets, UPS Center (input, bypass, distribution), X-Slot connectivity (Web/SNMP, ModBus/Jbus, Relay, Hot Sync, ViewUPS-X remote display), Hot Sync parallel tie cabinet, integrated manual bypass, external maintenance bypass switch

Communications	
X-Slot	2 communication bays
Serial ports	1 available
Relay inputs/outputs	2/1 programmable

Compliance with standards	
Safety (CB certified)	IEC 62040-1, IEC 60950-1
EMC	IEC 62040-2
Performance	IEC 62040-3

Stand-alone UPS with 1-phase input

Part number	Description	Rating	Back-up (pf. 0.7)	Dimensions (HxWxD)	Weight
1022532	9155-8-S-10-32x7Ah	8 kVA / 7.2 kW	10 min	817x305x702 mm	155 kg
1022533	9155-8-S-15-32x9Ah	8 kVA / 7.2 kW	15 min	817x305x702 mm	160 kg
1022534	9155-8-S-28-64x7Ah	8 kVA / 7.2 kW	28 min	1214x305x702 mm	250 kg
1022535	9155-8-S-33-64x9Ah	8 kVA / 7.2 kW	33 min	1214x305x702 mm	275 kg
1022536	9155-10-S-10-32x9Ah	10 kVA / 9 kW	10 min	817x305x702 mm	160 kg
1022537	9155-10-S-20-64x7Ah	10 kVA / 9 kW	20 min	1214x305x702 mm	250 kg
1022538	9155-10-S-25-64x9Ah	10 kVA / 9 kW	25 min	1214x305x702 mm	275 kg

Stand-alone UPS with 3-phase input

Part number 9155/9355	Description	Rating	Back-up (pf. 0.7)	Dimensions (HxWxD)	Weight
1022480	9155-8-N-10-32x7Ah	8 kVA / 7.2 kW	10 min	817x305x702 mm	155 kg
1022481/1023411	9155/9355-8-N-15-32x9Ah	8 kVA / 7.2 kW	15 min	817x305x702 mm	160 kg
1022482	9155-8-N-28-64x7Ah	8 kVA / 7.2 kW	28 min	1214x305x702 mm	250 kg
1022483/1023412	9155/9355-8-N-33-64x9Ah	8 kVA / 7.2 kW	33 min	1214x305x702 mm	275 kg
1022484/1023413	9155/9355-10-N-10-32x9Ah	10 kVA / 9 kW	10 min	817x305x702 mm	160 kg
1022485	9155-10-N-20-64x7Ah	10 kVA / 9 kW	20 min	1214x305x702 mm	250 kg
1022486/1023414	9155/9355-10-N-25-64x9Ah	10 kVA / 9 kW	25 min	1214x305x702 mm	275 kg
1022487/1023415	9155/9355-12-N-8-32x9Ah	12 kVA / 10.8 kW	8 min	817x305x702 mm	160 kg
1022488	9155-12-N-15-64x7Ah	12 kVA / 10.8 kW	15 min	1214x305x702 mm	250 kg
1022489/1023416	9155/9355-12-N-20-64x9Ah	12 kVA / 10.8 kW	20 min	1214x305x702 mm	275 kg
1022490/1023417	9155/9355-15-N-5-32x9Ah	15 kVA / 13.5 kW	5 min	817x305x702 mm	160 kg
1022491	9155-15-N-10-64x7Ah	15 kVA / 13.5 kW	10 min	1214x305x702 mm	250 kg
1022492/1023418	9155/9355-15-N-15-64x9Ah	15 kVA / 13.5 kW	15 min	1214x305x702 mm	275 kg

External battery cabinets

Part number	Description	Rating	Back-up (pf. 0.7)	Dimensions (HxWxD)	Weight
1022561	9X55-BAT5-64x7Ah	2x32x7 Ah	Check technical specifications	817x305x699 mm	195 kg
1022562	9X55-BAT5-96x7Ah	3x32x7 Ah	Check technical specifications	1214x305x699 mm	310 kg

Eaton 9355 UPS

20 - 40 kVA



Advanced power protection for:

- Financial services
- Medium size servers and computers
- ICT
- Critical building infrastructure
- Industrial applications



Double conversion UPS

Premium power performance

- Double conversion topology provides the highest level of protection available by isolating the output power from all input anomalies.
- With a transformer-free design and sophisticated sensing and control circuitry the 9355 delivers an efficiency of up to 93%.
- Active power factor correction (PFC) provides unbeatable 0,99 input power factor and less than 4,5% input ITHD, thus enhancing compatibility with generators and eliminating interference with other critical equipment in the same network.
- The UPS enables optimal power protection for modern 0,9 p.f. rated IT equipment without the need to oversize.
- The 9355 design is also available with 1-phase output (9155) at 20-30kVA power ratings.

True reliability

- HotSync technology makes possible to parallel two or more UPSs to increase availability or add capacity. The technology enables load sharing without any communication line, thus eliminating single point of failure.
- ABM technology charges batteries only when necessary, preventing batteries corrosion and prolonging batteries service life by up to 50%.
- Internal batteries in all standard configurations support more runtime than comparable UPS.

Extensive configurability

- Configurable and multilingual LCD control panel with back light and graphical mimic screen monitors the UPS status easily.
- Connectivity options guarantee a smooth integration with various application systems requirements.
- Bundled with Eaton Software Suite the 9355 provides an orderly network shutdown in an event of extended power outage. If required, the 9355 can also be integrated to network management, industrial automation and building management systems.

Cost savings and sustainability

- The 9355 features high up to 93% efficiency, thus reducing utility costs, extending battery runtimes and producing cooler operating conditions.
- Compact space efficient tower design offers smaller footprint enabling easy data centre space-planning and preserving valuable raised-floor real estate.
- Internal batteries often eliminate the need for costly and space-consuming external battery cabinets.
- A single technical platform used in Eaton's three-phase products guarantee easy upgrades and similarity in service, thus lowering total cost of ownership.
- A range of service agreement options can be easily customized for customers needs and budget.
- Eaton uses sustainable materials and highly efficient manufacturing technology, thus generating dramatic savings in carbon footprint as compared to competitive UPS systems.

Eaton 9355 UPS 20 - 40 kVA

TECHNICAL SPECIFICATIONS

UPS output power rating (0,9 p.f.)	
kVA	20 30 40
kW	18 27 36
General	
Efficiency in double conversion mode (full load)	93%
Efficiency in double conversion mode (half load)	91%
Distributed parallelling with Hot Sync technology	4
Field upgradeable	yes
Inverter/rectifier topology	transformer-free IGBT with PWM
Audible noise	<50 dB
Altitude (max)	1000 m without derating (max 2000 m)
Input	
Input wiring	1 ph or 3 ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz
Input voltage range	±20% from nominal at 100% load, 50%, +20% from nominal at 50% load
Input frequency range	45-65 Hz
Input power factor	0,99
Input ITHD	less than 4,5%
Soft start capability	Yes
Internal backfeed protection	Yes
Output	
Output wiring	1 ph or 3 ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz
Output UTHD	<3% (100% linear load); <5% (standard non linear load)

Output power factor	0,9 (e.g. 27 kW at 30 kVA)
Permitted load power factor	0,7 lagging - 0,8 leading
Overload on inverter	10 min 100-110%; 1 min 110-125%; 5 sec 125-150%; 300 ms >150%
Overload when bypass available	60 min 100-110%, 10 min 110-125%; 1 min >125-150%

Battery	
Type	Maintenance free VRLA batteries, NiCD
Charging method	ABM technology or Float
Temperature compensation	Optional
Battery nominal voltage (lead-acid)	432 V (36x12 V, 216 cells)
Charging current / Model	Default 3 A *Max 60 A

*Limited by maximum UPS input current rating

Accessories	
	Isolation transformer, long-life batteries, external battery cabinets, X-Slot connectivity (Web/SNMP, ModBus/Jbus, Relay, Hot Sync, ViewUPS-X remote display), Hot Sync parallel tie cabinet, integrated manual bypass, external maintenance bypass switch

Communications	
X-Slot	2 communication bays
Serial ports	1 available
Relay inputs/outputs	2/1 programmable

Compliance with standards	
Safety (CB certified)	IEC 62040-1, IEC 60950-1
EMC	IEC 62040-2
Performance	IEC 62040-3

Standard UPS with 3-phase input

Part number 9355	Description	Rating	Runtime (pf 0.7)	Dimensions (HxWxD)	Weight
1025061/1026598	9355/9155-20-N-5-1x9Ah-MBS	20 kVA / 18 kW	5 min	1684x494x762 mm	300 kg
1025062/1026599	9355/9155-20-N-13-2x9Ah-MBS	20 kVA / 18 kW	13 min	1684x494x762 mm	400 kg
1025063/1026600	9355/9155-20-N-22-3x9Ah-MBS	20 kVA / 18 kW	22 min	1684x494x762 mm	500 kg
1025064/1026601	9355/9155-20-N-31-4x9Ah-MBS	20 kVA / 18 kW	31 min	1684x494x762 mm	600 kg
1025065/1026602	9355/9155-30-N-7-2x9Ah-MBS	30 kVA / 27 kW	7 min	1684x494x762 mm	400 kg
1025066/1026603	9355/9155-30-N-13-3x9Ah-MBS	30 kVA / 27 kW	12 min	1684x494x762 mm	500 kg
1025067/1026604	9355/9155-30-N-20-4x9Ah-MBS	30 kVA / 27 kW	20 min	1684x494x762 mm	600 kg
1025795	9355-40-N-8-3x9Ah-MBS	40 kVA / 36 kW	8 min	1684x494x762 mm	517 kg
1025796	9355-40-N-12-4x9Ah-MBS	40 kVA / 36 kW	12 min	1684x494x762 mm	617 kg

External battery cabinets 9155/9355

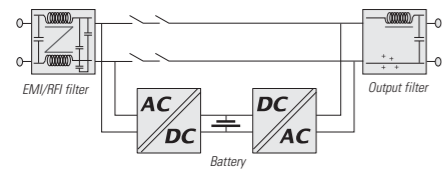
Part number	Description	Rating	Runtime	Dimensions (HxWxD)	Weight
1025169	9355-BAT-1x24Ah (30 kVA)	1x36x24 Ah	See page 31	1684x494x758 mm	510 kg
1025170	9355-BAT-2x24Ah (30 kVA)	2x36x24 Ah	See page 31	1684x494x758 mm	870 kg

9355 20-40 kVA runtimes

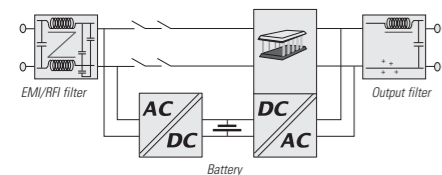
Runtimes for UPS with internal batteries ...p.f. 0.7 (typical IT server/computer load)										
Battery	Qty	5	10	15	20	25	30	35	40	kVA
7 Ah 12 V	1 x 36	24	8	5	-	-	-	-	-	min
9 Ah 12 V	1 x 36	30	12	7	5	-	-	-	-	min
7 Ah 12 V	2 x 36	60	24	14	10	6	-	-	-	min
9 Ah 12 V	2 x 36	70	28	18	13	10	7	5	-	min
7 Ah 12 V	3 x 36	103	41	26	17	12	10	7	5	min
9 Ah 12 V	3 x 36	115	46	31	22	16	13	10	8	min
7 Ah 12 V	4 x 36	152	55	40	26	18	15	11	9	min
9 Ah 12 V	4 x 36	158	63	42	31	23	20	15	12	min

Power Protection for Different Needs

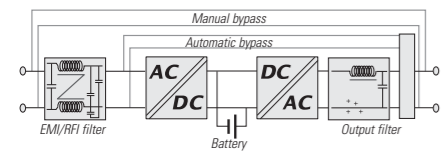
There are nine common types of power problems, including power failure, power sag, power surge, undervoltage, overvoltage, switching transient, line noise, frequency variation and harmonic distortion. Based on three UPS topologies, Eaton offers a wide range of UPS solutions to provide an appropriate level of power protection against different power problems and failures.



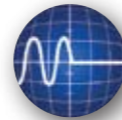
Passive standby topology (off-line) is the most frequently used UPS topology for protecting PCs against power failure, power sag and power surge. In normal mode, the UPS supplies power to the application directly from the mains, filtered but without active conversion. The battery is charged from the mains. In the event of a power cut or fluctuation, the UPS delivers stable power from the battery. The advantages of this topology are low cost and adequacy for office environments. Passive standby topology is not suitable if the power supply is of low quality (industrial sites) or subject to frequent disruptions.



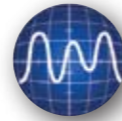
Line interactive topology is used for protecting enterprise networks and IT applications against power failure, power sag, power surge, undervoltage and overvoltage. In normal mode, the device is controlled by a microprocessor that monitors the quality of the supply and reacts to fluctuations. A voltage compensation circuit is enabled to boost or reduce the supply voltage to compensate for the fluctuations. The main advantage of this topology is that it enables compensation of under and overvoltage without using the batteries.



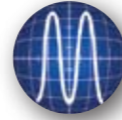
Double conversion topology (on-line) is a basis for UPSs designed for continuous power protection of critical equipment against all nine power problems: power failure, power sag, power surge, undervoltage, overvoltage, switching transient, line noise, frequency variation and harmonic distortion. It ensures a consistent quality of power supply regardless of disturbances in the incoming mains. The output voltage is entirely regenerated by a sequence of AC to DC conversion followed by DC to AC conversion in order to create power supply without any electrical interference. Double conversion UPSs can be used with any type of equipment as there are no transients when changing over to battery power.



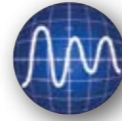
1. POWER FAILURE



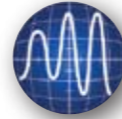
2. POWER SAG



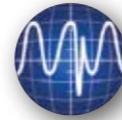
3. POWER SURGE



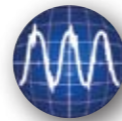
4. UNDERVOLTAGE



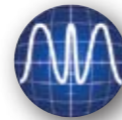
5. OVERVOLTAGE



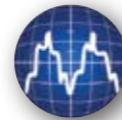
6. SWITCHING TRANSIENT



7. LINE NOISE

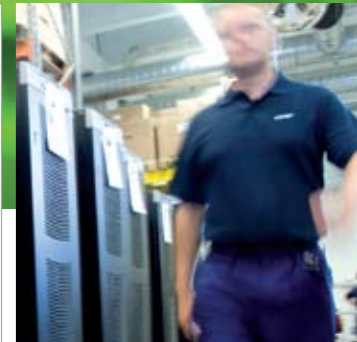


8. FREQUENCY VARIATION



9. HARMONIC DISTORTION

Sustainable by Design



Sustainability means meeting the current needs of our society in ways that enable future generations to meet their own needs. At Eaton, sustainability is an integral part of the design of our products and production processes right from the start and extends through to the end of the products' life.



An Eaton Green Solution

Eaton's commitment to being a leader in reducing its own ecological footprint covers green technologies, products and services that help our customers utilise electrical power more efficiently while improving environmental performance. In line with goals, we are also fully committed to decreasing our own greenhouse gas (GHG) emissions by 18 percent by 2012.

In recent years Eaton's internal environmental programmes have resulted in significant reductions in electricity and water consumption, waste generation and GHG emissions at our manufacturing sites. All Eaton Electrical sites throughout the world are ISO 14001 certified.

In addition, Eaton has developed a rigorous certification process based on the guidelines of international organisations such as the European Union, the US Federal Trade Commission and the International Organisation for Standardisation (ISO). As a result, the exceptional environmental performance is verified with widely accepted methods such as life cycle assessment (LCA). Eaton products and services meeting the environmental standards of this certification process earn the Eaton "Green Leaf" label. The label is our promise of exceptional, independently verified environmental performance to customers, consumers and our communities.

For more information on how Eaton is Sustainable by Design, please visit www.eaton.com/sustainability.

Eaton Protection Box



Eaton Protection Box 8



Eaton Protection Box 5



Eaton Protection Box 1

Advanced protection for:

- Computers, peripherals and multimedia
- TV, Video and Hi-Fi equipment: Home cinema, DVD writers, digital decoders, etc.
- Broadband modems (Internet and TV)
- IP telephony
- Household goods, etc.



Surge protection

The Eaton Protection Box multi-way block with high performance surge protection is a simple solution for protecting delicate equipment.

Effective surge protection

The Protection Box is designed to filter the power supply for delicate equipment to protect it against surges, interference and the indirect effects of lightning.

The high performance of the Protection Box is based on an advanced design with surge protection in compliance with IEC 61643-1.

Complete protection

The Protection Box range has models with 1, 5 or 8 sockets. Some models also provide protection for telephone connections that can carry surges to the equipment.

- Tel@ models: with telephone/broadband Internet access protection
- Tel@ + TV models: with telephone/broadband Internet access protection + Audio/Video protection module (surge protection for television and FM radio with TV and F-Type connectors)

Practical and economical: replaceable surge protection module

(Protection Box 5 Tel@, 5 Tel@ + TV and 8 Tel@ + TV)

The surge protective components for these models are grouped into a pluggable module for:

- Easy replacement if the surge protective devices are destroyed by a major surge (no need to disconnect the equipment and the pluggable unit is an Eaton standard replacement part)
- Can be updated (adding functions, changing connectors, etc.)

Warranty for connected equipment

Eaton offers free warranty for the equipment connected (applicable for EU countries and Norway only). This insurance is included in the purchase price of the Protection Box and covers up to 50 000 € for an 8 socket model to cover damage caused by a failure of the surge protection.

And lots of features to simplify life

- Power ON and active protection indicators
- PowerLine Communications compatibility (Protection Box 5/8) for connecting PLC adapters
- Cable ties and cable markers supplied (5 and 8 socket models)
- Sockets arranged to allow blocks to be plugged side by side



Eaton Protection Box

- 1 Power ON indicator
- 2 Active protection indicator
- 3 Telephone / broadband protection
- 4 Replaceable surge protection module



Eaton Protection Box 8



Eaton Protection Box 5

- 5 Widely spaced sockets for transformer units, 1 PLC-ready outlet (for Protection Box 5 and 8)
- 6 All outlets with safety shutters



Audio/Video protection module available (for Protection Box 5 Tel@ + TV and 8 Tel@ + TV only)

Technical Specifications

	1	1 Tel@	5	5 Tel@	5 Tel@+TV	8 Tel@+TV
Rating (A/W)	16 A / 3 520 W	16 A / 3 520 W	10 A / 2 500 W	10 A / 2 500 W	10 A / 2 500 W	10 A / 2 500 W
Voltage/frequency	220/250 V - 50/60 Hz					
IEC 61643-1 tested	Yes	Yes	Yes	Yes	Yes	Yes
PowerLine compatibility	/	/	Yes	Yes	Yes	Yes
Surge test conditions						
Surge test conditions for IEC 61643-1 with 8/20µs	Uoc = 6.6 kV - Up = 1.5 kV - In = 2.5 kA - Imax = 8 kA					
Protective devices						
Total rating	30 000 A, 3 x MOV 10 000 A					
Response time	<1ns					
Total power absorbed	1110 Joules					
EMI/RFI filter						
52dB from 100kHz to 100MHz	/	Yes	/	Yes	Yes	Yes
Telephone and audio/video line protection						
RJ11/RJ45 telephone including broadband	/	10 000 A	/	10 000 A	10 000 A	10 000 A
Audio/Video line	/	/	/	/	10 000 A	10 000 A
Marking and standards						
Safety	IEC 60-950, NFC 61-303					
EMC	EN 55082-2, EN 55022 class B, EN 61000-4-4 level 4 IEC 61000-4-5, level X=10kV					
Surge protection	IEC 61 643-1					
Dimensions and weight						
Dimensions H x W x D	67 x 70 x 105 mm	67 x 70 x 105 mm	65 x 120 x 255 mm	65 x 120 x 260 mm	65 x 120 x 260 mm	65 x 150 x 315 mm
Weight	0.160 kg	0.210 kg	0.610 kg	0.770 kg	0.840 kg	0.850 kg
Customer Service & Support						
2 years warranty	Standard product exchange ; warranty for connected equipment up to 50 000 €					
Replaceable surge protection module	Standard exchange free of charge from Eaton aftersales services					

Part Numbers

	1	1 Tel@	5	5 Tel@	5 Tel@+TV	8 Tel@+TV
French sockets (FR)	66 706	66 707	66 710	66 711	66 934	66 935
"Schuko" sockets (DIN)	66 708	66 709	66 712	66 713	66 936	66 937
French sockets (FR-B) for Belgium	/	/	66 932	66 933	66 938	/



FR DIN

Eaton Protection Station

500/650/800 VA



Eaton Protection Station 800



Multi-position

Advanced protection for:

- Home computing
- Digital leisure equipment



Combined UPS/surge protection/ multiple socket device

Innovative solutions offering total protection for home computers and digital leisure devices.

Connect all your equipment and protect them against power failures and voltage fluctuations...

Eaton Protection Station can do this, offering in a single device:

- Up to 8 standard outlets
- A high performance surge suppressor
- A UPS with 20 to 30 minutes battery back-up for a typical PC

The first UPS in this class with energy saving features

Eaton Protection Station boasts an efficient electrical design with **EcoControl function** that **automatically disables peripherals** when the master device (Computer, HD TV, Home network storage, etc...) is turned off. This will help you **save up to 30% energy** compared to previous generation UPSs.

One model suitable for each application

3 versions (500 VA/250 W, 650 VA/400 W or 800 VA/500 W back-up power), to protect an internet PC, a multimedia computer with peripherals or a hardcore gamer configuration. Thanks to its multi-position format Eaton Protection Station can fit anywhere.

Guarantees total peace of mind

- Surge suppressor compatible with IEC 61 643-1 standard (+ status indicator)
- USB port and power management software as standard (650 & 800 models)
- Data line protection to ensure that the internet line (including xDSL) is protected against surges
- Unlimited warranty for the connected computer equipment (EU countries and Norway)
- Periodic test and battery replacement indicator



Eaton Protection Station



- 1 Surge protection status indicator
- 2 Line protection for telephone/Internet ADS
- 3 Spaced outlets, compatible with local stan
- 4a Outlets with surge protection
- 4b Outlets with surge protection and back-up
- 4c 2 EcoControl outlets (650 & 800)

- 4d 1 PLC-ready outlet
- 5 Replaceable batterie
- 6 Reset button (circuit breaker)
- 7 USB port (650 & 800) with Windows/Linux/Mac software
- 8 Indicator for mains/battery operation, overload, fault + audible alarms

Eaton Protection Station 650 & 800

Technical Specifications	500	650	800
Technology	High frequency UPS with surge protection		
Application			
Outlets	6 standard outlets (3 with back-up power and surge protection + 3 with surge pro-	8 standard outlets (4 with back-up power and surge protection + 4 with surge protection)	
Performance			
Output power capacity (backup outlets)	500 VA - 250 W	650 VA - 400 W	800 VA - 500 W
Output power capacity (all outlets)	5 A - 1150 VA	10 A - 2300 VA	10 A - 2300 VA
Input voltage range	184 V - 264 V	Up to 160 V - 284 V (adjustable)	Up to 160 V - 284 V (adjustable)
Output voltage and frequency	230 V - 50 / 60 Hz auto-selection		
Protection	Resettable circuit breaker		
Batteries			
Battery type	Replaceable sealed lead-acid batteries		
Battery monitoring	Automatic battery test, battery replacement indicator, protection against deep discharges (4-hour limit)		
Battery operation	Cold-start capable (mobile power source), battery charging even in OFF position		
Typical application	1 internet computer	1 multimedia computer + peripherals	1 computer high graphics power
Backup time with typical application	20 min	30 min	30 min
Features			
User interface	Operation with mains/battery power, surge suppressor status, overload, battery replacement, fault, audible alarms		
EcoControl	Save up to 30% energy* (efficient electrical design and automatic deactivation of idle		
Surge protection	Complete common and differential mode protection - 3 MOV - Total power: 525 Joules, compatible with IEC 61643-1 standard		
Performance on 8/20 wave	Uoc = 6 kV Up = 1.5 kV In = 2.5 kA I max = 8 kA	Uoc = 6 kV Up = 1.7 kV In = 2.8 kA I max = 8 kA	Uoc = 6 kV Up = 1.7 kV In = 2.8 kA I max = 8 kA
PowerLine compatibility	/	1 PLC-ready outlet	1 PLC-ready outlet
Data line protection	Protection for telephone/fax/modem/Internet ADSL line + Ethernet network		
Installation	Requires earth connection		
Standards			
Standards	IEC 62040-1-1, IEC 62040-2, IEC 61643-1, Marquage CE		
Quality and environment	ISO 9001, ISO14001		
Dimensions and weight			
Dimensions H x W x D	155 x 304 x 137 mm	185 x 327 x 149 mm	185 x 327 x 149 mm
Weight	2.9 kg	3.8 kg	4 kg
Power Management			
Com port	/	USB port	USB port
Software	/	Personal Solution-Pac software on CD, compatible with Windows Vista/XP/Mac/Linux (power management, Automatic system shutdown, Alarm notification, Events log)	
Customer service & support			
2 years guarantee	Standard product exchange, including the battery ; warranty for the connected computing equipment for an unlimited amount (EU countries)		
Warranty+	Optional 3 years warranty (depending on the country please visit www.eaton.com/powerquality)		

*compared to UPS from the previous generations

Part Numbers	500	650	800
FR outlets	66 942	61 061	61 081
DIN outlets	66 943	61 062	61 082



Eaton Ellipse ASR

450/600/750/1000/1500 VA



Eaton Ellipse ASR range



Eaton Ellipse ASR versatility



Passive standby (off-line)

Protecting business computer equipment

The highest level of protection for business computers

- **Eaton Ellipse ASR** UPSs not only provide a battery backed up supply to keep equipment operating when there is a power cut but also provide effective protection against damaging surges
- **Ellipse ASR** (Advanced Surge Reduction) UPSs include a high performance surge protective device which complies with IEC 61643-1 standards
- **Ellipse ASR** UPSs also protect telephone, broadband and Ethernet for complete protection

The widest range of sockets

- 4 sockets (450/600/750 models) or 8 sockets (1000/1500 models)
- Practical: French, "Schuko" and universal sockets. Also available with IEC sockets

The greatest flexibility

Extra flat for easy installation in all business environments:

- Vertical box format or below the desk
- Horizontal under a monitor
- 19" rack mounted (optional 2U kit)

The best compatibility with computer equipment

The USBs models are designed for compatibility with a wide variety of computers:

- Combined USB and serial ports
- Power management software available under Windows, Linux and Mac OS



Eaton Ellipse ASR

450/600/750/1000/1500 VA



- 1 4 sockets with surge protection
- 2 4 sockets with surge protection and backup
- 3 Tel/broadband and Ethernet 10/100 MB protection
- 4 Combined USB / serial port
- 5 Replaceable batteries
- 6 Circuit breaker reset button

- 1 Combined USB/serial port (USBS models)
- 2 Tel/broadband and Ethernet 10/100 MB protection
- 3 Replaceable batteries
- 4 3 sockets with surge protection and backup and 1 socket with surge protection
- 5 Circuit breaker reset button

Eaton Ellipse ASR 1000/1500

Eaton Ellipse ASR 450/600/750

Technical Specifications	450	600/600 USBS	750 USBS	1000 USBS	1500 USBS	XL
Rating (VA/W)	450 VA / 250 W	600 VA / 360 W	750 VA / 450 W	1000 VA / 600 W	1500 VA / 900 W	420 VA / 250 W
Application						
Multi-way sockets	4	4	4	8	8	5
Sockets with surge protection and backup / Sockets with surge protection for peripherals	3/1	3/1	3/1	4/4	4/4	4/1
Characteristics						
Input voltage	184 V to 264 V	184 V to 264 V (adjustable from 161 V to 284 V)				
Output voltage	230 V	230 V (settable to 220 V, 230 V, 240 V)				
Frequency	50-60 Hz autoselect					
Surge protection	Integral surge protection device to IEC 61643-1, Total surge absorption: 525 Joules					
Circuit breaker	With reset					
Battery						
Replaceable battery	Compact sealed lead acid					
Battery charger	Operates when the UPS is under power					
Battery test	Yes	Yes	Yes	Yes	Yes	Yes
Cold start (no mains)	Yes	Yes	Yes	Yes	Yes	Yes
Deep discharge protection	4 hours	4 hours	4 hours	4 hours	4 hours	48 hours
Battery replacement indicators	LED + audible alarm					
50% load backup	11 min	15 min	13 min	18 min	16 min	4 EXB : 15h
70% load backup	6 min	7 min	6 min	9 min	8 min	4 EXB : 9h20 min
Communication						
Communications port (USBS models)	/	Combined USB and serial port	Combined USB and serial port	Combined USB and serial port	Combined USB and serial port	/
Software supplied as standard (USBS models)	/	Compatible with: Windows Vista XP/2003/2000/98/95/Me/NT, Mandrake Linux, Mandriva Linux, Red Hat Linux, Suse Novell, Debian GNU/Linux, Mac OS X				/
Line protection	Tel/Fax/Modem/Internet et Ethernet (available for all models)					
Standards						
Safety	IEC/EN 62040-1-1, CB Report, CE mark					
EMC	IEC 62040-2					
Surge protection	IEC 61643-1					
Mounting, colors, dimensions and weight						
Dimensions H x W x D	242 x 81 x 245 mm	270 x 82 x 265 mm	270 x 82 x 265 mm	305 x 80 x 312 mm	317 x 80 x 390 mm	317 x 80 x 390 mm
Weight	3 kg	4.2 kg	4.4 kg	8.1 kg	11 kg	11 kg
19" rack mounting kit	2U	2U	2U	2U	2U	2U
Color	Black	Titanium Grey	Titanium Grey	Titanium Grey	Titanium Grey	Titanium Grey
Customer Service & Support						
2 years warranty	Standard product exchange, including the battery ; warranty for the connected computing equipment for an unlimited amount (EU countries)					
Warranty+	Optional 3-years warranty (depending on the country please visit www.eaton.com/powerquality)					

Part Numbers	450	600	600 USBS	750 USBS	1000 USBS	1500 USBS	XL
French sockets (FR)	66 940	66 765	66 769	66 773	66 777	66 781	66 792
Schuko sockets (DIN)	66 941	66 766	66 770	66 774	66 778	66 782	66 793
UNI sockets	/	66 767	66 771	66 775	66 779	66 783	66 794
IEC sockets	*	66 768	66 772	66 776	66 780	66 784	66 795
Accessories							
19" rack mounting kit	68 561	68 561	68 561	68 561	68 561	66 561	68 561
Ellipse EXB	/	/	/	/	/	/	66 791

* Ellipse ASR 375 IEC (66 764) available upon request.



Eaton Ellipse MAX

600/850/1100/1500 VA



Eaton Ellipse MAX range



Eaton Ellipse MAX versatility

Advanced protection for:

- Workstation
- Small servers
- Office equipment



Line interactive

Power protection for workstations and small servers

Availability

- **Line Interactive technology:** Eaton Ellipse MAX provides effective protection, even in disturbed electrical environments. Fluctuations in voltage are automatically corrected by an AVR device (booster/fader), without using the batteries. UPSs not only provide a battery backed up supply to keep equipment operating when there is a power cut but also provide effective protection against damaging surges.
- **Surge protection:** Eaton Ellipse MAX includes a high performance surge protective device which complies with IEC 616431 standard.
- **Robust:** A wide tolerance of input voltage avoids excessively frequent changeover to battery power. This means that maximum capacity is always available. The thresholds for changeover to battery power can be adjusted using the supplied Solution-Pac software.

Value

- **Easy installation:** Eaton Ellipse MAX USBs models are supplied with power management software & communication cables
- **Unlimited warranty:** Eaton Ellipse MAX provides a warranty of connected computer equipment for an unlimited amount

Flexibility

- **Connection:** 4 or 8 standard outlets for each country (FR, DIN or UNIversal), IEC version also available
- **Integration:** Eaton Ellipse MAX can be installed in vertical position over & under the desk, or horizontally under a monitor
- **Rackable:** the optional 2U kit allows you to install the Eaton Ellipse MAX in a 19" rack
- **Power management:** the USBs models feature a combined USB and serial port



Eaton Ellipse MAX

600/850/1100/1500 VA

- 1 4 sockets with surge protection
- 2 4 sockets with surge protection and backup
- 3 Internet and Ethernet protection
- 4 Combined USB / serial port
- 5 Replaceable batteries
- 6 Circuit breaker reset button



Eaton Ellipse MAX 1500



Eaton Ellipse MAX 600

- 1 Combined USB/serial port (USBS models)
- 2 Tel/broadband and Ethernet 10/100 MB protection
- 3 Replaceable batteries
- 4 3 sockets with surge protection and backup and 1 socket with surge protection
- 5 Circuit breaker reset button

Technical Specifications

	600	600 USBS	850 USBS	1100 USBS	1500 USBS
Rating (VA/W)	600 VA / 360 W	600 VA / 360 W	850 VA / 550 W	1100 VA / 660 W	1500 VA / 900 W
Technology	Line-Interactive High Frequency (Automatic Voltage Regulation)				
Connections					
Multi-way sockets: French, Schuko, Universal,	4	4	8	8	8
Sockets with surge protection and backup / Sockets with surge protection for peripherals	3/1	3/1	4/4	4/4	4/4
Characteristics					
Input voltage	165 V - 285 V (adjustable to 150 V - 285 V)				
Output voltage	230 V (adjustable to 220 V - 230 V - 240 V)				
Frequency	50-60 Hz autoselect				
Surge protection	Integral surge protection device to IEC 61643-1, Total surge absorption: 525 Joules				
Circuit breaker	With reset				
Battery					
Replaceable battery	Compact sealed lead acid				
Battery charger	Operates when the UPS is under power				
Battery management	Battery test, Cold start (no mains), Deep discharge protection				
Battery replacement indicators	LED + audible alarm				
Typical backup times for 50 and 70% of the VA	12/7 min	12/7 min	18/12 min	15/9 min	12/7 min
Communication					
Communications port	/ Combined USB and serial port				
Software supplied as standard	/ Compatible with: Windows Vista/XP/2003/2000/98/NT, Mandrake Linux, Mandriva Linux, Red Hat Linux, Suse Novell, Debian GNU/Linux, Mac OS X				
Line protection	Tel/Fax/Modem/Internet et Ethernet 10/100 MB				
Standards					
Safety	IEC/EN 62040-1-1, CB Report, CE mark				
EMC	IEC / EN 62040-2 C1				
Surge protection	IEC 61643-1				
Mounting, Dimensions and Weight					
Dimensions H x W x D	314 x 82 x 301 mm	314 x 82 x 301 mm	314 x 82 x 410 mm	314 x 82 x 410 mm	314 x 82 x 410 mm
Weight	5.75 kg	5.75 kg	10.2 kg	10.2 kg	10.2 kg
19" rack mounting kit	2U	2U	2U	2U	2U
Customer Service & Support					
2 years warranty	Standard product exchange, including the battery ; warranty for the connected computing equipment for an unlimited amount (EU countries)				
Warranty+	Optional 3-years warranty (depending on the country please visit www.eaton.com/powerquality)				

Part Numbers

	600	600 USBS	850 USBS	1100 USBS	1500 USBS
French sockets (FR)	68 541	68 545	68 549	68 553	68 557
Schuko sockets (DIN)	68 542	68 546	68 550	68 554	68 558
UNI sockets	68 543	68 547	68 551	68 555	68 559
IEC sockets	68 544	68 548	68 552	68 556	68 560
Accessories					
19" rack mounting kit	68 561	68 561	68 561	68 561	68 561



FR DIN UNI IEC

Eaton Evolution

650/850/1150/1550/2000 VA



1U rack model & tower model

Line interactive

High density protection for network devices

Maximum availability

- **Powershare:** the Eaton Evolution output sockets are individually controlled to provide load-shedding to maximise the backup time and provide remote reboot and sequential start-up as standard
- **Continuous power supply:** Hot swappable batteries. The optional HotSwap MBP (Maintenance By-Pass) module allows the UPS to be replaced without interrupting the power supply
- **Pure sinewave output:** when operating in batterie mode the Eaton Evolution still provides high quality output signal for sensitive connected equipment

Minimum total cost of ownership

- **Line-interactive HF technology:** the best price/performance ratio
- **No additional cost:** rack 1U and RT models are provided with the rail kits
- **Remote supervision:** a wide range of options using the Eaton Software suite, including point-to-point power management, SNMP, relay outputs, etc...

Total flexibility

Evolution has unmatched Flexibility.

- **Format:** Evolution is available in tower format, rack 1U format, RT2U convertible rack/tower (2kVA model)
- **Communication:** the Evolution includes both serial and USB ports, plus remote On/Off connector and an extra slot for optional communication cards. The UPS comes with a complete Eaton software suite.



Eaton Evolution UPS

650/850/1150/1550/2000 VA



- 1 Full user interface:
 - ON/OFF button for UPS and outlets
 - Load protected/ not protected LED
 - Utilised power level/Battery charge level
 - Status of switchable outlets
- 2 Panel for batteries replacement (Hot swappable)

- 3 1 USB port + 1 serial port + remote ON/OFF
- 4 4 IEC 10A sockets, including 2 programmable sockets
- 5 Communication card slot

Eaton Evolution 1550 Tower

Technical Specifications	650	850	1150	1550	2000
Rating (VA/W)	650 VA / 420 W	850 VA / 600 W	1150 VA / 770 W	1550 VA / 1100 W	2000 VA / 1600 W
Format	Tower or 1U Rack	Tower or 1U Rack	Tower or 1U Rack	Tower or 1U Rack	RT2U (tower / rack 2U)
Electrical characteristics					
Technology Line-Interactive High Frequency (Booster + Fader)					
Input voltage and frequency ranges without using batteries 160V-294V (adjustable to 150V-294V) 47 to 70 Hz (50 Hz system), 56.5 to 70 Hz (60 Hz system), up to 40 Hz in low-sensitivity mode (programmable using Personal Solution-Pac software).					
Output voltage and frequency 230 V (+6/-10 %) (Adjustable to 200 V (10 % derating of output power) / 208 V / 220 V / 230 V / 240 V), 50/60 Hz +/- 0.1 %					
Connections					
Input 1 IEC C14 (10 A) socket					
Outputs 4 IEC C13 (10 A) 4 IEC C13 (10 A) 4 IEC C13 (10 A) 4 IEC C13 (10 A) 8 IEC C13 (10 A)					
Remotely controlled sockets 2 groups of 1 x IEC C13 (10 A) 2 groups of 1 x IEC C13 (10 A) 2 groups of 1 x IEC C13 (10 A) 2 groups of 1 x IEC C13 (10 A) 2 groups of 2 x IEC C13 (10 A)					
Additional outputs with HS MBP 4 FR/Schuko sockets or 3 BS sockets or 6 IEC 10 A sockets or terminal blocks (HW version)					
Additional outputs with FlexPDU 8 FR/Schuko sockets or 6 BS sockets or 12 IEC 10 A sockets					
Batteries					
Typical backup times for 50 and 70% load 9/6 mn 16/7 mn 14/7 mn 14/7 mn 14/7 mn					
Battery management Automatic weekly test (period adjustable), automatic recognition of external battery units => continuous maximisation of backup time + deep discharge protection					
Interfaces					
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 and Remote Power Off					
Communications card slots 1 slot for NMC Minislot card or NMC ModBus/JBus or MC Contacts/Serial					
Operating conditions, standards and approvals					
Operating temperature 0 to 35°C 0 to 35°C 0 to 35°C 0 to 40°C 0 to 40°C					
Noise level < 40dbA < 40dbA < 40dbA < 40dbA < 45 dBA					
Performance - Safety - EMC IEC/EN 62040-1-1 (Safety), IEC/EN 62040-2 EN 50091-2 class B (EMC), IEC/EN 62040-3 (Performance), IEC/EN 61000-4-2, 61000-4-3, 61000-4-4; 61000-4-5, 61000-4-6, 61000-4-8 (EMI)					
Approvals CE, CB report, TÜV					
Dimensions W x D x H / Weight					
Dimensions of the Tower 147 x 418 x 234 mm 147 x 418 x 234 mm 147 x 418 x 234 mm 147 x 492 x 234 mm 440 x 509 x 86.2 (2U) mm					
Dimensions of the Rack 438 x 366 x 43.2 (1U) 438 x 512 x 43.2 (1U) 438 x 512 x 43.2 (1U) 438 x 556 x 43.2 (1U) 440 x 509 x 86.2 (2U)					
Weight of the Tower/Rack 8.4/10.1 kg 10.85/16.1 kg 12.5/16.6 kg 16.53/20 kg 25.7 kg					
Customer Service & Support					
2 years warranty Standard product exchange, including the battery					
Warranty+ Optional 3-years warranty (depending on the country please visit www.eaton.com/powerquality)					

Part Numbers	650	850	1150	1550	2000 RT2U
Tower	68 450	68 452	68 454	68 457	/
Rack1U	68 451	68 453	68 455	68 458	/
Convertible Tower/Rack	/	/	/	/	68 460



Eaton Evolution S

1250/1750/2500/3000 VA



Eaton Evolution S



Eaton Evolution S with EXB

Advanced protection for:

- Rack servers
- Tower servers
- Network devices
- Storage systems



Line interactive

High density protection for network devices

Maximum availability

- **Powershare:** the Eaton Evolution S output sockets are individually controlled to provide load-shedding to maximise the backup time and provide remote reboot and sequential start-up as standard
- **Continuous power supply:** Hot swappable batteries. The optional HotSwap MBP (Maintenance By-Pass) module allows the UPS to be replaced without interrupting the power supply
- **Long backup times:** 1 to 4 EXB battery units can be added to the Evolution S
- **Pure sinewave output:** when operating in batterie mode the Eaton Evolution still provides high quality output signal for sensitive connected equipment

Minimum total cost of ownership

- **Line-interactive HF technology:** the best price/performance ratio
- **No additional cost:** all models are provided with tower stands and rail kits
- **Remote supervision:** a wide range of options using the Eaton Software suite, including point-to-point power management, SNMP, relay outputs, etc...

Total flexibility

Evolution has unmatched Flexibility.

- **Format:** Evolution S is available in RT2U convertible rack/tower version (optimised for rack mounting) or RT3U (for tower or short-depth racks)
- **Connections:** with FlexPDU and HotSwap MBP the Evolution S can be connected by sockets or terminal blocks. They can be installed as required behind, on the side or on top of the unit
- **Compatible with high power factor loads:** the Evolution S are rated for 0.9 total power factor (1250 VA/1150 W, 1750 VA/1600 W, 2500 VA/2250 W and 3000 VA/2700 W)
- **Communication:** the Evolution S includes both serial and USB ports, plus remote On/Off connector and an extra slot for optional communication cards. The UPS comes with a complete Eaton software suite.

Eaton Evolution S UPS

1250/1750/2500/3000 VA



Eaton Evolution S 3000 RT2U Netpack

- 1 Full user interface:
 - ON/OFF button for UPS and outlets
 - Load protected/ not protected LED
 - Utilised power level/Battery charge level
 - Status of switchable outlets
- 2 Panel for batteries replacement (Hot swappable)
- 3 1 USB port + 1 serial port + remote ON/O

- 4 EXB battery unit connector
- 5 EXB units recognised automatically
- 6 8 IEC 10A sockets, including 4 programmable sockets
- 7 Communication card slot

Technical Specifications

	1250	1750	2500	3000
Rating (VA/W)	1250 VA / 1150 W	1750 VA / 1600 W	2500 VA / 2250 W	3000 VA / 2700 W
Format	RT2U (tower / rack 2U)	RT2U (tower / rack 2U)	RT2U (tower / rack 2U)	RT2U & RT3U
Electrical characteristics				
Technology	Line-Interactive High Frequency (Booster + Fader)			
Input voltage and frequency ranges without using batteries	160V-294V (adjustable to 150V-294V) 47 to 70 Hz (50 Hz system), 56.5 to 70 Hz (60 Hz system), up to 40 Hz in low-sensitivity mode (programmable using Personal Solution-Pac software).			
Output voltage and frequency	230 V (+6/-10 %) (Adjustable to 200 V (10 % derating of output power) / 208 V / 220 V / 230 V / 240 V), 50/60 Hz +/- 0.1 %			
Connections				
Input	1 IEC C14 (10 A) socket	1 IEC C14 (10 A) socket	1 IEC C20 (16 A) socket	1 IEC C20 (16 A) socket
Outputs	8 IEC C13 (10 A)	8 IEC C13 (10 A)	8 IEC C13 (10 A) sockets 1 IEC C19 (16 A) socket	8 IEC C13 (10 A) sockets 1 IEC C19 (16 A) socket
Remotely controlled sockets	2 groups of 2 x IEC C13 (10 A)			
Additional outputs with HS MBP	4 FR/Schuko sockets or 3 BS sockets or 6 IEC 10 A sockets or terminal blocks (HW version)			
Additional outputs with FlexPDU	8 FR/Schuko sockets or 6 BS sockets or 12 IEC 10 A sockets			
Batteries				
Typical backup times for 50 and 70% load*				
Evolution S	20/14 mn	14/9 mn	17/11 mn	15/10 mn
Evolution S + 1 EXB	105/60 mn	60/36 mn	85/55 mn	60/42 mn
Evolution S + 4 EXB	300/200 mn	180/115 mn	290/200 mn	210/135 mn
Battery management	Automatic weekly test (period adjustable), automatic recognition of external battery units => continuous maximisation of backup time			
Interfaces				
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 and Remote Power Off			
Communications card slots	1 slot for NMC Minislot card (included in Netpack versions) or NMC ModBus/JBus or MC Contacts/Serial			
Operating conditions, standards and approvals				
Operating temperature	0 to 40°C			
Noise Level	< 45 dBA	< 45 dBA	< 50 dBA	< 50 dBA
Performance - Safety - EMC	IEC/EN 62040-1-1 (Safety), IEC/EN 62040-2 EN 50091-2 class B (EMC), IEC/EN 62040-3 (Performance), IEC/EN 61000-4-2, 61000-4-3, 61000-4-4; 61000-4-5, 61000-4-6, 61000-4-8 (EMI)			
Approvals	CE, CB report, TÜV			
Dimensions W x D x H / Weight				
Dimensions	440 x 509 x 86.2 (2U) mm	440 x 509 x 86.2 (2U) mm	440 x 634 x 86.2 (RT2U) mm 440 x 484 x 130.7 (RT3U) mm	440 x 634 x 86.2 (RT2U) mm 440 x 484 x 130.7 (RT3U) mm
Weight of the Tower/Rack	24.3 kg	26.6 kg	33.8 kg	33.8 kg (RT2U) - 34.3 kg (RT3U)
Dimensions of EXB	See UPS			
Weight of the EXB	30.4 kg	30.4 kg	41.7 kg	41.7 kg
Customer Service & Support				
2 years warranty	Standard product exchange, including the battery			
Warranty+	Optional 3-years warranty (depending on the country please visit www.eaton.com/powerquality)			

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

Part Numbers	S 1250 RT2U	S 1750 RT2U	S 2500 RT2U Netpack*	S 3000 RT3U	S 3000 RT2U Netpack*
Convertible Tower/Rack	68 456	68 459	68 463	68 464	68 465
EXB Models	68 470	68 470	2U = 68 472 - 3U = 68 471	2U = 68 472 - 3U = 68 471	2U = 68 472 - 3U = 68 471

* NMC card included in Netpack versions.



Eaton EX

700/1000/1500/2200/3000 VA



Eaton EX 1500



Eaton EX Rack/Tower versatility

Ideal protection for:

- Servers, data storage and network equipment
- Telephony - VoIP
- Medical equipment - Industrial processes



Double conversion (on-line)

Maximum availability

- **Topology:** double conversion on-line UPS with automatic by-pass and power factor correction
- **Powershare:** the Eaton EX output sockets are individually controlled to provide load-shedding to maximise the backup time and provide remote reboot and sequential start-up as standard
- **Continuous power supply:** Hot swappable batteries. The HotSwap MBP (Maintenance By-Pass) module allows the UPS to be replaced without interrupting the power supply
- **Long backup times:** 1 to 4 EXB battery units can be added to the Eaton EX. The Eaton EX 3000XL has a built-in super charger for extra long backup times

Minimum total cost of ownership

- **Easy operation:** the LCD gives you access to a wide range of measurements and set-up menus
- **Remote supervision:** the Eaton software suite offers a wide range of communication option including: SNMP and HTML, ModBus/JBus and relay outputs

Total flexibility

Eaton EX has unmatched Flexibility.

- **Format:** EX 700 to 1500 are available in tower format or RT2U convertible rack/tower format (compatible with short-depth rack). EX 2200 & 3000 are available in RT2U format (optimised for rack mounting) or RT3U (for tower or short-depth racks)
- **Connections:** with FlexPDU and HotSwap MBP, the RT2U and RT3U models can be connected by sockets or terminal blocks. They can be installed as required, on the side or on top of the unit
- **Compatible with high power factor loads:** Eaton EX is rated for 0.9 power factor (700 VA/630 W, 1000 VA/900 W, 1500 VA/1350 W, 2200 VA/1980 W and 3000 VA/2700 W)
- **Communication:** the EX includes both serial and USB ports, plus remote On/Off connector and an extra slot for optional communication cards. The UPS comes with a complete Eaton software suite.

Eaton EX UPS

700/1000/1500/2200/3000 VA



Eaton EX RT

- 1 LCD Multilingual display
 - 6 languages,
 - displays measurements,
 - displays alarms,
 - access to control and set-up menus.
- 2 Panel for batteries replacement (Hot swappable)

- 3 1 USB port + 1 serial port + remote ON/OFF and emergency stop inputs.
- 4 EXB battery unit connector.
- 5 EXB units recognised automatically.
- 6 8 IEC 10A sockets, including 4 Powershare programmable sockets and 1 IEC 16A socket.
- 7 Communication card slot.
- 8 Mountings for HotSwap MBP and FlexPDU.

Technical Specifications	700	1000 - 1000 RT2U	1500 - 1500 RT2U	2200	3000 - 3000 XL
Rating (VA/W)	700 VA / 630 W	1000 VA / 900 W ⁽¹⁾	1500 VA / 1350 W ⁽¹⁾	2200 VA / 1980 W	3000 VA / 2700 W ⁽¹⁾
Format	Mini tower	Mini tower or RT2U (tower/rack 2U)		RT2U (tower / rack 2U) and RT3U (tower / rack 3U)	
Electrical characteristics					
Architecture	On-line double conversion with automatic by-pass and power factor correction				
Input voltage and frequency ranges without using	100/120/140/160 V ⁽²⁾ to 284V - 40 to 70 Hz			100/120/160/184 V ⁽²⁾ to 284V - 40 to 70 Hz	
Output voltage and frequency	230 V (adjustable to 200/208/220/240/250 V), 50/60 Hz auto-select or frequency converter mode ⁽³⁾			230 V (adjustable to 200/208/220/240 V), 50/60 Hz auto-select or frequency converter mode	
Connections					
Input	1 IEC C14 (10A) socket			1 IEC C20 (16A) or terminal block on HotSwap MBP HW (Hard-Wired)	
Outputs	6 IEC C13 (10A) sockets			8 IEC C13 (10A) sockets + 1 IEC C19 (16A) socket	
Remotely controlled Powershare sockets	2 independent groups: 2 + 1 IEC C13 (10A) sockets			2 groups of 2 x IEC C13 (10A) on Eaton EX	
Additional outputs with HotSwap MBP FR/DIN/BS/	4 FR/Schuko sockets or 3 BS sockets or 6 IEC 10A sockets or terminal blocks (HW version)				
Additional outputs with FlexPDU FR/DIN/BS/IEC	8 FR/Schuko sockets or 6 BS sockets or 12 IEC 10A sockets				
Battery					
Typical backup times for 50 and 70% load ⁽⁶⁾ except for Eaton EX 3000 XL ⁽⁵⁾					
EX	16 min / 10 min	18 min / 12 min	13 min / 9 min	17 min / 12 min	15 min / 10 min
EX + 1 EXB	/	75 min / 50 min	50 min / 35 min	85 min / 60 min	60 min / 40 min
EX + 4 EXB	/	250 min / 200 min	180 min / 120 min	285 min / 200 min	190 min / 150 min
Battery management	Automatic weekly test (period adjustable using LCD display or in software supplied), automatic recognition of external battery units => continuous maximisation of backup time + deep discharge protection				
Interfaces					
Indicators and display	3 LEDs + adjustable multilingual display: display of measurements, access to control and set-up menus				
Communication ports	1 USB port + 1 RS232 serial port and relay contacts ⁽⁴⁾ + 1 mini terminal block for remote ON/OFF and emergency stop				
Communications card slots	1 slot for NMC Minislot card (included in Netpack version) or NMC ModBus/JBus or MC Contacts/Serial				
Operating conditions, standards and approvals					
Operating temperature noise level	0°C to 40°C continuous, 45 dBA				
Performance - Safety - EMC	IEC/EN 62 040-3 (VFI-SS-113), IEC/EN 62 040-1-1, IEC/EN 60 950-1 (RD), IEC/EN 62 040-2 C1 Class				
Approvals	CE, TÜV GS, CB report, cTUV-US			CE, TÜV, CB Report, UL CE, TÜV, CB Report, UL	
Dimensions (H x W x D) / Weight					
EX	242 x 153 x 440 mm / 12.5 kg	242 x 153 x 440 mm / 15 kg	242 x 153 x 490 mm / 18 kg	440 x 131 x 490 mm ⁽⁷⁾ / 30 kg (3000 XL = 18 kg)	
EX RT2U	/	86.5 x 438 x 483 mm / 18 kg	86.5 x 438 x 483 mm / 20.5 kg	86 x 440 x 640 mm / 31 kg	
EX EXB	/	242 x 153 x 440 mm / 21 kg		440 x 131 x 490 mm ⁽⁷⁾	
EX EXB RT2U	/	86.5 x 438 x 483 mm / 24.5 kg		/	
Customer Service & Support					
2 years warranty	Standard product exchange, including the battery				
Warranty+	Optional 3-years warranty (depending on the country please visit www.eaton.com/powerquality)				
1: Maximum rating with EXB battery units: Eaton EX 1000 = 800 W, Eaton EX 1500 = 1200 W and Eaton EX 3000 = 2400W. 2: Lower limits for <20%, <33%, <66%, >=66% of nominal power (VA). For active output power greater than 0.7 and 0.8 nominal rating, the lower limit is 180V and 190V respectively. 3: Derated by 15% when used as a frequency converter. 4: USB and RS232 serial ports cannot be used simultaneously. 5: Except Eaton EX 3000 XL: UPS with high speed charger, without built-in batteries, for custom configurations. 6: Runtimes are shown at 0.7 power factor. Backup times are approximate and may vary with equipment, configuration, battery age, temperature, etc. 7: compatible with 600 mm deep rack					
Part Numbers					
EX	68 180	68 181	68 183	68 400	68 402 - XL: 68 404
EX RT2U (includes rack kit)	/	68 182	68 184	68 401	68 403
EX RT3U HotSwap. (includes rack kit + HotSwap MBP)	/	/	/	FR: 68406 DIN: 68407 BS: 68408 FR: 68412 DIN: 68413 BS: 68414 IEC: 68409 HW: 68410 IEC: 68415 HW: 68416	
EX RT2U Netpack (includes rack kit and NMC card)	/	/	/	68 411	68 417
EX EXB	/	68 185	68 185	68 405	68 405
EX EXB (includes rack kit)RT2U	/	68 186	68 186	/	/
EX Rack Kit 2U/3U	/	/	/	68 441	68 441



Eaton MX

4/5/8/10/15/20 kVA



Eaton MX versatility



Eaton MX Frame

- Advanced protection for:**
- Departmental networks, servers and workstations



Double conversion (on-line)

High performance UPS upgradeable from 4 kVA to 20 kVA

Continuous power supply

- Two front access hot-swappable sub-modules (power and battery) for maintenance without load interruption
- Automatic battery test (test period can be set)
- Internal bypass built-in to supply the load even if the UPS fails
- Large input voltage and frequency ranges to avoid using the batteries unnecessarily

Total flexibility

- Can be used as a free-standing tower unit or 19" rack-mounted: only 3U for Eaton MX 4000 and 5000, 16U for Eaton MX Frame
- LCD multilingual display with mimic and LEDs for rapid view of the UPS status, diagnostics and event log
- **Outputs:** IEC 10A and 16A outlet sockets and hardwired outputs.
- Built-in Powershare system for remote reboot of the equipment connected, sequential start-up or load shedding while operating from battery to maintain the power to critical loads
- Eaton MX Frame is compatible with three phase or single phase supplies
- **Backup time:** 10 mins up to 2 hours by adding 3U battery extension modules

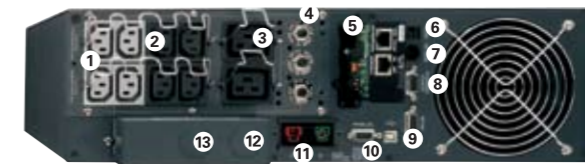
Minimum total cost of ownership (TCO)

- More power with an output power factor of 0.9
- When the power supply needs to be upgraded, the Eaton MX 4000 and 5000 can be paralleled to provide 8 kVA or 10 kVA using the ModularEasy kit: without extra cost on the initial purchase
- Eaton MX Frame is a modular system with 5 kVA sub-modules paralleled to provide up to 20 kVA or 15 kVA with redundancy

Eaton MX UPS

4/5/8/10/15/20 kVA

- 1 8 IEC 10A sockets
- 2 Retention clips
- 3 2 IEC 16A sockets
- 4 Output circuit protection
- 5 1 minislot for NMC, Modbus/JBus or MC Contacts/Serial card
- 6 RJ11 remote power off



Eaton MX 4000/5000

- 7 RJ45 EXB battery module detection
- 8 DB 9 with 5 output contacts
- 9 DB 9 serial and USB ports
- 10 DB 15 for paralleling
- 11 EXB battery extension module power connector
- 12 Input
- 13 Output

Technical Specifications	4000	5000	MX Frame 15000	MX Frame 20000
Rating (kVA/kW)	4 kVA / 3.6 kW	5 kVA / 4.5 kW	15 kVA / 13.5 kW	20 kVA / 18 kW
Paralleling				
Maximum rating / redundancy ⁽¹⁾	8 kVA / 4 kVA + 4 kVA redundancy	10 kVA / 5 kVA + 5 kVA redundancy	15 kVA / 10 kVA + 5 kVA redundancy	20 kVA / 15 kVA + 5 kVA redundancy
Inputs	VFI-SS-113, on-line double conversion with power factor correction, convection cooled static bypass switch			
Technology	VFI-SS-113, on-line double conversion with power factor correction, convection cooled static bypass switch			
Number of phases, input connections	L + N, terminals up to 6 mm ²	L + N, terminals up to 6 mm ²	L + N or 3P + N, terminals up to 35 mm ² , separate or common AC normal and AC bypass	L + N or 3P + N, terminals up to 35 mm ² , separate or common AC normal and AC bypass
Nominal voltage	200/208/220/230/240/250 V	200/208/220/230/240/250 V	200/208/220/230/240/250 V (L + N) or 380/400/415 V (3P + N)	200/208/220/230/240/250 V (L + N) or 380/400/415 V (3P + N)
Voltage range without using battery ⁽²⁾	120 - 280 V	120 - 280 V	120 - 280 V (L + N), 250 - 465 V (3P + N)	120 - 280 V (L + N), 250 - 465 V (3P + N)
Input frequency range, THDI	40-70 Hz, < 7%			
Outputs	Terminals + 8 IEC C13 (10A) + 2 IEC C19 (16A)			
Output connections ⁽³⁾	Terminals + 8 IEC C13 (10A) + 2 IEC C19 (16A)		Terminals + 8 IEC C13 (10A) + 4 IEC C19 (16A)	
Remotely controlled Powershare sockets	2 groups (2 IEC C13 10A per group)			
Output voltage and frequency ⁽⁴⁾ , THDU,	200/208/230/240 / 250 V, 50 / 60 Hz autoselect, frequency converter as standard, < 2%, 97%			
Backup time⁽⁶⁾	10 minutes			
Eaton MX standard backup time	10 minutes	8 minutes	8 minutes	8 minutes
Eaton MX + EXB / MX + 2 EXB / MX + 3 EXB	45 / 80 / 120 minutes	35 / 60 / 95 minutes	35 min (3 EXB)/60 min (6 EXB) / 90 min (9 EXB) ⁽⁷⁾	35 min (4 EXB)/60 min (8 EXB) / 90 min (12 EXB)
Communications	1 slot (MX) or 2 slots (MX Frame) for Network Management Card, NMC ModBus/JBus card or MC Contacts/Serial card			
Slots	1 slot (MX) or 2 slots (MX Frame) for Network Management Card, NMC ModBus/JBus card or MC Contacts/Serial card			
Ports	Remote Power off (RJ11), 5 output contacts (DB9), setup using Solution-Pac ⁽⁸⁾ , (USB and DB9-serial ports), EXB module detection (RJ45),			
Operating conditions, standards and approvals	Performance, safety, EMC, surge protection IEC/EN 62 040-3, IEC/EN 62 040-1-1, IEC/EN 62 040-2 class A (class B as option), 4 kV IEC 61 643, UL 1778 and CSA 22.2 ⁽⁹⁾			
Operating temperature, noise, approvals,	0°C to 40°C continuous, 45 dbA ⁽¹⁰⁾ , UL, TÜV, GS mark, CB, C-Tick, CE, IEC 61 931, one year ⁽¹¹⁾			
Dimensions H x W x D / Weight	Eaton MX standard backup tower 444.5 mm x 130.6 mm x 735 mm / 57 kg Tower 690 mm high (795 mm casters) x 444.5 mm wide x 735 mm deep			
Eaton MX standard backup rack	3U x 444.5 mm wide compatible with 800-1000 mm deep rack		Rack 16U x 444.5 mm wide, compatible with 800-1000 mm deep rack	
Eaton MX EXB battery unit tower / rack	444.5 mm x 130.6 mm x 650 mm / 3U x 444.5 mm wide / 70 kg		Dimensions same as MX Frame / 194 kg for 15 kVA, 239 kg for 20 kVA	
Eaton MX ModularEasy, paralleling kit	Dimensions same as EXB battery unit / 10 kg /			
Customer Service & Support	1 year guarantee, including batteries. Optional 3-years warranty (depending on the country please visit www.eaton.com/powerquality)			

1: Eaton MXs can be paralleled using ModularEasy. 2: At 70% load. 3: 4 IEC C13 (10A) 2 m long cables for use with retention clips (8 cables for use with Eaton MX Frame). 4: Frequency conversion for non-paralleled units only. 5: Economy mode, 91% in normal mode. 6: At 70% nominal rating with power factor 0.7 typical values after 3 charge/discharge cycles, with 3-5 years old batteries. Weekly battery test without interrupting the load (daily or monthly if required). EXB compatible with 0.8 power factor loads. 7: With Eaton MX Frame EXB (4 battery units). 8: Solution-Pac CD-ROM supplied as standard. 9: Applicable to US models. 10: 50 dbA above 5 kVA. 11: Depending on the country, see www.eaton.com/powerquality.

	MX 4000	MX 5000	MX Frame 15000	MX Frame 20000
Eaton MX Tower or rack-mounting: standard backup time	68 501	68 504	68 513 ⁽¹⁾	68 514 ⁽²⁾
Eaton MX Netpack: standard backup time + NMC + rack kit	68 502	68 505	68 513 ⁽¹⁾	68 514 ⁽²⁾
Eaton MX EXB: battery extension module	68 515	68 515	add multiple MX EXB : 68 515	
Eaton MX ModularEasy: paralleling kit (2 Eaton MX)	68 520	68 520	/	/
Eaton MX / EXB Rack Kit: rail kit for 19" rack mounting	68 002	68 002	/	/
IEC 32 A kit , 2 X 2 m long cables: male to hardwired and female to	68 525	68 525	/	/
MX 1,8 m Battery extension cable	68 528	68 528	68 528	68 528
MX Battery / Power electronics sub-module	68 524 / 68 522	68 524 / 68 523	68 524 / 68 523	68 524 / 68 523
Eaton MX Frame empty chassis	/	/	68 526	68 526
Battery Integration System (up to 9 EXB)	/	/	68 527	68 527

1: (with rack kit, casters, NMC card) 68 513 = 68 526 (empty Eaton MX Frame) + 3 x 68 524 + 3 x 68 523. 2: (with rack kit, casters, NMC card) 68 514 = 68 526 (empty Eaton MX Frame) + 4 x 68 524 + 4 x 68 523.



Eaton EX RT

7/11 kVA single phase input / single phase output
5/7/11 kVA three phase input / single phase output



Eaton EX RT



Battery Integration system

Advanced protection for:
Rack servers enclosures and industrial environment



Double conversion (on-line)

High performance UPS for single phase applications.

Maximum availability

- Hot swappable UPS and battery modules
- Internal bypass and maintenance bypass included as standard
- The UPS can be connected to two independent electrical sources (sources 1 and 2 can be common or separate)
- Large input voltage range without draining the battery: 230V + 20% to - 30% single phase and 400V + 15% to - 20% three phase
- Batteries tested automatically at regular intervals and protected against deep discharge
- N+1 redundancy supported by two single units

Wide choice of backup times

- From 10 minutes to 2 hours with battery modules or up to 8 hours using the CLA charger module
- Automatic recognition of battery modules and easy battery installation with battery integration system

Ergonomy

- Multilingual LCD display and LEDs for rapid view of the UPS status and the operating log
- Self diagnosis and fault messages

Can be integrated into even the most demanding environments:

Computer

- Tower / 6U Rack convertible
- Comprehensive range of Power Distribution Units for convenient power distribution within the rack

Industrial

- Compatible with all types of generator set
- Can be integrated into building management systems
- Steel casing
- Operating temperature up to 45°C
- Meets Marine vibration test requirements

Eaton EX RT UPS



- 1 Slot for Eaton minislot communication card
- 2 9-pin D output connector
- 3 RJ11 port for remote emergency power off
- 4 Connectors for automatic detection of battery module(s)
- 5 RS 232 communication port
- 6 Connector for EXB modules

- 7 Manual bypass for hot maintenance
- 8 Output connectors
- 9 Source switch 1
- 10 Source 1 connector
- 11 Source 2 connector
- 12 Battery circuit breaker

Technical Specifications

	5 kVA	7 kVA	11 kVA
Active power kVA / kW	5 kVA / 4 kW (single phase input not available for 5kVA)	7 kVA / 4.9 kW	11 kVA / 8 kW
Technology	On-line double conversion with PFC (Power Factor Correction) system (applicable to single phase models)		
Rated input voltage	200/208/220/230/240/250 V single phase 380/400/415V three phase		
Input voltage range	(- 30%; + 20%) 230 V; (- 20%, + 15%) 400 V		
Input, output frequency range	40-70 Hz, 50 / 60 HZ autoselection, frequency converter as a standard		
Output voltage / THDU	200/208/230/240 / 250 V +/- 2%; THDU < 2%		
Overall efficiency	Normal mode 91%, eco mode 97%		
THDI	THDI < 5% (single phase input value)		
Crest factor / short circuit current	3:1 / 100 A	3:1 / 100 A	3:1 / 150 A
Overload capacity	>150% 500 ms; 150% 30 s; 125% 60 s; 110% 120 s		
Temperature operating	45°C for 8 Hrs (at nominal output power for 230 V or 400V input and 230V output), 40°C continuous		
Back-up times* at 70% load			
From 10 up to 15 minutes	Standard: 1 power mod. 3U + 1 battery mod. EXB 3U = 6U		
From 15 up to 20 minutes	Standard + 1 battery mod. EXB 3U = 9U		
From 40 up to 65 minutes	Standard + 2 battery mod. EXB 3U = 12U		
Connection			
Input/output	Terminal block for 13 mm² (stranded cable) or 10 mm² (solid cable)		
Communication			
Port type	6 voltage free contacts DB9 2 A 48 V DC, 1 RS 232, RJ11 for remote emergency power off		
Slot	1 slot for communication card		
Standards and certification			
Performance and safety	IEC 62040-1/IEC 60950/UL 1778 and CSA 22.2 (applicable to single phase models)		
EMC	IEC 62040-2; EN 50091-2; FCC class A (applicable to single phase models), EMC B level (option for single phase model)		
Certification	UL (applicable to single phase models)/TÜV, GS mark,CB, C-Tick,CE, IEC 68-2-6 (vibration tests Marine approval)		
Dimensions H x W x D / Weight (single phase input / three phase input)			
Eaton EX RT standard backup tower	444.5 x 261.2 x 700 mm 89.5 kg	444.5 x 261.2 x 700 mm 88.3 kg / 89.5 kg	444.5 x 261.2 x 700 mm 94.2 kg / 95.3 kg
Eaton EX RT standard backup Network Pack rack mounting	261.2 (6U) x 444.5 x 700 mm 97.3 kg	261.2 (6U) x 444.5 x 700 mm 96.1 kg / 97.3 kg	261.2 (6U) x 444.5 x 700 mm 102 kg / 103.1 kg
Eaton EX RT Power module	444.5 x 130.6 x 700 / 130.6 (3U) x 444.5 x 700 mm 24.2 kg	444.5 x 130.6 x 700 / 130.6 (3U) x 444.5 x 700 mm 23 kg / 24.2 kg	444.5 x 130.6 x 700 / 130.6 (3U) x 444.5 x 700 mm 24.9 kg / 26 kg
Battery module Eaton EXB RT	444.5 x 130.6 x 650 / 130.6 (3U) x 444.5 x 650 mm 64.5 kg	444.5 x 130.6 x 650 / 130.6 (3U) x 444.5 x 650 mm 64.5 kg	444.5 x 130.6 x 650 / 130.6 (3U) x 444.5 x 650 mm 68.5 kg
EX RT CLA module / EX RT Transformer	130.6 (3U) x 444.5 x 650 mm / 12 kg / 87 kg	130.6 (3U) x 444.5 x 650 mm / 12 kg / 87 kg	130.6 (3U) x 444.5 x 650 mm / 12 kg / 87 kg
Customer Service & Support			
1 year warranty, including battery	Free standard replacement for faulty units, including the batteries		
Warranty+	Optional 3-years warranty (depending on the country please visit www.eaton.com/powerquality)		

* (typical values after 3 discharge cycles, batteries 3-5 years, longer backup times available using the CLA or EXB module, ask for details)

Part Numbers

	EX RT 5		EX RT 7		EX RT 11	
Input voltage	Single-phase	Three-phase	Single-phase	Three-phase	Single-phase	Three-phase
Eaton EX RT standard back-up time Tower	/	68 054	68 070	68 074	68 110	68 114
Network Pack Rack Format ⁽¹⁾	/	68 056	68 072	68 076	68 112	68 116
EXB RT battery module / EXB RT battery module with EPO	/	68 078 / 68 079	68 078 / 68 079	68 078 / 68 079	68 118 / 68 119	68 118 / 68 119
Eaton EX RT Power module (for use with EXB or CLA module)	/	68 057	68 075	68 077	68 115	68 117
Rack kit for Eaton EX RT Power module / Eaton EXB RT and CLA	/	68 001 / 68 002	68 001 / 68 002	68 001 / 68 002	68 001 / 68 002	68 001 / 68 002
Eaton EX RT Transformer module	/	68 003	68 003	68 003	68 003	68 003
Eaton EX RT CLA module (2 to 8 hours)	/	68 004	68 004	68 004	68 004	68 004
EX RT Battery Integration System ⁽²⁾	/	68 005	68 005	68 005	68 005	68 005
EMC B level filter module	/	/	68 008	/	68 008	/
EX RT PDU 19" rack format ⁽³⁾	/	66 857	66 857	66 857	66 857	66 857
1.8 m battery connection cable ⁽⁴⁾	/	68 006	68 006	68 006	68 006	68 006
UPS Control, remote UPS monitor display	/	66 080	66 080	66 080	66 080	66 080

1: the Network Pack version includes standard back-up time unit + Network Management Card + rack mounting kit. 2: trolley capacity 8 modules max, casters, adjustable feet. 3: 12 sockets 4 X IEC 16 A + 8 X IEC 10 A. 4: for non standard inter-module spacing.



Eaton BladeUPS

12 – 60 kW



An Eaton Green Solution

Due to outstanding green performance, the BladeUPS has earned the "An Eaton Green Solution"™ label

Advanced power protection for:

- Small, medium and large data centres
- Blade servers
- Network environment
- PBX and VoIP equipment
- Networking applications: IPTV, security
- Storage devices: RAID, SAN



High Efficiency UPS for Data Centres

Premium power performance

- BladeUPS provides scalable, flexible backup power optimized for high-density blade servers and IT equipment.
- A single module of BladeUPS provides 12 kW of power in only 6U of standard rack space, including batteries
- A scalable solution that delivers up to 60 kW of redundant power in a single rack enclosure.
- BladeUPS delivers an industry-leading 97% efficiency, resulting in cooler operating conditions and less heat dissipation.

True reliability

- Hot Sync technology makes possible to parallel six UPS modules for extra capacity or redundancy.
- ABM technology charges batteries only with necessary, preventing battery corrosion and prolonging battery service life by up to 50%.
- Replacing hot-swappable batteries and electronic modules can be done without interrupting the power, which dramatically improves the availability of the protected IT equipment.

Extensive configurability

- BladeUPS is extremely flexible and supports a variety of system architectures to fit to your specific requirements and desired levels of redundancy. BladeUPS also accommodates growth through its saleable building-block architecture.
- Due to the low heat dissipation, air conditioning requirement reduce by up to a third and BladeUPS can be located close to IT equipment.
- BladeUPS automatically detects parallel modules and self-configures for parallel operation.
- A module working in a parallel configuration can be separated and easily re-deployed as a stand-alone module.
- Each BladeUPS can be configured with its own external battery backup.
- BladeUPS is a scalable UPS with its own power distribution, courtesy of the Rack Power Module. The 3U RPM delivers single-phase power and can be deployed in the same rack as the UPS and IT equipment.
- The BladeUPS can be monitored over LAN or the Internet.

Cost savings and sustainability

- A high level of efficiency leads to utility cost saving, with a 60 kW N+1 solution paying for itself over a 5 year period through energy and cooling savings alone.
- The small footprint of BladeUPS allows extra space for IT equipment in the rack and data centre.
- Eaton uses sustainable materials and highly efficient manufacturing technology to dramatically reduce the carbon footprint when compared to UPS systems on the market.

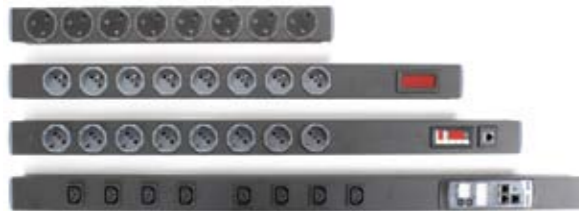
Eaton BladeUPS

TECHNICAL SPECIFICATIONS

General	
Power Rating	12 kW per UPS module
Efficiency	Up to 97 per cent
Heat Dissipation	371W/1266 BTU/hr at 100% rated load
Cooling	Fan cooled, temperature microprocessor monitored; front air entry, rear exhaust
Audible Noise, Normal Operation	<60 dBA at 1 meter
Altitude Before Derating	1000 meters (3300 ft ASL)
Input	
Input Voltage	400 Vac
Voltage Range	400V: 311 to 519 Vac, phase to phase
Frequency Range	50 or 60 Hz, ±5 Hz
Input Current Distortion	<5% with IT loads (PFC power supplies)
Input Power Factor	>0.99 with IT loads (PFC power supplies)
Inrush Current	Load dependent
Input Requirements	Three-phase, four-wire + ground
Bypass Source	Same as input (single feed)
Generator Compatibility	Fast sync slew rate for generator synchronisation
Output	
Rated Output Voltage	400V: 180 to 240 Vac, Ph to N
Output Configuration	Three-phase, four-wire + ground
Output Frequency (nominal)	50 or 60 Hz auto-detection on startup
Frequency Regulation	0.1 Hz free running
Load Power Factor Range	Lagging: 0.7
Total Output	Leading: 0.9
Voltage Distortion	<3% with IT loads (PFC power supplies)
	<5% non-linear or non-PFC power supplies
Battery	
Battery Type	VRLA - AGM
Battery Runtime (Internal)	13 minutes at 50 per cent load 4.7 minutes at 100 per cent load
Battery String Voltage	240 Vdc
Battery Test	Automatic battery test standard (remote scheduling capable) Manual battery test from front display
Battery Recharge Profile	ABM three-stage charging technology
Battery Cut-off Voltage	Variable from 1.67 VPC at <5 min. runtime
Battery Low Condition	Announced with alarm
Extended Battery Capability	Yes, add up to four additional 3U battery enclosures (~34 min at 100 per cent load, >1 hour at 50 per cent load)
Physical	
Dimensions (HxWxD) UPS	261 (6U) x 442 x 660 mm 132 (3U) x 437 x 660 mm
Note:	
Total Chassis Weight without batteries or electronics	46 kg
Total Chassis Weight with batteries or electronics	140 kg
Total UPS Weight without Batteries	61 kg
Total UPS Weight with Batteries	140 kg
EBM Weight	77 kg

Communications and User Interface	
Software Compatibility	UPS ships with Software Suite CD containing LanSafe power management software and a trial version of PowerVision
X-Slot Bays	Two available for the cards listed below
Control Panel LCD	Two lines by 20 characters Four menu-driven interface buttons Four status at a glance LEDs
Multi-language	English standard; 20 languages available
Configuration Changes	User capable, firmware auto configures
Dry Contact Inputs	Two, user-configurable
Dry Contact Outputs	One, user-configurable
Service	
Installation	User capable, located in the IT racks
Preventative Maintenance	User capable, optional factory service available
Corrective Maintenance	User capable, optional factory service available
Serviceability Features	Hot-swappable batteries Hot-swappable electronics module Automated internal maintenance bypass Auto-configure firmware Flash firmware upgradeable
Certifications	
EMI	IEC 62040
Surge Protection	ANSI C62.41, Cat B-3
Hazardous Materials (RoHS)	EU Directive 2002/95/EC Category 3 (4 of 5)
Warranty	
Standard	12 months
Warranty Repair	Factory depot repair or replace
Options and Accessories	
Detachable input cord	
Detachable input/output cord assembly	
Detachable paralleling cord assembly	
Extended Battery Modules (EBMs)	
3U output sub-distribution module	
0U to 3U rack power strips	
60 kW Powerware BladeUPS Parallel Bar	
Four-post rail kit	
Optional X-Slot Communication Cards	
Application	Card
Web SNMP	ConnectUPS-X Web/SNMP Card
Environment Monitoring	EMP Environmental Monitoring Probe (requires Web/SNMP card)
Modbus® RTU	Modbus Card
IBM eServer™ (i5™, iSeries™, or AS/400), industrial	Relay Interface Card
Parallel	Powerware Hot Sync Card
Remote Monitoring	Modem Card
Remote LCD Display	ViewUPS-X
Recommended ePDU:	
Y032440CD100000	RPM - Rack Power Module (BladeUPS in, 12xC13 + 6xC19 out) 20 ft lead
PW107BA0UC08	ePDU - Basic (0U, Dual 16A C20 in, 24xC13+ 8xC19 out) use in addition to RPM
PW107MI0UC08	ePDU - IP Monitored (0U, Dual 16A C20 in, 24xC13+ 8xC19 out) use in addition to RPM

Eaton ePDU



User benefits:

- Eaton ePDUs are designed for Mission Critical reliability and server applications
- Support all enclosure power densities - Standard 0-4 to Ultra 15 kW and up
- Wide choice of outlets, including UK, Schuko, French, Nema, C13, C19
- Up to 3 types of outlet on a single zero U ePDU
- Solutions include Basic, Metered, Monitored and Managed technologies
- Vertical zero U, or horizontal 1U/2U configurations
- Custom product capabilities to meet the most demanding needs
- Integrated isolation mounting hardware provides maximum enclosure integrity
- High quality sockets ensure maximum reliability
- Multi-option mounting improves installation flexibility. Have confidence that the strip can be adapted to suit any on-site rack configuration.



Enclosure Power Distribution Units

With today's changing technology and the demand for reliability, data centre professionals need sophisticated equipment to monitor consumption at a server level as well as at the data center level to understand and control what is happening within their infrastructure.

Wide choice of models

Eaton ePDUs feature the broadest portfolio in the industry across all power densities and technologies to satisfy the needs of every data centre. This complete suite of power products is designed specifically to help data centre IT managers understand their rapidly escalating power requirements.

The ePDU family includes models with a variety of power inputs and outputs to fit your power requirements. You can select from UK, Schuko, French and IEC (C13 & C19) output sockets and local (UK or Schuko), EN 60309, IEC (C14 & C20) or unterminated cords for termination directly to the output terminals of the UPS.

The ePDU range includes an extensive range of vertical zero U products that do not occupy server space in racks as well as 1U and 2U formats. Environmental Monitoring options are also available.

From single to dual corded, four technology options, the broadest power range and the ability to manufacture ePDUs with custom arrangement of outlets (number and type) for every region, Eaton ePDUs are distinguished for their quality, dependability and versatility. All products are designed for the specific application with an emphasis on safety and reliability.

Choose your Perfect Solution

Every data centre is unique – choose the right solution of enclosure power distribution units with three simple questions:

1. How much power do you need?

We have power solutions from Standard Power - 1 to 4 kW to Ultra High Power 15kW and up, including single phase 10A, 13A, 16A, 32A and 63A, 3 Phase 16A and 32A

2. Which inputs and outlets do you need?

ePDUs are highly configurable, allowing multiple outlet and plug configurations including 3 types of outlet on a single ePDU – UK, Schuko, French, Nema as well and C13 and C19

3. What functionality do you need?

We offer a broad range of functionalities including Basic, Metered, Monitored and Managed technologies

Eaton ePDU

Basic ePDU

Designed for reliable and cost effective power distribution, Basic ePDUs have the form factor and outlet choices to meet your needs. All ePDUs, including basic ePDUs, are made of rugged aluminium chassis and incorporate fully shrouded circuit breakers and switches.

- Rugged construction
- Data centre grade components
- Multiple mounting options
- Fully shrouded circuit breakers and switches
- High-density units available to support blade servers and network switches

Multiple Mounting Options

Side Mounting

End Mounting

Blind Mounting



Basic ePDU

Eaton ePDU

Metered ePDU

Metered ePDUs offer an easy-read digital ammeter for easy start-up and provisioning of servers. The display is large and bright and can be viewed from afar and through perforations in the cabinets. The ePDU assures easy management and monitoring for current requirements and future expansion.

- Local ammeter display enables load balancing and load segmentation
- Easy-read digital ammeter
- True RMS ammeter provides accurate power measurement



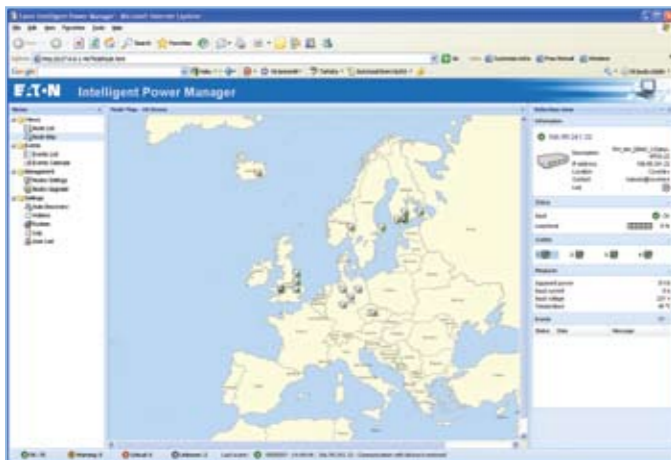
Example 1U and 2U configurations

Monitored ePDU

Monitored ePDUs offer customers the ability to remotely monitor the current draw over an Ethernet connection. This allows the user to aggregate the information from thousands of ePDUs in one location. All monitored ePDUs also include an easy-read digital ammeter for local provisioning and load balancing of servers.

The multi-channel Ammeter allows the monitoring of current on input and each branch circuit to ensure accurate load balancing. The Ammeter can manually or automatically scroll through up to eight circuits. Eaton ePDU's offer a reliable, scalable solution for your current and future requirements.

- Monitor current draw over an Ethernet connection
- Easy-read digital ammeter with up to 8 circuits
- Accurate load balancing
- True RMS ammeter provides accurate measurement
- Manual or auto scrolling through circuits



Metered ePDU



Monitored ePDU

Eaton ePDU

Managed ePDU

Manage your power consumption to the individual server level. Managed ePDUs have unprecedented management and monitoring capabilities.

You can even monitor your power down to the individual outlet level to gain a full understanding of your data centre. User-definable grouping and sequencing of outlets with time delays allow controlled remote boot-up of servers and equipment. 256-bit encryption ensures secure communication and IPMI and SMASH CLI capability provides harmonised user access to computer hardware and ePDUs.

- Monitor and control individual outlets to manage the efficiency of the Data Centre at server level
- Comprehensive monitoring to the outlet level (Amps, Volts, Watts)
- Individual outlet switching enables remote reboot of servers
- User defined grouping and sequencing of outlets over multiple ePDUs (for A&B feed)
- Communication using SSL, TELNET, http, https, SNMP, IPMI, SMASH CLI, Serial 256-bit encryption security and in-built firewall
- Email capability for instant alert notification
- SNMP network management protocol enables you to monitor thousands of ePDUs in the network
- Optional temperature and humidity sensors available



Managed ePDU

In-Line Monitored ePDU

Retrofit for existing PDUs without power metering.

Designed for new or retrofit applications, our in-line monitoring units provide simple single and dual fed local and remote monitoring solutions. Available with IP connectivity, as well as the Easy-Read digital ammeter.

- Adds power distribution monitoring to existing or Legacy data centres
- Available in 16A & 32A, single & dual circuits
- 19" horizontal mounting or 0U vertical mounting
- Single or Dual fed – allows A and B feeds to be monitored
- Fuse-less and breaker-less design: no inline break



ePDU.com is Making Product Configuration as Easy as 1, 2, 3...

Making the right decisions from the start can make a difference in the dependability and efficiency of an infrastructure.

ePDU.com is helping make the selection of enclosure power distribution units, as easy as 1, 2, 3. This product configuration wizard is a simple interface that allows the customer to search over 1,000 products for the perfect solution.

This site allows the customer to ask themselves three key questions about their power needs.

1. How much power do you need?
2. What functionality do you need?
3. What inputs and outputs do you need?

This innovative site allows the customer to explore features, benefits and learn basic fundamentals of ePDUs, as well as allows them to demo the live interface.



Eaton ePDUs are covered by a two-year limited factory warranty.

Supervise your ePDU power distribution with Intelligent Power Manager

Intelligent Power® Manager is a new power monitoring software product from Eaton. It supports Eaton Monitored and Managed ePDU products as well as UPS, so customers can monitor and manage their power distribution via one interface and one IP address.

Benefits:

- Monitor and manage multiple ePDUs and UPS systems over an IP network using a standard web browser
- IPM provides details of ePDU parameters, measurements and settings, from any point in the network, simply using the IP address of each ePDU
- Drill down to individual devices
- User-definable alarms including E-mail and SMS alerts through a single point
- Supervision and management of a whole system though a single user interface
- Configurable views
- Automatic discovery of devices
- Free of charge for up to 10 devices (ePDU or UPS)



Intelligent Power Manager Features and Benefits

Key Feature	Benefit
Browser Based	IE 6 and 7; Firefox 2 and 3; Safari. The system can be installed locally, or on a main server and browsed to.
Auto Discovery	Fast installation - automatically detect devices on your network.
Security	Application has multiple password protected access levels and support for secure communications.
Remote access	Interface is web-based which enables remote monitoring and access to systems.
User definable tree structure	Simplifies management of multiple devices over multiple locations through grouping.
User definable graphics view	Helps in visualising physical locations of devices on maps or schematic drawings.
Aggregation of device alarms	Single interface to view all alerts. Minimise response time, reduce time to repair, maximise uptime. Alerts via mobile phones & e-mail.
Aggregated device views	Grouping of multiple 'like' devices simplifies management. Single interface accessible from anywhere on the network through a web browser.
Device firmware management	Reduce set-up and maintenance time of Network Management Cards by mass-configuring parameters and mass-upgrading firmware (not currently functional with ePDU).
Shutdown agent management	Enables safe shutdown of servers.
Automatic updates	Keeps the software at the latest version level.
Support for many device types	UPS and ePDU with network interface devices are visible and their individual web interfaces accessible for editing / configuration from a single view.
Customisable views	Lets users select the most relevant data for fast viewing and sorting on the interface.

Power Management Solutions



Minimize downtime and prevent data loss

In order to get full benefit out of a UPS it needs to communicate with the outside world. IT system administrators need to be informed if power supply is compromised, facility managers have to be notified if temperature rises in the UPS or battery room and service has to be alarmed if there is a component failure in the system. Having the ability to control power systems remotely or automatically opens up new opportunities and can bring huge savings in work effort, energy usage and response time. Controllable power distribution can be used to reboot equipment or turn it off when it is not needed.

Eaton's Power Management Solutions, including software and connectivity products, scale from homes to most mission-critical data centres and from largest factories to unmanned remote observation stations. They link to network, IT, facility, automation and building management systems delivering information to e-mail, mobile devices and Web among others.

In the optimum case sophisticated analysis in power devices themselves or software such as PowerVision® can prevent the risk of downtime. Even in the case where risk is present, a fast delivery of an alarm increases the likelihood that it can be dealt with before there are any consequences to the operation of the powered system. Even in case where power loss can't be avoided, software can help by automatically shutting down systems in a controlled and predefined manner, preventing data corruption on storage devices and databases. Eaton's offices and representatives have experts who can help in designing and installing these solutions.

Protection: shutting down servers

To ensure the integrity of the system and the data, a computer operating system must be shut down in the correct sequence. Dedicated shutdown software must be installed on the servers to execute various functions before the power supply is cut off. These functions include:

- executing a script to close applications running on the server;
- initiating a shutdown sequence or hibernation after a preset timeout or just before total battery discharge;
- rebooting the operating system automatically or manually when the mains power is restored;
- showing UPS alerts to the user.

Benefits of using Power Management Solutions

- Real-time notification makes it easy to prevent or analyse possible failures immediately
- Helps to prevent data losses by enabling controlled shutdown of servers and PC operating systems
- View and analyse power events and measured values from recorded logs
- Save time and money with remote equipment control, which removes the need for additional site visits to restart equipment. It also enables prolonged runtime of essential equipment during power outages by allowing orderly remote shutdown of non-critical systems and processes.



Power Management Solutions

Software Suite

Eaton offers a full line of shutdown and monitoring software products to enhance the protection provided by its UPSs. The Software Suite, conveniently packed on one CD-Rom, follows every UPS free of charge.

NetWatch is a shutdown agent for the ConnectUPS Web/SNMP card. It is a very compact piece of software, but still features powerful configuration options for shutdown actions, timings and user notification.

LanSafe is a network shutdown software product that currently supports up to 20 operating systems. It ensures controlled sequential shutdown of the whole network across platforms in case of a prolonged power failure. LanSafe allows the shutdown of up to 64 computers protected by a single UPS.

Intelligent Power Manager is a software tool for managing networked UPS and PDU systems more easily and at lower cost than the major NMS platforms, and is dedicated to power management functions. Administrators have an overall, consolidated view of the main operating parameters of all UPS systems. The web-based interface is intuitive and easy to use while also having high configurability and powerful features.

Intelligent Power Manager centralises alarm management. It can collate several events into a single message and deliver the message via email or SMS.

Intelligent Power Manager is very easy and fast to install. Once running, the software discovers manageable power devices automatically and is operational in just a few seconds.

A version of Intelligent Power Manager limited to 10 monitored devices is available free with each networked Eaton UPS.

PowerVision is performance monitoring and trend analysis software for critical UPSs and multiple UPSs in a network. It stores information about the operation of the UPS device in its relational database where it can be retrieved for display and analysis. PowerVision's alert and notification behaviour is highly configurable, which makes it a great tool for system administrators.

Integrated shutdown controller module can host hundreds of shutdown clients and it can also be used in case of paralleled UPSs. PowerVision's shutdown logic is based on user definable script, which gives almost unlimited flexibility in deciding when to initiate operating system shutdown. The Software Suite CD offers a 30-day trial license of PowerVision Network Edition.

- **Network Edition**, which monitors multiple UPSs in the network.
- **Facility Edition**, which provides support for other equipment in the power chain and more options for parallel systems.
- **Enterprise Manager**, which adds a data view client and support for multiple PowerVision Facility or Network editions.



Linux and Eaton uninterruptible power supplies

For several years Eaton has been actively supporting the trend towards open source software by providing information on our products to the Network UPS Tools development community. For more information on this tool, please see www.networkupstools.org



Software Compatibility

LanSafe	Compatible with	Operating system support*
	3105	Windows 2000/XP/2003/Vista/2008
	5110	VMware ESX 3.5
	5115	Novell NetWare 5.0, 6.0, 6.5
	5125	AT&T SVR4 v.3.0
	5130**	HP UX 10.20, 11.0, 11i (PA RISC) 11i 1.6, 2 (Itanium)
	9120	AIX 4.x (RISC) 4.X, 5.1, 5.2, 5.3 (PowerPC)
	9125	SCO OpenServer 5.0.6, 5.0.7
	9130	Solaris 7, 8, 9, 10 (SPARC, Intel)
	9135**	SGE Irix 6.5 (MIPS)
	9140	Mac OS X 10.2.8, 10.3.X, 10.4.X (PowerPC)
	9155	Red Hat Enterprise Linux 3, 4, 5
	9355	SuSE 8, 9, 10
	9390	SuSe Enterprise Linux Server 8, 9, 10
	9395	Fedora Core 5, 6, 7, 8

Intelligent Power Manager	Compatible with	Operating system support*
	All UPS models with Eaton Web/SNMP card, managed and monitored ePDUs	Windows 2000/XP (Home or Pro) /2003 / Vista / 2008

PowerVision	Compatible with	Operating system support*
	Network Edition	PowerVision Editions
	5115	Windows
	5125	2000 Server, Advanced Server, Professional
	9120	XP Home Edition, Professional
	9125	Server 2003 Standard, Web, Enterprise
	9130	
	9140	PowerVision shutdown agent
	9155	Windows
	9355	2000 Server, Advanced Server, Professional
	9390	XP Home Edition, Professional
	9395	Server 2003 Standard, Web, Enterprise
	Generic third party UPS	UNIX
	Generic redundant units (1+1)	HP-UX v. 10.x and higher
		IBM AIX v. 4.x and higher
		Sun Solaris v. 6.x and higher
		SGI Irix v. 6.3 and higher
		Linux (kernel version 2.2 and higher)
		BSD OS v. 4.x and higher
		Novell NetWare
		Netware v. 4.11 and higher, requires TCP/IP

NetWatch OS Support	Compatible with	Operating system support*
	All models with ConnectUPS Web/SNMP card	Windows 2000, XP, 2003, Vista, 2008, VMware ESX 3.5, Novell NetWare, SGI IRIX, HP-UX, IBM AIX, Linux, BSD, SCO, Solaris, Mac OS X

* Check latest information at www.eaton.com/powerquality
 ** LanSafe v.6 or higher

Connection Options to Manage and Monitor Your UPS

ConnectUPS Web/SNMP card is a complete UPS monitoring, control and shutdown solution in a networked IT environment. In case of alert the Web/SNMP card can notify users and administrators through e-mail and SNMP traps. In case of a prolonged power failure the protected computer systems can be shut down in a graceful manner with NetWatch and LanSafe software. The unique three-port switching hub on the X-Slot model provides additional network connections.

ConnectUPS-X
 P/N 116750221-001 for Eaton 5115 RM, 5125, 5125 RM, 9125, 9140, 9155, 9355, 9390, 9395, BladeUPS.

ConnectUPS-BD
 P/N 116750222-001 for Eaton 9120 and 9130.

ConnectUPS-E
 P/N 116750223-001 is an external model that is connected to a serial port on a UPS.

ConnectUPS-MS
 P/N 103006826 for Eaton 5130, 9135.



Environmental Monitoring Probe (EMP) adds temperature, humidity and two contact closure monitoring capability to ConnectUPS Web/SNMP cards. It is well suited for monitoring rack temperature and door status, as well as battery temperature. Operating system shutdown can be triggered if user defined thresholds are exceeded or contact closure status changes.
 P/N 116750224-001 for all UPSs with a Web/SNMP card installed.



Relay/AS400 cards are an easy connection to IBM AS/400 series computers as well as industrial and building management systems.
 P/N 1018460 for Eaton 5115 RM, 5125, 5125 RM, 9125, 9140, 9155, 9355, 9390, 9395, BladeUPS.
 P/N 1014018 for Eaton 9120 and 9130.



X-Slot ModBus card connects the UPS to industrial and building management systems using ModBus/JBUS RTU protocol.
 P/N 103002510-5501 for Eaton 5115 RM, 5125, 5125 RM, 9125, 9155, 9355, 9395.



ViewUPS-X remote display is an LCD panel that lets users view the status of the UPS from as far as 100 m. ViewUPS-X has also four status LEDs and an alarm sound. The display is bundled with a dedicated X-Slot card that also powers the display through the communication cable. In addition to the remote display connection the card has also a SELV isolated relay port for connection to monitoring systems and AS/400 computers.
 P/N 1027020 for 5115 RM, 5125, 5125 RM, 9125, 9140, 9155, 9355, 9390, 9395, BladeUPS.



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