Eaton 93PM UPS

100-500 kVA

Scalability • Efficiency • Resiliency • Safety

LOWER TCO

HIGHER AVAILABILITY

Key applications

- Medium and large data centers
- Finance and banking critical infrastructure
- Commercial buildings and industrial complexes
- Healthcare
- Telecommunications installations
- Process control equipment

Highest availability, at the lowest total cost of ownership

Lowest total cost of ownership (TCO)

- The 93PM UPS sets new standards, with an operating level of up to 96,7% in double conversion mode resulting in significant savings in operational costs.
- > 99% superior efficiency is delivered in Energy Saver System mode (ESS).
- High efficiency even when UPS load levels are low, optimized by Variable Module Management System (VMMS).
- Maximal power and energy density ensures a compact footprint.

Ultimate resiliency

- HotSync® patented load-sharing technology enables parallel operating of static converters without communication or loadshare signals. Eliminating the communication link eliminates risk of single point of failure.
- One static switch per UPS enables the full bypass capacity to be achieved from day one. Power modules can be added as loads increase.
- Equipped with an ultra-rapid fuse in the Static Switch – ensuring safety in all scenarios.
- Equipped with a backfeed contactor – no need for additional installments
- Wide power factor range meets rapidly changing load power factor without de-rating.
- Intelligent battery charging through Advanced Battery Management prevents unnecessary charging and significantly retards battery wear rate.

Higly scalable and easy deployment

- Scalable, modular architecture and 'Pay as you grow' capability minimises CapEx.
- Thermal management support allows for flexible installation against the wall, in rows and in hot/cold aisle configurations.
- Easy access allows fast MTTR (mean time to repair).

Easy management

- Wide range of connectivity options (Web/SNMP, Modbus/Jbus, relay contacts)
- Intelligent Power® software integrates with leading virtualisation management systems for monitoring and managing.
- The intuitive touchscreen LCD user interface and visual data logging provides clear information on the UPS status.

FAT•N

Powering Business Worldwide

Eaton 93PM UPS 100-500 kVA

Technical specifications

General

UPS output power rating	100-400 kW range (p.f. 1.0), 100-500 kVA range (p.f. 0.90 / 0.95)
Efficiency in double conversion mode	Up to 96,7%
Efficiency in Energy Saver System (ESS)	> 99%[1]
Inverter/rectifier topology	Transformer-free IGBT with PWM
Paralleling capability	Up to 4 units
Audible noise	Default	< 69 dBA
	With top air exhaust kit	< 74 dBA
UPS topology	Double conversion
UPS dimensions (width x depth, height)	1618 mm x 920 mm x 1968 mm
UPS Degree of protection	IP 20
Altitude (max)	1000 m without derating (max 2000 m)

Input

Input wiring	3ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V
Rated input frequency	50 or 60 Hz, user configurable
Frequency tolerance	40 to 72 Hz
Input Power Factor	0.99
Input ITHD	< 3%
Soft start capability	Yes
Internal backfeed protection	Yes

Battery

Battery type	VRLA
Charging method	ABM technology or Float
Temperature compensation	Optional
Battery nominal voltage (VRLA)	432 V (36 x 12 V, 216 cells) or 480 V (40 x 12 V, 240 cells) for 100-400 kW range 480 V (40 x 12 V, 240 cells) for 100-500 kVA range **Note:** Strings with different battery voltage may not be paralleled!
Battery start capability	Yes
Alternative backup power technologies	Li-ion batteries, NiCd batteries, Wet cell batteries, Supercapacitors

1. IEC 62040-3 Class 3 output

Output

Output	100-400 kW (p.f. 1.0)	100-500 kVA (p.f. 0.90 or 0.95)
Output wiring	3ph + N + PE	
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz	
Output UTHD	< 1,5% (100% linear load). < 3% (reference non-linear load)	
Permitted load power factor	0.8 lagging – 0.8 leading	
Overload on inverter	10 min 102–110%; 60 sec 111–125%; 10 sec 126–150%; 300 ms >150%.	60 sec 101% - 105%; 10 sec 106% - 125%; 300 ms >125%
Overload when bypass available	Continuous < 115%, 10 ms 1000% **Note:** Bypass fuses may limit the overload capability!	

Options and accessories

External cabinets with VRLA batteries, Li-ion batteries or Supercapacitors
Top air exhaust kit (front to top airflow)
Integrated manual bypass switch for maintenance
Sync control for synchronizing the output of two separate UPS systems
MiniSlot connectivity (Network/SNMP, Modbus/Jbus, Relay)
Power Conditioner mode
Frequency Converter mode

Communications

MiniSlot	3 communication bays
Serial ports	Built-in host and device USB
Relay inputs/outputs	5 relay inputs and dedicated EPO 1 relay output
Software	Eaton Intelligent Power Manager Eaton Intelligent Power Protector

Compliance with standarts

Safety (CB certified)	IEC 62040-1
EMC	IEC 62040-2
Performance	IEC 62040-3
RoHS	EU directive 2011/65/EU
WEEE	EU directive 2012/19/EU

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

Eaton 93PM 100-400 kW range

Description	Rating	Power factor	Dimension (WxDxH)	Weight
93PM-100(400)	100 kVA	1.0	1618 mm x 920 mm x 1968 mm	680
93PM-150(400)	150 kVA	1.0	1618 mm x 920 mm x 1968 mm	745
93PM-200(400)	200 kVA	1.0	1618 mm x 920 mm x 1968 mm	810
93PM-250(400)	250 kVA	1.0	1618 mm x 920 mm x 1968 mm	875
93PM-300(400)	300 kVA	1.0	1618 mm x 920 mm x 1968 mm	940
93PM-350(400)	350 kVA	1.0	1618 mm x 920 mm x 1968 mm	1005
93PM-400(400)	400 kVA	1.0	1618 mm x 920 mm x 1968 mm	1070

Eaton 93PM 100-500 kVA range

Description	Rating	Power factor	Dimension (WxDxH)	Weight
93PM-100(500)	100 kVA	0.95	1618 mm x 920 mm x 1968 mm	680
93PM-150(500)	150 kVA	0.95	1618 mm x 920 mm x 1968 mm	745
93PM-200(500)	200 kVA	0.95	1618 mm x 920 mm x 1968 mm	810
93PM-250(500)	250 kVA	0.9	1618 mm x 920 mm x 1968 mm	810
93PM-300(500)	300 kVA	0.9	1618 mm x 920 mm x 1968 mm	875
93PM-350(500)	350 kVA	0.95	1618 mm x 920 mm x 1968 mm	940
93PM-400(500)	400 kVA	0.95	1618 mm x 920 mm x 1968 mm	1005
93PM-450(500)	450 kVA	0.95	1618 mm x 920 mm x 1968 mm	1070
93PM-500(500)	500 kVA	0.9	1618 mm x 920 mm x 1968 mm	1070