

# Eaton 93PM UPS

30-50 kW



## PREMIER POWER QUALITY FOR YOUR

- Virtualised data centres
- Mission-critical applications
- IT infrastructure



## All-in-one solution for power protection

### Reliably efficient power performance

- On-line double conversion topology secures the UPS output is not affected by any abnormalities in the utility power and keeps critical load equipment protected against all common power problems.
- With Eaton 93PM UPS, modern multilevel converter technology ensures that in double conversion no energy is wasted and the **UPS operating efficiency is top-of-market 96.7%** resulting in significant savings in operational costs.
- **Energy Saver System (ESS) delivers superior > 99% efficiency.** When utility power quality is high, ESS can reduce UPS power losses by 75% as it runs on double conversion only when needed.
- With a 1.0 power factor the kW equals kVA and 93PM delivers 11-25% more real power than other similarly rated UPS.

### Highest availability

- Maximal power and energy density in a minimal 0.5 m<sup>2</sup> footprint. Standard 10-20 minutes full load runtime available with internal batteries.
- Optional internal maintenance bypass switch (MBS) reduces need for external expensive switchgear solutions and allows servicing the UPS without de-energising system output and shutting off load.
- The 93PM is fully front serviceable, which makes maintenance of the UPS fast and easy.
- Unique Advanced Battery Management (ABM) charging algorithm prolongs battery service life significantly compared to traditional charging methods. Automatic battery tests ensure any defects on batteries are detected and any failed blocks can be replaced on time.

### Easy manageability

- Eaton 93PM comes with interfaces for Web and SNMP as standard and free license for use of Eaton's Intelligent Power Manager software for up to 10 UPS.
- Intelligent Power Manager integrates with leading virtualisation management systems like VMware vCenter, Microsoft Systems Center and Citrix XenCenter.
- The 93PM offers Serial, USB, relay connectivity and three extra slots for optional connectivity cards and relay connectors built in, as well (network card delivered as standard).
- An intuitive graphical colour touch screen LCD provides clear information on the UPS status, history of events and measurements.



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# Eaton 93PM UPS Technical Specifications

General	
UPS output power rating (1.0 p.f.)	30, 40, 50 kW
Efficiency in double conversion mode	96.7%
Efficiency in Energy Saver System (ESS)	99%
Field upgradeable	Yes, up to 50 kW
Inverter/rectifier topology	Transformer-free IGBT with PWM
Audible noise	55 dBA at 75% load 60 dBA at 100% load
Altitude (max)	1000 m without derating (max 2000 m)
Input	
Input wiring	3 ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz
Input voltage range	<b>High</b> +20% rectifier input, 10% bypass input <b>Low</b> -15% at 100% load, -40% at 50% load without battery discharge
Input frequency range	40-72 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 (lead-acid)	432 V (36 x 12 V, 216 cells)
Charging current maximum	22 A
Battery start capability	Yes

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

## Accessories

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

## 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

## Compliance with standards

Safety (CB certified)	IEC 62040-1
EMC	IEC 62040-2, EMC Category C2
Performance	IEC 62040-3

## Standard UPS

Part number	Description	Rating	Full load runtime	Dimensions ( WxDx H)	Weight (with battery)
P-105000007-013	93PM-30(50)-MBS-BB-6x9Ah	30 kW	20 min	560 x 914 x 1876 mm	890 kg
P-105000007-028	93PM-40(50)-MBS-BB-6x9Ah	40 kW	15 min	560 x 914 x 1876 mm	890 kg
P-105000007-040	93PM-50(50)-MBS-BB-6x9Ah	50 kW	10 min	560 x 914 x 1876 mm	890 kg

## External Battery Cabinet

Part number	Description	Battery	Dimensions (WxDxH)
P-105000017-002	93PM BAT-S 1x36 110W (250A)	110 W 12 V	575 x 914 x 1870 mm
P-105000017-004	93PM BAT-S 1x36 200W (250A)	200 W 12 V	575 x 914 x 1870 mm

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



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