Eaton 91PS and 93PS UPS

8-10 kW

`1:1` `3:1` `3:3`

LOWER TCO

HIGHER AVAILABILITY

Scalability · Efficiency · Resiliency · Safety

Key applications

- IT applications:

  - Server rooms
  - Localised Data centres

- Mission critical applications:

  - Manufacturing/Industrial facilities
  - Transportation
  - Retail Buildings
  - Healthcare
  - Telecommunication
  - Government

Lowest total cost of ownership (TCO)

- Highest efficiency in its power range with above 96% efficiency in double conversion mode and up to 99% efficiency in Energy Saver System mode

- Scalable by paralleling up to 4 units

- Smallest footprint on the market, footprint only 0.25 m²

- Unity power factor (1.0), providing more real power than many of its rivals

Maximum availability

- HotSync® patented load-sharing technology enables parallel operation of units without communication or loadshare signals. Eliminating the communication link eliminates the risk of single point of failure

- Equipped with ultra-rapid fuses in the Static Switch

  - ensuring safety in all scenarios

- Equipped with backfeed protection

  - no need for additional installments

- Advanced Battery Management – Intelligent battery charging to keep your batteries safe and in good condition

- Eaton 91PS/93PS and Eaton's Intelligent Power Manager® software suite takes the resiliency of the system to the next level by bridging the electrical and IT infrastructure

F·T·N

Powering Business Worldwide

Technical specification

General

Model rating (1.0 p.f.)	Eaton 91PS	Eaton 93PS
Model catalogue reference	91PS-8(10)-0-MBS 91PS-8(10)-1x9Ah-MBS 91PS-10(10)-0-MBS 91PS-10(10)-1x9Ah-MBS	93PS-8(10)-0-MBS or 93PS-8(10)-1x9Ah-MBS 93PS-10(10)-0-MBS or 93PS-10(10)-1x9Ah-MBS
Number of internal batteries	0 or 1 x 32 blocks	
Upgradability	Yes, to 10 kW	
External paralleling	Up to 4 units with HotSync technology	
UPS topology	Double conversion, 3-level IGBT converters	
Efficiency in double-conversion mode	96%	
Efficiency in Energy Saver System (ESS) mode	Up to 99%	
UPS dimensions (width x depth x height)	335 x 750 x 950 mm	
UPS Degree of protection	IP 20	
Acoustic noise at 1 m, in 25 °C ambient temperature	< 54 dBA in double conversion < 47 dBA in ESS	
Maximum service altitude	1000 m (3300 ft) above sea level at 40 °C Maximum 2000 m (6600 ft) with 1 % derating per each add. 100 m	

Input

Model rating (1.0 p.f.)	Eaton 91PS	Eaton 93PS
Input wiring	**3:1** 3 phases + neutral **1:1** 1 phase + neutral	3 phases + neutral
Rated input r.m.s. current:	**3:1** 220/380 V; 230/400 V; 240/415 V **1:1** 220 V; 230 V; 240 V	220/380 V; 230/400 V; 240/415 V
Input ITHD: Resistive load Non-linear load	8 kW < 4.0% and 10 kW < 3.5% 8 kW < 6.5% and 10 kW < 5.5%	
Voltage tolerance: Rectifier input Bypass input	187 to 276 V rated voltage -15% / +10%	
Rated input frequency	50 or 60 Hz, user configurable	
Frequency tolerance	40 to 72 Hz	
Input power factor	0.99	
Soft start capability	Yes	
Internal Back feed protection	Yes, for rectifier and bypass lines	

Output

Model rating (1.0 p.f.)	Eaton 91PS	Eaton 93PS
Output wiring	1 phase + neutral	3 phases + neutral
Rated output voltage	220 V; 230 V; 240 V	220/380 V; 230/400 V; 240/415 V,
Output UTHD: 100% linear load 100% non-linear load	< 1.5% < 2.5%	
Rated output power	8 kW / 8 kVA or 10 kW / 10 kVA	
Overload capability: On inverter	10 min 102-110% load 60 sec 111-125% load 10 sec 126-150% load 300 ms > 150 %	
On bypass	Continuous < 125% load 20 ms 1000% load	
Load power factor: Rated Permitted range	1.0 0.8 lagging to 0.8 leading	

1. IEC 62040-3 Class 3 output

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

Battery

Models with internal batteries

Battery technology	12 V, VRLA
Nominal Ah capacity (C10)	9Ah
Battery design life	5 years
Battery quantity: Internal External	32 blocks, 192 cells per battery string 28-40 blocks per string
Battery voltage: Internal External	384 V 336 V – 480 V
Charging method	ABM technology or Float
Charge current limit	Default 5A, configurable Maximum 12.5A
Battery start option	Yes
Alternative energy source technologies	Wet cell batteries NiCd batteries Lithium-ion batteries Supercapacitors

Communication

MiniSlots	2 communication bays
Network/SNMP interface	Yes, standard
Standard connectivity ports	Mini-slot ports for optional cards, Device USB and Host USB, RS-232 service port, relay output, 5 building alarm inputs and a dedicated EPO,Web and SNMP card

Compliance with standards

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