

Eaton Power Xpert 93PR

25 kW to 200 kW



93PR

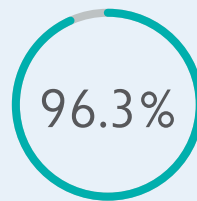
**Best Reliability
for IT space**

Total capacity in parallel
upto 1600 kW

Power factor 1

The Dashboard:

**Best in
Class Efficiency**



Double conversion efficiency
40°C without de-rating
Native N+1, N+2

**Best in
Class Footprint**



ESS efficiency
3 Levels IGBT 2ms
MTTR=10 min



Power
Failure



Power
Sag



Power
Surge



Under-
Voltage



Over-
voltage



Line
Noise



Frequency
variation



Switching
Transient



Harmonic
Distortion

Key Features:

- Modular and Transformer free Design
- Scalable (Off and On premises)
- Easy modules replacement 28Kg
- Hot swappable / scalable modules
 - 19" rack size
 - VRLA and LIB ready
- WEB / SNMP / MODBUS communication
- Top and bottom cable entry
- Critical components redundancy

Key Patents:

ESS Energy Saver System

VMMS Variable Module Management

HotSync® spofless technology

ECT Easy Capacity Test

ABM Advanced battery management

Easy sync control

The UPM Advantage:

- Enhanced reliability with 3 level IGBT
- Patented method for load sharing (Hot-Synch)
- Peer-to-peer control strategy
- Each UPM/unit synchronises independently
- No SPOF - single point of failure

- Ensure vertical and horizontal upgrade
- No 'master-slave' configuration
- No load share signals
- Selective tripping



EAT•N

Powering Business Worldwide

Eaton 93PR 25-50-75-100-125-150-175-200 kW Technical Specification as per IEC 62040-3

General

Ratings	25 kW	50 kW	75 kW	100 kW	125 kW	150 kW	175 kW	200 kW
Model catalogue reference	9106-9292 93PR-75kW-EN 9106-9295 93PR-75kW-IBC-EN							
UPS option	Internal battery breaker Internal maintenance bypass sw itch (MBS) External battery cabinets (EBC) Parallel tie cabinet (PTC)							
Frames Capacity	200 kW							
Upgradability	Yes, up to 200kW							
External paralleling	Up to 8 units w ith HotSync technology							
UPS topology	Double conversion							
UPS performance classification	VFI-SS-111							

EFFICIENCY & HEAT DISSIPATION

Ratings	25 kW	50 kW	75 kW	100 kW	125 kW	150 kW	175 kW	200 kW
Efficiency in double-conversion, rated linear load								
100% load	95.0%	95.0%	95.0%	95.6%	95.6%	95.7%	95.7%	95.7%
75% load	95.3%	95.3%	95.3%	96.1%	96.1%	96.1%	96.1%	96.1%
50% load	95.5%	95.5%	95.5%	96.3%	96.3%	96.3%	96.3%	96.3%
25% load	94.5%	94.5%	94.5%	95.7%	95.7%	95.7%	95.7%	95.7%
Heat dissipation (watt) in double conversion								
100% load	1316	2632	3947	4603	5753	6904	8054	9205
75% load	987	1974	2961	3206	4008	4810	5611	6413
50% load	616	1233	1849	2029	2536	3044	3551	4058
25% load	364	728	1091	1178	1473	1767	2062	2356

INPUT CHARACTERISTICS

Ratings	25 kW	50 kW	75 kW	100 kW	125 kW	150 kW	175 kW	200 kW
Rated input voltage	220/380 V; 230/400 V; 240/415 V							
Voltage tolerance Rectifier input	305 to 478 V							
Voltage tolerance Bypass input	rated voltage -15% / +10%							
Rated input frequency	50 or 60 Hz, user configurable 40 to 72 Hz							
Frequency tolerance								
Number of input phases	3 phases + neutral							
Rectifier input Bypass input	3 phases + neutral							
Input power factor, double conversion 100% load	> 0.99							
Maximum input r.m.s. current	45	90 A	135 A	180 A	225 A	270 A	315 A	360 A
Input current distortion at rated input current	< 3%, 100% load < 3%, 75% load < 5%, 50% load < 10%, 25% load							
Rectifier ramp-up, rectifier start and load step	5 A/s (default), configurable. Minimum 1 A/s.							

BYPASS CHARACTERISTICS

Ratings	25 kW	50 kW	75 kW	100 kW	125 kW	150 kW	175 kW	200 kW
Type of bypass	Static							
Bypass rating	200 kW							
Bypass voltage range	220/380 V; 230/400 V; 240/415 V tolerance -15% / +10% of rated voltage							
Transfer time break	No break in Synchronized Conditions 2 ms typical under Unsynchronized Conditions							
Maintenance bypass	Inbuilt & without Both Available							

MECHANICAL PARAMETER

Ratings	25 kW	50 kW	75 kW	100 kW	125 kW	150 kW	175 kW	200 kW
UPS dimensions (W x D x H)	903 x 1013 x 2050 mm							
Weight, UPS frame w/o UPM	425 kg							
Weight, UPM (power module)	28 kg (< 25 kg w/o fan panel & DC capacitors)							
UPS Cable entry	Rear top & rear bottom							
UPS Degree of protection	IP 20							
UPS colour	Black; RAL 9005							

ENVIRONMENTAL PARAMETER

Ratings	25 kW	50 kW	75 kW	100 kW	125 kW	150 kW	175 kW	200 kW
Acoustic noise at 1 m, in 25 °C ambient temperature	< 70 dBA in double conversion < 55 dBA in ESS							
Ambient service temperature range UPS Internal battery	0 °C to + 40 °C w ithout output power derating + 20 °C to + 25 °C recommended for optimized battery life time							
Relative humidity range	5 to 95%, no condensation allowed							
Maximum service altitude	1000 m (3300 ft) above sea level at 40 °C Maximum 2000 m (6600 ft) w ith 1 % derating per each add. 100 m							

OUTPUT CHARACTERISTICS

Ratings	25 kW	50 kW	75 kW	100 kW	125 kW	150 kW	175 kW	200 kW
Number of output phases	3 phases + neutral							
Crest factor	3							
Rated output voltage	220/380 V; 230/400 V; 240/415 V, configurable							
Output voltage variation, steady state	< 1%							
Total voltage harmonic distortion								
100% linear load	< 1%							
100% non-linear load	< 5%							
Maximum frequency range for synchronization with bypass	± 4 Hz as default. User settable 0.5 to 5 Hz.							
Maximum synchronized phase error	< 1° with static balanced load							
Maximum slew-rate when synchronizing	1 Hz/s							
Overload capability On inverter	10 min 102-110% load @ Unity PF Load 60 sec 111-125% load @ Unity PF Load 10 sec 126-150% load @ Unity PF Load 60 Min 102-110% load @ 0.9 PF Load 10 Min 111-125% load @ 0.9 PF Load 60 sec 126-150% load @ 0.9 PF Load 300 ms >150% load							
Load power factor	1.0							
Rated Permitted range	0.8 lagging to 0.8 leading							

BATTERY CHARACTERISTICS

Ratings	25 kW	50 kW	75 kW	100 kW	125 kW	150 kW	175 kW	200 kW
Battery technology	12 V, VRLA/Lithium ION							
Battery quantity	36 to 44 blocks, 216 to 264 cells per battery string 400Vdc minimum cut-off							
Battery voltage	432 to 528 V, default							
Recharge profile	ABM or float							
Charge current limit	Default 5A, configurable, maximum 25A per UPM with derating to 60% Capacity with Charger current incremental							
Battery start option	Yes							

India Head Office

Eaton Power Quality Pvt. Ltd.
2, EVR Street, Sedarpet
Industrial Estate
Pondicherry-605111
Tel: +91 413 2672000
Enquiries - EatonElectricalIndia@eaton.com

Sales and Service

Toll Free Hotline:

1800 425 5758

www.eaton.com

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