

# Eaton Power Xpert 93E

15-40 KVA



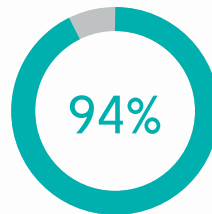
93E

Total capacity in parallel upto 160 kVA

Power factor 1

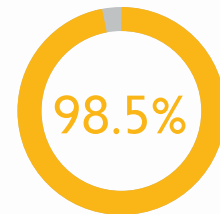
## The Dashboard:

Best in Class Efficiency



Double conversion efficiency  
40°C without de-rating

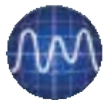
Best in Class Footprint



HE efficiency  
2 Levels IGBT 4ms  
MTTR<30min



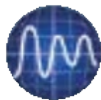
Power Failure



Power Sag



Power Surge



Under-Voltage



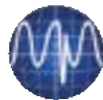
Over-voltage



Line Noise



Frequency variation



Switching Transient



Harmonic Distortion

### Key Features:

- Active Power Factor Correction
- Transformer free Design
- Easy integration in the IT space
- Easy front access
- IT space options : Chimney for cooling
- WEB / SNMP / MODBUS communication
- EPO built in contact
- Available and compatible for regenerate load also

### Key Patents:

HotSync<sup>®</sup> spofless technology

ECT Easy Capacity Test

ABM Advanced battery management

HE High efficiency mode



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# Eaton 93E- 15-20-30-40 kVA UPS Technical Specification



## General

Ratings	15 KVA	20 KVA	30 KVA	40 KVA
Model(Platform/Power Rating)	93E -15KVA / 13.5 KW	93E -20KVA / 18KW	93E -30KVA / 27KW	93E -40KVA / 36KW
UPS Topology	Double Conversion, IGBT Converters			
Performance classification	VFI-SS-111			
UPS Dimensions: WxDxH (mm)	500x710x960	500x710x960	500x710x1230	500x710x1500
Degree of protection	IP20, with front door mounted washable dust filter(IP 21 optional)			
Cabinet colour	Black, RAL 9005			
Cable entry	Bottom/Rear			
Weight (kg) without batteries	72	72	91	120

## ELECTRICAL INPUT CHARACTERISTICS

Ratings	15 KVA	20 KVA	30 KVA	40 KVA
Power Distribution System compatibility	TN, TN-S, TN-C, TN-C-S, TT (Three-phase, four-wire + PE)			
Rated input voltage.	Rectifier: 230/400Vac nominal (220/380, 240/415 Selectable)			
Operating frequency / tolerance	50 or 60Hz; Tolerance 40-72Hz			
Input current distortion	<5% THDi (Linear Load Condition at rated input current)			
Input power factor	0.99pf at 100% load			
Number of input phases	3 phases + Neutral + PE (3 phase input)			
Rated rectifier input current (rms @ 400V)	23A	31A	46A	61A
Maximum rectifier input current (rms @ 400V)	25A	33A	49A	65A
Bypass input current (rms @ 400V) Recommended/Max	22/25A	29/33A	43/50A	58/66A

## EFFICIENCY IN DOUBLE CONVERSION MODE & HEAT DISSIPATION UNDER LINEAR LOAD CONDITIONS

Ratings	15 KVA	20 KVA	30 KVA	40 KVA
Efficiency @ 100% Linear Load	88%	90%	90%	90%
Efficiency @ 75% Linear Load	92%	92.5%	92.5%	92.5%
Efficiency @ 50% Linear Load	93.5%	94%	94%	94%
Efficiency @ 25% Linear Load	94%	94%	94%	94%
Heat Dissipation @ 100% Linear Load	460	500	750	1000
Heat Dissipation @ 75% Linear Load	587	730	1095	1459
Heat Dissipation @ 50% Linear Load	704	862	1293	1723
Heat Dissipation @ 25% Linear Load	862	1149	1723	2298



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## ENVIRONMENTAL PARAMETER

Ratings	15 KVA	20 KVA	30 KVA	40 KVA
Ambient storage temperature	Range of -15 to +55 Degree C in the protective package			
Ambient service temperature	UPS: 0 to +40 Degree C			
Maximum service altitude	1000m above sea level.			
Relative humidity	5 to 95%, no condensation allowed			
Acoustic noise at 1m (ISO7779)	<55dB @75%		< 62db @75%	

## ELECTRICAL OUTPUT CHARACTERISTICS - NORMAL MODE

Ratings	15 KVA	20 KVA	30 KVA	40 KVA
Rated output voltage	230/400 Vac, three phase, (220/380, 240/415 selectable)			
Crest factor	3:1			
Rated output frequency	50 Hz (default) or 60 Hz			
Total voltage distortion	<2% with linear load, <5% with non-linear load defined according to EN62040-3			
Short circuit capability, <400ms	80A	80A	120A	160A
Overload capacity w/out bypass	102-110% load 60mins ; 111-125% load 10 minutes, 126-150% load 1 minute, >151% load 500ms @ 30°C			
Overload capacity with bypass	115% load continuous, 1000% for 20ms at 40°C and ≤1000m altitude Note: Selected external Bypass fuses or breaker may limit the overload capability			
Load power factor range	0.7 lagging to 0.9 leading without de-rating			
Range of frequency synchronisation with bypass	+/-3Hz/s default, up to 7Hz/s user settable for single UPS, up to 0.5 Hz/s for parallel UPS			

## BYPASS CHARACTERISTICS

Ratings	15 KVA	20 KVA	30 KVA	40 KVA
Automatic bypass	Static bypass switch, continuously rated*, no break transfer *bypass capable of 115% continuous load			
Automatic bypass rating	30 KVA		40 KVA	
Automatic bypass SCR i <sup>2</sup> t value	10200A <sup>2</sup> S		20400A <sup>2</sup> S	
Back-feed protection	Optional Internal back-feed contactor			
Separate bypass input feed	Optional			
Manual bypass switch (internal)	standard .			

## BATTERY CHARACTERISTICS

Ratings	15 KVA	20 KVA	30 KVA	40 KVA
Battery nominal voltage	216 to 252 Cells, 240 Cells Default (Continual selectable)			
Float charge voltage	216/228/240 x 2.30V = 497/524/552V			
Maximum charge voltage	216/228/240 x 2.35V = 508/536/564V			
Battery cut off voltage	216 Cells = 1.85V/Cell, 228 Cells = 1.75V/Cell, 240 Cells = 1.67V/Cell			
Restored energy time to 90%	Maximum 10 hours recommended (dependant on battery size)			
Charging current (at full load)	5.3A	5.3A	8A	10.6A
Battery recharge profile	Advanced Battery Management (ABM®) = 90% resting, 10% floating/charging (typical)			

