

# Eaton 93E UPS

15/20/30/40/60/80 kVA



Eaton 93E 15-80 kVA

#### Advanced power protection for:

- Financial services
- Building management
- Telecommunications
- Industrial automation equipment
- Healthcare
- Government
- Data centres



#### Double conversion UPS

##### Simply effective power protection

- Double conversion provides the highest level of protection available by isolating the output power from all input anomalies.
- With a transformer-free design and sophisticated sensing and control circuitry the 93E UPS delivers an efficiency of up to 98%.
- Active power factor correction (PFC) provides unbeatable 0,99 input power and <5% THD, thus eliminating interference with other critical equipment in the same network and enhancing compatibility with generators.
- The UPS is optimized for protecting modern 0,9 p.f. rated IT equipment without the need to oversize.

##### True reliability

- Eaton's patented HotSync technology makes it possible to parallel up to 4 UPSs in capacity or in redundancy.
- ABM testing and charging cycle helps you to prevent battery problems and in addition lessens corrosion prolonging battery service life up to 50%.
- Equipped with a backfeed contactor – no need for additional installations

##### Extensive configurability

- The 93E offers up to 30% smaller footprint compared to competitive UPS offerings.
- A multilingual graphical LCD display makes possible to monitor the UPS status easily.
- Wide software and connectivity options provide monitoring, management and shutdown capabilities over the network.
- Connectivity options are available to suit nearly any communication requirements, from standard serial communications to secure remote monitoring over the Web.

##### Cost savings and sustainability

- A new technical platform used in Eaton's three-phase UPS products guarantee easy upgrades, low MTTR, similarity on service trainings and documentation, thus lowering total cost of ownership.
- Equipped with internal maintenance bypass for safe and easy serviceability.
- A range of service agreement options can be easily customized for customers' needs and budget.

# EATON

Powering Business Worldwide

# Eaton 93E UPS 15-80 kVA Technical Specifications

## Power

UPS output power rating (0.9 p.f)	15 kVA/13.5 kW 30 kVA/27 kW 60 kVA/54 kW	20 kVA/18 kW 40 kVA/36 kW 80 kVA/72 kW
Topology	Double-conversion online UPS	
Operating frequency	50/60 Hz (40 to 72 Hz)	
Input power factor	>0.99 typical	
Input current distortion	<5% THD	

## Electrical input

Input wiring	3 ph + neutral	
Nominal input voltage	220/380, 230/400, 240/415 V 50/60 Hz	
Input voltage range	-15%, +20% from nominal (400 V) at 100% load	
Power walk-in	Yes	
Internal backfeed protection	Yes	

## Electrical output

Internal maintenance bypass	Yes	
Output wiring	3 ph + neutral	
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz	
Output voltage regulation	±1% Static; <5% dynamic at 100% resistive load change, <20 ms response time	
Overload on inverter	10 min 102-125% load 1 min 126-150% load 500 ms >151% load	
Overload when bypass available	Continuous <115% load, 20 ms 1000% peak current. <b>Note!</b> External bypass fuses may limit the overload capability	

## Battery

Battery	384 V (32 x 12 V, 192 cells) for 15-40 kVA with internal batteries 384 V - 480 V for 15-80 kVA with external batteries	
Charging method	ABM Cyclic Charging	
Charging current/Model	15 20 30 40 60 80 kVA	
Default	3.5 3.5 5.2 7 10.4 15.6 A	
Max*	5.3 5.3 8 10.6 16 24 A	

\*May be limited by maximum UPS input current rating

## General

Efficiency	Up to 98% High-efficiency mode Up to 94% Double-conversion mode	
Parallel technology	Powerware Hot Sync® Technology	
Dimensions W x D x H (mm)	500 x 710 x 960	15-20 kVA (with internal battery) 500 x 710 x 1230 30 kVA (with internal battery) 500 x 710 x 1500 40 kVA (with internal battery) 600 x 800 x 1876 60-80 kVA
Cabinet rating	IP20 with standard washable dust filters	
Weights without internal battery	72 kg 88 kg 120 kg 202 kg 245 kg	15/20 kVA 30 kVA 40 kVA 60 kVA 80 kVA
Weights with internal battery	272 kg 376 kg 490 kg	15/20 kVA 30 kVA 40 kVA

## Communications

Display	Graphical LCD with blue backlight
LEDs	(4) LEDs for notice and alarm
Audible alarms	Yes
Communication ports	(1) RS-232, (1) USB, (1) EPO
Communication slots	(2) Mini-slot communication bays
Relay inputs/outputs	Three Signal inputs

## Environmental

Operating temperature	0 °C to +40 °C
Storage temperature	-25 °C to +55 °C without batteries +15 °C to +25 °C with batteries
Relative humidity	5-95%, non-condensing
Audible noise	15-20 kVA ≤55 dBA at 1m typical 30-40 kVA ≤62 dBA at 1m typical 60-80 kVA ≤65 dBA at 1m typical
Altitude	1000 m without derating (max 2000 m)

## Compliance with standards

Safety (CB certified)	IEC 62040-1
EMC	IEC 62040-2, EMC Category C3
Performance	IEC 62040-3
Quality	ISO 9001: 2000 and ISO 14001:1996

## Accessories

External battery cabinets
External maintenance bypass switch
MiniSlot connectivity (Web/SNMP, ModBus/Jbus, Relay)
Environmental monitoring probe

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