Eaton 93E UPS

80 – 400 kVA

The Eaton® 93E UPS delivers superior power protection for ever-expanding loads in today's space-constrained data centres.

Facilitating a lower total cost of ownership (TCO) through a combination of energy-efficiency, high reliability and a compact footprint the 93E is an ideal solution for small - to medium - sized data centres and other applications desiring highly reliable power protection.

Applications:

- Data centres
- Manufacturing
- Telecom
- Healthcare

Double conversion UPS

Double conversion provides the highest level of protection available by isolating the output power from all input anomalies.

Energy-efficient design

With a transformer-free design and sophisticated sensing and control circuitry the 93E is capable of achieving up to a 98.5% efficiency rating, making it one of the most energy-efficient UPSs in its class - and it still provides maximum load protection. Unlike most high efficiency UPSs, the 93E:

- Provides surge suppression for the load
- Detects the location of faults (utility or load) and takes the appropriate action
- Switches to double-conversion operation in less than 4ms

High system efficiency reduces utility cost, extends battery run times and ensures cooler operating conditions.

Real compatibility

Active power factor correction (PFC) provides 0.99 input power factor and <5% ITHD, thus eliminating interference with other critical equipment in the same network and enhancing compatibility with generators. The 93E is optimised for protecting modern 0.9 p.f. rated IT equipment without the need to oversize.

True reliability

Patented Eaton Hot Sync® technology makes it possible to parallel up to four UPSs to increase availability or add capacity. The technology enables load sharing without any communication line, thus eliminating single point of failure.

Compact & serviceable design

Small footprint occupies minimal floor space:

- Up to 30% smaller than similar competitive solutions
- Allows dedication of more floor space to revenue producing equipment

The 93E is easily and quickly serviced to provide the highest level of availability with Mean Time to Repair (MTTR) <30 minutes

E·T·N

Powering Business Worldwide

User Interface

Large LCD graphically displays UPS status and offers easy access to measurements, controls and settings.

Connectivity

With Eaton® Mini-Slot connectivitycards, you canmonitor, manage andremotely shutdown UPSsacross the network

- Network Card–MS Web/SNMP Card allows you toconnect your 93E UPS directly to the Ethernet network andtheInternet.
- Network and MODBUS Card-MS providesremote monitoring of a UPS system througha Building Management System (BMS) or Industrial AutomationSystem (IAS).
- Relay Card-MS provides an RS232 port and the dry-contact interface between your Eaton UPS and any relay-connectedcomputer.
- Industrial Relay Card-MS provides a hard-wired dry-contact relay interface for industrial applications

Software

Eaton's Intelligent Power® Software Suite incorporates two important applications for ensuring quality power and uptime: monitoring and management of power devices across the network combined with automatic, graceful shutdown when faced with an extended power outage.

- Monitor and manage multiple power devicesacross your network
- Extend the uptime of dual-powered serverswith redundancy capabilities
- Enable server shutdown and live migration events

To learn more, please visit www.eaton.com/intelligentpower
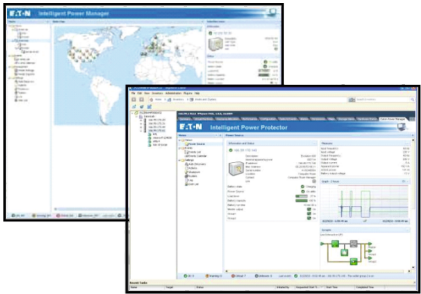
TECHNICAL SPECIFICATION[1]

Power

Ratings	80kVA/72kW, 100kVA/90kW, 120kVA/108kW, 160kVA/144kW, 200kVA/180kW 300kVA/270kW, 400kVA/360kW
Topology	Double-conversion online UPS
Electrical Input	400/230V, 4 wire (380/415V selectable)
Input Voltage Range	-15%, +20% from nominal (400V) at 100% load without depleting battery
Operating Frequency	50/60 Hz (40 to 72 Hz) Batteries
Input Power Factor	>0.99 typical
Input Current Distortion	≤5% THD

Electrical output

Nominal Output Voltage	400/230, 4 wire (380/415V selectable)
Output Voltage	±1% Static; ±5% dynamic at 100% resistive
Regulation	load change <20 ms response time

Battery

Battery	216/240 Cells (Selectable)
Charging Method	ABM Cyclic Charging

General

Efficiency	Up to 98.5% High-efficiency mode Up to 94% Double-conversion mode
UPS Bypass	Automatic on overload or UPS failure
Dimensions W x D x H,	600 x 800 x 1876 (mm) 80-200kVA 1600 x 820 x 1880 (mm) 300/400kVA
Cabinet rating	IP20 with standard washable dust filters
Weights	80/100 kVA - 283 kg, 120kVA - 311 kg 160/200kVA - 457 kg, 300/400kVA - 970 kg
Overload	150% for 1 minute, 125% for 10 minutes >150% for 150ms

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 Slot	(2) Mini-slot communication bays

Environmental

Operating Temperature	0ºC to +40ºC ; Batteries recommended max. +25ºC
Storage Temperature	-25ºC to +55ºC without batteries +15ºC to +25ºC with batteries
Relative Humidity	5–95%, non-condensing
Audible Noise	80-120kVA ≤65 dBA at 1m typical 160-200kVA ≤70 dBA at 1m typical 300-400kVA ≤73 dBA at 1m typical
Altitude	<1000m at +40°C

Certifications

EMI Standards	EN55022/EN55024
EMC Compliance	IEC 62040-2
Quality	ISO 9001: 2000 and ISO 14001:1996

Accessories

Top Cable Entry (80-200kVA, standard on 300-400kVA)

Maintenance Bypass Switches and System Parallel Modules

Battery Cabinets & Battery Circuit Breakers, IP21 hood (80-200kVA)

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