# Eaton 93E UPS

80 - 400 kVA

**Applications:**

- Data centre
- Telecom
- Manufacturing
- 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.

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.

## 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

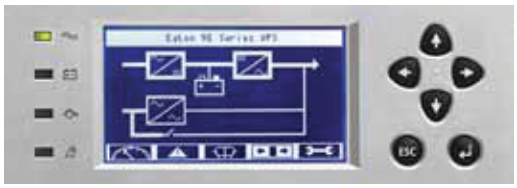
The 93E is easily and quickly serviced to provide the highest level of availability with Mean Time to Repair (MTTR) <30 minutes

EATON

*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 connectivity cards, you can monitor, manage and remotely shutdown UPSs across the network.

- Network Card–MS Web/SNMP Card allows you to connect your 93E UPS directly to the Ethernet network and the Internet.
- Network and MODBUS Card-MS provides remote monitoring of a UPS system through a Building Management System (BMS) or Industrial Automation System (IAS).
- Relay Card-MS provides an RS232 port and the dry-contact interface between your Eaton UPS and any relay-connected computer.
- 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.

To learn more, please visit www.eaton.com/intelligentpower

## TECHNICAL SPECIFICATIONS[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) |
| 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 Regulation | ±1% Static; ±5% dynamic at 100% resistive 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<br>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<br>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<br>160/200kVA - 457 kg, 300/400kVA - 1090 kg |
| Overload | 150% for 1 minute, 125% for 10 minutes<br>>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 | 0°C to +40°C ;<br>Batteries recommended max. +25°C |
| Storage Temperature | -25°C to +55°C without batteries<br>+15°C to +25°C with batteries |
| Relative Humidity | 5–95%, non-condensing |
| Audible Noise | 80-120kVA ≤65 dBA at 1m typical<br>160-200kVA ≤70 dBA at 1m typical<br>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.


**Eaton Australia**
Sales 1300 877 877
Service 1300 303 059

10 Kent Road Mascot,
NSW 2020 Australia
1300 UPS UPS (1300 877 877)
aupqsales@eaton.com
www.eaton.com/powerquality

**Eaton New Zealand**
Sales 0508 328 6669

1 Barry Hogan Place,
Christchurch 8041 NZ
0508 EATON NZ (0508 328 6669)
NZSales@eaton.com
www.eaton.com/powerquality


Powering Business Worldwide