

# Eaton 9E UPS



20-30 kVA



40-60 kVA

The Eaton® 9E UPS delivers superior power protection for ever-expanding loads in today's space-constrained data centers. Facilitating a lower total cost of ownership (TCO) through three key features — energy-efficiency, internal batteries and compact footprint — the 9E is an ideal solution for small- to medium-sized data centers and other applications desiring highly reliable power protection.

## Energy-efficient performance lowers operating costs

- Delivers up to 98% efficiency
- Up to 7% more efficient than competitive units
- Qualifies for local utility rebates and incentives

## Internal batteries provide maximum runtime

- Delivers up to 21 minutes of runtime
- Pre-wired for easy installation

## Compact footprint occupies minimal floor space

- Up to 35% smaller than similar competitive solutions
- Allows dedication of more floor space to revenue-producing equipment

## Applications

- Small to medium data centers
- Corporate
- Telecom
- Healthcare
- Banking
- Industrial
- Education
- Government



Powering Business Worldwide

## Lowest total cost of ownership

The 9E is the clear choice if you're seeking to maximize your return on investment (ROI). Delivering the lowest TCO of any UPS in its class, the 9E offers a unique blend of energy, space and installation savings. The 9E can decrease your TCO by more than \$85,000\* over its 12-year lifespan when compared to current competitive offerings.

## Savings

<b>Energy</b>	<b>\$71,292</b>
<b>Space</b>	<b>\$11,880</b>
<b>Installation, maintenance and freight</b>	<b>\$2,000</b>
<b>TOTAL</b>	<b>\$85,000+</b>

\* Energy calculation based against a 60 kVA UPS operating at 91% efficiency (kW/hr \$0.10, Cooling Ratio 80%, 12 yrs). Space saving calculation based against a 60 kVA UPS with an 11.8 ft<sup>2</sup> footprint using \$150/ft<sup>2</sup> per year.



## Energy-efficient design

The 9E is capable of achieving up to a 98% 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 9E:

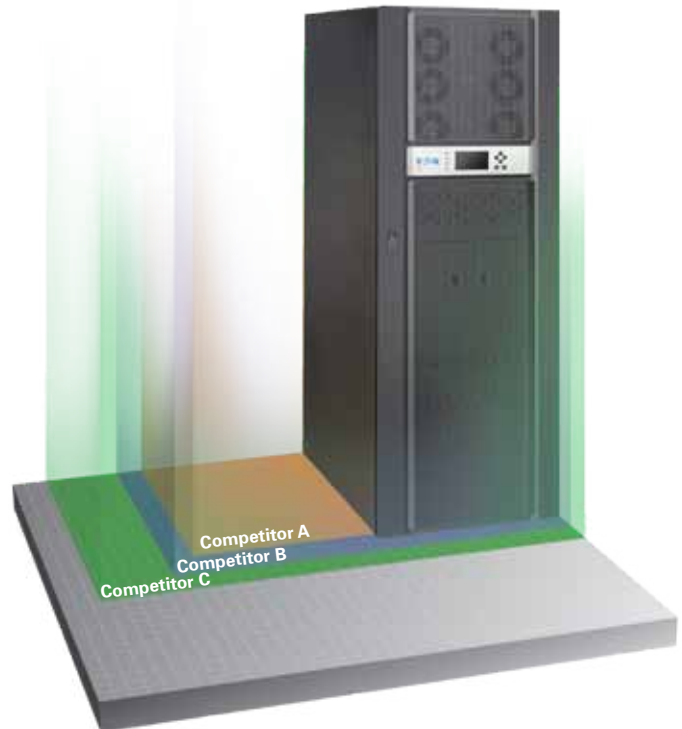
- Provides surge suppression for the load
- Detects the location of faults (utility or load) and takes the appropriate action
- Switches to double-conversion operation in less than 4 ms

The 9E will save more than \$71,292 in electricity and cooling costs over the life of the product when compared to a 60 kVA UPS operating at 91% efficiency.

## Compact footprint

Smaller than any comparable competitor by up to 35%, the 9E allows you to better utilize floor space for revenue-producing equipment. It also puts money back in your pocket that would otherwise be used to build, maintain and condition space for larger power/support equipment. The ongoing annual maintenance cost for office and data center space in the United States is estimated to be between \$90 and \$224 per square foot. The savings realized from the 9E's smaller footprint quickly adds up.

60 kVA	Width (in)	Depth (in)	Height (in)	Footprint (sq/ft)
<b>Eaton 9E</b>	23.6	31.5	74.9	5.2
<b>A</b>	45.3	30.0	72.0	9.4
<b>B</b>	48.0	35.5	81.5	11.8
<b>C</b>	56.8	38.0	78.5	15.0



## Installation

Reduced installation costs mean the 9E can be up and supporting your loads faster, while lower installation and wiring costs to further reduce its TCO.

- Pre-wired internal batteries need only facility connections
- Optimized angled connections reduce bending radius of input and output wiring
- Clear wiring terminal block access ensures easy connections
- Integrated wheels facilitate easy movement to final location

## Serviceability

The 9E is easily and quickly serviced to provide the highest level of availability.

- Mean Time to Repair (MTTR) <30 minutes
- Screws are attached to components to prevent accidental drops into the unit
- An optional on-board maintenance bypass rotary switch allows replacement of power modules, control board and display

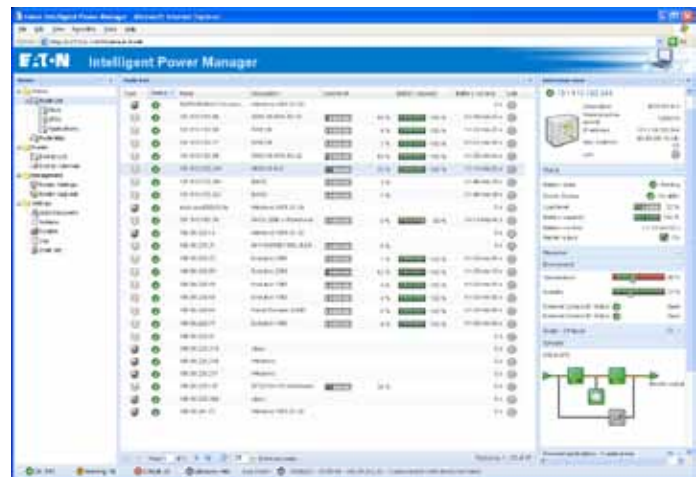
## Software

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.

Intelligent Power Manager supervisory software lets you monitor and manage multiple power and environmental devices across the network from a single interface, giving you up-to-the-minute information on the status of power in your network. It also works seamlessly with VMware's vCenter Server™ and vMotion™, as well as Microsoft's SCVMM™ and Live Migration.

Intelligent Power Protector protection software provides graceful, automatic shutdown of network devices during a prolonged power disruption, preventing data loss and saving work-in-progress. As part of Eaton's power network management system, these two applications work together to deliver comprehensive power management and protection.

Both software programs can be downloaded free of charge from [www.eaton.com/intelligentpower](http://www.eaton.com/intelligentpower).



## Accessories

### Extended Battery Cabinet (EBC)

EBCs give the 9E flexible runtime options to meet the needs of any requirement. Matching cabinets can be seamlessly paired with the 9E.

### Integrated Accessory Cabinet (IAC)

Several configurations of the IAC are available:

- Parallel tie and maintenance bypass
- Maintenance bypass
- Distribution with one 42-pole panelboard with up to three subfeed breakers

### Integrated Transformer Cabinet (ITC)

Houses transformer configurations to adjust output or input/output voltages to meet location requirements

- 480V:208V
- 480V:480V

### Wall-Mount Bypass

Save even more floor space with an Eaton wall-mount bypass panel, available in two configurations:

- Bypass
- Bypass and 36-pole distribution

## TECHNICAL SPECIFICATIONS<sup>1</sup>

### POWER

Ratings	20 kVA/16 kW, 30 kVA/24 kW, 40 kVA/32 kW and 60 kVA/48 kW
Topology	Double-conversion online UPS
Electrical Input	208/120V, 4 wire or 220/127V, 4 wire
Input Voltage Range	-15%, +20% from nominal (208V) 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	208/220, 3/4 wire
Output Voltage Regulation	±1% Static; ±5% dynamic at 100% resistive load change, <20 ms response time

### BATTERY

Battery Type	9 Ah, sealed, lead-acid, maintenance-free
Battery Runtime (100% Load)	20 kVA - 21 minutes, 30 kVA - 12 minutes, 40 kVA - 10 minutes, 60 kVA - 5 minutes
Battery Replacement	Field-replaceable
Charging Method	ABM (Cyclic) or float

### GENERAL

Efficiency	Up to 98% High-efficiency mode Up to 92% Double-conversion
UPS Bypass	Automatic on overload or UPS failure
Dimensions W x D x H, in (mm)	20-30 kVA - 20.9 x 31.5 x 53.5 (530 x 800 x 1360) 40-60 kVA - 23.6 x 31.5 x 74.9 (600 x 800 x 1880)
Weights	20-30 kVA - 1049.4 lbs, 476 kg 40-60 kVA - 1499.1 lbs, 680 kg
Overload	150% for 40 ms / 125% for 30 seconds 110% for 10 min

### 9E EBC Runtimes

	20 kVA	30 kVA	40 kVA	60 kVA		
<b>1 EBC</b>	42 minutes	26 minutes	26 minutes - 4 String	43 minutes - 6 String	14 minutes - 4 String	26 minutes - 6 String
<b>2 EBC</b>	102 minutes	62 minutes	62 minutes - 8 String	104 minutes - 12 String	37 minutes - 8 String	62 minutes - 12 String

### COMMUNICATIONS

Display	Graphical LCD with blue backlight
LEDs	(4) LEDs for notice and alarm
Audible Alarms	Yes
Communication Ports	(1) RS-232, (1) REPO
Communication Slot	(2) Mini-slot communication bays

### ENVIRONMENTAL

Operating Temperature	0°C (32°F) to +30°C (86°F); Batteries recommended max. +25°C (77°F)
Storage Temperature	-25°C (-13°F) to +55°C (131°F) without batteries +15°C (59°F) to +25°C (77°F) with batteries
Relative Humidity	5–95%, non-condensing
Audible Noise	< 64 dBA at 1 meter (noise less room) typical
Altitude	< 1000m at +30°C (86°F)

### CERTIFICATIONS

Safety Certifications	UL60950
EMI Standards	EN55022/EN55024
EMC Compliance	IEC 62040-2
Quality	ISO 9001: 2000 and ISO 14001:1996
Markings	UL, cUL

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



**Large LCD graphically displays UPS status and offers easy access to options and settings**

For more information visit: [eaton.com/9E](http://eaton.com/9E)

UNITED STATES  
8609 Six Forks Road  
Raleigh, NC 27615 U.S.A.  
Toll Free: 1.800.356.5794

[www.eaton.com/powerquality](http://www.eaton.com/powerquality)

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