Eaton 93PM UPS
93PM features and benefits

The Eaton 93PM UPS combines unprecedented efficiency and reliability with an eye-catching design. A space-saving, scalable and flexible device that’s as easy to deploy as it is to manage, it’s the perfect three-phase white or grey space solution for today’s data center.

### 93PM features and benefits

<table>
<thead>
<tr>
<th>Load (%)</th>
<th>Legacy UPS efficiency</th>
<th>93PM ESS efficiency</th>
<th>93PM ESS annual savings ($)</th>
<th>93PM double-conversion efficiency</th>
<th>93PM double-conversion annual savings ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>84.0%</td>
<td>98.4%</td>
<td>$27,470</td>
<td>95.8%</td>
<td>$23,121</td>
</tr>
<tr>
<td>50%</td>
<td>90.6%</td>
<td>98.9%</td>
<td>$29,212</td>
<td>96.8%</td>
<td>$22,294</td>
</tr>
<tr>
<td>75%</td>
<td>92.5%</td>
<td>99.1%</td>
<td>$34,059</td>
<td>97.0%</td>
<td>$23,724</td>
</tr>
<tr>
<td>100%</td>
<td>93.0%</td>
<td>99.1%</td>
<td>$41,746</td>
<td>96.8%</td>
<td>$26,623</td>
</tr>
</tbody>
</table>

* Savings calculated using $0.10 kW/hr. and 80% cooling ratio (currency in US dollars)

** Table data is specific to the 480V 93PM UPS

![Eaton UPS with redundancy](image)

**Table showing 400 kW efficiency savings comparison**

1. **Lowest TCO (Total Cost of Ownership)**
   - Conserves valuable data center floor space with its compact footprint and internal redundancy design
   - Reduces cost and unexpected future growth risks with its vertical scalability, enabling you to scale as you grow
   - Reduces power and cooling OPEX through industry-leading energy-efficiency
     - 99% efficiency with ESS
     - Up to 97% efficiency in double-conversion mode

![Eaton UPS with redundancy](image)

**The 93PM ESS energy cost savings pay for the UPS in less than 3 years. Calculate your 93PM savings with ESS at Eaton.com/ESS.**

![Eaton UPS with redundancy](image)

**The 93PM double-conversion energy savings pay for the UPS in less than 3 years.**
2. Easy deployment

- Maximizes deployment flexibility by providing flexible configurability

The 93PM supports front-to-top ventilation, ideal for against the wall configuration.

Front-to-top ventilation feature also makes the 93PM a perfect fit for in-row configurations that support slim chimneys.

The 93PM also supports front-to-back ventilation making it great for hot/cold aisle configuration.
LED light bars

Green light bars showing healthy UPS

Red light bars showing alerts on system. Yellow light bars indicate battery and bypass status.

Intelligent Power Manager® (IPM) is a world class power management software platform. It seamlessly monitors power and environmental conditions while providing business continuity for workloads using VMware®, Citrix® and Microsoft® platforms. IPM also optimizes power and environmental conditions for data centers using OpenStack® or HPE OneView®.

Connectivity options:
- Power Xpert Gateway Mini-slot communication card
- Industrial relay card

3. Easy management

• Provides easier access to detailed status information through its large, user-friendly LCD touchscreen interface

With the 93PM’s graphical LCD interface you can track stats on energy savings, battery time, outage tracking, load profiling and much more.

The green/yellow/red LED light-bars make system status visible from a distance in data centers.

• Integrates with the leading virtual platforms through its full suite of power management and connectivity software

Designed for the most advanced IT environments, the 93PM supports optional communication cards that allow remote access via the HTTP(S), SNMP, MODBUS TCP/IP, Modbus RTU and BACnet IP protocols. In addition, Eaton’s Power Xpert® software and Intelligent Power® Software Suite give you all the tools you need to manage power devices in your physical or virtual environment. Learn more at Eaton.com/intelligentpower.

• Increases uptime through its 24x7 remote monitoring and reporting capabilities

Eaton’s PredictPulse™ remote monitoring and management service provides real-time monitoring of the 93PM and alerts service technicians to take necessary measures when a problem is detected. Learn more at Eaton.com/PredictPulse.
Eaton’s comprehensive portfolio
Integrated data center products and services

A Overhead cable management solutions
B Thermal management solutions
C Busway
ePDUs
D Aisle based power management solutions (UPSs)
F Rack monitoring solutions
G Rack-based power management solutions (UPSs)
H IT enclosures
I Customized service plans
J Management software

Eaton.com/datacenters
**The functional core of the 93PM UPS**

### A Cable entry
- Top and bottom cable entry options available

### B Communications and connectivity
- Built-in device and host USB
- Five alarm inputs and dedicated EPO
- Alarm relay output
- Four communication slots

### C Serviceable redundant fan assembly
- Contained within each power module

### D Swappable power modules (50 kW)
- With independent control and power

### E Soft start controls
- Contained within each power module

### F Input/output connections

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### EATON 93PM UPS TECHNICAL SPECIFICATIONS*

#### Power modules

<table>
<thead>
<tr>
<th>Power offering (kW)</th>
<th>480V models</th>
<th>400V models</th>
<th>208V models</th>
</tr>
</thead>
<tbody>
<tr>
<td>10–200 kW in 5 kW increments at 208/220V</td>
<td>10–200 kW</td>
<td>10–200 kW</td>
<td>10–200 kW</td>
</tr>
<tr>
<td>20–160 kW in 10 kW increments at 480V</td>
<td>20–160 kW</td>
<td>20–160 kW</td>
<td>20–160 kW</td>
</tr>
<tr>
<td>20–200 kW in 10 kW increments at 480V</td>
<td>20–200 kW</td>
<td>20–200 kW</td>
<td>20–200 kW</td>
</tr>
<tr>
<td>200–400 kW in 50 kW increments at 480V</td>
<td>200–400 kW</td>
<td>200–400 kW</td>
<td>200–400 kW</td>
</tr>
</tbody>
</table>

#### General characteristics

- **Efficiency in Energy Saver System (ESS)**: Up to 99%
- **Efficiency in double-conversion mode**: Up to 97%
- **Parallel capability**: Four distributed, contact factory for more information

#### Input characteristics

<table>
<thead>
<tr>
<th>Voltage</th>
<th>480/277V 4-wire</th>
<th>480V 3-wire</th>
<th>400/230V 4-wire</th>
<th>415/240V 4-wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage range:</td>
<td>+10%/-15%</td>
<td>+10%/-10%</td>
<td>+15%/−15% @ 208V, +10%/−15% @ 220V</td>
<td></td>
</tr>
<tr>
<td>Frequency range:</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>Input current distortion:</td>
<td>&lt; 3% @ 100% load capacity</td>
<td>&lt; 3% @ 100% load capacity</td>
<td>≤ 3.5% @ 100% load capacity</td>
<td></td>
</tr>
</tbody>
</table>

#### Battery

<table>
<thead>
<tr>
<th>Voltage</th>
<th>480V models</th>
<th>400V models</th>
<th>208V models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery voltage:</td>
<td>432V, 480V</td>
<td>480V</td>
<td>480V</td>
</tr>
<tr>
<td>Charging method:</td>
<td>ABM® or float technology</td>
<td>ABM® or float technology</td>
<td>ABM or float technology</td>
</tr>
</tbody>
</table>

#### Output

<table>
<thead>
<tr>
<th>Voltage</th>
<th>480V models</th>
<th>400V models</th>
<th>208V models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage:</td>
<td>480V 3-phase 3-wire or 4-wire with IAC-D up to 200 kW</td>
<td>480V or 415V 3-phase 3-wire or 4-wire</td>
<td>208V or 220V 3-phase 3-wire or 4-wire</td>
</tr>
<tr>
<td>Frequency range:</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Regulation:</td>
<td>±1% steady state</td>
<td>±1% steady state</td>
<td>±1% steady state</td>
</tr>
<tr>
<td>Voltage THD:</td>
<td>&lt; 1% (100% linear load)</td>
<td>&lt; 1% (100% linear load)</td>
<td>&lt; 1.5% (100% linear load)</td>
</tr>
<tr>
<td>Load power factor range:</td>
<td>Unity with the ability to support 0.8 leading to 0.8 lagging without de-rating</td>
<td>Unity with the ability to support 0.8 leading to 0.8 lagging without de-rating</td>
<td>Unity with the ability to support 0.8 leading to 0.8 lagging without de-rating</td>
</tr>
</tbody>
</table>

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### Certification

<table>
<thead>
<tr>
<th>480V models</th>
<th>400V models</th>
<th>208V models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety:</td>
<td>UL 1778, cULus</td>
<td>UL 1778, cULus</td>
</tr>
<tr>
<td>EMC:</td>
<td>FCC Part 15, subpart B class A</td>
<td>FCC Part 15, subpart B class A</td>
</tr>
<tr>
<td>Surge:</td>
<td>IEC 61000-4-5</td>
<td>IEC 61000-4-5</td>
</tr>
</tbody>
</table>

### Optional accessories

- Integrated maintenance bypass
- Integrated distribution cabinet (with input and output transformer options)
- Integrated power distribution cabinet
- Integrated parallel tie cabinet
- Integrated battery cabinet (small and large)
- Wall mounted or floor mounted bypass
- Lithium battery cabinet

### UL 924 certification

The 93PM meets the strict standards for UL 924 compliance for emergency lighting applications when ordered with an emergency lighting SKU.

*For more information, visit Eaton.com/UL924UPS*

### UPS dimensions

- **Height**: 74”
- **Depth**: 42”
- **Width**: 22” 20–150 kW (480V), 20–120 kW (400V) and 10–120 kW (208/220V)
  - 32” 160–200 kW (480V) and 120–160 kW (400V)
  - 34.4” 10–180 kW (208/220V)
  - 43.3” 10–200 kW (208/220V)
  - 64” 250–400 kW (480V)

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*Due to continued improvements, specifications are subject to change.*

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Learn more at Eaton.com/93PM