

Eaton 9390M UPS

40 - 160 kVA



Advanced vessel or rig power protection for:

- Navigation systems
- Emergency lightning
- Computer systems
- General Services



EATON

Powering Business Worldwide

Double conversion UPS

Qualified design for marine and offshore environment

- Compact design for saving space
- Easy to install, mounting rails can be bolted or welded to the deck/bulk head
- IP22 protection class
- Vibration absorbers under and at the back of the cabinet
- Maintenance from the front

Premium power performance

- Double conversion provides the highest level of protection available by isolating the output power from all input anomalies.
- Active power factor correction (PFC) provides 0,99 input power factor and less than 4,5% ITHD, 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

- Patented Powerware HotSync® technology makes 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.
- ABM® technology charges batteries only when necessary, preventing batteries corrosion and prolonging batteries service life by up to 50%.
- Internal automatic static bypass switch

Extensive configurability

- Configurable to frequency converter operation (50 → 60 Hz and 60 → 50 Hz)
- 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 network

Cost savings and sustainability

- High level of system efficiency leads to utility cost saving, extension of battery run times and cooler operating conditions within the UPS, which extends the life of components.
- As the compact 9390 can be installed against back and side walls, customers have more location options, installation is faster and easier, deployment costs are lower and more valuable data centre space can be saved for future needs.
- A single technical platform used in Eaton's three-phase UPS products guarantee easy upgrades, similarity or service trainings and documentation, thus lowering total cost of ownership.
- A range of service agreement options can be easily customized for customers needs and budget.
- Eaton uses sustainable materials and highly efficient manufacturing technology, thus generating dramatic savings in carbon footprint as compared to competitive UPS systems.

Eaton 9390M UPS 40-160 kVA Technical Specifications

TECHNICAL SPECIFICATIONS

UPS output power rating (0,9 p.f.)

| | | | | | | |
|-----|----|----|----|-----|-----|-----|
| kVA | 40 | 60 | 80 | 100 | 120 | 160 |
| kW | 36 | 54 | 72 | 90 | 108 | 144 |

General

| | |
|---|--------------------------------|
| Efficiency in double conversion mode (full load) | 94% (without transformer) |
| Efficiency in double conversion mode (half load) | 92,5% (without transformer) |
| Distributed parallelling with Hot Sync technology | 6 |
| Field upgradeable | yes |
| Inverter/rectifier topology | transformer-free IGBT with PWM |
| Audible noise | <65 dB |
| Colour | RAL 7035 |

Input

| | |
|---------------------------------------|--|
| Nominal voltage rating (configurable) | 380, 400, 415 V 50/60 Hz |
| With external transformer | e.g. 230, 440, 480, 690 V |
| Input voltage range | Low -15% at 100% load/-30% at 50% load without battery discharge; High +10%/max +20% |
| Input frequency range | 45-65 Hz |
| Input power factor | 0,99 |
| Input ITHD | less than 4,5% |
| Soft start capability | Yes |
| Internal backfeed protection | Yes |

Output

| | |
|---------------------------------------|--------------------------|
| Nominal voltage rating (configurable) | 380, 400, 415 V 50/60 Hz |
|---------------------------------------|--------------------------|

| | |
|-----------------------------|---|
| With external transformer | e.g. 230, 440, 480, 690 V |
| Output UTHD | <3% (100% linear load); <5% (reference non linear load) |
| Output power factor | 0,9 (e.g. 72 kW at 80 kVA) |
| Permitted load power factor | 0,7 lagging - 0,8 leading |

Battery

| | |
|-------------------------------------|---------------------------------------|
| Type | Maintenance free VRLA batteries, NiCd |
| Charging method | ABM technology or Float |
| Temperature compensation | Optional |
| Battery nominal voltage (lead-acid) | 480 V (40 x 12 V, 240 cells) |
| Charging current / Model | 40 60 80 100 120 160 |
| Default A | 10 20 20 30 30 40 |
| Max* A | 20 40 40 60 60 80 |

*May be limited by maximum UPS input current rating

Accessories

External battery cabinets with long-life batteries, X-Slot connectivity (Web/SNMP, ModBus/Jbus, Relay, Hot Sync, ViewUPS-X remote display), Hot Sync parallel tie cabinet, integrated manual bypass up to 80 kVA, external maintenance bypass switch

Communications

| | |
|----------------------|----------------------|
| X-Slot | 4 communication bays |
| Serial ports | 1 available |
| Relay inputs/outputs | 5/1 programmable |

Compliance with standards

Classification survey report On request

Standard UPS

| Description | Rating | Dimensions (HxWxD) | Weight |
|--------------|------------------|------------------------|--------|
| 9390-60-U-M | 60 kVA / 54 kW | 2022x519x808 (+110) mm | 363 kg |
| 9390-80-N-M | 80 kVA / 72 kW | 2022x519x808 (+110) mm | 363 kg |
| 9390-100-U-M | 100 kVA / 90 kW | 2022x944x808 (+110) mm | 485 kg |
| 9390-120-N-M | 120 kVA / 108 kW | 2022x944x808 (+110) mm | 485 kg |
| 9390-120-U-M | 120 kVA / 108 kW | 2022x944x808 (+110) mm | 585 kg |
| 9390-160-N-M | 160 kVA / 144 kW | 2022x944x808 (+110) mm | 585 kg |

Standard external battery

| Description | Rating | Dimensions (HxWxD) | Weight |
|----------------------|--------|-------------------------|---------|
| 9390-BAT-M-S-40x38Ah | 38 Ah | 2022x575x808 (+110) mm | 740 kg |
| 9390-BAT-M-S-200 | 53 Ah | 2022x575x808 (+110) mm | 1216 kg |
| 9390-BAT-M-280 | 83 Ah | 2022x1125x808 (+110) mm | 1504 kg |
| 9390-BAT-M-330 | 94 Ah | 2022x1125x808 (+110) mm | 1685 kg |
| 9390-BAT-M-500 | 130 Ah | 2022x1125x808 (+110) mm | 2248 kg |

See runtime from the runtime specification.

