

Eaton 9390 UPS

40-160 kVA



Advanced power protection for:

- Data centers
- Financial services
- Building management
- Telecommunications
- Industrial automation equipment
- Healthcare



Powering Business Worldwide

Double conversion UPS

Premium power performance

- Double conversion provides the highest level of protection available by isolating the output power from all input anomalies.
- With a transformer-free design and sophisticated sensing and control circuitry the 9390 UPS delivers an efficiency of up to 94%.
- Active power factor correction (PFC) provides unbeatable 0.99 input power factor and less than 4.5 percent 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%.
- Increased overall reliability of the UPS due to the high level of efficiency.

Extensive configurability

- The 9390 offers small footprint compared to competitive UPS offerings. Cabling can enter the UPS from either the top or bottom of the cabinet to provide easier and flexible installation.
- 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 the network.
- Connectivity options are available to suit nearly any communication requirements, from standard serial communications to secure remote monitoring over the Web.

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.

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%
Efficiency in double conversion mode (half load)	92.5%
Efficiency in Energy Saver Mode (ESM) up to	99%
Distributed parallelling with Hot Sync technology	6
Field upgradeable	yes
Inverter/rectifier topology	transformer-free IGBT with PWM
Audible noise	<65 dB
Altitude (max)	1000 m without derating (max 2000 m)

Input

Input wiring	3 ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz
Input voltage range	±15 +20% from nominal at 100% load, -30%, +20% from nominal at 50% load
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

Output wiring	3 ph + N + PE
Nominal voltage rating (configurable)	220/380, 230/400, 240/415 V 50/60 Hz

Output UTHD	<3% (100% linear load); <5% (standard 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
Overload when bypass available	Continuous 100-110%, 10 min 110-150%, 5 ms 1000% Note! Nypass fuses may limit the overload capability

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

Safety (CB certified)	IEC 62040-1, IEC 60950-1
EMC	IEC 62040-2
Performance	IEC 62040-3

Standard UPS

Eaton P/N	Description	Rating	Dimension (H x W x D) mm	Weight (kg)
1023295	9390-40-N-4X1-MBS (c/w SNMP card)	40 kVA / 36 kW	1879 x 519 x 808	313
1023296	9390-60-U-4X1-MBS (c/w SNMP card)	60 kVA / 54 kW	1879 x 519 x 808	313
1023297	9390-80-N-4X1-MBS (c/w SNMP card)	80 kVA / 72 kW	1879 x 519 x 808	313
1028500	9390-40-N-4X0-MBS	40 kVA / 36 kW	1879 x 519 x 808	313
1028501	9390-60-U-4X0-MBS	60 kVA / 54 kW	1879 x 519 x 808	313
1028502	9390-80-N-4X0-MBS	80 kVA / 72 kW	1879 x 519 x 808	313
1024994	9390-60-U-4X1 (c/w SNMP card)	60 kVA / 54 kW	1879 x 519 x 808	313
1024995	9390-80-N-4X1 (c/w SNMP card)	80 kVA / 72 kW	1879 x 519 x 808	313
1024635	9390-100-U-4X1 (c/w SNMP card)	100 kVA / 90 kW	1879 x 944 x 808	480
1024636	9390-120-N-4X1 (c/w SNMP card)	120 kVA / 108 kW	1879 x 944 x 808	480
1028514	9390-120-N-4X0	120 kVA / 108 kW	1879 x 944 x 808	480
1023298	9390-120-U-4X1 (c/w SNMP card)	120 kVA / 108 kW	1879 x 944 x 808	530
1023299	9390-160-N-4X1 (c/w SNMP card)	160 kVA / 144 kW	1879 x 944 x 808	530
1028516	9390-160-N-4X0	160 kVA / 144 kW	1879 x 944 x 808	530

Standard accessories

1021887	External Bypass Switch 60-80kVA (wall-mount)	840 x 380 x 130	17
1021888	External Bypass Switch 120 kVA (wall-mount)	1040 x 560 x 130	25
1024626	External Bypass Switch 160 kVA (wall-mount)	1040 x 560 x 130	25
1025476	SPM-60-2 1+1 System Parallel Module (wall-mounted)	700 x 500 x 250	50
1023540	SPM-80-4 3+1 System Parallel Module (Floor-standing c/w MBS)	1530 x 520 x 788	230
1024687	9390 Tie Cabinet 3x120 kVA Tie Cabinet (Floor-standing w/o MBS)	1879 x 519 x 808	217
1024506	9390 Tie Cabinet 3x160 kVA Tie Cabinet (Floor-standing w/o MBS)	1879 x 519 x 808	217

In the interests of continuous product improvement all specifications are subject to change without notice.

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