

Eaton 9355 UPS

20 - 40 kVA



Advanced power protection for:

- Financial services
- Medium size servers and computers
- ICT
- Critical building infrastructure
- Industrial applications



Powering Business Worldwide

Double conversion UPS

Premium power performance

- Double conversion topology 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 9355 delivers an efficiency of up to 93%.
- Active power factor correction (PFC) provides unbeatable 0,99 input power factor and less than 4,5% input ITHD, thus enhancing compatibility with generators and eliminating interference with other critical equipment in the same network.
- The UPS enables optimal power protection for modern 0,9 p.f. rated IT equipment without the need to oversize.
- The 9355 design is also available with 1-phase output (9155) at 20-30kVA power ratings.

True reliability

- Patented Powerware HotSync® technology makes possible to parallel two or more 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 batteries in all standard configurations support more runtime than comparable UPS.

Extensive configurability

- Configurable and multilingual LCD control panel with back light and graphical mimic screen monitors the UPS status easily.
- Connectivity options guarantee a smooth integration with various application systems requirements.
- Bundled with Eaton Software Suite the 9355 provides an orderly network shutdown in an event of extended power outage. If required, the 9355 can also be integrated to network management, industrial automation and building management systems.

Cost savings and sustainability

- The 9355 features high up to 93% efficiency, thus reducing utility costs, extending battery runtimes and producing cooler operating conditions.
- Compact space efficient tower design offers smaller footprint enabling easy data centre space-planning and preserving valuable raised-floor real estate.
- Internal batteries often eliminate the need for costly and space-consuming external battery cabinets.
- A single technical platform used in Eaton's three-phase products guarantee easy upgrades and similarity in service, 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.

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TECHNICAL SPECIFICATIONS

| UPS output power rating (0,9 p.f.) | | | |
|------------------------------------|----|----|----|
| kVA | 20 | 30 | 40 |
| kW | 18 | 27 | 36 |

General

| | |
|---|--------------------------------------|
| Efficiency in double conversion mode (full load) | 93% |
| Efficiency in double conversion mode (half load) | 91% |
| Distributed parallelling with Hot Sync technology | 4 |
| Field upgradeable | yes |
| Inverter/rectifier topology | transformer-free IGBT with PWM |
| Audible noise | <50 dB |
| Altitude (max) | 1000 m without derating (max 2000 m) |

Input

| | |
|---------------------------------------|--|
| Input wiring | 1 ph or 3 ph + N + PE |
| Nominal voltage rating (configurable) | 220/380, 230/400, 240/415 V 50/60 Hz |
| Input voltage range | Low -20% at 100% load/-50% 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

| | |
|---------------------------------------|---|
| Output wiring | 1 ph or 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% (reference non linear load) |

| | |
|--------------------------------|--|
| Output power factor | 0,9 (e.g. 27 kW at 30 kVA) |
| Permitted load power factor | 0,7 lagging - 0,8 leading |
| Overload on inverter | 10 min 100-110%; 1 min 110-125%; 5 sec 125-150%; 300 ms >150% |
| Overload when bypass available | 60 min 100-110%, 10 min 110-125%; 1 min >125-150% |

Battery

| | |
|-------------------------------------|---------------------------------------|
| Type | Maintenance free VRLA batteries, NiCd |
| Charging method | ABM technology or Float |
| Temperature compensation | Optional |
| Battery nominal voltage (lead-acid) | 432 V (36x12 V, 216 cells) |
| Charging current / Model | Default 3 A *Max 60 A |

*May be limited by maximum UPS input current rating

Accessories

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

Communications

| | |
|----------------------|----------------------|
| X-Slot | 2 communication bays |
| Serial ports | 1 available |
| Relay inputs/outputs | 2/1 programmable |

Compliance with standards

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

Standard UPS with 3-phase input

| Part number 9355 | Description | Rating | Runtime (pf 0.7) | Dimensions (HxWxD) | Weight |
|------------------|-----------------------------|----------------|------------------|--------------------|--------|
| 1025061/1026598 | 9355/9155-20-N-5-1x9Ah-MBS | 20 kVA / 18 kW | 5 min | 1684x494x762 mm | 300 kg |
| 1025062/1026599 | 9355/9155-20-N-13-2x9Ah-MBS | 20 kVA / 18 kW | 13 min | 1684x494x762 mm | 400 kg |
| 1025063/1026600 | 9355/9155-20-N-22-3x9Ah-MBS | 20 kVA / 18 kW | 22 min | 1684x494x762 mm | 500 kg |
| 1025064/1026601 | 9355/9155-20-N-31-4x9Ah-MBS | 20 kVA / 18 kW | 31 min | 1684x494x762 mm | 600 kg |
| 1025065/1026602 | 9355/9155-30-N-7-2x9Ah-MBS | 30 kVA / 27 kW | 7 min | 1684x494x762 mm | 400 kg |
| 1025066/1026603 | 9355/9155-30-N-13-3x9Ah-MBS | 30 kVA / 27 kW | 12 min | 1684x494x762 mm | 500 kg |
| 1025067/1026604 | 9355/9155-30-N-20-4x9Ah-MBS | 30 kVA / 27 kW | 20 min | 1684x494x762 mm | 600 kg |
| 1025795 | 9355-40-N-8-3x9Ah-MBS | 40 kVA / 36 kW | 8 min | 1684x494x762 mm | 517 kg |
| 1025796 | 9355-40-N-12-4x9Ah-MBS | 40 kVA / 36 kW | 12 min | 1684x494x762 mm | 617 kg |

External battery cabinets 9155/9355

| Part number | Description | Rating | Runtime | Dimensions (HxWxD) | Weight |
|-------------|--------------------------|------------|-------------|--------------------|--------|
| 1025169 | 9355-BAT-1x24Ah (30 kVA) | 1x36x24 Ah | See page 31 | 1684x494x758 mm | 510 kg |
| 1025170 | 9355-BAT-2x24Ah (30 kVA) | 2x36x24 Ah | See page 31 | 1684x494x758 mm | 870 kg |

9355 20-40 kVA runtimes

Runtimes for UPS with internal batteries ...p.f. 0.7 (typical IT server/computer load)

| Battery | Qty | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | kVA |
|-----------|--------|-----|----|----|----|----|----|----|----|-----|
| 7 Ah 12 V | 1 x 36 | 24 | 8 | 5 | - | - | - | - | - | min |
| 9 Ah 12 V | 1 x 36 | 30 | 12 | 7 | 5 | - | - | - | - | min |
| 7 Ah 12 V | 2 x 36 | 60 | 24 | 14 | 10 | 6 | - | - | - | min |
| 9 Ah 12 V | 2 x 36 | 70 | 28 | 18 | 13 | 10 | 7 | 5 | - | min |
| 7 Ah 12 V | 3 x 36 | 103 | 41 | 26 | 17 | 12 | 10 | 7 | 5 | min |
| 9 Ah 12 V | 3 x 36 | 115 | 46 | 31 | 22 | 16 | 13 | 10 | 8 | min |
| 7 Ah 12 V | 4 x 36 | 152 | 55 | 40 | 26 | 18 | 15 | 11 | 9 | min |
| 9 Ah 12 V | 4 x 36 | 158 | 63 | 42 | 31 | 23 | 20 | 15 | 12 | min |