Galaxy 7000

250/300/400/500 kVA
Power efficiency for business continuity

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Performance three-phase power protection with high adaptability to meet the unique requirements of medium to large data centers, industry, buildings, and mission-critical environments

- Flexible and very adaptable
- Advanced electrical features
- Parallel capable up to eight units
- High efficiency
- Output synchronization to external source
- High availability architectures component
- Efficiency booster mode (EBM) on parallel installations
- ECO-mode on both single units and parallel installations
- Smart Power Test (SPoT) feature

Features and benefits

Power efficiency for business continuity

The Schneider Electric™ Galaxy™ 7000 UPS provides secured power solutions for medium to large data centers, industry, buildings, and mission-critical environments. The Galaxy 7000 is flexible and adaptable through its robust IGBT rectifier/inverter design with all types of real-world loads (inductive, capacitive with no derating of active power). This transformerless UPS system maximizes the system efficiency up to 94.5%, keeping valuable operational costs low (energy savings) while providing the highest power quality to mission-critical loads. Higher gains can also be made thanks to the ECO-mode feature, with up to 99% efficiency, available on both parallel and single units. The SPoT feature eliminates the need for a load bank, which provides significant savings during both installation and operation of the UPS. This feature can operate in two different modes on both single and parallel systems.

Galaxy 7000 includes features and options that continue to solve customer needs, including flexibility to grow as power requirements expand. These include the N+1 parallel/redundant modules with several choices, including isolated redundant, integrated parallel, and centralized static switch, making the Galaxy 7000 a leader with high-availability architectures for mission-critical environments. Easy installation and maintenance are the bases of the core design for this UPS, with only front electrical connections and fully serviceable components. Galaxy 7000 includes additional UPS solutions such as: bus synchronization boxes, IP32 enclosures, back-feed protection, frequency conversion capabilities, and flexible and extended battery solutions including li-ion, VRLA, NiCad, external matching maintenance bypass cabinets, and paralleling gear. The user-friendly graphical display includes multiple language options, and the included network-based power management card supports SNMP. Galaxy 7000 available services include start-up, preventive maintenance, fast response time, and comprehensive service packages designed for hassle-free system maintenance.

Galaxy 7000

Availability

- Sized for harsh environments
- Easy to upgrade
- Flexible

Installation and serviceability

- Front access design
- Easy to install
- Easy integration into electrical networks
- Smart Power Test feature

Low total cost of ownership

- Power factor corrected input
- Up to 94.5% efficiency in double conversion mode
- Up to 99% efficiency with Eco-mode
- Efficiency Booster Mode on parallel installations

Options

- Battery cabinets
- System bypass cabinet
- Centralized static switch cabinet
- Centralized static switch cabinet maintenance bypass
- SKID
- Communications cards
- Advanced power management software
- Top entry cabinet
- Li-ion battery solutions
- Backfeed

Typical applications

- Data centers
- Financial institutions
- Industrial
- Healthcare
- Petrochemical
- Utility

An innovative solution to make life simple

The Galaxy 7000 is easy to choose. It can operate at different frequencies and voltages, i.e., 50/60 Hz and 380 – 440 V. It also displays all information in 19 languages.

Compatible with all load types
- Output power factor up to 1, in line with the latest generation of IT applications
- No derating for leading power factors
- High short-circuit and overload capacities for motor loads

Compatible with all battery types
- Lead-acid batteries (vented, sealed)
- Ni-Cad
- Li-on batteries

Compatible with all backup time
- The high-power charger rapidly charges batteries for backup times up to four hours

Harmonic free rectifier
- No additional harmonic filtering is required

Easy integration into electrical networks

Schneider Electric, a leader in harmonic management, has built a true IGBT rectifier into the Galaxy 7000. Upstream THDI is less than 5% and the input power factor is greater than 0.99.
- Less reactive power
- Fewer harmonics injected upstream
- Savings in network component ratings such as circuit breakers, cables, etc.
- Fully compatible with generator sets — a 400 kVA UPS only requires a 440 kVA generator set
- Features a soft start capability

The Galaxy 7000 is easy to install. Phase sequence detection prevents start-up if the phase order is incorrect.

- Small footprint
- No need for rear or side access — all connections are made through the front
- Integration of all switches requiring connection
- Ready for all system earthing arrangements

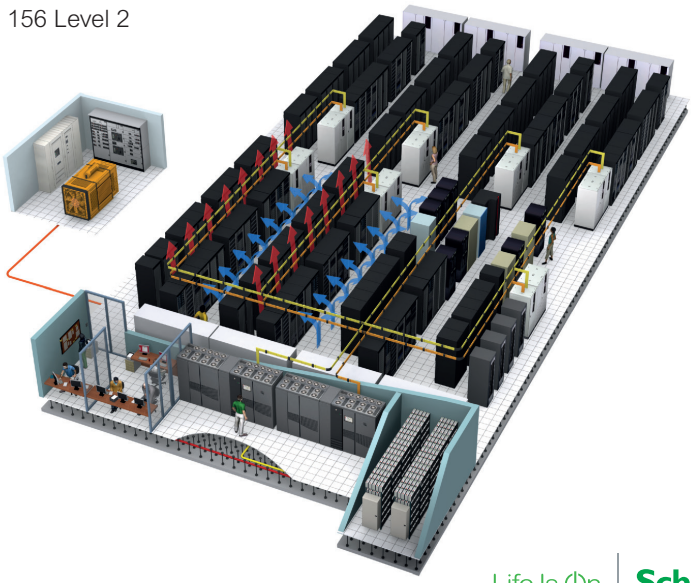
The Galaxy 7000 is easy to operate. Any screen may be selected as the standard display. For example, if output measurements are a critical parameter, select the output measurement screen as the default display.

Locally
- The Galaxy 7000 intuitive user interface provides clear, relevant information for easy operation. With its 5,000 time-stamped events, statistical analysis, and energy flow pictograms, system management could not be simpler.

Remotely
- The Galaxy 7000 provides valuable information to supervision systems on:
  - The UPS and its environment
  - Controlled shutdown of operating systems
- A number of different communication protocols are available for remote operation:
  - Ethernet 10/100 Mbps with HTTPS encryption for browser and NMS supervision
  - J-Bus/Modbus for BMS systems
  - Modem for teleservice
  - Simple programmable current loop contacts

Seismic compliant

The Galaxy 7000 has been tested for seismic compliancy using a specific anchoring system engineered by Schneider Electric. This allows the option to be compliant to the following worldwide recognized standards:
- EEE 693 High Level
- GR 63 CORE Zone 1 & 2
- AC 156 Level 2



Efficient product: power availability

Sized for harsh environments

Robust electrical performance

The sizing and quality of power components result in unsurpassed output performance:

- High fault-clearing capabilities
- High load crest factor > 3:1
- Excellent voltage stability, even for stepped load switching or unbalanced loads
- Designed for any type of load (from industrial to IT)
- No derating, even for loads with a leading power factor
- Benefits
  - High fault-clearing capacity for better discrimination in the electrical network
  - Compatibility with all types of loads, including computer loads and loads with high crest factors

Clean, stable output waveform

The digitally controlled IGBTs and high technology output filter provide a very clean, stable output voltage waveform with less than 2% total harmonic distortion (THDU), even for:

- Stepped load switching
- Unbalanced loads
- Benefits
  - Optimum supply for loads
  - Increased life expectancy for the protected equipment

Easy to upgrade

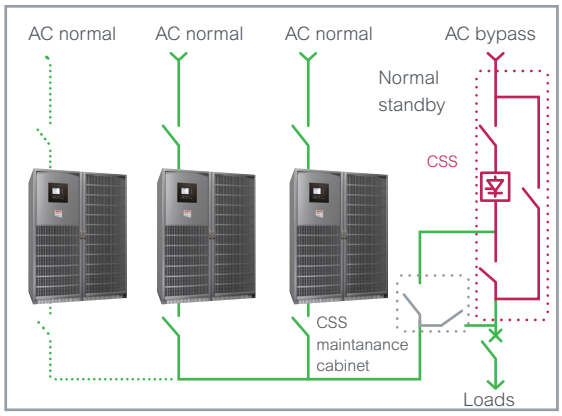
Power and redundancy upgrades

- Power requirements can change over time
- Galaxy 7000 output can be multiplied by a factor of eight. Redundancy can also be added or upgraded as needed, e.g., 2N, N+1 or N+2.

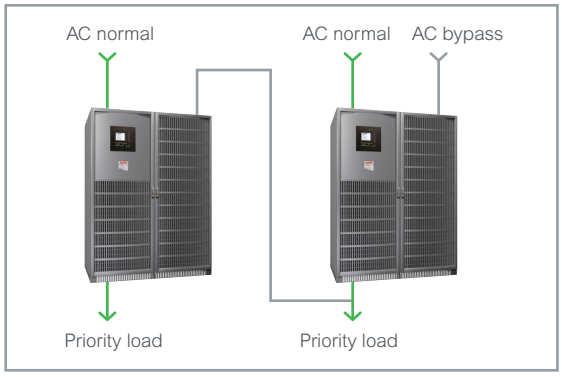
Flexible architecture

High availability results not only from UPS reliability, but also from innovative and resilient architectures providing:

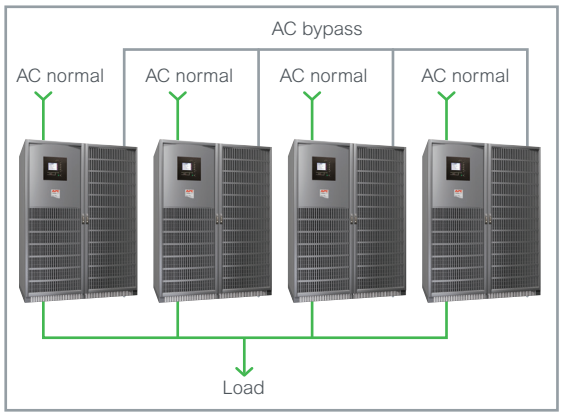
- Source redundancy
- Power-distribution redundancy



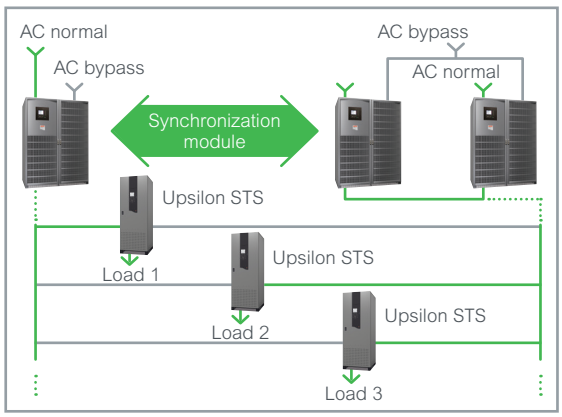
Parallel connection for increased power with a centralized static switch (CSS) unit and up to eight UPS units, including the optional CSS bypass, which enables maintenance of the CSS while continuing to support the load



Live standby redundancy



Distributed parallel connection for increased power and redundancy



Distribution redundancy with the static transfer switch (Upsilon STS)

Flexible architectures: Meet the unique needs of your site

Centralized static switch cabinet (CSS or SSC)

- High power — up to 4000 kVA/6000 A
- Connection through busbars (Schneider Electric Canalis busway)
- Mechanical bypass included for systems up to 2000 kVA (available on demand above 2000 kVA)
- Supports integration in your existing switchgear

Coupling cabinet

- Add a UPS in a parallel installation without switching to bypass
- Perform maintenance or testing of UPSs while still supplying the load

Backfeed

- Fully integrated backfeed option: Fully compliant with IEC 62040-1
- Dry contact backfeed option: Requires customer adaptation to comply with IEC 62040-1

Use power efficiently

Efficiency booster mode available on parallel installation

The innovative and highly anticipated EBM function helps to maintain highest global efficiency in a parallel system without any compromise on the global availability of the system.

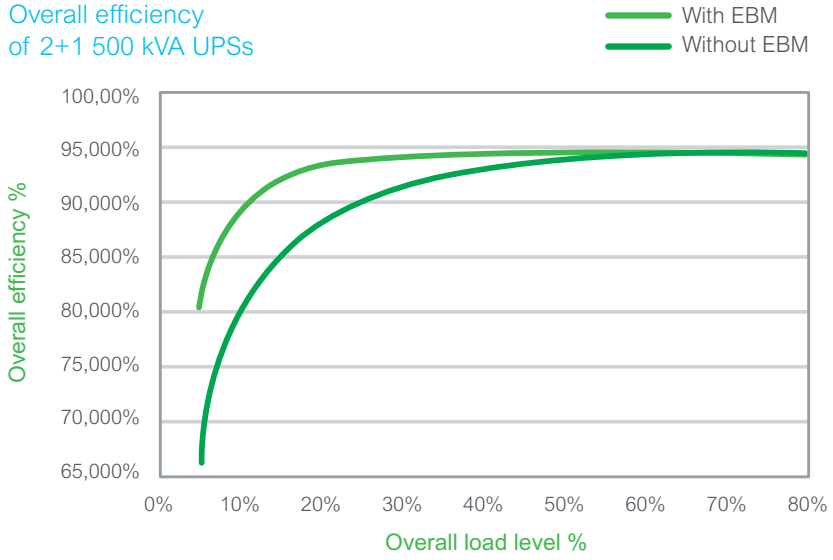
- Benefits
  - Improve system efficiency by an average of 2%
  - Reduce electricity consumption and cooling of the UPS room
  - Manage your energy

Up to 94.5% efficiency means significant savings

The innovative technology built into the Galaxy 7000, including digital electronics for better and faster regulation, an IGBT rectifier, and transformerless design, results in high efficiency.

- Benefits
  - Energy savings to cut costs
  - Reduced air conditioning and ventilation in the UPS room

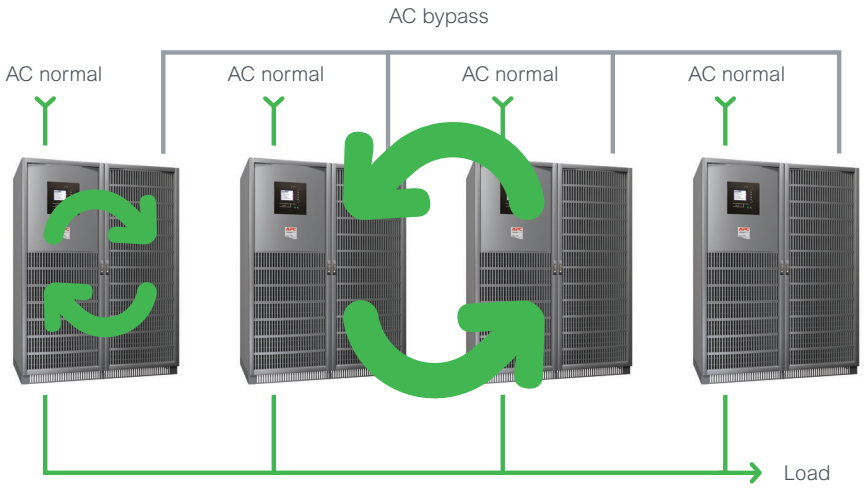
Overall efficiency of 2+1 500 kVA UPSs



Smart Power Test (SPoT) feature

This advanced feature creates significant savings during overall system installation. By removing the need for a load bank, additional breakers and switchgears are not necessary.

- Benefits
  - Installation can be tested at any load level and at any power factor
  - SPoT can be used on both single and parallel systems



Reducing environmental impact for sustainable development

Beyond international environmental regulations

The data center and critical power industry must commit to environmental issues. Schneider Electric systematically attempts to exceed current and future requirements imposed by standards. That includes:

- ISO 14001 certification of sites and R&D
- Eco-design based on ISO 14040 &14060 standards and eco-production, a true commitment to sustainable development
- Taking the environmental issue into account at each stage of the product's life

Design

Reducing the number of parts improves reliability and reduces impact on the environment. The Galaxy 7000 design team used advanced digital electronics to achieve savings:

- Fewer electronic boards
- Software updates via downloading instead of changing boards

End-of-life recycling

- End of product life:
  - Safety instructions
  - List of parts containing regulated substances and their position in the UPS

Raw materials

Thanks to its compact size and low weight, the Galaxy 7000 requires fewer raw materials and the types used are more environmentally friendly.

- Power efficient components:
  - Specific choke coils
  - Smaller output filters
- New design for a transformerless UPS:
  - More silicon, less copper
  - More powerful IGBTs

★ The weight of the Galaxy 7000 has been halved compared to the previous generation.

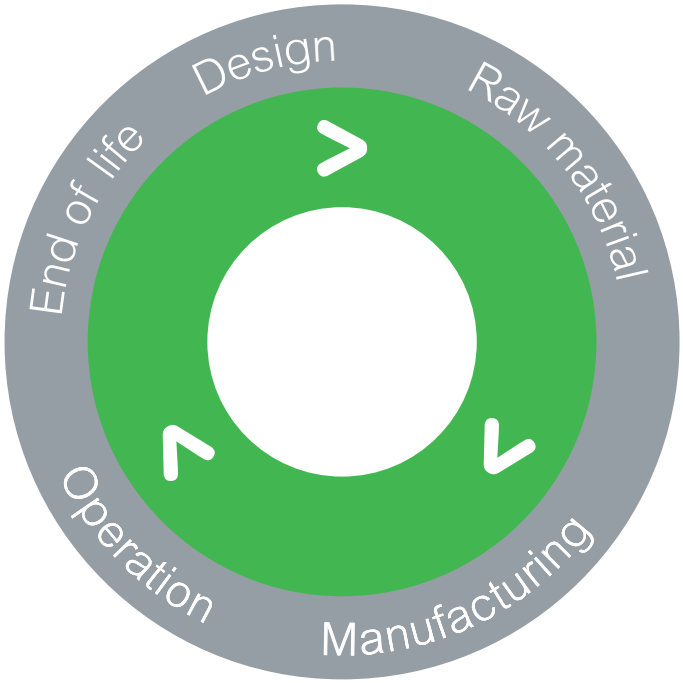
Manufacturing according to environmental standards

Galaxy 7000 is produced in factories that comply with the ISO 14001 standard to reduce:

- Energy consumption
- Packaging waste for supplier parts
- Amount of materials used in the process

Energy efficiency thanks to quality power solutions

- Reduced consumption thanks to the green IGBT rectifier (low harmonics), which, in turn, reduces sizing of the electrical distribution system (breakers, cables, generator)
- High-efficiency UPS solutions to reduce heat losses:
  - Up to 94.5% efficiency in online mode
  - Improves global efficiency of a parallel system at low load level via EBM
  - Up to 99% efficiency in ECO mode



StruxureWare for Data Centers software suite

Schneider Electric UPSs and secure power systems are a core component of any architecture designed for highly critical applications, such as data centers, industry environments, infrastructure, and buildings.

Intelligent energy management of these systems is enabled by Schneider Electric EcoStruxure™ integrated hardware and software system architecture. StruxureWare™ software applications and suites are a key element of the EcoStruxure architecture. StruxureWare software helps maximize system reliability and optimize operational efficiency.

StruxureWare for Data Centers software collects and manages real-time information about assets, resource use, and operation status throughout the data center life cycle. This data center infrastructure management software fully integrates the Galaxy 7000 UPS. With full system visibility, managers can monitor and apply this information in order to optimize data center performance to meet IT-, business-, and service-oriented goals.

A comprehensive portfolio of services

Schneider Electric Critical Power & Cooling Services provides the highest quality services and solutions by trained and trusted professionals. Our world-class services offer a smart way to build, operate, and maintain your critical applications, ensuring the right people, in the right place, at the right time.

Assembly and Start-Up Service

Assembly and Start-Up Service by a certified Field Service Engineer (FSE) ensures full factory warranty coverage. A Schneider Electric certified installation of your solution ensures your equipment is properly and safely configured for optimal performance. This service features a standard response time between 9 a.m. and 5 p.m., Monday through Friday, with upgrades available for off-business hours.

Advantage plans

Flexible service packages offer hassle-free system maintenance to improve uptime at a predictable cost. These packages provide your system with the care it needs to operate most efficiently while minimizing downtime. The Advantage Plus, Prime, Ultra, and Max are full-service packages that include technical support, preventive maintenance, quick on-site response, and remote monitoring. Response time upgrades are available.

Remote Monitoring Service

Remote Monitoring Service is an economical and easy-to-use Web-based service that lets you quickly respond to environmental or system changes. Trained technicians provide secure 24-hour monitoring of your physical infrastructure to diagnose and resolve problems before they become critical.

Preventive maintenance

Preventive maintenance on-site examinations of your critical systems are designed to prevent problems before they occur and keep your system running at maximum efficiency.

On-site warranty extension service

In the event of a system issue, an FSE will arrive on site by the next business day to isolate, diagnose, and correct the problem in as little time as possible, minimizing downtime. Upgrades to even faster response times are available.

Technical specifications

Rated power (kVA/kW)[1]	250/250	300/300	400/400	500/500
Normal AC input				
Input voltage range	250 V[2] to 470 V, three phase			
Normal and bypass AC inputs	Separate			
Frequency	45 Hz to 66 Hz			
Input current distortion (THDI)	< 3 %			
Input power factor	> 0.99			
Phase sequence detection	Yes			
Bypass AC input				
Input voltage range	(380 V, 400 V, 415 V, 440 V[5]) +/- 10%			
Frequency	50 Hz/60 HZ +/- 10%			
Output				
Power factor	up to 1[1]			
Phase-to-phase voltage setting	380/400/415 V/440 V, three-phase + neutral			
Voltage regulation	+/- 1%			
Frequency	50 or 60 Hz +/- 0.1%			
Permissible overloads	150% for 30 seconds, 125% for 10 minutes			
Voltage distortion (THDU)	< 2% Ph/Ph and Ph/N for nonlinear loads			
Battery				
Number of battery chains managed	Up to 3 circuit breakers			
Type	Sealed lead-acid, vented, Ni-Cd, Li-ion			
Overall efficiency				
Double conversion	Up to 94.5%			
ECO mode	Up to 99%[1]			
Environmental conditions				
Operating temperature	Up to 40 °C[3]			
Humidity	Up to 95% (noncondensing)			
Operating altitude	Up to 1,000 m, without derating			
Color	RAL 9023			
IP degree of protection	IP20 Standard, IP32 Optional			
Parallel configurations				
Integrated parallel units	Up to 8 units			
Parallel modules with remote centralized static bypass switch	Up to 8 units			
Standards				
Construction and safety	IEC/EN 62040-1, IEC/EN 60950			
Performance and topology	IEC 62040-3/VFI SS 111			
Design and manufacture	ISO 14001, ISO 9001, IEC 60146			
EMC immunity	IEC 61000-4			
EMC emissions	IEC 62040-2 C3			
Approvals	LCIE - CE Mark			
Seismic compliancy[4]	IEEE 693 High - Level 2 AC156 - Zone 1 & 2 GR63CORE			

UPS dimensions (depth 855 mm, height 1,900 mm)				
Rated power (kVA)	250	300	400	500
Width (without battery, in mm)	1,412	1,412	1,412	1,812
Weight (in kg)	990	990	1,140	1,500

[1]Conditions applied; [2]Depending on load level; [3]8 hours max., 35°C continuous; [4]Available as an option; [5]Input voltage window +6%/-10%

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