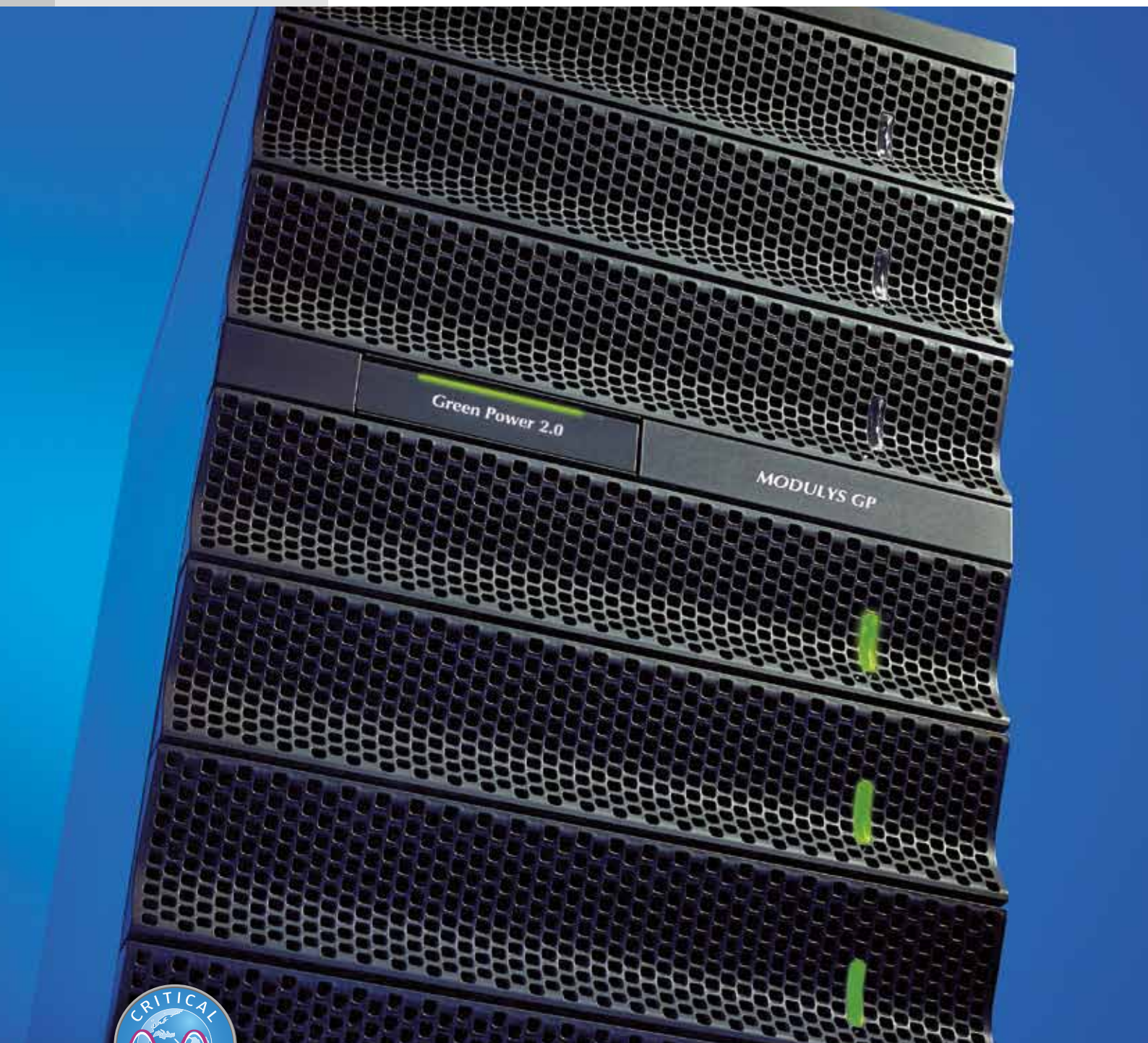




MODULYS GP

Green Power 2.0 range
Modular UPS from 25 to 600 kW



Keep up with unpredictable evolutions in your IT infrastructure

Companies running high-performance computing systems or critical automated processes need solutions that match their application requirements. The constant changes involved means that data center, IT and facility managers face a complex balancing act: maximizing availability, keeping costs down and maintaining a flexible infrastructure.



Ensuring absolute business continuity

Maintaining the uptime of mission critical applications is a major concern for IT or data center managers.

Availability, reliability & quality as well as quick and risk-free maintainability of the power supply system are key factors in achieving this target.

Aligning capacity to business demand

IT technology changes are accelerating, putting pressure on the power infrastructure to keep pace.

Providing **flexibility** is essential to match short-term capacity and long-term growth requirements along with a cost-effective and fast deployment.

Optimizing costs over the full life cycle

Several challenges have to be met to **optimize the cost** of the power infrastructure, from design through to installation and operation.

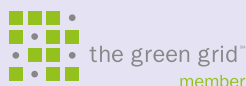
Optimizing costs while meeting changes in performance demand and ensuring life-cycle extensions are key issues in data centers.

Access the expertise of the leading player in critical power infrastructure

SOCOMEC is a multi-technology specialist in power, electronics and energy performance systems with many years of experience in providing high availability power solutions.



SOCOMEC's commitment to continuous innovation provides data center customers with solutions and services that meet the increasing technological complexity and evolving power requirements of cloud computing facilities.



SOCOMEC for sustainability

The entire Green Power 2.0 UPS range is designed to operate in compliance with the EU Code of Conduct governing data centers for reducing energy consumption and associated carbon emissions. A fully accredited PEP Product Environmental Passport is available.



MODULYS GP

High availability for your business, cost-effective protection and flexible response to unpredictable demands



Fully modular system

- Plug-in power module.
- Plug-in battery module.
- Plug-in bypass module.
- Output distribution module.
- Top-bottom connection module.
- Top-air exhaust module.



'Forever Young' concept

- Based on set of modules + electronics-free cabinet.
- Eliminates end-of-life criticality.
- Module compatibility guaranteed for 20 years.
- Allows for the implementation of future module technology.



Manufactured in Europe

Designed, developed and produced by SOCOMEC, a European specialist manufacturer with more than 20 years of experience in supplying modular solutions.



Totally redundant design

- N+1, N+2 redundancy level.
- Designed for no single point of failure.
- No centralized parallel control.
- Totally independent power modules.



Enhanced serviceability performance

- Fast & safe maintenance based on hot-swap modules.
- Ready for concurrent maintenance.
- Exclusive life cycle extension service program.



GREEN 105 B

Innovative solution

MODULYS GP is the innovative solution for protecting critical applications in computer rooms, data centers, banks, healthcare facilities, insurance, telecom.



From 25 to 600 kW.



Minimized energy consumption and cooling costs.



Unity power factor provides the best €/kW ratio.



Ready for Li-Ion battery. Ultra-fast recharge function.

The benefit of a fully modular system



Pay as you need

- No prior expenditure for unpredictable future extensions in power and back-up time.
- Space saving thanks to reduced footprint with vertical modularity.
- Eliminate installation rework costs when new capacity is required from IT physical infrastructure.
- No risk of design oversizing due to project data uncertainty.



Easy to adapt

- Totally modular rack-mounting system for power scaling or for quickly adapting to business changes.
- Time-saving design for different configuration & architecture requirements.
- Flexible design for sizing adaptations each time project data is revised.
- Easy integration with physical IT infrastructures.
- Specifically designed for integration in hot aisle/cold aisle arrangements.
- Adaptable to different cooling strategies in hot aisle/cold aisle arrangements.

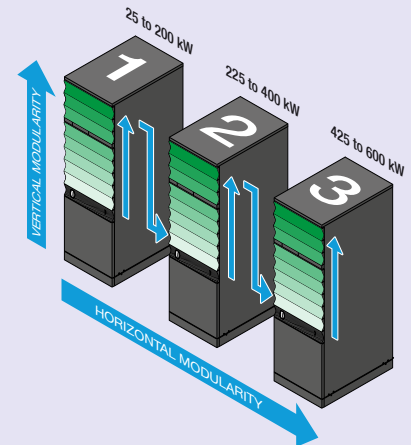


Easy to install

- Light, empty cabinets and independent modules for easy moving, on-site positioning and system assembling.
- Flexible solutions for adaptation to all types of infrastructure and environments: top or bottom entry cable management, integrated PDU for easy distribution to the IT racks.
- Flexible heat management for top air exhaust:
 - wall configuration,
 - supporting slim chimney for in-row configuration allowing busway, distribution on the top of the unit.
- On-site last minute modifications to meet any possible changes to power and back-up time.
- Automatic self-configuration power modules.

Vertical and horizontal scalability

With its vertical and horizontal modularity, the MODULYS GP range offers power scalability of up to 600 kW, ideal for unscheduled site upgrades or incremental power evolutions. The installed power of a single system can be increased up to 200 kW by adding power modules for incremental steps of 25 kW. Higher power and flexibility can be offered by putting up to 3 systems in horizontal parallel configuration to reach 600 kW.



GREEN 107 A



GREEN 109 A

A user-friendly graphic LCD panel provides easy access to detailed operating information. A brightly colored light bar allows quick status determination even across a dark room.



Easy to manage

- Standardized rack system and modules covering a wide range of power and back-up times.
- Repeatable and standardized scalable architecture.
- Hot swap plug-in modules.
- Network connectivity for the integration of power system in physical or virtualized environments.



LOGIC 020 A

NET VISION interface allows:

- UPS connection to the Ethernet network.
- Installation supervision through web server or SNMP protocol.
- Alarm notification through e-mail.



GREEN 110 A

Compactness and reduced footprint: power modules and battery packs can be installed together in the system cabinet.

The benefit of a **totally redundant** design



Total resilience

- Electronics-free (failure-free) cabinet.
- Totally independent and self-sufficient modules.
- Real selective module disconnection with galvanic separation.
- No centralized control for parallel and load sharing management.
- Totally segregated, fully sized and centralized bypass.
- Configurable N+1 to N+x redundancy (power & battery).
- No single point of failure.
- Redundant parallel bus connection (ring configuration).



Optimum reliability

- Each module is checked by automatic testing systems.
- Power module designed for superior robustness proved by an independent body (MTBF > 600,000 hr).
- Highly robust bypass (MTBF > 10,000,000 hr)
- Acid leak-proof modular battery box.



Maximum availability

- Fast recovery of lost redundancy thanks to minimum MTTR (Mean Time To Repair).
- No risk of downtime during power upgrading and maintenance.
- No risk of failure propagation.



Cost-effective redundancy

- No need to duplicate the system hardware to get redundancy.
- Redundancy achievable just by adding one more power and battery module.
- Redundancy can be easily combined with power scalability.



Modular battery cabinet

Modular UPS system

UPS system

1. Mimic panel
2. Hot swap plug-in power modules
3. Hot-swap bypass
4. Switches
5. UPS connections
6. Communication

Battery cabinet

7. Battery connections
8. Battery string protection
9. Battery string switches
10. Bays for hosting hot-swap battery strings

SITE 684-A

The benefit of an enhanced serviceability



Uptime guaranteed

- Anticipate anomaly detection via remote monitoring and diagnostic.
- Rapid response to site to limit risks affecting the availability.
- Maintenance based on independent hot-swap modules.
- Quick repair time guaranteed (low MTTR) thanks to plug-in modules.
- Safe maintenance: full load protection and business continuity (on-line maintenance).



Optimized maintenance costs

- Savings in Total Cost of Ownership compared to traditional redundant architecture.
- Easier to budget global maintenance plan over a multi-year period.
- Tailored service program adapted to specific applications (SLA requirement).



Assisted on-site system upgrades

- Upgrade safely system power and back-up with expertise on electrical installation.
- Assisted fast deployment in case of power scalability requirement.
- Professional advice on statistic system usage and electrical input and output protection sizing.
- Fast response time to site to meet unpredictable application changes.



Extended system life cycle

- Exclusive service program with the "Forever Young" concept for eliminating system end-of-life criticality.
- Periodic renewal, with complete module replacement using the latest technology.
- Spare part compatibility/availability guaranteed for more than 20 years
- Continuous system care & monitoring of electronic component aging based on specific usage conditions.



Access a manufacturer's expertise

Expert service engineers

- 370 Socomec service engineers in 20+ subsidiaries.
- 175 Business Partner service engineers in 70+ countries.
- 3,500 hours of technical training provided per year (product, methodology and safety).

Technical hotline network

- 20+ languages spoken by Socomec's technical hotline staff.
- 3 advanced technical support centers.
- 90,000+ incoming calls handled per year.

Services

- Specialist team of engineers on call 24/7.
- Technical expertise on site in max 6 hours guaranteed.
- Power quality and thermal imaging audit.
- On-site tests, commissioning and training.
- Certified preventive maintenance visit.
- Remote monitoring and proactive diagnostic.
- Corrective maintenance with original spare parts.
- 24/7 original spare part stock availability.
- High priority spare part shipment.



Please check service coverage for your area

Technical specifications

Green Power 2.0 MODULYS GP			
UPS SYSTEM			
Power (Sn)	25 to 200 kVA		
Power (Pn)	25 to 200 kW		
Number of power modules	1 to 8		
Input / output	3/3		
Redundant configuration	N+x		
Parallel configuration	up to 600 kW (up to 3 systems)		
INPUT			
Voltage	400 V 3ph (340 V to 480 V)		
Frequency	50/60 Hz $\pm 10\%$		
Power factor / THDI	$> 0.99 / < 3\%$		
OUTPUT			
Voltage	380/400/415 V $\pm 1\%$ 3ph+N		
Frequency	50/60 Hz $\pm 0.1\%$		
Voltage distortion	$< 1\%$ (linear load), $< 4\%$ (non-linear load according IEC 62040-3)		
Short-circuit current	up to 3 x In		
Overload ⁽¹⁾	125% for 10 minutes, 150% for 1 minute		
Crest factor	3:1		
BYPASS			
Voltage	rated output voltage $\pm 15\%$ (configurable with from 10% to 20%)		
Frequency	50/60 Hz $\pm 2\%$ (configurable for GenSet compatibility)		
EFFICIENCY (TÜV SÜD VERIFIED)			
Online double conversion mode	up to 96.5%		
ENVIRONMENT			
Ambient temperature	0 °C to 40 °C (15 to 25 °C for maximum battery life)		
Relative humidity	0 to 95% without condensation		
Maximum altitude	1000 m without derating (3000 m max)		
Acoustic level at 1 m	< 55 dBA		
UPS CABINET			
Dimensions W x D x H	600 x 890 x 1975 mm		
Weight (empty cabinet)	210 kg		
Degree of protection	IP20		
STANDARDS			
Safety	EN 62040-1, EN 60950-1		
EMC	EN 62040-2 Class C2		
Performance	EN 62040-3 (VFI-SS-111)		
Product certification	CE		
POWER MODULE			
Height	3U		
Weight	34 kg		
Type	Hot plug-in / Hot-swappable		
MTBF	$> 600\ 000$ hours (calculated and verified)		
BATTERY MODULE			
Type	Acid leak-proof - Long Life batteries		
Protection	Single fuse for each battery box		
BATTERY CABINETS			
	S modular battery cabinet	M modular battery cabinet	High capacity battery cabinet
Dimensions W x D x H	600 x 890 x 1975 mm	810 x 910 x 1975 mm	810 x 910 x 1975 mm
Number of battery bays	12	12	Blocks

(1) Conditions apply

Certifications and attestations



Green Power 2.0 MODULYS GP is certified by TÜV SÜD with regard to product safety (EN 62040-1)

Green Power 2.0 MODULYS GP efficiency & performance are tested and verified by TÜV SÜD



Green Power 2.0 MODULYS GP power module MTBF is calculated and verified higher than 600000 hours by SERMA TECHNOLOGIES (IEC 62380)



SOCOMEC solutions for data center



http://www.socomec.com/data-center_en.html

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