



# MODULYS *RM GP*

Rack-mounted modular UPS system  
Green Power 2.0 range up to 4 x 25 kW

Three-phase UPS



GAMME 562 A

## Full rack integration

- Designed for easy and no-risk integration in 19" rack cabinets.
- Total compatibility with any 19" standard rack cabinet.
- High power density.
- Easy to manage, integrate and customise.
- Flexible simplified cabling.

## Overall cost optimisation

- Time saving integration process.
- No risk of cost and budget overruns.
- Compact solution saving valuable space.
- Simplified logistics.
- Easy integration: avoids costly set-up and reworking.

## Totally redundant design

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

## Enhanced serviceability performance

- Fast & safe maintenance based on hot-swap parts (power modules, bypass, electronic boards, batteries).
- Ready for concurrent maintenance.
- Battery can be hot-swapped without shutting down the connected equipment.

## 'Forever Young' concept

- Exclusive life cycle extension programme.
- Eliminates end-of-life criticality.
- Based on an electronics-free sub-rack enclosure + a set of plug-in parts.
- Module compatibility guaranteed for 20+ years.
- Allows for the implementation of future module technology.

## The solution for

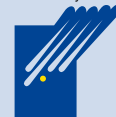
- > Integration in 19" standard rack cabinets
- > Computer rooms
- > Data centers
- > Banks
- > Healthcare facilities
- > Insurance
- > Telecom

## Certifications and attestations



Green Power 2.0 MODULYS RM GP module is certified by TUV SUD with regard to product safety (EN 62040-1).

Green Power 2.0 MODULYS module efficiency & performance are tested and verified by TUV SUD.



## SERMA TECHNOLOGIES

Green Power 2.0 MODULYS RM GP module MTBF is calculated and verified 1,000,000 hours by SERMA TECHNOLOGIES (IEC 62380).



## Advantages



Up to 4 x 25 kW



Highest rack-mounted UPS power density on the market



Unity power factor provides the best €/kW ratio



High efficiency minimises energy consumption and reduces energy costs



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



### Standard electrical features

- Dual input mains.
- Internal maintenance bypass.
- Backfeed protection: detection circuit.
- EBS (Expert Battery System) for battery management.
- Battery temperature sensor.

### Electrical options

- 19" 4U battery rack.
- External battery cabinet.
- High capacity battery charger.
- ACS synchronization system.

### Standard communication features

- User-friendly multilingual interface with color graphic display.
- 2 slots for communication options.

### Communication options

- Dry-contact, RS232/485 interfaces.
- MODBUS RTU.
- MODBUS TCP.
- BACnet/IP interface.
- NET VISION: professional WEB/SNMP interface for UPS monitoring and shutdown management of several operating systems.

### Total resilience

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

### Technical data

MODULYS RM GP		
Model	9U	15U
Number of power modules	1 to 2 x 25 kW	1 to 4 <sup>(1)</sup> x 25 kW
Configuration	N, N+1 redundant	
Power (Sn)	25 to 50 kVA	25 to 75 kVA
Power (Pn)	25 to 50 kW	25 to 75 kW
Input/output	3/3	
INPUT		
Voltage	400 V 3ph (340 V to 480 V)	
Frequency	50/60 Hz ±10%	
Power factor/THDI	> 0.99/< 3%	
OUTPUT		
Voltage	380/400/415 V ±1% 3ph+N	
Frequency	50/60 Hz ±0.1%	
Voltage distortion	< 1% (linear load), < 4% (non-linear load according to IEC 62040-3)	
Short-circuit current	up to 3 x In	
Overload	125% for 10 minutes, 150% for 1 minute	
Crest factor	3:1	
HOT-SWAP BYPASS		
Voltage	Rated output voltage ±15% (configurable from 10% to 20%)	
Frequency	50/60 Hz ±2% (configurable for GenSet compatibility)	
Weight	7 kg	7.5 kg
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	< 53 dBA	
UPS RACK		
Dimensions W x D x H	442 mm x 920 mm x 9 U	442 mm x 920 mm x 15 U
Weight (empty cabinet)	36 kg	42 kg
Degree of protection	IP20	
HOT-SWAP POWER MODULE		
Height	3U	
Weight	34 kg	
Type	Hot plug-in/ Hot-swappable	
MTBF	> 1000000 hours (calculated and verified)	
HOT-SWAP BATTERY RACK		
Type	Acid leak-proof - Long Life batteries	
Protection	Independent protection for each battery string	
Dimensions W x D x H	442 mm x 890 mm x 4 U	
Weight (empty rack)	15 kg	
STANDARDS		
Safety	EN 62040-1, EN 60950-1	
EMC	EN 62040-2 Class C2	
Performance	EN 62040-3 (VFI-SS-111)	
Product certification	CE	

(1) 4<sup>th</sup> module is for redundancy.

### Optimum reliability

- Power module designed for superior robustness verified by an independent body (MTBF > 1,000,000 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.

# MODULYS RM GP

Three-phase UPS

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## The benefit of a system designed for 19" rack integration

### Easy to integrate

- Specifically designed for integration in 19" standard rack cabinets.
- Adjustable rails and mounting accessories.
- High power density (>6 kW/U).
- Low weight for easy integration.
- Pre-cabled system for simplified connections.
- Flexible cabling management for top, bottom and mixed top/bottom entry cable.
- Integrated cables organiser for tidy connections.
- Low power dissipation (<40 W per supplied kW).

### No-risk integration

- Assured compatibility with any 19" standard rack cabinet.
- Pre-engineered and lab-tested parts assuring total system reliability.
- Automatic self-configuration power modules.
- No risk of design oversize due to project data uncertainty thanks to power module scalability.

### Easy to customise

- Complete set of pre-engineered and pre-tested parts to meet any customer need:
  - modular Power Modules,
  - special power modules with extra battery charger for extremely long BUT,
  - plug-in J-BUS communication board for BMS integration,
  - plug-in SNMP board for UPS monitoring and shutdown management,
  - plug-in programmable dry-contact board,
  - environmental sensors,
  - blank panels (covers for empty slots),
  - rack-mounted battery modules,
  - external battery cabinet,
  - isolation transformer,
  - bypass redundant cooling.

### Easy to manage

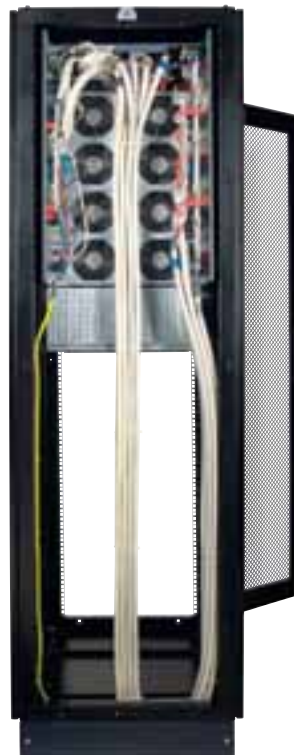
- Full documentation package including schematics, integration instructions, technical sheets, etc.
- Factory-set configurations for easy model selection.
- Full set of pre-engineered options for easy product customisation.

### Pre-cabled system for simplified connections



Example of integration (3x25 kW).

Only 15 U of rack space occupied: space-saving design leaving free space for other rack-mounted devices. One empty slot in the MODULYS RM GP sub-rack remains available for power upgrade or redundancy.



Rear view (before adding rear protective cover). Flexible cabling management for easy connections and tidier cabling.

### Overall cost optimisation

- Compact sub-rack enclosure saving valuable cabinet rack space.
- 2 sub-rack enclosure models for optimum sizing.
- Best-in-class €/kW ratio thanks to high power density and PF=1.
- Cost-optimised solution for minimum initial investment.
- Plug & Play and self-configuration power modules for easy and time saving system set up.
- Pre-engineered and lab-tested parts for easy and time saving customisation.
- Repeatable and standardised architecture for time saving design and know-how capitalisation.

### Simplified logistics

- Fewer standardised parts for easy ordering.
- Parts always in stock for fast procurement.
- Fewer parts covering a wide range of configurations, power, back-up time and options.
- Once integrated in the 19" rack cabinet, MODULYS RM GP can be safely shipped with the power modules plugged in.

### Compact 15U sub-rack enclosure

- > Designed for complete integration in any 19" standard rack cabinet.



### Pre-cabled rack with maintenance bypass

M4-R-075-82B0 15U rack, 4 slots  
 M4-R-050-82B0 9U rack, 2 slots

### Plug-in boards

CP-OP-ADC+SL Programmable IN/OUT dry contact + serial link  
 CP-OP-MODTCP MODBUS TCP interface  
 NET-VISION6CARD NET VISION card, WEB/SNMP interface IPV4/IPV6

### Other options

NET-VISION-EMD Environment temp. and humidity sensor + 4 dry contacts  
 MAS-OP-TEMP External temperature sensor

### Blank panel

M4-RI-OP-SSC Cover for empty slot

### Power module - 25 kW

M4-RI-25

### 4U battery rack

M4-BR-009L With 42 x 9Ah batteries, fuse and switch  
 M4-BR-009L-B Empty, for 42 x 9Ah batteries including interconnections, fuses and switch

### Mounting accessories

M4-RI-OP-RAIL Adjustable rails for rack mounting support

