

# Galaxy 3000

Superior UPS protection  
for telecom, networking,  
process and critical  
infrastructure

- ▶ Protection from 50 servers (10 kVA model) up to 150 servers (30 kVA model).
- ▶ Fault tolerant system.
- ▶ Redundancy.
- ▶ Scalability.
- ▶ Optimized battery management.
- ▶ Ease of operation.
- ▶ Compact design to be installed in a data room as well as in a technical room.
- ▶ Comprehensive remote monitoring and network integration.
- ▶ Cost optimized installation and operation.



THE ONLY INTERRUPTIBLE POWER PROVIDER

**MGE**  
UPS SYSTEMS



Full compatibility with any genset  
Large choice of runtimes

Fault-tolerant system, redundancy  
High quality of energy

Scalability  
EMC B Level

Low footprint  
Easy integration in NMS



## Supervision and notification management

### NMS integration

Via the software suites (available on CD format or downloadable) and the range of communication cards provided by MGE UPS SYSTEMS, Galaxy 3000 allows an easy integration into the different remote supervision systems and Network Management Systems which are installed in your company whatever the protocol is SNMP, Web/HTTP or JBus/ModBus.

As a standard, Galaxy 3000 is delivered with a contact relays card and 3 available

slots for the different communication cards. By this way you can combine simultaneously different modes of supervision.

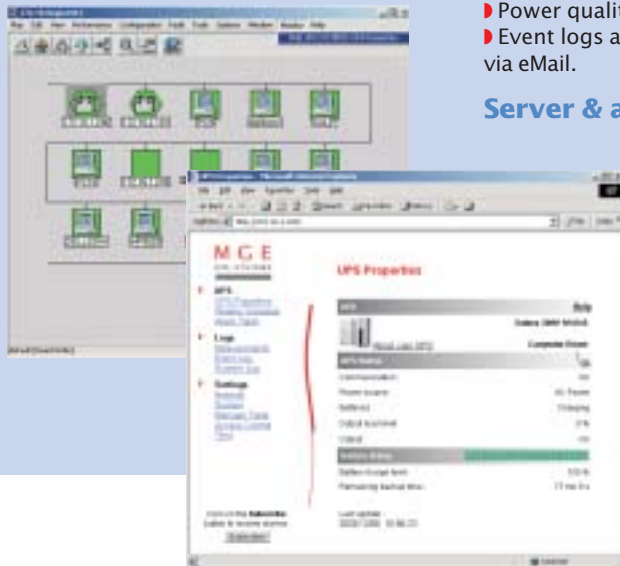
- ▶ Integration into popular Network Management Systems (HP OpenView, IBM Tivoli Netview or CA Unicenter) or Server Management Systems (like HP IM 7).
- ▶ Web interfaces to get quick and easy status information from a simple PC with an internet browser.
- ▶ Notification via SMS, pager, e-mail in case of power problem.
- ▶ Automatic actions (multiple OS shutdown).

### Power quality management

- ▶ Power quality display.
- ▶ Event logs and measurements available via eMail.

### Server & application availability

- ▶ Customizable scripts to close running applications prior to system shutdown.
- ▶ Network-based shutdown of multiple servers .
- ▶ Automatic UPS and server reboot on power restoration.



## High availability

### Fault-tolerant system

- ▶ Designed as a fault-tolerant system, the Galaxy 3000 range has an internal bypass to power continuously the secured equipment in an unlikely UPS fault condition.
- ▶ In addition the Galaxy 3000 range is fitted out with an external bypass to maintain the UPS without interrupting the secured equipment.

### Redundant system

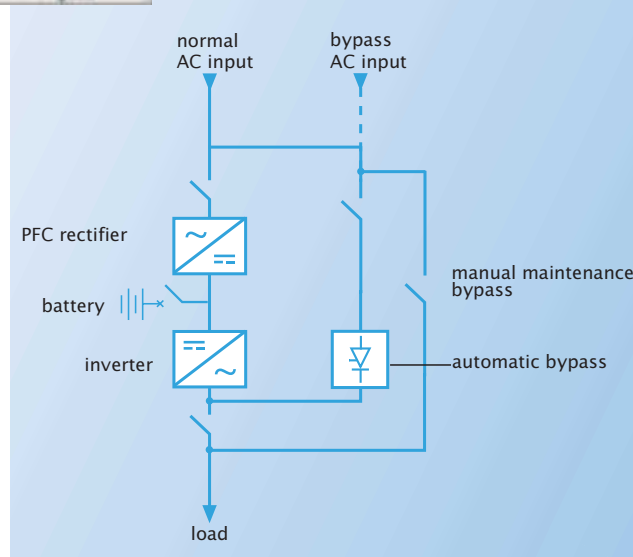
For critical use, 2 Galaxy 3000 operating in parallel will ensure the continuity of service.

- ▶ In normal mode each one supports 50% of the load. In an unlikely UPS fault, the non-faulty one will take 100% of the load without any interruption.
- ▶ Galaxy 3000 can be connected on two independant sources (AC normal and AC bypass inputs) to rise up the MTBF (Mean Time Between Failures) of the equipment.

### Battery always available

- ▶ The large input voltage range of the Galaxy 3000 range (down to -37% of the rated voltage) avoids excessive use of battery in case of low amplitude disturbances (brownout, sags and surges).
- ▶ The intermittent-recharge system fits out the Galaxy 3000 as a standard. This technology doubles the battery life expectancy.

- ▶ The measurement of the ambient temperature, the battery age and the protection against deep discharges avoids any premature battery ageing.



Galaxy single-line diagram

## Large choice of back-up times from 10 minutes to 2 hours

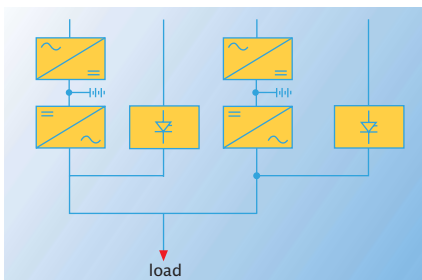
The shutdown of a Window OS is generally quicker than a Unix one. A PLC shutdown requires longer time than a usual network one. Your request concerning the back-up time of your UPS will be different according to the type of your secured systems. That is why Galaxy 3000 provides a large choice of back-up times.

## Scalability

### Parallel operation up to 4 UPSs

Because your IT equipment is permanently upgrading, its protection systems must be flexible. Based on a modular design, the Galaxy 3000 is scalable in terms of power capacity by simply adding a similar UPS module.

- ▶ This power upgrading can be achieved without interrupting the equipment already secured.
- ▶ You “pay as you grow” because the parallel operation is an option which does not impact the cost of the single module.



## User-friendly operation

### A multi-lingual and graphical interface

A wide selection of available languages for users worldwide, a colour graphical display for immediate understanding of measurements, diagnostics and status indications.

- ▶ An event log to store information such as the number of transfers to battery power, to facilitate the diagnostic of the installation.
- ▶ A personalization menu for specific installation settings.

## Easy installation and simplified maintenance

### The Galaxy 3000 range has been designed to reduce dramatically the MTTR (meantime to repair) and ease the installation.

- ▶ Forklift handling compatibility.
- ▶ Low footprint to be compatible with any location (data or technical room).
- ▶ The connection of the cables, the communication cards insertion and the maintenance are achieved from the front.
- ▶ Casters for rapid positioning.

## Economical

### A very competitive TCO (total cost of ownership)

10% of the Galaxy 3000 cost is amortized during its first year of operation. Via the PFC (Power Factor Correction) system, the Galaxy 3000 range prevents harmonic pollution of the upstream distribution.

- ▶ By this way, your power consumption is reduced by 20% versus a standard UPS.
- ▶ The PFC system avoids also the oversizing of the upstream genset and generates consequently significant savings.
- ▶ With the eco mode, the efficiency of the UPS jumps to 97%. The savings achieved on UPS and air conditioning equipment consumption represent each year 8% of the UPS cost.



## The most sensitive equipment are secured

The disturbances generated by electrical equipment such as a UPS may have negative impact on sensitive equipment such as Telecom, Radio, TV.

- ▶ The Galaxy 3000 complies with the most stringent standard in that field: EMC B level.
- ▶ The output voltage of the Galaxy 3000 is constant, whatever the disturbances downstream the UPS are (cable impedance, computer load) and whatever the variation of the loads is (start-up or turn-off of a large part of the protected devices). This warranty of the output voltage quality is ensured by: a minimum voltage distortion (2% for the Galaxy 3000 THDU), a minimum voltage transients (+/- 3% for Galaxy 3000).

# Galaxy 3000, the all-purpose UPS for a perfect continuity of service

## Standard features:

- ▶ on-line double-conversion and PFC rectifier,
- ▶ colour graphical display,
- ▶ relay communications card,
- ▶ ECO mode,
- ▶ automatic and maintenance bypasses,
- ▶ enhanced EMC (level B).

## Options:

- ▶ isolation transformer,
- ▶ JBus/ModBus, Web/SNMP, XML, U-Talk/ASCII, USB, SHUT/HID communications cards,
- ▶ MultiSlot communications expansion module,
- ▶ Solution-Pac power management suite,
- ▶ Integration kits with Network Management Systems,
- ▶ back-feed protection,
- ▶ Environment sensor.

## General characteristics

	10	15	20	30
<b>Rated power (kVA)</b>	10	15	20	30
<b>Active power (kW)</b>	8	12	16	24
<b>Normal AC input</b>				
Rated voltage	380 - 400 - 415 V tri + neutral (up to 480 V with Autotransfo)			
Voltage range <sup>(1)</sup>	250 V min. to 440 V max			
Frequency	50/60 Hz			
Frequency window	47 & 63 Hz			
Power factor	> 0.99 (cos phi = 1)			
Current distortion (THDi) <sup>(2)</sup>	< 5%			
<b>Output</b>				
Voltage under steady-state conditions <sup>(3)</sup>	380-400-415 V +/- 1% - 3-phase + neutral			
Frequency	50 or 60 Hz			
Voltage transients	+/- 3% for 0 to 100% and 100% to 0% load step changes			
Voltage distortion	THDU < 2% ph-ph and ph-n for linear loads THDU < 3% ph-ph and ph-n for IT system			
Permissible overload	150% - 1s ; 110% - 5mn ; 120% - 1,5mn			
Overall efficiency	Up to 97% in ECO mode			
<b>Environment</b>				
Colour	RAL 9002			
Ambient temperature	0° to 40° C (8h), 0° to 35° C continuous, 20° to 25° C recommended			
Noise level (dBA)	<50 ; <50 ; <53 ; <53			
<b>Standards</b>				
Construction and safety / Performance / EMC <sup>(4)</sup>	IEC 62040-1 / IEC 62040-3 / IEC 62040-2 level B			
Technology	on line double conversion			
Design and manufacturing	ISO 14001 - ISO 9001			
Harmonics	IEC 61000-3-2/4			
Certification and marking	TUV, CE			

## Dimensions and weight

	10	15	20	30
<b>Rated power (kVA)</b>	10	15	20	30
Width (mm) UPS cabinet/battery cabinet	655/650			
Height (mm) UPS cabinet/battery cabinet	1420/1420			
Depth (mm) UPS cabinet/battery cabinet	565/565			
Weight UPS with battery built-in (kg)	685/685			
Standard/premium back-up time for IT System	273/330	335/380	365/470	427/570

## Back up time <sup>(5)</sup>

### Back-up time for IT System : 70% load / 100% load

Back-up time for 1 G 3000 cabinet (battery built-in)				
Standard back-up time	10mn/5mn			
Premium back-up time	25mn/17mn			
Long back-up time	44mn/29mn			17mn/10mn
Back-up time for 1 G 3000 cabinet + 1 battery extension cabinet				
Standard back-up time	70mn/46mn	40mn/27mn	62mn/33mn	30mn/20mn
Long back-up time	120mn/60mn <sup>(6)</sup>	70mn/45mn	100mn/63mn <sup>(6)</sup>	65mn/40mn

### Back-up time for industrial load (PF = 0.8) 70% load / 100% load

Back-up time for 1 G 3000 (battery built-in)				
Standard back-up time	20mn/13mn			
Long back-up time	35mn/21mn			13mn/7mn
Back-up time for 1 G 3000 cabinet + 1 battery extension cabinet				
Standard back-up time	48mn/33mn	32mn/19mn	41mn/26mn	24mn/14mn
Long back-up time	75mn/45mn <sup>(6)</sup>	53mn/32mn	70mn/60mn <sup>(6)</sup>	53mn/32mn

(1) Power derating for voltage range < 323 V.

(2) For a source THDU < 2%.

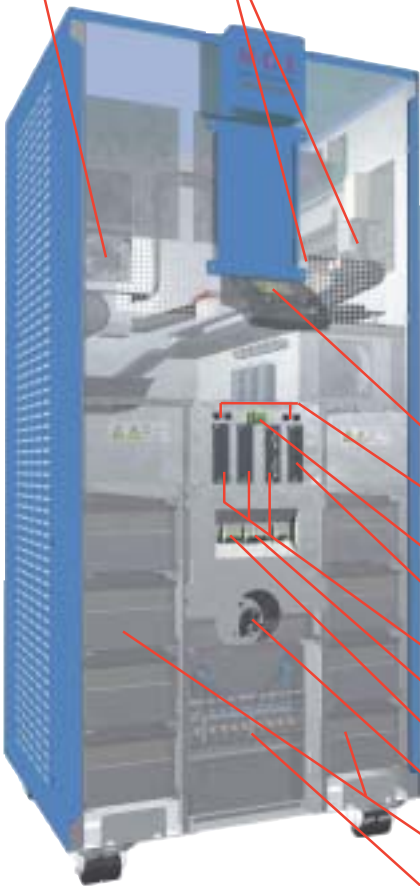
(3) Line voltage drop compensated up to 5%.

(4) EMC kit B level available on request for parallel and battery extension enclosures.

(5) Typical value given for 5 years design life after 3 discharges cycles, battery 10 years on request.

(6) On request.

Power boards (PFC system)  
High-performance cooling



- ▶ Multilingual graphical display
- ▶ RJ45 connector for Multislot module, parallel UPSs and external synchronisation
- ▶ Emergency power off terminal
- ▶ Programmable relay card
- ▶ Slots for optional communication cards
- ▶ Battery circuit breaker
- ▶ Input switch
- ▶ Manual bypass switch
- ▶ 5 or 10-years batteries
- ▶ Input or output terminal block

## MGE UPS SYSTEMS

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