



POWERWAVE 33

Master your energy challenge

POWERWAVE 33 60-300 KVA

Technical specifications PowerWave 33 (60–300 kVA)



GENERAL DATA									
Output Rated Power	kVA	60	80	100	120	160	200	250	300
Output Active Power ≥ 44 Battery Blocks	kW	60	80	100	120	160	200	225	270
Topology		True double conversion online (VFI-SS-I11)							
Parallel Configurations		Decentralized Parallel Architecture DPA™ (standard up to 10 units, more on request)							
Static and Maintenance Bypass		Standard							
Accessibility		Front access only for service and maintenance (no need for side or top access)							
Efficiency (Double Conversion)		Up to 95.5%							
Audible Noise with 100% Load		<65		<69				<71	
INPUT DATA									
Nominal Voltage		3 x 380/220 V + N, 3 x 400/230 V + N, 3 x 415/240 V + N							
Voltage Tolerance (Ref. to 3 x 400/230 V)	%	For loads <100% (–23%, +15%), <80% (–30%, +15%), <60% (–40%, +15%)							
Frequency	Hz	35–70							
Power Factor		0.99 (electrically regulated)							
Current Distortion THDi	%	<3.5 at 100% load (sinewave)							
Inrush Current		Soft start							
Cabling		Hardwired							
OUTPUT DATA									
Voltage	V	3 x 380/220 V + N, 3 x 400/230 V + N, 3 x 415/240 V + N							
Voltage Tolerance	%	± 1%							
Voltage Tolerance (Load Jumps 0–100–0%)	%	± 4%							
Frequency	Hz	50 or 60							
Frequency Tolerance	%	± 0.1% (free-running), ± 4% (with mains, adjustable)							
Crest Factor		3:1							
Overloading Capability	%	125% / 10 min., 150% / 60 s.							
Permissible Unbalanced Load	%	100% (all 3 phases regulated independently)							
COMMUNICATIONS									
Power Management Display (PMD)		With LCD, mimic diagram, control							
Communication Port (Smart Port)		Serial RS232, Sub-D9 and USB (standard)							
Communication Port (Dry Port)		Volt-free contacts (standard)							
SNMP		Yes (optional)							
Shutdown and Monitoring Software		Yes (Wavemon) (optional)							
Emergency Power Off (EPO)		Yes							
STANDARDS									
Safety		IEC/EN 62040-1-1, IEC/EN 60950-1							
Electromagnetic Compatibility (EMC)		IEC/EN 61000-6-4 (product standard IEC/EN 62040-2 limit A (C3 UPS)) IEC/EN 61000-6-2 (product standard IEC/EN 62040-2 criterion A (C2 UPS)) IEC/EN 61000-4-2, IEC/EN 61000-4-3, IEC/EN 61000-4-4, IEC/EN 61000-4-5, IEC/EN 61000-4-6							
Performance		IEC/EN 62040-3							
Product Certification		CE - GOST by TÜV							
Protection Rating		IP 20							
Manufacturing		ISO 9001:2008, ISO 14001:2004							
Country of Origin		Switzerland							
MECHANICAL DATA									
Dimensions (W x H x D)	mm	550 x 1820 x 750			850 x 1820 x 750			1100 x 1920 x 750	
Dimensions with Battery Enclosures (W x H x D)	mm	970 (or 1180) x 1820 x 750							
Weight (without Batteries)	kg	230	240	245	280	290	310	390	410

Specifications are subject to change without notice.

Master your energy challenge

PowerWave 33, Newave’s latest three-phase UPS system, delivers the best combination of energy efficiency and overall power performance in the industry. Offering both intelligent energy management and maximum power protection, PowerWave 33 helps you to use less energy, generates less CO₂, takes up less space and provides significant cost savings.

In the face of continuous energy cost increases, IT managers can no longer ignore the savings of using a highly efficient UPS. PowerWave 33 has been specifically developed to meet the challenges of today’s IT infrastructures by maximising energy cost savings while ensuring the highest level of power protection availability. PowerWave 33’s exceptional design meets all modern requirements to build and operate energy-efficient and environmentally friendly data centres.

PowerWave 33 is a double conversion UPS topology and is available from 60 to 300 kVA. It supplies clean, uninterruptible power and delivers performance according to your needs – whether you are implementing power protection equipment for data centres, banking, telecommunications, health care systems, industrial automation equipment or any other requirement. Furthermore, the PowerWave 33’s small footprint not only facilitates easy installation but also saves space for future growth.



Even a small efficiency percentage difference can generate significant savings in operating costs during the UPS life cycle. Cost savings are calculated based on 0.10 EUR/kWh including air conditioning/ventilation costs.

Difference of efficiency	2%		3%		4%	
	3 years	7 years	3 years	7 years	3 years	7 years
Load (kW)						
100	8240	19,227	12,495	29,154	16,841	39,297
500	41,200	96,140	62,475	145,770	84,205	196,485
1000	82,400	192,270	124,950	291,540	168,410	392,970
COST SAVINGS (EUR)						

Overall power performance

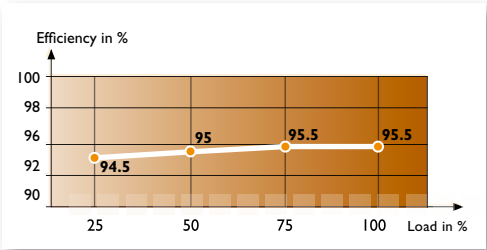
Built-in batteries for up to 100 kVA

PowerWave 33 is compatible with a wide range of battery autonomies. Furthermore the ripple-free and temperature-controlled battery chargers protect your batteries and extend their run-time. PowerWave 33 is available with integrated enclosures to accommodate batteries for 60, 80 and 100 kVA power ranges. Front access facilitates installation and servicing of the batteries.



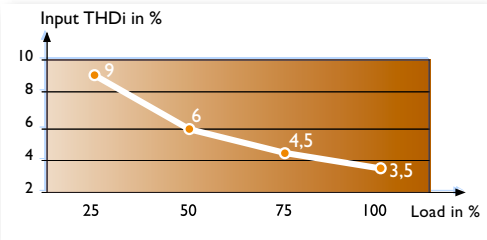
High efficiency and minimum cost of ownership

With a transformer-less design and Energy Saving Inverter Switching (ESIS) technology, PowerWave 33 delivers high efficiency at partial and rated loads (up to 95.5 % in double conversion online mode). This level of efficiency dramatically reduces the total cost of ownership of the UPS during its life cycle. In addition to lower operating costs, PowerWave 33 extends battery run-times and the life of components, thereby greatly increasing overall power performance.



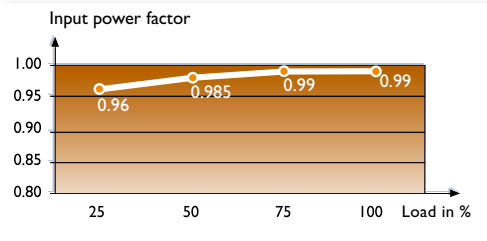
Low input harmonic distortion (THDi)

PowerWave 33 is capable of keeping the total input harmonic distortion (THDi) at a low level (3.5 at 100% load). Newave's unique technology neutralises the emission of harmonics at the input of the UPS, provides greater reliability of operations for circuit breakers and extends the overall service life of the equipment. Low harmonic distortions save unnecessary oversizing of gensets, cabling and circuit breakers, avoid extra heating of input transformers and extend the overall service life of all input components.



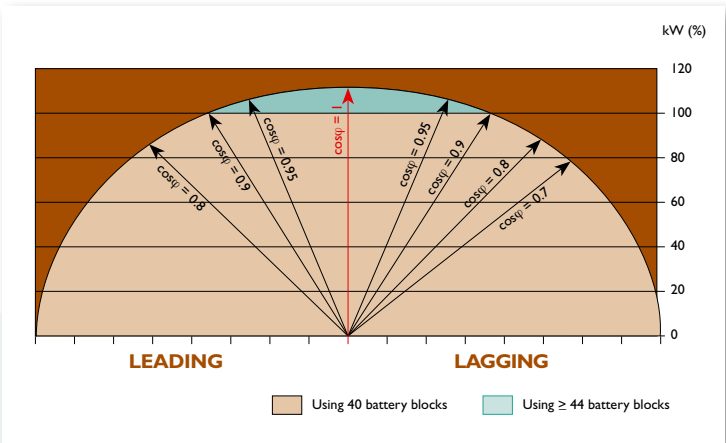
Near to unity input power factor

The near to unity input power factor (sine wave) of PowerWave 33 reduces the input installation costs by using smaller cable sections and fuse sizes. Accordingly the use of additional phase compensating devices is not needed which consequently keeps the overall UPS efficiency high.



Fully rated output power (blade friendly)

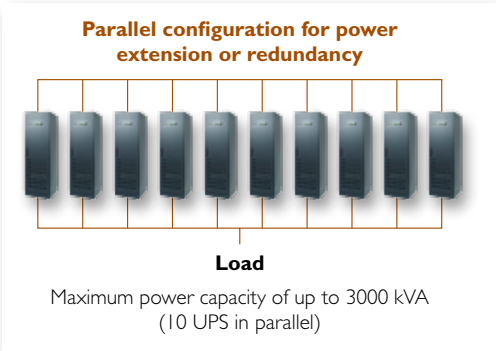
PowerWave 33 is rated at an output of 0.9 leading and delivers fully rated active power for applications in the wide range of 0.9 leading to 0.9 lagging without derating. If equipped with ≥ 44 battery blocks, PowerWave 33 delivers up to 11 % more active power.



Advanced scalable architecture

If additional capacity or redundancy is needed, up to 10 independent UPS units can operate in parallel configuration. Accordingly, a single system of parallel mounted UPS units can deliver a power capacity of up to 3000 kVA. In all parallel configurations, each PowerWave 33 unit operates independently but is securely synchronised with the others. This scalable architecture keeps the purchasing and operating costs of your power protection solutions exceptionally low. As your power requirements grow, the UPS grows with you

– thanks to its flexible scalability – even in the most confined spaces. You benefit from lower capital commitment, cost-effective expansion and minimal footprint.



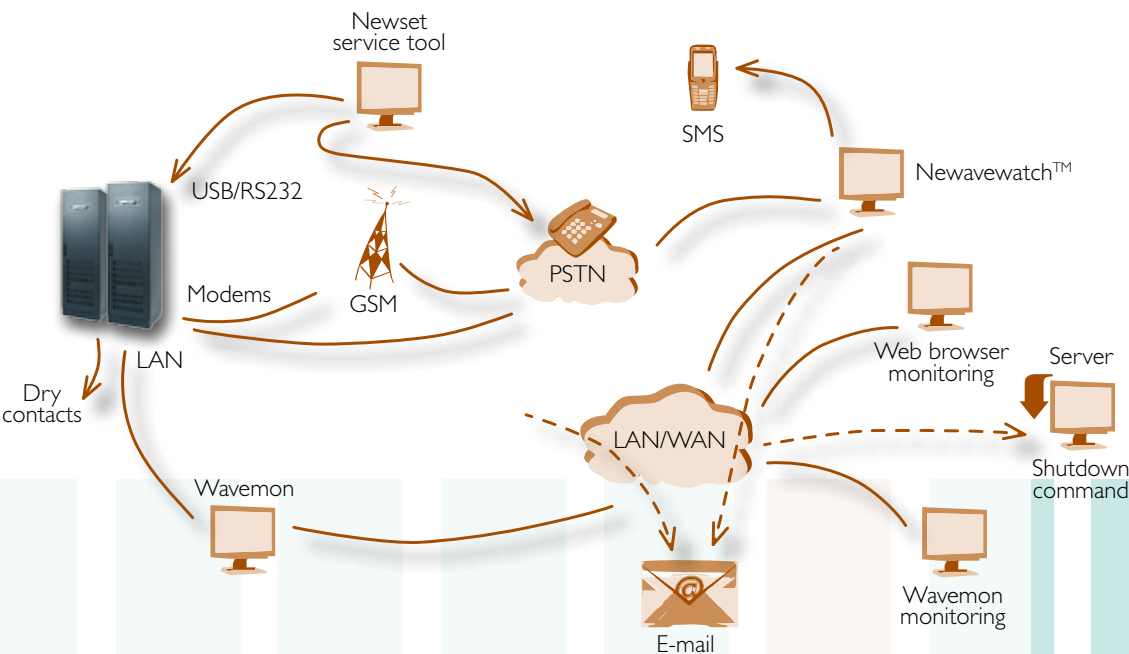
Connectivity

PowerWave 33 is equipped with several connection/interface types which can be used for local and remote monitoring, status signalling, control, maintenance and even firmware upgrades. A specific interface is provided for these operations in order to connect several UPS in parallel. The interfaces are:

- USB, RS232 for maintenance and upgrade
Newave service engineer
- Dry contacts (out) for status signals
Local facility management and control
- Dry contacts (in) for external commands
Local facility management and control
- LAN adapter (SNMP, modbus, PROFIBUS) for monitoring
Local facility management and control

- GSM-Modem / fixnet for remote monitoring (Newavewatch™*)
Newave service centre/engineer

* Newavewatch™ is a redundant remote surveillance system and service provided by Newave which complements Newave's Continuous Power Protection Availability concept. Newavewatch™ supports Newave's service engineers with early detection/identification of anomalies, 24/7 monitoring, analysis and diagnostic capabilities and reporting functions. Facility managers are offered real preventive maintenance and can eliminate major knock-on effects or even downtimes.





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Newave Certifications & Recognitions

