



POWERWAVE 33

Master your energy challenge



POWERWAVE 33 60-200KVA

Technical Specifications PowerWave 33 60-200 kVA



GENERAL DATA							
Output Rated Power	kVA	60	80	100	120	160	200
Topology		True double conversion on-line (VFI-SS-III)					
Parallel configurations		Distributed 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% / 50% Load		<65			<69		
INPUT DATA							
Nominal Voltage		3x380/220V+N, 3x400/230V+N, 3x415/240V+N					
Voltage Tolerance (Ref. to3x400/230V)	%	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 @ 100% load (sinewave)					
Inrush Current		Soft start					
Cabling		Hardwired					
OUTPUT DATA							
Voltage	V	3x380/220V+N, 3x400/230V+N, 3x415/240V+N					
Voltage Tolerance	%	+/- 1% (linear load), +/- 3% (non-linear load)					
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 RS 232, 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 62040-1-1:2003, IEC 60950-2:2001/A1:2004					
Electromagnetic Compatibility		IEC 50091-2:1995, IEC 61000-3-2:2000 IEC 61000-3-3:1995/A1:2001, IEC 61000-6-2:2001					
Performance		IEC 62040-3:2001					
Product Certification		CE – GOST by TUV					
Degree of protection		IP 20					
Manufacturing		ISO 9001:2000, ISO 14001:2004					
Country of origin		Switzerland					
MECHANICAL DATA							
Dimensions (WxHxD)	mm	550x1820x750			850x1820x750		
Dimension with battery enclosures (WxHxD)	mm	970 (or 1180)x1820x750					
Weight (Without batteries)	kg	230	240	245	280	290	310

Specifications are subject to change without notice.

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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, generate less CO2, take up less space and provide significant cost savings.

Facing continuous energy cost increases, Information Technology (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 maximising energy cost savings while ensuring the highest level of power protection availability. PowerWave 33's exceptional design supports all organisation's requirements to build and operate energy-efficient and environmentally friendly data centres. Cost savings from using Newave's high efficiency UPS often equal the cost of energy for power and cooling within a few years.

PowerWave 33 is a double conversion UPS topology and is available from 60 to 200 kVA. PowerWave 33 supplies clean, uninterruptible power and delivers the performance according to your needs – whether you are implementing power protection equipment for data centres, banking, telecommunication, healthcare systems, industrial automation equipments and others. 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 calculated based on a 0.10 Euro/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 (kVA)						
100	8'240	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 (Euros)						

Overall Power Performance

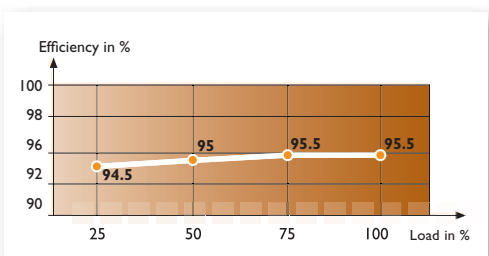
Built in batteries for up to 100 kVA

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 life time performance. PowerWave 33 is available with integrated enclosures to accommodate batteries for 60, 80 and 100 kVA power ranges. Front access facilitates installation and service of batteries.



High efficiency and minimum cost of ownership

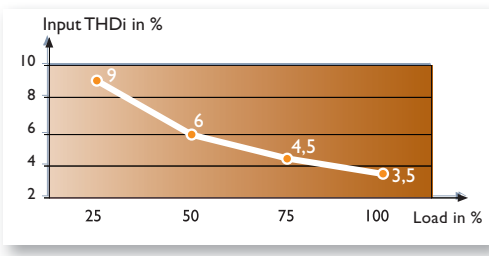
With a transformer-less design and the Energy Saving Inverter Switching (ESIS) Technology, PowerWave 33 delivers high efficiency at partial and rated loads (up to 95.5 %). This level of efficiency reduces dramatically the Total Cost of Ownership of the UPS during its life cycle. In addition to lower operating costs, PowerWave 33 extends battery run times and the life of components. Overall power performance is therefore very much increased.



Low input harmonic distortion (THDi)

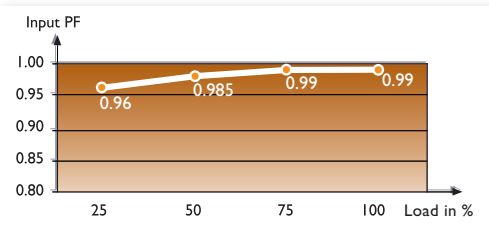
PowerWave 33 is capable of keeping the Total Input Harmonic Distortion (THDi) at a low level (3.5% at 100% load). Newave's unique technology neutralizes the emission of harmonics at the input of the UPS, provides greater reliability of operations for circuit breakers and extends the overall life of the equipment.

Low harmonic distortions saves unnecessary oversizing of gen-sets, cabling and circuit breakers, avoids extra heating of input transformers and extends the overall life time of all input components.



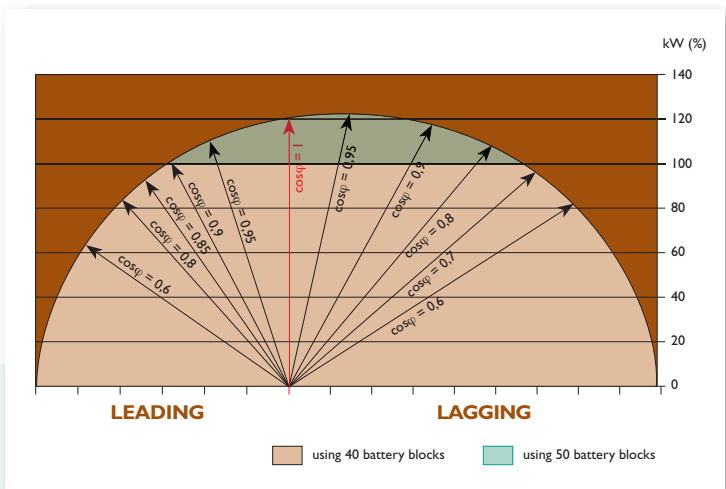
Near to unity Input power factor

The near to unity input power factor (sinewave) of PowerWave 33 reduces the input installation costs by using smaller cable sections and smaller 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 0.73 lagging. In other words PowerWave 33 does not require de-rating within the mentioned range and is fully optimised for a wide range of IT and industrial loads and applications.



Advanced scalable architecture

If additional capacity or redundancy is needed, up to 10 independent UPS units can be mounted in parallel. Correspondingly, a single system of parallel mounted UPS units can deliver a maximum power capacity of up to 2000 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. Your benefits are lower capital commitment, cost-effective expansion and minimal space occupancy.



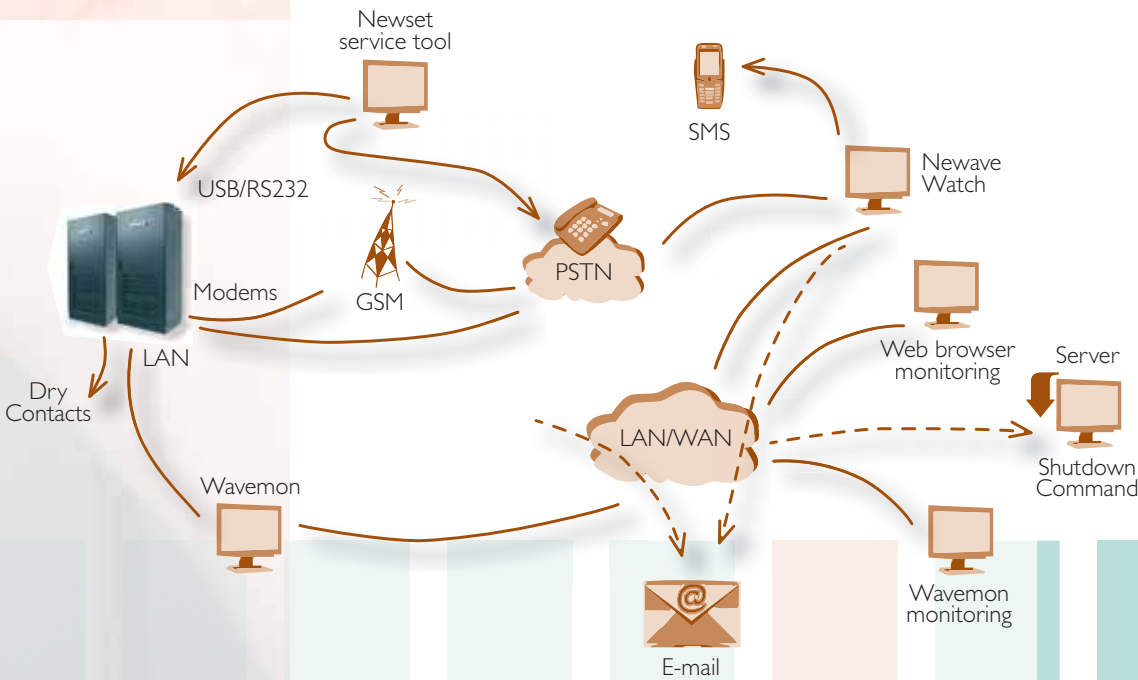
Connectivity

PowerWave 33 is equipped with several connection/interface types which can be used for local and remote monitoring, status signaling, control, maintenance and even FirmWare upgrade. For these operations a specific interface is foreseen for the inter-connection of several parallel UPS. The interfaces are:

- USB, RS232 for maintenance and upgrade *Newave Service Engineer*
- Dry contacts (out) for status signals *local facility management & control*
- Dry contacts (in) for external commands *local facility management & control*
- LAN adapter (SNMP, MODBUS, PROFIBUS) for monitoring *local facility management and control*

- Modem GSM / Fixnet for remote monitoring (*Newavewatch™)
Newave service center/engineer

*Newavewatch™ is a redundant remote surveillance system and service of Newave which complements Newave's "Continuous Power Protection Availability" concept. Newavewatch™ supports Newave's service engineers with early detection/ identification of anomalies, 24/365 monitoring, analysis and diagnosis capabilities and reporting functions. Facility managers are offered real preventive maintenance and get rid of important consequences or even downtimes.



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