

# PowerWAVE 9250DPA

(50–250 N+1 kVA/kW)

Parallelable up to 1.5 MVA/MW





True modular UPS for medium power applications in critical, high-density computing environments such as small to medium-sized data centres, plus industrial automation processes and healthcare facilities.



The 9250DPA's highly efficient modular architecture offers the best reliability for environmentally conscious organisations that also need zero downtime and low cost of ownership.

The UPS sets the standard for the next generation of UPS progress with advanced features such as its transformer-free IGBT converters that include three-level topology and interleaving controls to enable market-leading efficiency of 97.6 per cent.

It also supports Xtra VFI, which further minimises power consumption by intelligently configuring the number of modules required to support the current critical load. When Xtra VI is enabled, the number of active modules required will adjust accordingly, with modules not needed switching to a standby state of readiness but primed to become active again if the load increases.

## PowerWAVE 9250DPA

Six frames can be connected in parallel for 1.5 MW total system power.

Frame-rated power 250 kW N+1 (hosting up to 5+1 modules).

Module-rated power 50 kW.

Unity power factor.

Efficient – up to 97.4% at system level.

Scaling the UPS capacity to match the load power is simple.

Xtra VFI mode: the smart way to enhance efficiency at low load levels.

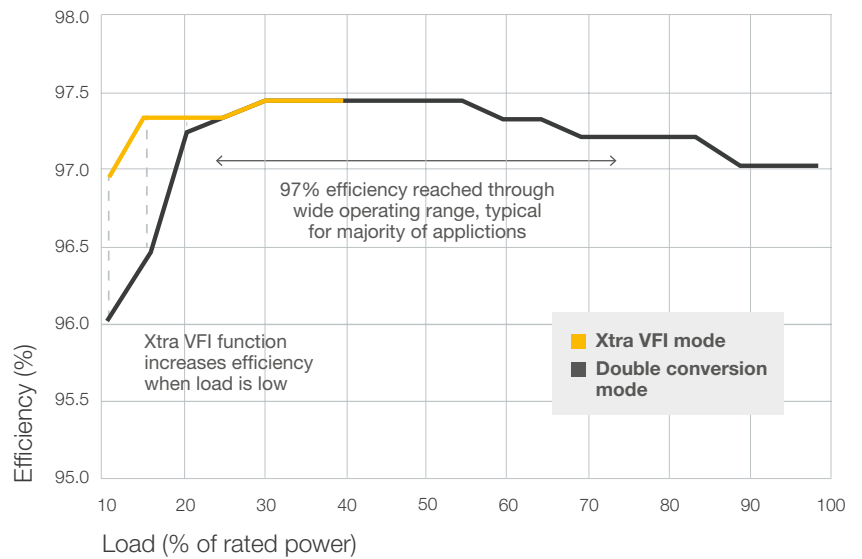
Energy storage: lithium-ion, VRLA, NiCD battery; common battery (per frame) or dedicated battery for each UPS module.

Adding redundancy to increase availability and reliability is easy.

Rated voltage 380/ 400/ 415 Vac.

Robust ring-bus communication for increased reliability.

Designed for even easier access to consumable parts in order to further improve availability and reduce mean time to repair (MTTR).



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## 50-250 kW [N+1] uninterrupted power in a single frame

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The use of DPA™ (Decentralised Parallel Architecture) ensures each module has all the hardware and software needed for autonomous operation: rectifier, inverter, battery converter, static bypass switch, back-feed protection, control logic, display and mimic diagram for monitoring and control. If one module is lost, the others take up the load, meaning that the system is fault tolerant and there are no single points of failure. Uptime is guaranteed, and availability is maximised.

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### Scalability and redundancy inside one single frame

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Ability to host up to six 50 kW UPS modules with N+1 redundancy for up to 250 kW N+1 clean, secured power in single UPS cabinet with small footprint.

Features DPA™ where each UPS module is a comprehensive and independent functional unit for true redundancy.

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### Wiring options secure compliancy for any site installation need

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Supports top or bottom cable entry.

Supports single or dual input feed.

Separate (per module) or common battery.

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### Integrated switchgears complete the system

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Output isolation switch to disconnect the UPS from downstream.

Optional maintenance bypass switch for enhanced serviceability.

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### Easy to monitor and manage

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Intuitive, graphical system user interface.

Each module features dedicated display for module specific data access.

Advanced software and connectivity options.

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## From 50 kW up to 1.5 MW secured power

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Featuring superior 97.6 per cent UPS module efficiency and 97.4 per cent system efficiency, the 9250DPA reduces energy losses that create pure costs as direct electricity spend and costs for cooling. Thanks to three-level interleaved technology, the 9250DPA achieves an efficiency of over 97 per cent in a wide-operating range, when the load is between 25 and 75 per cent of nominal capacity.

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### True modular UPS for medium power applications

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50 kW module-based UPS solution to medium-power commercial applications.

250 kW UPS frame can host up to six modules for N+1 redundancy.

Scaling of power easily and securely from 50 kW to 1.5 MW.

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### High efficiency and proven technology

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Minimises TCO by facilitating top-of-market efficiency of over 97%, leveraging 3-level converter technology and featuring efficiency optimising Xtra VFI – double-conversion mode.

Secures highest availability thanks to inherently redundant modular concept, with decentralised parallel architecture (DPATM) and robust ring-bus communication between modules.

Compact design saves floor space – 0.73m<sup>2</sup> footprint.

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## Features

### DC (battery) breakers

DC breakers for energy storage connection on each module separately.

### Maintenance bypass (optional)

Integrated MBS is available as an option for enhanced service ability with single frame installations.

### I/O section and DC wiring

Wiring area has good space for service. Single and dual input feed supported as well as common or separate battery. Top or bottom cable entry supported.

### Up to 6 x 50 kW UPS module

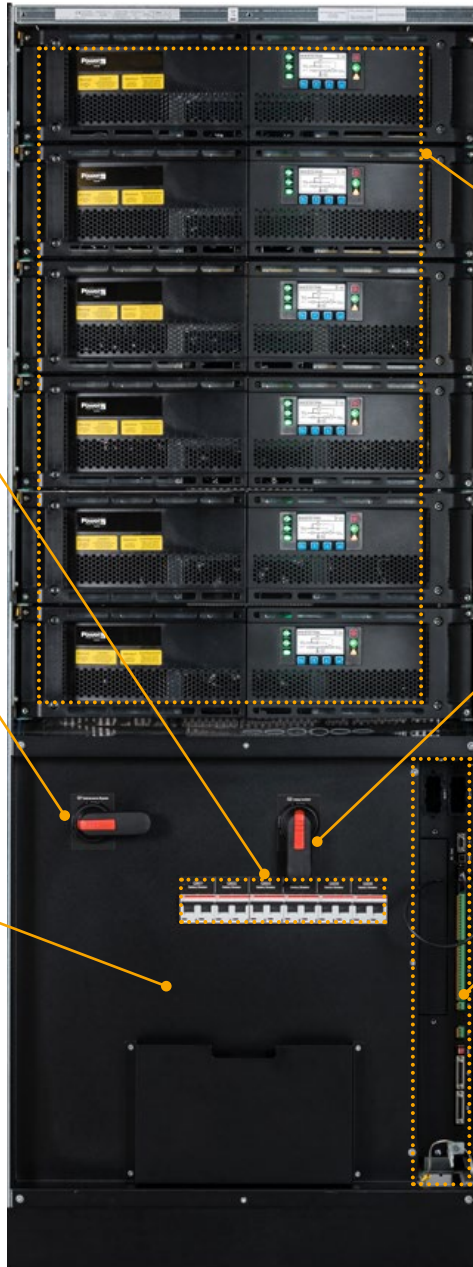
Integrated UPS module with all UPS essential functions: rectifier, inverter, static bypass, control logic and display.

### Output isolation switch

Included in the standard configuration to allow disconnection of complete UPS cabinet from load supply.

### Connectivity section

Two slots for connectivity cards, e.g. SNMP web card and relay board. USB and RS-232 communication ports. Building alarm inputs/relay outputs. Connection point for parallel system communication cable.



## User interface

### System graphical display

Touch screen interface – one per system.

Interactive mimic diagram.

Coloured and graphical display.

Integrated buzzer for alarms.

18-languages selection.

Extended events log (1,000 events).

Clear system overview, measurements and system status.

Navigation into module level, module level measurements and status.

System level commands.

### DPA module display

240 x 128 pixel graphical display.

Five-line menu.

Capacitive buttons/key.

Status LED RG/RGB.

Allows for easy module level data access and module management.

# Technical specification

General data		Environment	
System power range	50–1,500 kVA/kW	Protection rating	IP 20 (IP 21 optional)
Nominal power per module	50 kW	Storage temperature	-25°C to +70°C
Nominal power / frame	250 kW (N+1)	Operating temperature	0°C to +40°C
Number of UPS modules	5 + 1	Altitude (above sea level)	1,000 m w/o derating
Topology	Online double conversion	Batteries	
Parallel configuration	Up to 30 modules	Types	VRLA, open cells, NiCd and Li-Ion
Cable entry	Top or bottom	Battery charger	Decentralised charger per module
Output power factor	1.0	Communications	
Serviceability	Front access	User interface	Graphical touch screen (one per frame as standard) Decentralised LCD and mimic diagram (one per module as standard)
Back-feed protection	Built-in as standard	Communication ports	Communication ports USB, RS-232, potential-free contacts, SNMP (optional)
Input		Customer interface	Remote shutdown, gen-set interface, external bypass contact
Nominal input voltage	380/400/415 VAC	Compliance	
Voltage tolerance % (applicable for 400 V nominal voltage)	Load ≤ 100% (-10%, +15%) Load ≤ 80% (-20%, +15%) Load ≤ 60% (-30%, +15%)	Safety	IEC / EN 62040-1
Current distortion THDi	<3%	EMC	IEC / EN 62040-2
Frequency range	35–70 Hz	Performance	IEC / EN 62040-3
Power factor	0.99	Manufacturing	ISO 9001:2015, ISO 14001:2015, OHSAS18001
Walk in/soft start	Yes	Weight/Dimensions	
Output		Weight (without modules/without batteries)	270 kg
Rated output voltage	380/400/415 VAC	Weight (per module)	66 kg
Voltage tolerance (referred to 400 V)	±2.0%	Dimensions (mm) W x D x H	795 x 943 x 1978
Voltage distortion THDU	<2.0%		
Frequency	50 or 60 Hz (selectable)		
Output power factor	1.0		
Efficiency			
Module efficiency	Up to 97.6%		
Overall system efficiency	Up to 97.4%		
In eco-mode	Up to 99%		

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