Standalone three-phase UPS system

PowerWave 33 S3
60 – 120 kW
Efficient and reliable power protection for IT equipment in small- and medium-sized organizations

Power and productivity
for a better world™

Innovative technology delivering unmatched power performance

ABB has always set global standards in uninterruptible power supply (UPS) solutions. The latest generation of PowerWave 33 Series 3 continues ABB's tradition of applying state-of-the-art technology to UPS products, and delivering the best combination of energy efficiency and overall power performance in the industry.

Offering maximum power protection, the PowerWave 33 Series 3 (S3) has a small footprint and uses less energy than comparable products – thus delivering significant cost savings for the user. The PowerWave 33 S3's exceptional design meets all the modern requirements involved in building and operating energy-efficient and environmentally friendly centers. The PowerWave 33 S3 employs transformer-less double conversion UPS topology and is available in ratings from 60 to 120 kW.

APPLICATIONS

- Small - to medium-sized data centers
- Office and building power protection
- Process automation
- Other critical processes

PowerWave 33 S3 60 - 120 kW

Rating
60 to **120 kW**

Highlights:

- **Reliable** double conversion UPS ensures the critical load is never affected by utility disturbances.
- High, **96 percent efficiency** in double conversion mode reduces running costs without compromising reliability.
- **Space-saving** mechanical design has a footprint of only 1/3 m² and front-to-top airflow allows installation against the wall.
- **Front service access** reduces time needed for maintenance.
- **Up to 10 UPSs in parallel** can give additional capacity and/or redundancy.
- **Integrated system** – this UPS has a maintenance bypass switch, single or dual input feed configurations as well as other features, integrated into the system.
- **Highly flexible battery** configuration supports usage of 42-48 battery blocks in a string. This allows optimizing the battery and reduces the need to oversize.

The best combination of energy efficiency, reliability and low cost of ownership

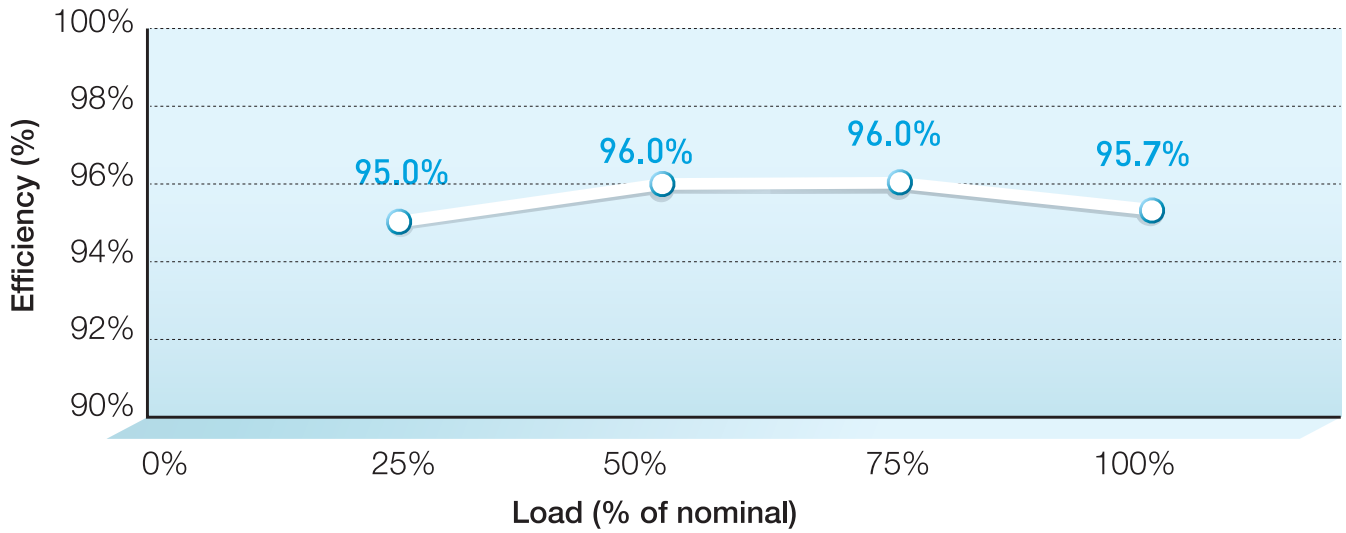
Perfectly reliable

The PowerWave 33 S3 has true online double conversion technology that continuously conditions incoming power to eliminate spikes, swells, sags, noise and harmonics, ensuring that the critical load is at no point affected by any utility disturbances.

Highly efficient

Top-of-market 96 percent efficiency in double conversion mode reduces running costs without compromising reliability. This UPS has a very flat efficiency curve so high efficiency is reached at low load levels.

96% efficiency
in secure double conversion mode



Well optimized for modern loads

Battery runtime can be optimized to match well the exact needs. The UPS supports usage of 42-48 batteries in a single string, which minimizes the total cost of installation as optimal configuration can be used and so there is no need to oversize the battery.

1.0 rated output power factor means that each and every Watt of power is REAL power that is available for use. This helps with optimizing the complete electrical infrastructure in terms of switchgears and cabling, both upstream and downstream from the UPS.

Mains-friendly with low input harmonics and advanced PFC

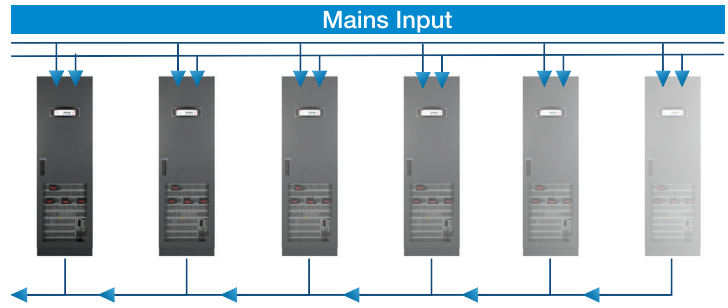
This UPS's front-end rectifier actively controls the input power factor and has extremely low content of input current harmonics. This means that no additional filters are required upstream and the UPS does not cause any disturbance to other equipment connected to the same input source. Unity input power factor and low harmonic distortion allows upstream cabling, switchgear and generator sizes to be optimized, and reduces heating of input transformers.

Technical specification

GENERAL DATA	60 kW	80 kW	100 kW	120 kW
Output power max.	60 kW	80 kW	100 kW	120 kW
Output power factor	1.0			
Topology	True online double conversion			
Parallel configuration	Up to 10 units			
UPS type	Standalone			
Cable entry	Front access			
INPUT				
Nominal input voltage	3 × 380 / 220 VAC + N, 3 × 400 / 230 VAC + N, 3 × 415 / 240 VAC + N			
Voltage tolerance (Ref. to 3 × 400 / 230 V)	For loads < 100 % (-10 %, +15 %), < 80 % (-20 %, +15 %), < 60 % (-30 %, +15 %)			
Input distortion THDi	≤ 4% at 100 %			
Frequency	35-70 Hz			
Power factor	0.99 at 100 % load			
OUTPUT				
Rated output voltage	3 × 380 / 220 VAC + N, 3 × 400 / 230 VAC + N, 3 × 415 / 240 VAC + N			
Voltage distortion	< 2 %			
Frequency	50 or 60 Hz			
Overload capability	0.5 min. @ 150 % load; 5 min. @ 125 % load; 20 min. @ 110 % load			
Unbalanced load	100 % possible			
EFFICIENCY				
Double conversion	Up to 96 %			
In eco-mode configuration	≥ 99 %			
ENVIRONMENT				
Storage temperature	-25 - 70 °C			
Operating temperature	0 - 40 °C			
Altitude configuration	1000 m without de-rating			
BATTERY				
Battery type	Sealed, lead-acid, maintenance-free or NiCd			
COMMUNICATIONS				
User interface	Optional			
Customer inputs	Remote shutdown, genset interface			
Customer outputs	Potential-free contacts (optional), USB (optional)			
STANDARDS				
Safety	IEC / EN 62040-1			
Electromagnetic compatibility (EMC)	IEC / EN 62040-2			
Performance	IEC / EN 62040-3			
Product certification	CE			
Protection rating	IP 20			
Manufacturing	ISO 9001:2008, ISO 14001:2004			
WEIGHT, DIMENSIONS				
Weight (without batteries)	198 kg	206 kg	228 kg	230 kg
Dimensions W × H × D (mm)	615 × 1954 × 480 or 615 × 1978 × 480 (with feet)			

Easily scalable for capacity and redundancy

Up to 10 units can be configured in parallel to provide over a megawatt of UPS power or redundant backup. This scalability means the UPS system capacity can be sized to match the load requirements, with the possibility to add incremental capacity later, when power needs change. The resulting savings in power usage over the service life of the UPS are substantial.



As your power requirements grow, the UPS system grows with them – thanks to its flexible scalability - even in the most confined spaces.

Up to 10 UPSs in parallel

can give additional capacity and/or redundancy

Space-saving and simple to service

Space-saving mechanical design results in a footprint of only 0.30 m² and front-to-top airflow allows installation directly against a wall. For service, only frontal access is needed, which means that the total footprint with maintenance clearances is minimized and overall time required for service and maintenance is shortened.

Compact size

footprint of only 0.30 m²

Contact us

www.abb.com/ups
ups.sales@ch.abb.com

4NWP100605R0001 | Printed in Switzerland, 2014

Power and productivity
for a better world™