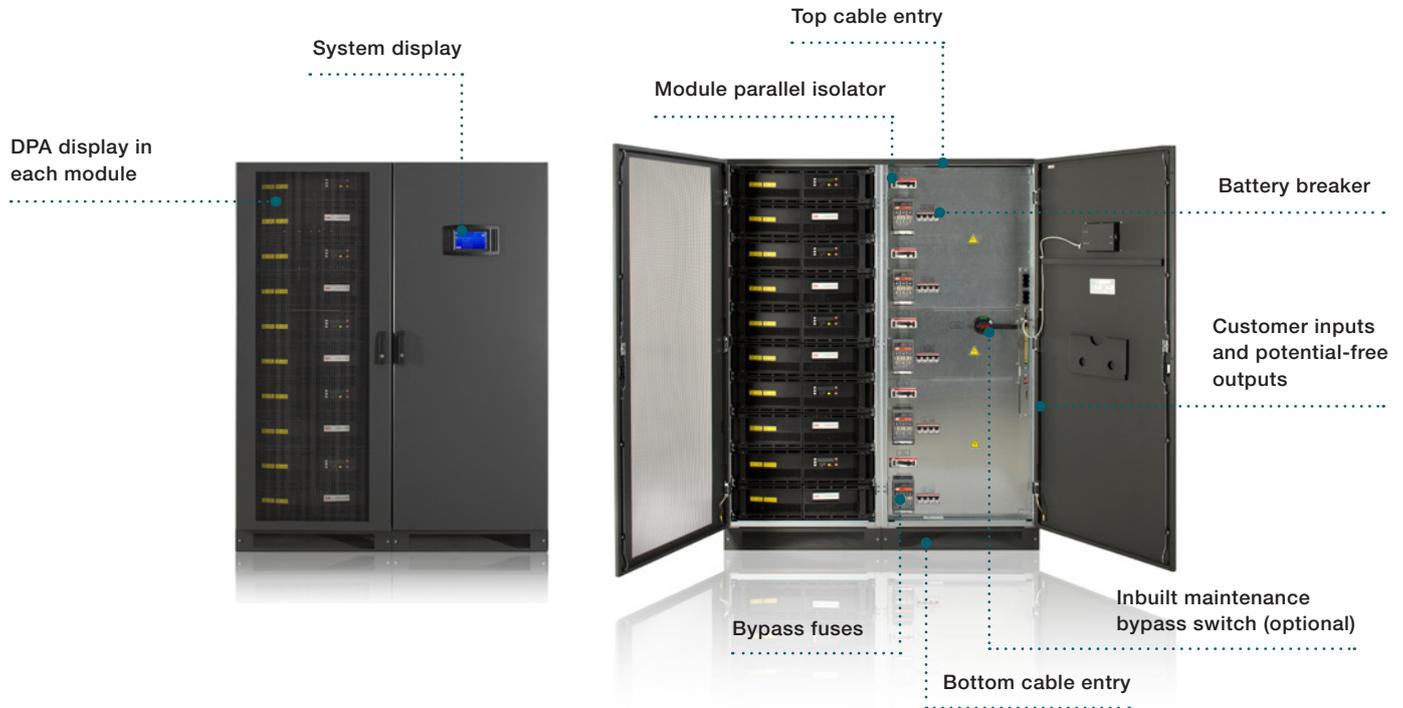


Conceptpower DPA 500

The modular UPS for medium-sized and large data centers



A data center with full uptime. That target is why ABB's Conceptpower DPA 500 is based on Decentralized Parallel Architecture (DPA). Only a truly redundant architecture like DPA allows online modules to be swapped out while the system is running. Each high-reliability, standardized module is self-contained and can be swapped at any time, so nothing

has to be ever switched off – making routine maintenance safe and easy. And if you want to increase power, the UPS can be scaled vertically in 100 kW modular steps to provide up to 500 kW power in a single frame. Horizontal scalability is also given, with up to six frames in parallel, to increase total power up to 3 MW.

99.9999% (6 nines) availability

- Decentralized Parallel Architecture
- Replace or add modules with no downtime
- Short mean time to repair
- No single points of failure

Cost effective “right-sizing”

- Scalable up to 3 MW
- Vertical and horizontal scalability

Low total cost of ownership

- Up to 96% true online efficiency
- Eco-mode efficiency $\geq 99\%$
- Small footprint / high power density
- Unity power factor (kW = kVA)
- Low input harmonic distortion (THDi < 3.5%)

Efficient service concept

- Simple power upgrade
- Fast maintenance
- Reduced spare parts needed
- Full front access

Conceptpower DPA 500

Product features

Total vertical and horizontal scalability

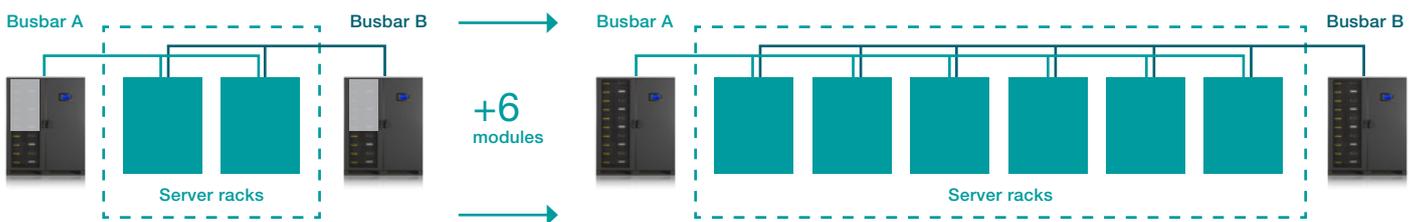
The Conceptpower DPA 500 delivers power protection from 100 to 500kW (one to five modules) in a single cabinet (vertical scalability). Cabinets can operate in a parallel configuration to build a system of up to 3MW (horizontal scalability).



Designed with maximum flexibility at its core

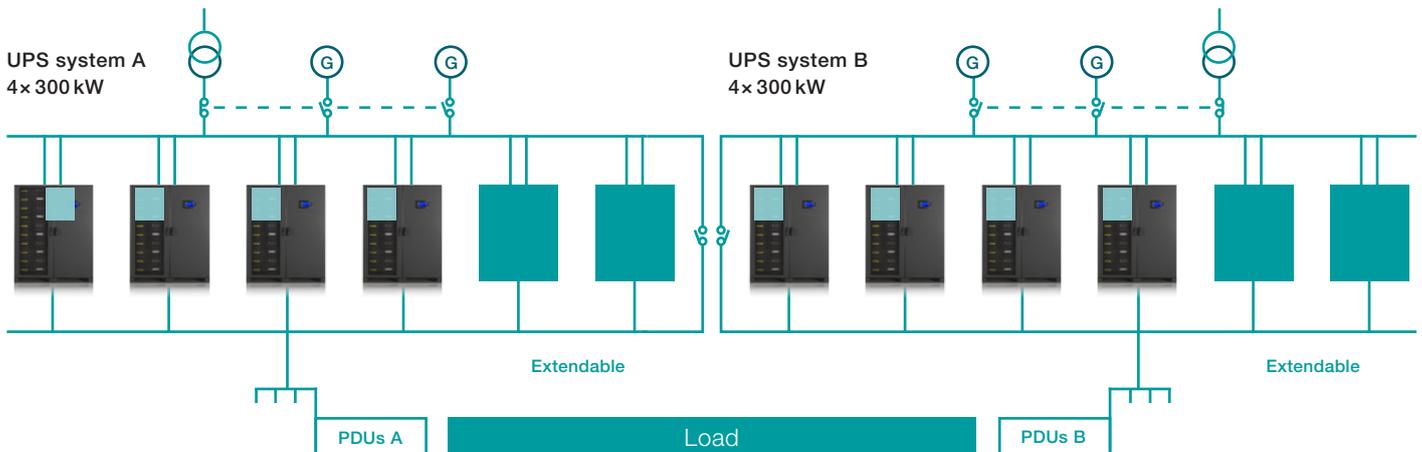
The system flexibility allows upgrading or downgrading power capacity according to your needs.

End of rack row applications



The power demand of one row of server racks can vary from 100kW up to hundreds of kW. The building block concept of Conceptpower DPA 500 allows adaption to the changes in power demand in a growing infrastructure.

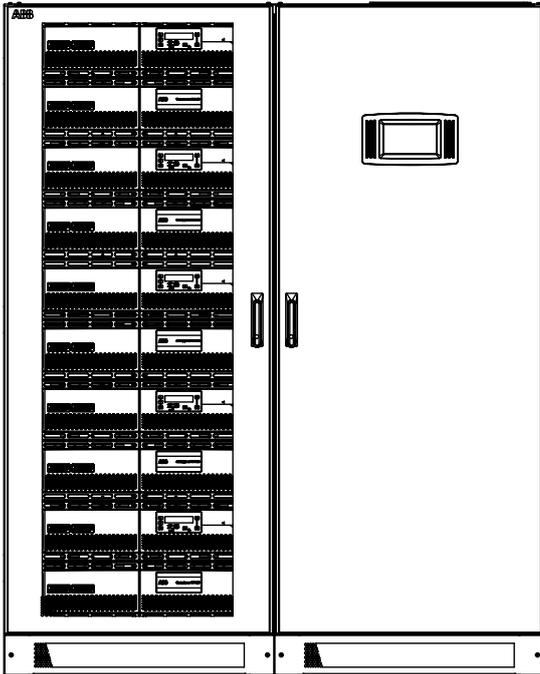
Dual-bus power protection solutions



The sample reference scenario, 1200kW Tier 4, illustrates one possible example of how the Conceptpower DPA 500 can be used to create a high-performance and flexible IT infrastructure. Extra modules can be added while the system is powered up to make it up to 3MW.

Conceptpower DPA 500

Available model



Cabinet type	DPA – 500 kW
Dimensions w × h × d	1580 × 1975 × 945 mm
Capacity	Up to five modules
Weight in kg	975 kg (500 kW system)

UPS cabinet configuration

- Online double conversion UPS
- Inbuilt module isolator
- Inbuilt back-feed protection
- Individual module display
- HMI interface with mimic diagram and LCD
- Top or bottom cable entry (standard)
- Single- and dual-input feed available
- Bypass fuses and battery circuit breaker for each module
- Graphical touch screen system display
- Communication interfaces: RS-232 and USB ports, I/O dry contacts (EPO, GEN On, ...) and interface for external key interlock (bypass)

Options

- Manual bypass switch (one-frame applications)
- Control and monitoring (ModBus RS-485, ModBus TCP/IP, SNMP and others)
- Remote panel (graphical touch screen display)
- Battery temperature sensor
- Cold start
- Synchronization kit

Conceptpower DPA 500

Technical specification

General data

System power range	100 kW–3 MW
Nominal power / module	100 kW
Nominal power / frame	500 kW
Output power factor	1.0
Topology	Online double conversion, Decentralized Parallel Architecture
Parallel configuration	Up to 5 modules in 1 cabinet (500 kW) / up to 6 cabinets in parallel (3 MW)
Cable entry	Bottom or top as standard
Serviceability	Full front
Back-feed protection	Built-in as standard

Input

Nominal input voltage	3× 380 / 220 V + N, 3× 400 / 230 V + N, 3× 415 / 240 V + N
Voltage tolerance (referred to 400 / 230 V)	For loads <100% (–10%, +15%), <80% (–20%, +15%), <60% (–30%, +15%)
Input distortion THDi	<3.5%
Frequency range	35–70 Hz
Power factor	0.99
Walk in / soft start	Yes

Output

Rated output voltage	3× 380 / 220 V + N, 3× 400 / 230 V + N, 3× 415 / 240 V + N
Voltage tolerance (referred to 400 / 230 V)	<±1% with static load / <±4% with step load
Voltage distortion	<2% with linear load / <4% with non-linear load
Frequency	50 Hz or 60 Hz (selectable)

Efficiency

Overall efficiency	Up to 96%
In eco-mode	≥99%

Environment

Protection rating	IP 20
Storage temperature	–25 °C to +70 °C
Operating temperature	0 °C to +40 °C
Altitude (above sea level)	1000 m without derating

Batteries

Types	VRLA (vented lead-acid), NiCd
Battery charger	Decentralized charger per module

Communications

User interface	Graphical touch screen (one per frame as standard) Decentralized LCD and mimic diagram (one per module as standard)
Communication ports	USB, RS-232, potential-free contacts, SNMP (optional)
Customer interface	Remote shutdown, gen-set interface, external bypass contact

Compliance

Safety	IEC / EN 62040-1
EMC	IEC / EN 62040-2
Performance	IEC / EN 62040-3
Manufacturing	ISO 9001:2008, ISO 14001:2004, OHSAS18001

Weight, dimensions

Weight	975 kg (500 kW system)
Dimensions w × h × d	1580 × 1975 × 945 mm

www.abb.com/ups

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