DISTRIBUTION SOLUTIONS

MNS®-Up

UPS power with integrated energy distribution

ABB's MNS platform for low-voltage switchgear has been evolving for over 45 years. Since its inception, the MNS design has focused on the fundamental principles of safety, reliability, modularity and scalability. MNS-Up is the most cost-effective design of a UPS with integrated energy distribution offering savings in electrical infrastructure, installation time and footprint.

In the global information economy, data centers are essential industry infrastructure. MNS-Up makes growth simpler and faster.

Benefits

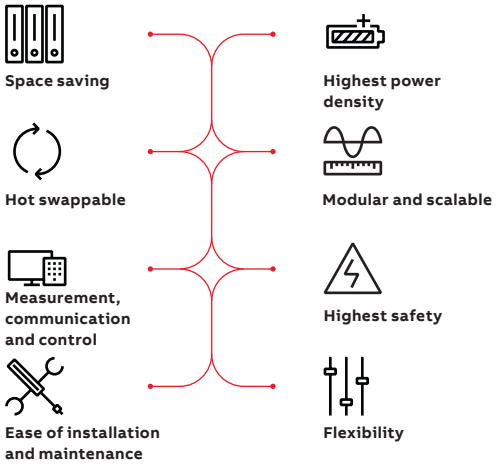
- Scalable 100 kW modules up to 3 MW UPS power enable rapid growth without over-investment.
- Space savings of 20-30%.
- Faster installation and commissioning means operations start sooner.
- Planned incremental additions ensure responsible energy consumption and facility growth match with business growth.
- Switchgear and UPS modules can be safely and rapidly swapped online, lowering maintenance costs and maintaining uptime.
- Factory assembly and testing of MNS-Up means higher levels of quality and safety.
- With ABB factories and service centers in 100+ countries, customers receive fast deliveries and responsive, professional local support.

Space savings of up to 30%

By integrating proven UPS and switchgear technologies into a single, modular system, MNS-Up saves space, time and money.

- For a simple 500 kW system, the space saving can be 20%.
- For systems of 2 MW or more, the footprint saving is more than 30%.

Why choose MNS Up?



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Conventional versus MNS-UP UPS integration
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01 Conventional power distribution system layout, with external bus duct or cable connections
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02 MNS-Up: highly integrated layout, with internal bus bar connections

What's inside MNS-Up
MNS-Up integrates tried and tested innovations that enable ABB to eliminate cabling and ducts that waste space. The system comprises ABB's Conceptpower DPA 500 uninterruptible power supply (UPS) and ABB's MNS low-voltage switchgear with Emax2 circuit breakers.

Trusted UPS
The Conceptpower DPA 500 was developed for data centers and other mission-critical facilities that demand zero downtime.

MNS-Up's UPS modules use a decentralized parallel architecture. Each module has its own input switch, bypass, UPS and output switch. Each module's hardware and software operates self-sufficiently.

As a result, each module is isolated from failures anywhere else in the system. Each module can also be removed for maintenance without shutting down the UPS.

Design-verified low-voltage switchgear
MNS-Up combines the proven MNS switchgear with the space-saving new Emax2 circuit breaker. With four decades of technical development and 1.5 million systems installed around the world, MNS is the industry benchmark in operational safety, reliability and quality.

Simple maintenance
Using standardized withdrawable modules in UPS and switchgear makes maintenance simpler and less expensive.

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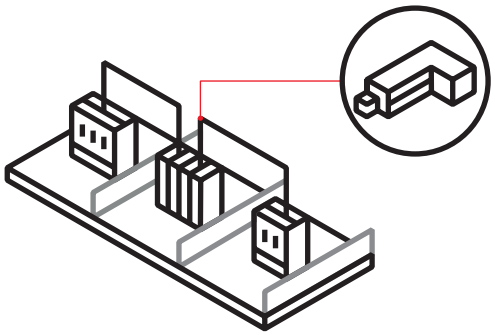
01



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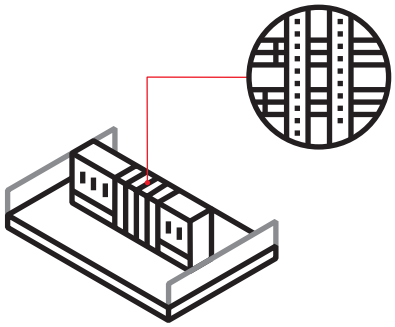

Technical data	
Nominal input voltage	3×380/220 V + N, 3×400/230 V + N, 3×415/240 V + N
Voltage tolerance (referred to 400/230 V)	For loads < 100% (-10%, +15%), < 80% (-20%, +15%), < 60% (-30%, +15%)
Battery voltage	400-650 VDC
Power factor	Input: 0.99 | Output: 1.0
Efficiency	up to 96% in double conversion mode >99% in eco mode
Capacity	500 kW (5 x 100 kW) per frame
Paralleling capability	Up to 6 frames (6 x 500 kW = 3.0 MW)
Busbar	Main AC: 4-pole (100% N) up to 6300 A AC out: 3-pole up to 6300 A
IEC 61439-1/ -2	Low-voltage switchgear and controlgear assemblies Part 1: General rules Part 2: Power switchgear and controlgear assemblies
IEC TR 61641	Guide for testing under conditions of arching due to internal fault*
IEC 60950-1	Information Technology Equipment - Safety Part 1: General requirements
IEC 62040-1/ -2/ -3	Uninterruptible Power Systems (UPS) Part 1: General and safety requirements for UPS Part 2: Electromagnetic compatibility (EMC) requirements Part 3: Method of specifying the performance and test requirements

* Switchgear sections only

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