



MNS[®]-Up

Power distribution and UPS
in a single, compact system



Upgrade your power supply architecture
with MNS-Up

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

Benefits

- Scalable 100 kW modules 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 106 countries, customers receive fast deliveries and responsive, professional local support

Proven expertise

ABB is the industry leader in low-voltage power supply. The new MNS-Up power supply solution distills the company's expertise in data center technology, uninterruptible power supply (UPS) and low-voltage power distribution into a compact, powerful system that takes your power supply architecture to the next level.



Data centers require new power supply architectures.
MNS-Up scales as your business grows.

Highlights

Scale up with 100 kW modules

MNS-Up's modular design expands in 100 kW steps so that companies just pay as they grow. Each frame of the system can support up to five 100 kW UPS modules. Up to six frames can combine to provide 3 MW of backup power supply.

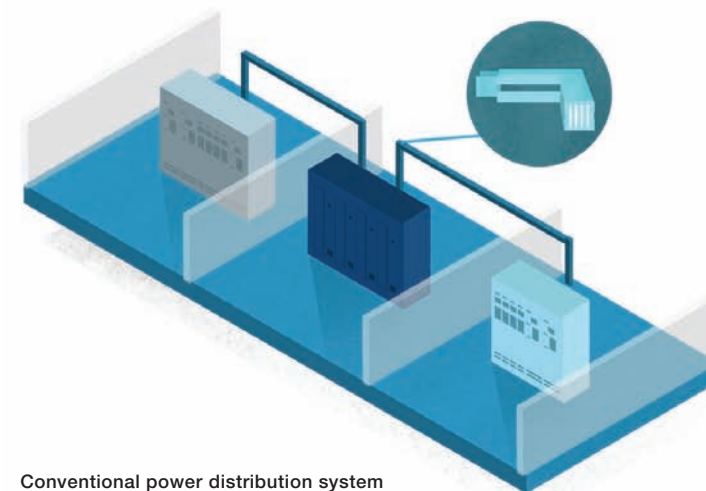
For more power, further systems can be installed in parallel. ABB can install MNS-Up in whatever configuration works best in the space available – L-shape, U-shape, straight lines or back-to-back – and all without external bus ducts or cables.



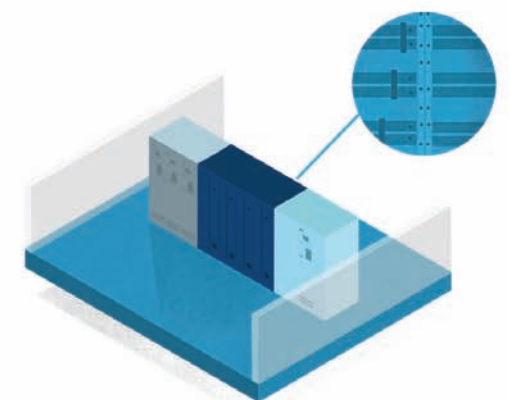
Space savings of up to 30%

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%.



Conventional power distribution system layout, with external bus duct or cable connections



MNS-Up: highly integrated layout, with internal bus bar connections



Customer in focus

Green Datacenter of Switzerland uses a 5.2MW MNS-Up system at its 7,265 sq m facility in Zurich-West. Built in accordance with Tier IV standards, the high-efficiency facility operates at a power usage effectiveness (PUE) of 1.19. For each watt of power used to run servers, only 0.19 watts is consumed by other infrastructure needs

Delivery is everything

“At ABB we understand that overcapacity is just as serious a topic for data center operators as uptime. To grow, you need your data centers and power supplies to grow with you, step by step – in ways that save space and energy and that make your investment predictable. And you need a partner who delivers.

“Green had been looking for an effective way to scale their power supply for some time before they connected with us. We saw immediately that MNS-Up offered a unique way to align their power supply with their business strategy and we got to work.

“With fast installation and can-do, responsive support, ABB works hard to deliver to every customer the same high level of quality service.

“A year on, Green’s CEO says MNS-Up has exceeded his expectations. MNS-Up allowed Green to cut the space for the electrical infrastructure by 25%, increasing white-space. Furthermore, Green could control their day-one capital expenditure by matching MNS-Up capacity with business needs.”

Andre Schaerer

Managing Director

ABB Electrification Solutions Switzerland

Product knowledge



MNS-Up modular technology is simple to use, safe, flexible, reliable and easy to maintain

What’s inside MNS-Up
MNS-Up integrates tried and tested innovations that enable ABB to eliminate cabling and bulky bolt-ons that waste space.

The system comprises ABB’s Conceptpower DPA 500 uninterruptible power supply (UPS) and ABB’s MNS 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. Major international stock exchanges and data centers use Conceptpower DPA500, the online transformerless, double-conversion UPS of choice worldwide.

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 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 makes maintenance simpler and less expensive.

Technical data	
Input voltage	380/400/415 VAC +/- 15%, 35-70 Hz
Output voltage	380/400/415 VAC +/- 1%, 50 or 60 Hz
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 (5x100 kW) per frame
Paralleling capability	Up to 6 frames (6 x 500 kW = 3.0 MW)
Bus bar	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 arcing 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

Contact us

ABB Electrification Solutions

Local contacts at
www.abb.com/mns

Argentina

+54 1142295500

Australia

+61 297537170

Benelux

+31 104078663

Brazil

+55 1124328010

China

+86 5926038118

Czech

+420 543145111

Denmark

+45 44504450

Egypt

+20 226251300

Estonia

+372 6801800

Finland

+358 102221999

France

+33 388556700

Germany

+49 6203712816

Greece

+30 2102891807

India

+91 8022948905

Italy

+39 03714531

Kazakhstan

+7 7272583838

Korea

+82 415292148

Malaysia

+60 356284888

Norway

+47 22872000

Poland

+48 713858300

Qatar

+974 44253888

Russia

+7 4957772220

Saudi Arabia

+966 112653030

Singapore

+65 67765711

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+27 102025000

Spain

+34 934842121

Sweden

+46 21325000

Switzerland

+41 844845845

Thailand

+66 26651000

Turkey

+90 2165816800

UAE

+971 43147500

United Kingdom

+44 1915144555

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