

DATA CENTER SOLUTION DAY 2023 | OCTOBER 19, 2023 | JAKARTA, INDONESIA

Power Protection - UPS

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Electrification, Indonesia





Presenter



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Product Power Protection

Overview presentation

Power Protection

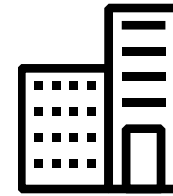
Key facts



>900
employees

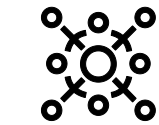


Present in **60 locations**



Production units **3**
Main Local Product Units (LPGs);
Switzerland, Romania, China

Why Power Protection from ABB?

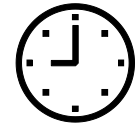


Comprehensive offering

We offer a wide variety of UPS, Power Conditioning and Power Distribution products to cover all your critical power needs.

Reliable performance

All of our products, are designed, built and tested for high reliability and availability performance.



Our values



Safe operation

Our products will help you create a safe working environment.

Innovative and sustainable design

Designed for easy, high efficiency and cost-efficient installation, maintenance and use.

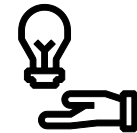


ABB services

All our UPS products are always supported by our dedicated and skilled worldwide service network. With a product by ABB you are never alone.

Newave UPS Solutions is now ABB

Newave



Newave developed and manufactured technologically advanced UPS systems for critical electronic devices and systems. The company was a leading integrated solutions provider for UPS systems covering the full range of development, manufacturing, distribution and after-sales services. Newave was established in 1993. Its main operations were based in Quartino in the Swiss region of Ticino. Newave introduced modular and transformer-less UPS technology to the UPS market; these are now the most important architectural trends in the UPS market today.

ABB acquired Newave Energy Holding SA in March 2012, making it a 100 percent member of the ABB Group. The company initially kept its name in some European countries; in all other countries it was called ABB Power Protection Product Group. All Newave entities, including the headquarters in Quartino, fully switched to the ABB brand in the first half of 2014.

Organizationally, the product group has been integrated into the ABB Discrete Automation and Motion division. The operations in Quartino have become the main location for ABB's UPS products and is today ABB's UPS center of excellence.

GE Industrial Solutions is now ABB



GE Industrial Solutions is now ABB

Let's write the future of electrification.
Together.






[DISCOVER MORE](#)



Product offering

ABB Power Protection

Commercial applications

	1ph UPS	3ph UPS – Standalone (Monolithic)	3ph UPS - Modular	High-power UPS	Industrial UPS
IEC offering	PowerValue 11LI 600-2000 VA PowerValue 11T G2 1-10 kVA PowerValue 11RT G2 1-10 kVA PowerValue 11/31T 10-20 kVA	PowerScale 33 10-50kVA PowerWave 33 60-500 kW SG Series 10-500 kVA	DPA UPScale 10-200 kW DPA 250 S4 50-300 kW DPA 500 100 – 500kW	MegaFlex DPA 1 – 1.5 MW	Powerline DPA 20 – 120 KVA
			DPA 60 (20-60kW) DPA 120 (20-120 kW) DPA 300 (100-300 kW) DPA 500 (100-500 kW)		
Segments/ applications	Small IT Rooms Building infra-structure Critical equipment ATM	IT / server rooms Data centers Telecomm. Building infrastructure Healthcare & medical imaging Light industries	IT / server rooms/ edge Data centers Telecom Building infrastructure Transportation	Data centers Hospitals Light industrial	Oil, Gas, & Chemicals Mining Critical process & Automation Semiconductor Manufacturing
Pictures					
Power range	600 VA – 20 kVA Parallel systems: up to 80 kVA	10 kVA – 1000 kW Parallel systems: up to 5 MW	10 kW – 500 kW Parallel systems: up to 3 MW	1 MW – 1.5 MW Parallel systems: up to 4 units	Powerline up to 600 KVA (Parallel Systems)

Service

Fast customer support across the entire value chain

Integration of all segments and customer channels



Rapid response

- Repairs
- Spares and consumables
- Replacement
- Training
- Service agreements



Lifecycle management

- Installation and commissioning
- Maintenance
- Extensions, upgrades and retrofits
- Replacement
- Training
- Spares and consumables
- End of life services
- Service agreements



Operational efficiency

- Engineering and consulting
- Maintenance
- Advanced services
- Extensions, upgrades and retrofits
- Training
- Service agreements



Performance improvement

- Advanced services
- Engineering and consulting
- Extensions, upgrades and retrofits
- End of life services
- Service agreements

ABB's UPS service offering

A truly global service organization

- Channel partners in nearly each country
- We support our channels through our local sales and service organizations worldwide



Product offering

Technology insights: DPA™ for modular UPS

The concept of modular UPS - What makes it so unique

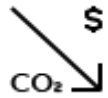
In centralized systems, failure of one point can bring down the entire system; in DPA, there are no shared critical elements, therefore no single points of failure.

Maximized availability



- No single point of failures
- Online swappable module for continuous uptime
- Fail-safe operation for high power applications thanks to ring communication

Low total cost of ownership



- High efficiency reduces operational costs and minimizes environmental impact
- Intelligent Xtra VFI feature optimizes efficiency under all load conditions
- Capacity can be easily scaled up or down and adapted to power demand

Full flexibility



- Small installation footprint saves space
- Variety of options for energy backup, including lithium-ion batteries
- Adaptable to different installation schemes

High service-ability

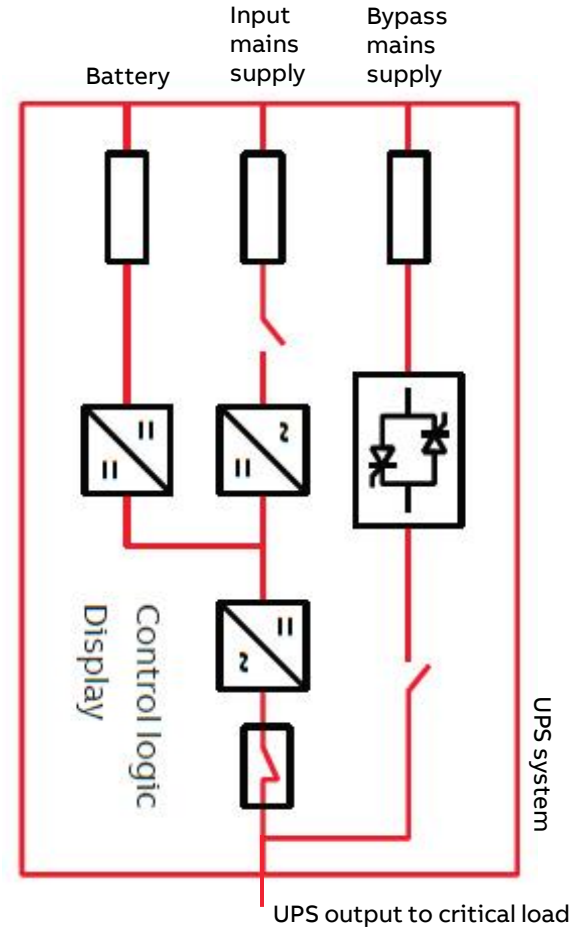
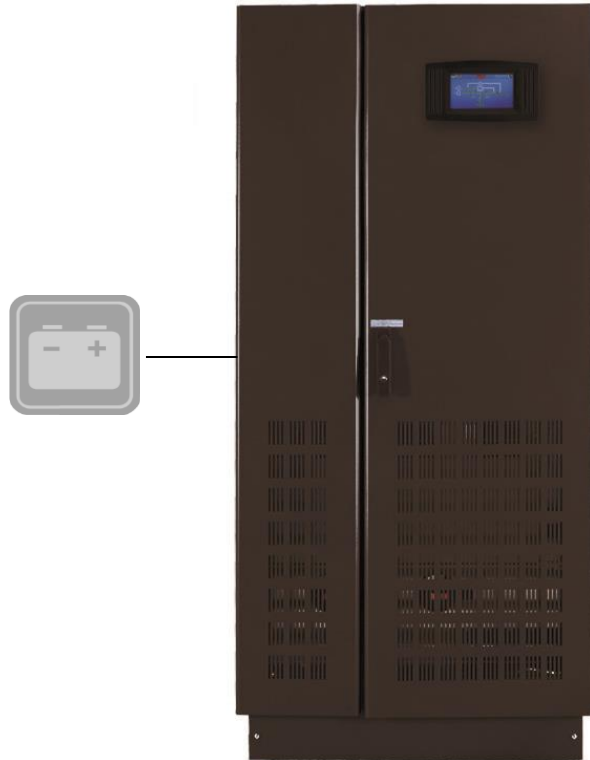


- Very fast and easy replacement of modules
- Standardized modules reduce inventory levels of specialist spare parts
- Ease of monitoring at system and module level

DPA increases system reliability and availability and minimizes TCO

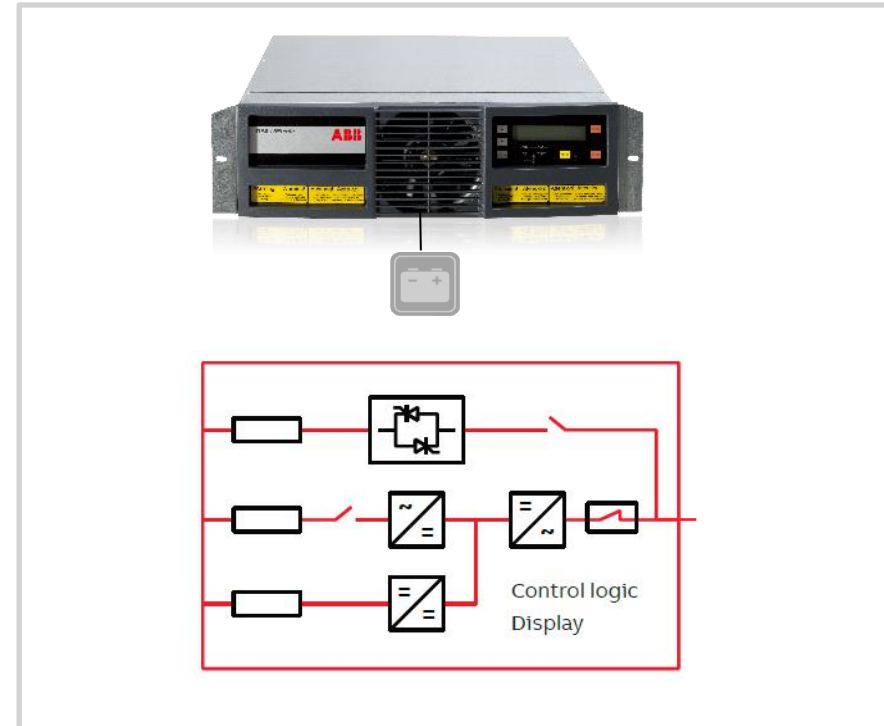
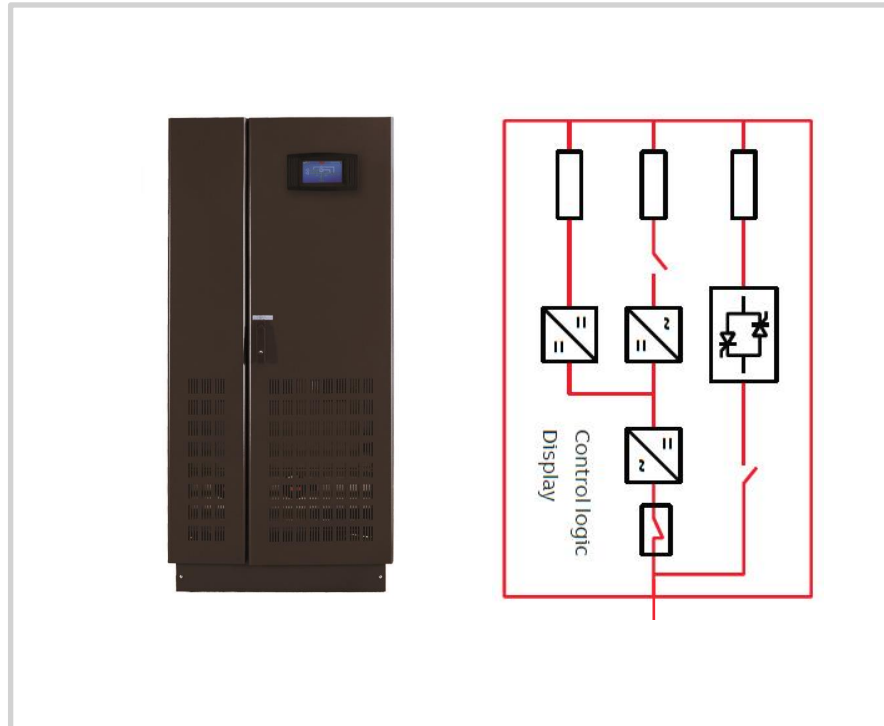
Technology insights: The DPA concept

Traditional standalone UPS concept / main functional elements



Technology insights: The DPA concept

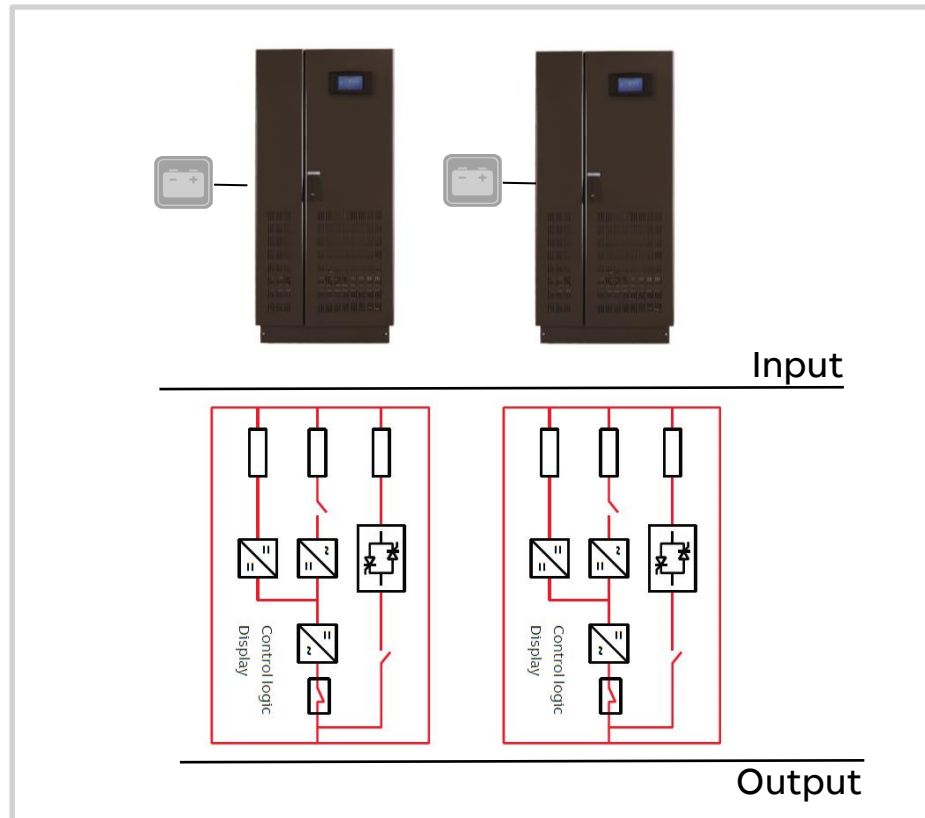
The DPA concept mirrors the traditional UPS concept: single UPS



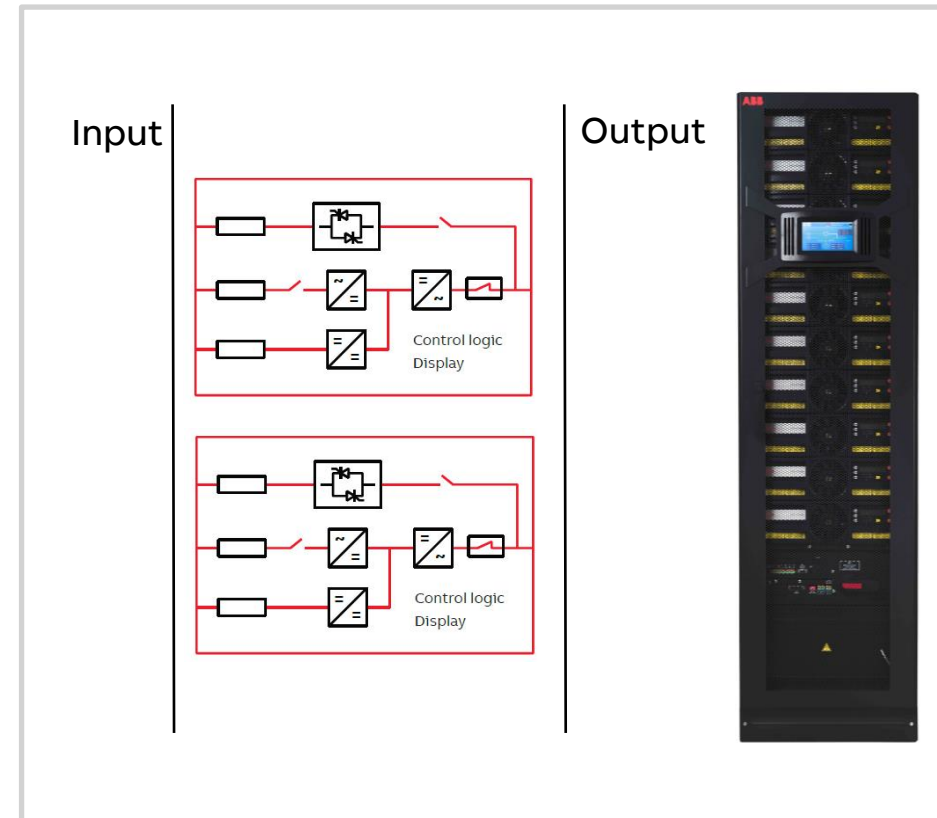
Each DPA module is a complete UPS system

Technology insights: The DPA concept

The DPA concept mirrors the traditional UPS concept: parallel UPSs



Horizontal scalability for capacity and redundancy

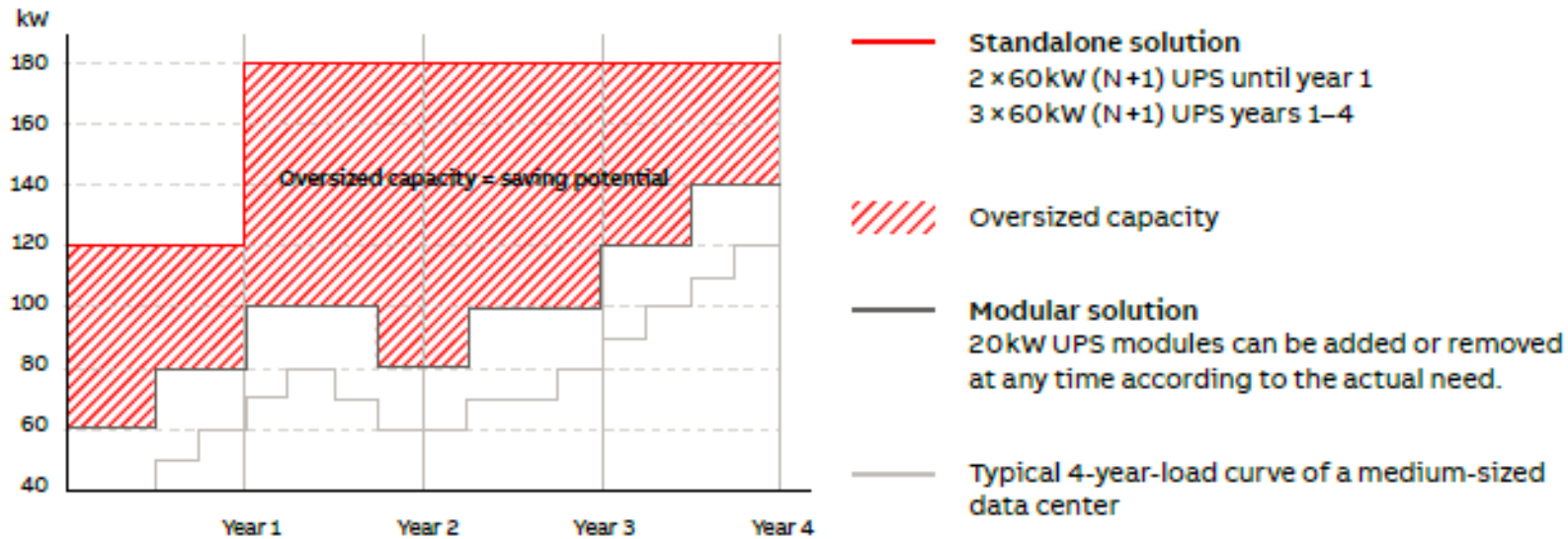


Vertical and horizontal scalability for capacity and redundancy

ABB's modular UPS design

Ensures high availability and low total cost of ownership

The UPS capacity can be changed with changing load, eliminating the need to oversize the UPS upfront



Vertical modularity minimizes space requirements and maximizes predictability of future space requirements

UPS product portfolio

3ph modular UPS (IEC)





DPA 250 S4

Features



- Up to 300 kW or 250 kW N+ 1 power in one frame cabinet
- 50 kW power per module
- Up to 1500 kW system power
- 97.6% module efficiency and 97.4% system efficiency
- Fail-safe operation for mid- high-power applications (ring communication technique)
- Xtra VFI maximizes efficiency under low-load conditions
- Compatible with Lithium, VLRA, NiCd energy storage solution





Benefits

-  High efficiency – top of the market – reducing up to 30% operational cost and cooling infrastructure
-  Scalable and redundant power from 50kW to 1.5 MW capability, pay as you grow
-  Up to 25% space saving with an optimized footprint
-  Quick to repair and maintain < 10 min service time for one module

DPA 500



- Up to 500 kW in one frame cabinet
- 100 kW power per module
- Up to 6 cabinets in parallel (3MW)
- Up to 96 % system efficiency, low input and output THD, output PF 1
- Xtra VFI mode maximizes efficiency under low-load conditions
- Build-in bypass input breaker, battery fuse, output isolation switch per power module
- Compatible with Lithium, VLRA, NiCd energy storage solution

-  Scalable and redundant power from 100kW to 3MW, , pay as you grow
-  Optimal performance to reduce operational cost
-  High adaptable to the infrastructure, ensuring easy installation and maintenance
-  Remote monitoring and connectivity, to building management systems

UPS product portfolio

3ph modular UPS (IEC)

DPA UPScale ST Features



- Up to 200 kW power in one frame cabinet
- 10/20 kW power per module
- Up to 400 kW system power
- Up to 96% efficiency (98% in eco-mode)
- Integrated batteries
- Graphical display with mimic diagram
- Manual bypass switch

Benefits



All-in-one solution UPS modules, MBS and internal batteries



Redundant power capability, up to 180kW (N+1) or 200 kW in one frame



Scalable power up to 400kW, by paralleling up to 2 frames



Compact design to save floor space, only 0.42 m² footprint

DPA UPScale RI



- Up to 80 kW power in one frame cabinet
- 10/20 kW power per module
- Up to 96% efficiency (98% in eco-mode)
- Rack-independent
- Available in seven different models
- Integrated batteries



Rack independent UPS solution, suitable for standard 19" racks and customized solutions



Redundant power capability, up to 60kW (N+1) or 80 kW in one frame



All-in-one solution, UPS modules, MBS and internal batteries



Continuous operation, availability guaranteed

UPS product portfolio

1phase UPS IEC

PowerValue 11LI Up/Pro IEC



- Available models:
 - 11LI Up: 600-800-1000-1500-2000 VA
 - 11LI Pro: 600-800-1000-1500-2000 VA
- Integrated batteries
- Backup and surge protection only outlets
- USB and RS232 port



Enhanced runtime, up to 4' @ 60% load



Easy battery replacement, change your battery in seconds



Compact size, min 122x315 mm footprint



LCD display, all information in a tap

PowerValue 11T G2 IEC



- Available models: 1-2-3-6-10 kVA
- Power factor up to 1.0
- Integrated batteries for standard models
- Long runtime models available
- Manual bypass switch (6-10 kVA)
- Paralleling up to 3 units (6-10 kVA)
- Communication interfaces : dry contacts, network management cards



Top quality at convenient price, more value to our customers' money



Reduced footprint most compact UPS among its rivals



Reliable in harsh environment up to 50°C operative temperature at 50% load



Enhanced runtime, >5 minutes at full load and nominal power factor

UPS product portfolio

1phase UPS (IEC)

PowerValue 11RT G2 IEC



- Available models: 1-2-3-6-10 kVA
- Power factor 1.0 (IEC)
- Integrated batteries
- Long run time models available
- Manual bypass switch for 6-10 kVA
- Paralleling up to 3 units for 6-10 kVA
- Communication interfaces : dry contacts, network management cards



2U only, smallest 1ph module available in the market



High efficiency, up to 95% in double conversion (98% in ECO mode)



Adjustable battery charger current, up to 12 A for challenging runtime applications



Scalable capacity, up to 3 UPS in parallel deliver 30 kW per system

PowerValue 11/31T IEC



- Available models: 10-20 kVA
- Integrated batteries for standard models
- Long run time models available
- Manual bypass switch
- Paralleling up to 4 units
- Communication interfaces : dry contacts, network management cards



All-in-one UPS, internal batteries, maintenance bypass switch



Scalable capacity, up to 4 UPS in parallel deliver 80 kVA per system



Reduced footprint save valuable floor space



Long run models, extend system runtime to hours with up to 2 battery cabinets per UPS

UPS product portfolio

3ph standalone UPS IEC

PowerScale

Features



- Available models: 10-20-25-30-40-50 kVA
- Integrated batteries
- Manual bypass switch
- Single and dual input feed
- Communication interfaces : dry contacts, network management cards

Benefits



Reduced footprint, UPS with integrated battery for backup



Scalable capacity, up to 20 UPS in parallel



EN 50171 ready, specific solution for emergency lighting



Continuous operation, availability guaranteed

PowerWave 33



- Available models : 60-80-100-120 kW (S3) / 160-200-250-320-400-500kW (S2), build-in manual bypass switch
- Small footprint : 0.3m² (S3), 1.4 m² (S2)
- Up to 96% in double conversion (VFI) mode and 99% in Eco mode
- Friendly system interface : LCD (S3) and graphical display (S2)
- Communication interfaces : dry contacts, network management cards



Optimal performance for large infrastructure reducing operational costs



Scalable capacity up to 5MW, up to 10 UPS in parallel



High adaptable to the infrastructure, ensuring easy installation and maintenance



Remote monitoring and connectivity, to building management systems

UPS product portfolio

3ph standalone and transformer-based UPS IEC





SG Series IEC

Features

Benefits



- 10-500kVA power in one frame cabinet
- Up to 3MVA system power (6 units with RPA)
- Up to 94% efficiency, 98% in super eco mode
- IGBT rectifier & inverter, input pf 0.99, output pf 0.9
- Additional transformers for input/output isolation and voltage adaptation available for all kVA sizes and voltages
- Compliance to EMI standards (up to C2 level IEC 62040-2)

-  Optimal performance for a wide power ranges, excellent dynamic response in case of pulsating loads
-  RPA™ for reliability, redundancy & scalability, up to 6 UPS in parallel
-  Continuous operation, proven reliability
-  Remote monitoring and connectivity to building management systems

UPS product portfolio





3ph High Power UPS IEC

MegaFlex DPA IEC Features



- 1000 kW – 1500 kW power in one frame cabinet
- Up to 6 MW system power (4 units in parallel)
- Up to 97.4 % efficiency, 99 % in super eco mode
- Optimized system efficiency under low load conditions with ABB Xtra VFI modes
- Slide-in power modules for simple and safe installation
- Intelligent predictive maintenance program to plan and reduce maintenance throughout product life

Benefits

-  - Maximized power density (up to 45% footprint saving)
-  - Maximized availability using proven DPA technology
-  - Plug-in design make it easy and safe to hot swap
-  - Design life of up to 15 years

UPS product portfolio

Industrial UPS

PowerLine DPA IEC Features



- 20-120kVA modular UPS, DPA architecture
- IGBT rectifier & inverter, input pf 0.99, output pf 1
- Up to 96% efficiency, 98% in eco mode
- N+N (3ph) and N+1 (1ph) redundant configurations available
- Pre-configured and pre-engineered
- Up to +45°C, IP42, dust protection and tropicalization available

Benefits



Redundant power capability
Up to 120kVA (3ph) or 80kVA (1ph)



Superior Electrical Performance
Up to 96% efficiency / 2.7In short-circuit (3ph)



Quick to repair and maintain
< 15 min replacement time for one module



Highly adaptable to industrial conditions
Wide range of options to withstand challenging conditions



- Max. system power 80 kVA
- 480V, three-phase in/ 120V single-phase out system
- GUI display with 16 LED system status
- UL 1778
- CSA C.22.2 No. 107.3 UPS Systems



Robust, design suitable for heavy industrial applications



Phase-locked loops (PLL) control system enables precise measurements of input/output waveform



Innovative IGBT based pulse-width modulation (PWM) inverter design employs active current limitation for higher short circuit tolerance



Digital static transfer switch design, which enhances system performance through increased redundancy and reliability



Global footprint

Manufacturing Units

PG Power Protection

Footprint



Overview of UPS business experience

Local product group Quartino, Switzerland

200+ employees

Design & manufacturing of UPS products

Product offering:

- 3ph and 1ph modular UPS (commercial and industrial UPS)
- 3ph and 1ph standalone UPS
- 3ph high power UPS

Large testing infrastructure enables testing of up to 4 MW systems

24/7 data center services

Typical applications are 24/7 operations & critical processes:

- Data centers
- Process automation
- Health care
- Transportation



[Watch the video here](#)

ABB Power Protection R&D test facility

Quartino, Switzerland



Our test center facility in Quartino, Switzerland has the following capabilities:

- The modular infrastructure enables flexible testing of one 4 MW system or two smaller systems.
- The UPS can be tested together with associated equipment – such as switchgear, static transfer switches, transformers etc.
- Different countries have different voltage standards – 208, 400, 480 VAC – and they can all be tested here.
- Customers and ABB engineers have a safe environment from which they can closely monitor the entire test process.
- The facility is fully equipped with teleconference and video services to allow customer participation from anywhere.
- Around 90 percent of the power used in testing is recirculated. This massively reduces the electrical energy that is pulled from the public grid.
- Additionally, there is also a thermal chamber available to test components during our Research and Development projects.

ABB UPS ~ Surveyor Independent ~ 100% original from Switzerland

BARANG MODAL DALAM KEADAAN TIDAK BARU

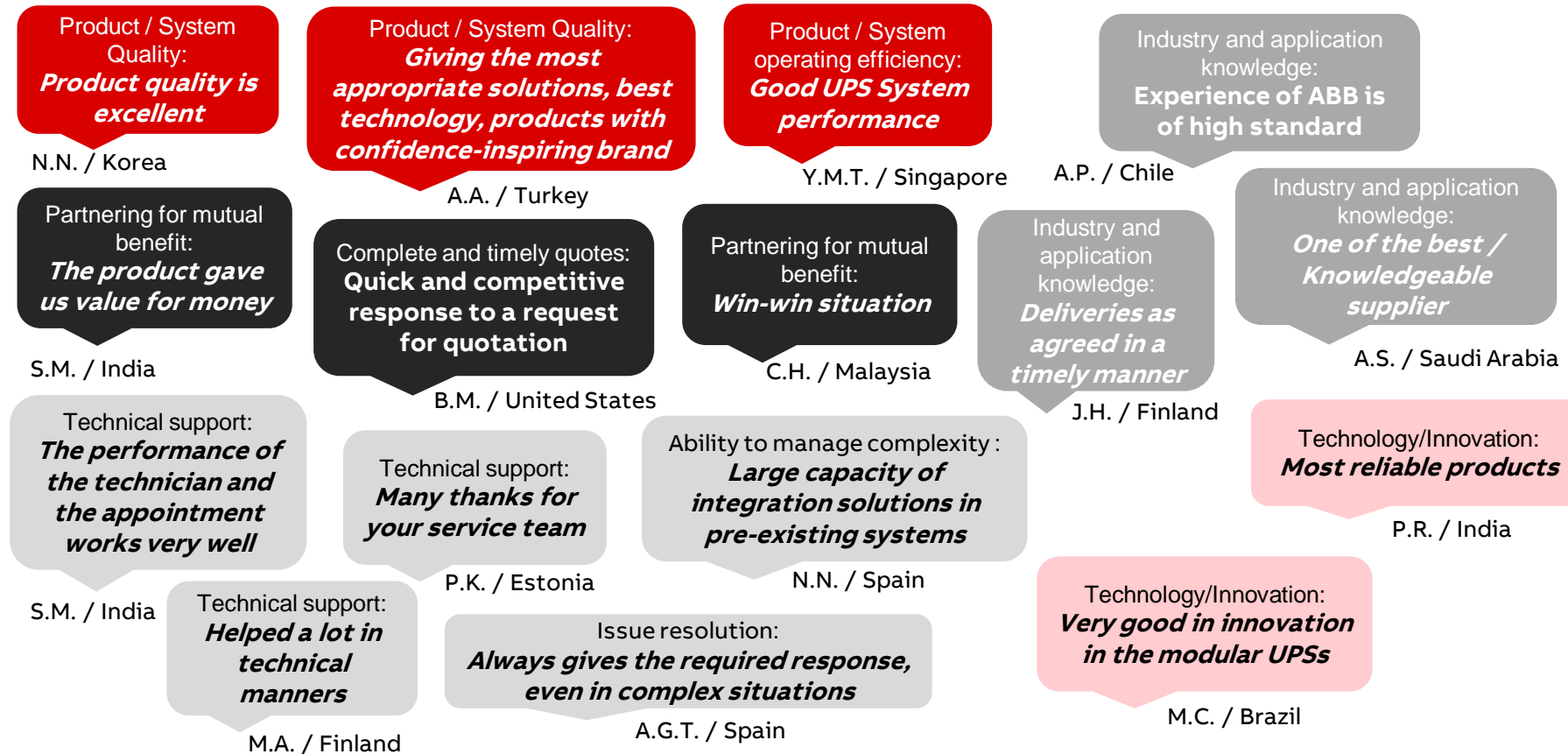
VR No.	: TB21C0760	VO Expiry	: 01 August 2023 (Latest Arrival Date)
VO No.	: CH11HC0760		
VO Date	: 06 August 2022		
Importer / Importir		Exporter / Eksportir	
Name / Nama	: PT. ABB SAKTI INDUSTRI	Name / Nama	: ABB Power Protection SA
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Phone / Telp	: 0819643155	Country / Negara	: Switzerland
Fax	: -	Phone / Telp	: [REDACTED]
Email	: rajeni.ray@id.abb.com	Fax	: -
NFPW	: 01.061.553.2-055.000	Email	: [REDACTED]
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No	HS Code	Goods Description	Origin Quantity
1	8504.40.11	UPS Powerwave 33	CH 2,00 SET
Remarks			

We're so excited to share with you another great story around our UPS solution. **The Indonesian State Palace (or locally known as Istana Negara) electricity system will be protected by ABB's Uninterruptable Power System (UPS) PowerWave 33** as part of the efforts to modernize and protect the power supply to the palace.

Strong partnership between our channel partner and ABB was one of the keys to this success. We worked together as a team to convince customer that our solution would best fit their exacting requirements. Learn more about how the team has managed to secure the order after a long and tough award process, here in this internal article.

Customer focused organization

What our customers say about us





References

Project reference

UPS installation at key installed base across Indonesia

PowerWave 33 UPS



Self-contained ABB UPS on-wheels is supporting Indonesia's state-owned power PLN to protect power supplies at 2022 G20 summit in Bali.

The PowerWave UPS achieves efficiency of up to 96% in double conversion or 99% efficiency in eco-mode across a wide load range.

PowerLine DPA UPS



ABB UPS solutions based on the PowerLine DPA 20–80 kVA system installed at four different locations of South Pacific Viscose (SPV), part of Lenzing Group.

The ABB PowerLine DPA UPS guarantees continuous power availability to SPV's operation-critical infrastructure

PowerWave 33 UPS



PowerWave 33 UPS helps AREA31 to flexibly accommodate an increase in power requirements, securing power 24/7 and keeping consumers connected.

Project reference

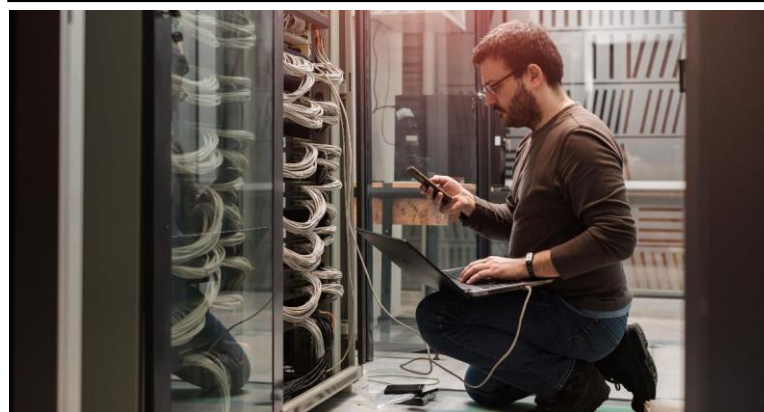
UPS installation at key installed base across Indonesia

PowerWave 33 UPS



ABB UPS solutions installed at IndoKeppel Data Centre 1 (IKDC1), a colocation data center campus in Bogor, Indonesia.

MegaFlex UPS



The first installed base of ABB MegaFlex UPS (and the lithium battery) in Indonesia and in the Southeast Asia region. The UPS is installed at Indonesia's telecommunication giant's data center.

The supply includes MV and LV switchgear.

Complete solutions



ABB provided MV, LV, UPS and building automation systems for the first Tier 1 accredited data center in Indonesia. ABB equipment are supporting the phase 1 of this state-of-the-art data center with an IT load of 1MW in a full 2N configuration.

The project was delivered in 2018, and Tier IV accreditation took place at the end of 2018.

References

Innovation in action: Modular UPS for medium to large data centers

Volico Enterprise Hosting Solutions – Broward County and Miami, Florida, USA



[Watch the video](#)

DPA 500 480 UL UPS solves a data center's need for rightsizing and simple scalability

Power protection solution for dairy manufacturer

Fonterra Brands – New Zealand



[Watch the video](#)

ABB's power protection solution eliminates voltage sags, providing estimated cost savings of \$200,000 per year for Fonterra.

ABB technology improves energy supply reliability at Africa's largest climate-controlled agricultural facility



[Read the article](#)

ABB's PCS100 AVC-20 solves utility power quality issues, securing productivity for sustainable hydroponic crop production facility in South Africa

References

Innovation in action: Compact modular switchgear for data centers

MNS-Up application in the University Hospital, Basel



[Watch the video](#)

Compact, modular UPS and switchgear solution reduces the hospital's data center footprint

References

Innovation in action: Modular UPS in underground data center

Lefdal underground data center - Top of the class with energy efficiency



[Watch the video](#)

Each section inside the data center has its own UPS installation

References

Innovation in action: ABB technology ensures ABB FIA Formula E World Championship never goes 'off air'

Custom ABB UPS technology delivers reliable, sustainable solutions to all-electric motor-racing series



[Watch the video](#)

UPS system is wheel-mounted and weight-optimized for mobility.

ABB