

BUYLOG SECTION 17

UPS



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UPS high power

MegaFlex UPS

This monolithic UPS is specifically designed for critical high-density computing environments across private and public enterprise, as well as data centers for colocation, hosting cloud and telecommunication centers.

Technology based on ABB's **redundant parallel architecture™ (RPA)** allows the UPS to run in a parallel arrangement, eliminating any single point of failure with true redundancy. RPA reduces operating footprint and provides a scalable paralleling approach that increases system reliability. It also eliminates the need for external paralleling equipment or centralized bypass and master control.

The ABB MegaFlex UPS delivers up to 97% efficiency in double conversion mode and 99% in eBoost operating mode. The system efficiency substantially reduces operating and cooling costs, reducing cost of ownership and providing more effective power usage

Features

- **Flexible, scalable power**
From 1200kW to 1600 kW based on power block of 400 kW
- **Sustainable power technology**
Best-in-class efficiency of up to 97% in double conversion mode and up to 99% in VFD mode
- **Maximized power density in compact monolithic design**
Up to 40% footprint savings with ultra-high kW per square foot
- **Simple and safe installation**
Pre-engineered interconnection between power section and power distribution cabinet enables trouble-free installation
- **Maximized availability using proven RPA technology**
RPA provides complete redundancy of all UPS modules in parallel, eliminating single points of failure
- **Up to 15 year life on consumable components**
Reduces the cost of system replacements over the product lifespan



MegaFlex UPS

UPS high power

MegaFlex UPS

Technical specifications

General data			
System power rating [kW]	1,200	1,500	1,600
Core power rating [kW]	400		
Topology	Online double conversion		
Parallel system capacity	Up to 4 UPS systems via RPA Decentralized Architecture		
Static bypass inductor (standard)	Up to 25% more flexibility on cable length in case of RPA system.		
Cable entry	Top or bottom		
Serviceability	Front and top service access		
Hrg ready	Yes		
Input connections	Single or dual feed		
Short circuit withstand rating	100 kAIC		
Static bypass	100% Rated – Continuous Duty		
Cabinet color	RAL 9005 (black)		
Input			
Nominal input voltage	480 VAC, 3-ph, 4 W + ground or 3 W + ground		
Voltage tolerance	-15% to +15%		
Current distortion THDi	<3.0% 100% load normal mode – linear		
Frequency range	60 Hz +/-10%		
Power factor	0.99		
Output			
Rated output voltage	480 V ph-ph / 277 V ph-N		
Voltage tolerance	Static: +/-1%		
	Dynamic (step load 0%-100%-0) +/-3		
	Dynamic (step load 0%-50%-0) +/-2		
Voltage distortion THDu	<3 @ 100% load-normal mode – linear		
	<5 @ 100% load-normal mode – non-linear		
Frequency	60 Hz		
Rated power factor	1.0		
Efficiency			
Double conversion	Up to 97%		
eBoost mode (VFD)	Up to 99%		
Environment			
Protection rating	IP20		
Storage temperature	-13 to 131° F / -25 to 55° C		
Operating temperature	32 to 104° F / 0 to 40°C		
Altitude without de-rating	Up to 1,000 m		
Altitude with de-rating	1,500 m: -2.5% / 2,500 m: -2.5%		
	1,500 m: -2.5% / 1,500 m: -2.5%		
Acoustic noise at 1 m	<80 dBA		
Communications			
User interface	System graphical touch screen		
Communication ports	RS232, SNMP & Modbus		
Customer interface	Remote shutdown, gen-set interface, external bypass contact		
Batteries			
Types	Lithium ion, VRLA, VLA, NiCd		
Nominal battery bus	480V (240 Cell)		
Standards			
Safety	ETL as tested to UL1778 / EN 62040-1		
EMC	C3		
Manufacturing	ISO 9001:2015, ISO 14001:2015, OHSAS18001		
Weight, dimensions			
Weight [lbs] [kg]	8,157 lbs / 3,700 kg	9,039 lbs / 4,100 kg	9,039 lbs / 4,100 kg
Dimensions w x h x d (in) (mm)	129.92 x 86.61 x 39.37 in	129.92 x 86.61 x 39.37 in	129.92 x 86.61 x 39.37 in
	3,300 x 2,200 x 1,000 mm	3,300 x 2,200 x 1,000 mm	3,300 x 2,200 x 1,000 mm

Changes to the product or to the information contained in this brochure are reserved; so are errors and omissions. Please reference ABB order confirmations and submittal documentation packages for job specific configurations.

[Download Technical Data Sheet for more information.](#)

UPS high power

MegaFlex UPS

Ordering tables

MegaFlex UL UPS - 480V (stand alone)

Power (kW)	Voltage	Part number
1200	480V 60HZ	4NWP106510R0001
1000	480V 60HZ	4NWP106510R0002
1100	480V 60HZ	4NWP106510R0003
1600	480V 60HZ	4NWP106511R0001
1500	480V 60HZ	4NWP106511R0002

Maintenance bypass cabinet

Power range (kW)	Ampere/KAIC	Capacity	Part number
1000-1200	1600A/65K	3 breaker MBC - 65 KAIC, SKRU	MBSA243A6A60MIK600
1000-1200	1600A/100K	3 breaker MBC - 100 KAIC, SKRU	MBSA243A6A60MIKA00
1500-1600	2000A/65K	3 breaker MBC - 65 KAIC, SKRU	MBSA643B0B00MIK600
1500-1600	2000A/100K	3 breaker MBC - 100 KAIC, SKRU	MBSA643B0B00MIKA00

External batteries

Power (kW)	Battery time	Battery type	Part number
1000	2 minutes at BOL; 1 minute at EOL	Pure Lead	MGD1000-4-49-ALT
1000	5 minutes at BOL; 2 minutes at EOL	Pure Lead	MGD1000-5-49-ALT
1000	8 minutes at BOL; 4 minutes at EOL	Pure Lead	MGD1000-6-49-ALT
1200	2 minutes at BOL; 1 minutes at EOL	Pure Lead	MGD1200-5-49-ALT
1200	5 minutes at BOL; 2 minutes at EOL	Pure Lead	MGD1200-6-49-ALT
1200	7 minutes at BOL; 4 minutes at EOL	Pure Lead	MGD1200-7-49-ALT
1500	2 minutes at BOL; 1 minute at EOL	Pure Lead	MGD1500-6-49-ALT
1500	4 minutes at BOL; 1 minute at EOL	Pure Lead	MGD1500-7-49-ALT
1500	6 minutes at BOL; 3 minutes at EOL	Pure Lead	MGD1500-8-49-ALT
1600	3 minutes at BOL; 1 minute at EOL	Pure Lead	MGD1600-7-49-ALT
1600	5 minutes at BOL; 2 minutes at EOL	Pure Lead	MGD1600-8-49-ALT
1000	5 minutes at BOL	Valve Regulated Lead Acid	MGF1000-5-56-ALT
1000	10 minutes at BOL; 5 minutes at EOL	Valve Regulated Lead Acid	MGF1000-6-4A-ALT
1100	7 minutes at BOL	Valve Regulated Lead Acid	MGF1100-6-56-ALT
1200	11 minutes at BOL; 6 minutes at EOL	Valve Regulated Lead Acid	MGF1100-7-4A-ALT
1200	6 minutes at BOL	Valve Regulated Lead Acid	MGF1200-6-4A-ALT
1500	5 minutes at BOL	Valve Regulated Lead Acid	MGF1500-7-4A-ALT
1600	6 minutes	Valve Regulated Lead Acid	MGF1600-8-4A-ALT
1000	16 minutes at BOL; 10 minutes at EOL	Valve Regulated Lead Acid	MGG1000-5-58-ALT
1100	13 minutes at BOL; 8 minutes at EOL	Valve Regulated Lead Acid	MGG1100-5-58-ALT
1200	11 minutes at BOL; 5 minutes at EOL	Valve Regulated Lead Acid	MGG1200-5-58-ALT
1200	16 minutes at BOL; 10 minutes at EOL	Valve Regulated Lead Acid	MGG1200-6-58-ALT
1500	10 minutes at BOL; 5 minutes at EOL	Valve Regulated Lead Acid	MGG1500-6-58-ALT
1600	9 minutes at BOL; 5 minutes at EOL	Valve Regulated Lead Acid	MGG1600-6-58-ALT
1500	7 minutes	Valve Regulated Lead Acid	MGH1500-5-4B-ALT
1600	14 minutes at BOL; 8 minutes at EOL	Valve Regulated Lead Acid	MGH1600-7-4B-ALT

Accessories

Description	Part number
Connectivity - CIC Card	1020010
Connectivity - SNMP Card	4NWP107196R0001
Modbus License Only, must also purchase SKU 4NWP107196R0001	24864
iUPSGuard Annual License – First year free	26106
Connectivity - Battery sensor - 5 meters Long	1025486
Connectivity - Battery sensor - 15 meters Long	1025487
Connectivity - Battery sensor - 20 meters Long	1025488

UPS high power

MegaFlex UPS

Ordering tables (continued)

Start-up, services and warranty

Description	Power range	On-site schedule	Part number
Start-up and commissioning Level 1	1.0-1.2 MW	Monday through Friday, 8:00am-5:00pm local time	FSUMEG1000N
Start-up and commissioning Level 2	1.0-1.2 MW	Monday through Saturday, any time	FSUMEG1000P1
Start-up and commissioning Level 3	1.0-1.2 MW	Anytime, including holidays	FSUMEG1000P2
Start-up and commissioning Level 1	1.5-1.6 MW	Monday through Friday, 8:00am-5:00pm local time	FSUMEG1600N
Start-up and commissioning Level 2	1.5-1.6 MW	Monday through Saturday, any time	FSUMEG1600P1
Start-up and commissioning Level 3	1.5-1.6 MW	Anytime, including holidays	FSUMEG1600P2
Preventative maintenance - UPS only	1.0-1.2 MW	Two annual visits per year	2PMMEG1000
Preventative maintenance - UPS only	1.5-1.6 MW	Two annual visits per year	2PMMEG1600
Preventative maintenance - UPS only	1.0-1.2 MW	One annual visit per year	PMMEG1000
Preventative maintenance - UPS only	1.5-1.6 MW	One annual visit per year	PMMEG1600
Preventative maintenance - Primary battery cabinet	--	One annual visit per year	PMMEGAB
Preventative maintenance - Additional battery cabinets	--	One annual visit per year	PMMEGAB2
Extended warranty - Primary battery cabinet	--	Additional one year	WARBATMG
Extended warranty - Additional battery cabinets	--	Additional one year	WARBATMG1
Extended warranty - UPS only	1.0-1.2 MW	Additional one year	WARMEGNOPM
Extended warranty - UPS only	1.5-1.6 MW	Additional one year	WARMEG16NOPM

UPS 3-phase monolithic scalable

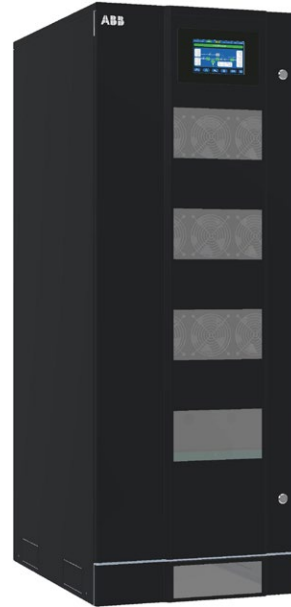
TLE Series 40-150 KVA/kW, 480 VAC

The TLE Series UPS is a robust, high performance 480/277VAC UPS system suitable for a broad range of mission-critical applications including data centers, data closets, healthcare/medical, telecommunications, transportation, commercial buildings, and industrial critical processes.

The TLE Series UPS uses double conversion technology via a true on-line VFI (voltage frequency independent) design. The IGBT Rectifier provides low input current harmonic distortion and a high input power factor to minimize input feeder sizing. The IGBT Inverter with transformerless output ensures low output voltage distortion and fast transient response to high crest factor loads or step loads.

Features

- Transformerless design at 277/480VAC to reduce footprint and weight, yet increase reliability.
- High input power factor and use of a IGBT Rectifier eliminates the use of oversized input feeders, and maximizes standby generator compatibility.
- High switching frequency IGBT Inverter provides best-in-class transient response and low output voltage distortion. An output voltage waveform that closely resembles utility power!
- Compact footprint and low audible design, allows for use in most commercial and industrial buildings.
- Reliable paralleling of UPS modules via ABB's RPA design, which eliminates any and all common mode failure points.
- Wide band of acceptable AC input voltage and frequency, that eliminates nuisance transfers to the battery plant, thus maximizing battery jar life.
- Internal battery management and monitoring system (SBM) that enhances battery life and reduces cost of operation. Also eliminates need for costly 3rd party bolt-on battery monitoring systems.
- Optional maintenance bypass capabilities, via external wrap-around cabinetry.
- Optional 208VAC output, via matching stepdown transformer cabinetry.
- Optional output distribution cabinet with panelboard or subfeed circuit breakers.
- Seismic area capabilities, via seismic restraint hardware and seismic lab testing.
- Two year parts and labor warranty.



TLE Series 40-150 KVA/kW, 480 VAC

UPS 3-phase monolithic scalable

TLE Series 40-150 KVA/kW, 480 VAC

Technical specifications

General data	TLE 40 UL S1	TLE 50 UL S1	TLE 80 UL S1	TLE 100 UL S1	TLE 120 UL S1	TLE 150 UL S1
Topology	VFI, double conversion					
Nominal output power	40kW	50kW	80kW	100kW	120kW	150kW
Overall efficiency in VFI mode	Up to 95.9%					
Overall efficiency in SEM mode (super eco mode)	Up to 98.9%					
Audible noise level	62 dB(A)					
Operating temperature range	UPS: 32°F to 104°F/ 0°C to 40°C (122°F /50°C subjected to conditions)					
Protection degree	IP 30 (IEC 60529 – ANSI/NEMA 60529)					
Standards	UL 1778, UL marking					
EMC (electromagnetic compatibility)	EN/IEC 62040-2					
Electrostatic discharge immunity	4kV contact / 8kV air discharge					
Color	RAL 9005 (Black)					
Service access	Front and top access only					
External cable connections	Bottom at the front of the cabinet or top with lateral sidecar					
Paralleling (RPA version)	Up to 6 units for redundancy or capacity in RPA configuration (option)					
Rectifier						
Standard input voltage	Nominal: 3 x 480V + N					
Rectifier accepted ph-ph voltage range	410V - 550V (wider voltage range subject to de-rated loads)					
Input frequency	60 Hz +/-10% (54 ÷ 66 Hz)					
Power factor	0.99					
Input current THD	<3% at 100%					
Inverter						
Nominal output voltage (on-site programmable)	3 x 480V + N					
Output frequency	60 Hz					
Output voltage tolerance: static	+/- 1%					
Output voltage tolerance: dynamic (at load step 0 – 100 – 0%)	+/- 3%					
– output voltage THD for 100% linear load	<3%					
– output voltage THD for 100% non-linear load (EN 62040)	<5%					
Output frequency tolerance: free-running	+/- 0.1%					
Overload capability (at 25°C ambient temperature)	105% continuous, 110% – 10 minutes, 125% – 1 minute, 150% – 30 seconds					
Bypass						
Voltage limits for inverter/ bypass load transfers	+/- 10% (adjustable)					
Overload on bypass	198A continuous - 270 for 1 minute - up to 3000A for 10ms, non repetitive					
Primary components	Static switch (SCR) on bypass Electromechanic contactors (backfeed protection) on bypass and inverter					
Interfacing						
Standard interfacing features	RS232 serial port, EPO, Customer Interface board, 3-ph SNMP/MODBUS/WEB plug-in Adapter, Black Box for standard intelligent Diagnostics					
Physical data						
Weights	849 lbs / 385 Kg		992 lbs / 450 Kg		1147 lbs / 520 Kg	
Floor loading	152 lbs/sq. ft / 742 Kg/m2		178 lbs/sq. ft / 867 Kg/m2		205 lbs/sq. ft / 1002 Kg/m2	
Dimensions (WxDxH)	23.62 x 34.06 x 64.17 inches / 600 x 865 x 1630 mm					

UPS 3-phase monolithic scalable

TLE Series 40-150 KVA/kW, 480 VAC

Ordering tables

TLE 480V UL UPS - 40 to 150kW scalable (monolithic)

Power (kW)	Voltage	Part number
40	480V 60HZ	4NWP105714R0002
40 w/stand	480V 60HZ	4NWP105714R0004
50	480V 60HZ	4NWP105714R0001
50 w/stand	480V 60HZ	4NWP105714R0003
80	480V 60HZ	4NWP105716R0002
80 w/stand	480V 60HZ	4NWP105716R0004
100	480V 60HZ	4NWP105716R0001
100 w/stand	480V 60HZ	4NWP105716R0003
120	480V 60HZ	4NWP105718R0002
120 w/stand	480V 60HZ	4NWP105718R0004
150	480V 60HZ	4NWP105718R0001
150 w/stand	480V 60HZ	4NWP105718R0003

Cabinet accessory

Description	Details	Part number
Top hat fascia for TLE 40-150 without stand	Extends UPS Module height to 75" to match accessories 24" w x 34" d x 11" h, 60lbs Shipped loose to be installed by contractor	TLE-TOPHAT40-150

Maintenance bypass cabinet

Power range	Breaker ¹ -Ampere/KAIC/interlock	Output transformer	Part number
40	UIB=80A, MIB/MBB=60A, 25 KAIC, SKRU INTRLK	none	MBC044-06080T-K200
40	UIB=80A, MIB/MBB=60A, 25 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC044-06080T-K204
40	UIB=80A, MIB/MBB=60A, 65 KAIC, SKRU INTRLK	none	MBC044-06080T-K600
40	UIB=80A, MIB/MBB=60A, 65 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC044-06080T-K604
40	UIB=80A, MIB/MBB=60A, 25 KAIC, KK INTRLK	none	MBC044-06080T-L200
40	UIB=80A, MIB/MBB=60A, 25 KAIC, KK INTRLK	480V/208V output xfmr	MBC044-06080T-L204
40	UIB=80A, MIB/MBB=60A, 65 KAIC, KK INTRLK	none	MBC044-06080T-L600
40	UIB=80A, MIB/MBB=60A, 65 KAIC, KK INTRLK	480V/208V output xfmr	MBC044-06080T-L604
40	UIB=80A, MIB/MBB=60A, 18 KAIC, SKRU INTRLK	none	MBP044-06080T-K100
40	UIB=80A, MIB/MBB=60A, 65 KAIC, SKRU INTRLK	none	MBP044-06080T-K600
40	UIB=80A, MIB/MBB=60A, 18 KAIC, KK INTRLK	none	MBP044-06080T-L100
40	UIB=80A, MIB/MBB=60A, 65 KAIC, KK INTRLK	none	MBP044-06080T-L600
50	UIB/MIB/MBB=90A, 25 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC054-10120T-K205
50	UIB/MIB/MBB=90A, 65 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC054-10120T-K605
50	UIB/MIB/MBB=90A, 25 KAIC, KK INTRLK	480V/208V output xfmr	MBC054-10120T-L205
50	UIB/MIB/MBB=90A, 65 KAIC, KK INTRLK	480V/208V output xfmr	MBC054-10120T-L605
50	UIB/MIB/MBB=90A, 25 KAIC, SKRU INTRLK	3 breaker SKRU	MBC054-1A120T-K200
50	UIB/MIB/MBB=90A, 65 KAIC, SKRU INTRLK	none	MBC054-1A120T-K600
50	UIB/MIB/MBB=90A, 25 KAIC, KK INTRLK	none	MBC054-1A120T-L200
50	UIB/MIB/MBB=90A, 65 KAIC, KK INTRLK	none	MBC054-1A120T-L600
50	UIB/MIB/MBB=90A, 25 KAIC, SKRU INTRLK	none	MBP054-1A120T-K100
50	UIB/MIB/MBB=90A, 65 KAIC, SKRU INTRLK	none	MBP054-1A120T-K600
50	UIB/MIB/MBB=90A, 25 KAIC, KK INTRLK	none	MBP054-1A120T-L100
50	UIB/MIB/MBB=90A, 65 KAIC, KK INTRLK	none	MBP054-1A120T-L600

¹Key: UIB-UPS input breaker, MIB-Module isolation breaker, MBB-main bypass breaker

Table continued on next page

UPS 3-phase monolithic scalable

TLE Series 40-150 KVA/kW, 480 VAC

Ordering tables (continued)

Maintenance bypass cabinet (continued)

Power range	Breaker ¹ -Ampere/KAIC/interlock	Output transformer	Part number
80	UIB/MIB/MBB=175A, 25 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC084-12170T-K208
80	UIB/MIB/MBB=175A, 35 KAIC, SKRU INTRLK	none	MBC084-12170T-K300
80	UIB/MIB/MBB=175A, 65 KAIC, SKRU INTRLK	none	MBC084-12170T-K600
80	UIB/MIB/MBB=175A, 65 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC084-12170T-K608
80	UIB/MIB/MBB=175A, 25 KAIC, KK INTRLK	480V/208V output xfmr	MBC084-12170T-L208
80	UIB/MIB/MBB=175A, 35 KAIC, KK INTRLK	none	MBC084-12170T-L300
80	UIB/MIB/MBB=175A, 65 KAIC, KK INTRLK	none	MBC084-12170T-L600
80	UIB/MIB/MBB=175A, 65 KAIC, KK INTRLK	480V/208V output xfmr	MBC084-12170T-L608
80	UIB/MIB/MBB=175A, 18 KAIC, SKRU INTRLK	none	MBP084-12170T-K100
80	UIB/MIB/MBB=175A, 65 KAIC, SKRU INTRLK	none	MBP084-12170T-K600
80	UIB/MIB/MBB=175A, 18 KAIC, KK INTRLK	none	MBP084-12170T-L100
80	UIB/MIB/MBB=175A, 65 KAIC, KK INTRLK	none	MBP084-12170T-L600
100	UIB/MIB/MBB=175A, 25 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC104-15200T-K210
100	UIB/MIB/MBB=175A, 35 KAIC, SKRU INTRLK	none	MBC104-15200T-K300
100	UIB/MIB/MBB=175A, 65 KAIC, SKRU INTRLK	none	MBC104-15200T-K600
100	UIB/MIB/MBB=175A, 65 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC104-15200T-K610
100	UIB/MIB/MBB=175A, 25 KAIC, KK INTRLK	480V/208V output xfmr	MBC104-15200T-L210
100	UIB/MIB/MBB=175A, 35 KAIC, KK INTRLK	none	MBC104-15200T-L300
100	UIB/MIB/MBB=175A, 65 KAIC, KK INTRLK	none	MBC104-15200T-L600
100	UIB/MIB/MBB=175A, 65 KAIC, KK INTRLK	480V/208V output xfmr	MBC104-15200T-L610
100	UIB/MIB/MBB=175A, 35 KAIC, SKRU INTRLK	none	MBP104-15200T-K300
100	UIB/MIB/MBB=175A, 65 KAIC, SKRU INTRLK	none	MBP104-15200T-K600
100	UIB/MIB/MBB=175A, 35 KAIC, KK INTRLK	none	MBP104-15200T-L300
100	UIB/MIB/MBB=175A, 65 KAIC, KK INTRLK	none	MBP104-15200T-L600
120	UIB=250A, MIB/MBB=200A, 25 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC124-20250T-K212
120	UIB=250A, MIB/MBB=200A, 35 KAIC, SKRU INTRLK	none	MBC124-20250T-K300
120	UIB=250A, MIB/MBB=200A, 65 KAIC, SKRU INTRLK	none	MBC124-20250T-K600
120	UIB=250A, MIB/MBB=200A, 65 KAIC, SKRU INTRLK	480V/208V output xfmr	MBC124-20250T-K612
120	UIB=250A, MIB/MBB=200A, 25 KAIC, KK INTRLK	480V/208V output xfmr	MBC124-20250T-L212
120	UIB=250A, MIB/MBB=200A, 35 KAIC, KK INTRLK	none	MBC124-20250T-L300
120	UIB=250A, MIB/MBB=200A, 65 KAIC, KK INTRLK	none	MBC124-20250T-L600
120	UIB=250A, MIB/MBB=200A, 65 KAIC, KK INTRLK	480V/208V output xfmr	MBC124-20250T-L612
120	UIB=250A, MIB/MBB=200A, 35 KAIC, SKRU INTRLK	none	MBP124-20250T-K300
120	UIB=250A, MIB/MBB=200A, 65 KAIC, SKRU INTRLK	none	MBP124-20250T-K600
120	UIB=250A, MIB/MBB=200A, 35 KAIC, KK INTRLK	none	MBP124-20250T-L300
120	UIB=250A, MIB/MBB=200A, 65 KAIC, KK INTRLK	none	MBP124-20250T-L600
150	UIB=300A, MIB/MBB=250A, 25 KAIC, SKRU INTRLK	3 breaker SKRU, 480V/208V output xfmr	MBC154-25300T-K215
150	UIB=300A, MIB/MBB=250A, 35 KAIC, SKRU INTRLK	none	MBC154-25300T-K300
150	UIB=300A, MIB/MBB=250A, 65 KAIC, SKRU INTRLK	none	MBC154-25300T-K600
150	UIB=300A, MIB/MBB=250A, 65 KAIC, SKRU INTRLK	3 breaker SKRU, 480V/208V output xfmr	MBC154-25300T-K615
150	UIB=300A, MIB/MBB=250A, 25 KAIC, KK INTRLK	3 breaker KK, 480V/208V output xfmr	MBC154-25300T-L215
150	UIB=300A, MIB/MBB=250A, 35 KAIC, KK INTRLK	none	MBC154-25300T-L300
150	UIB=300A, MIB/MBB=250A, 65 KAIC, KK INTRLK	none	MBC154-25300T-L600
150	UIB=300A, MIB/MBB=250A, 65 KAIC, KK INTRLK	3 breaker KK, 480V/208V output xfmr	MBC154-25300T-L615
150	UIB=300A, MIB/MBB=250A, 35 KAIC, SKRU INTRLK	none	MBP154-25300T-K300
150	UIB=300A, MIB/MBB=250A, 65 KAIC, SKRU INTRLK	none	MBP154-25300T-K600
150	UIB=300A, MIB/MBB=250A, 35 KAIC, KK INTRLK	none	MBP154-25300T-L300
150	UIB=300A, MIB/MBB=250A, 65 KAIC, KK INTRLK	none	MBP154-25300T-L600

¹Key: UIB-UPS input breaker, MIB-Module isolation breaker, MBB-main bypass breaker

UPS 3-phase monolithic scalable

TLE Series 40-150 KVA/kW, 480 VAC

Ordering tables

External batteries

Power (kW)	Battery time	Battery type	Part number
40	5 minutes runtime BOL	VRLA	BC41040-1BR-61-N
40	8 minutes runtime BOL	VRLA	BC41040-1BR-62-N
40	12 minutes runtime BOL	VRLA	BC41040-1BR-63-N
40	21 minutes runtime BOL	VRLA	BC41040-1BR-64-N
50	6 minutes runtime BOL	VRLA	BC41050-1BR-62-N
50	7 minutes runtime BOL	VRLA	BC41050-1BR-63-N
50	14 minutes runtime BOL	VRLA	BC41050-1BR-64-N
50	23 minutes runtime BOL	VRLA	BC53050-1BR-65-N
50	29 minutes runtime BOL	VRLA	BC53050-1BR-66-N
50	38 minutes runtime BOL	VRLA	BC53050-1BR-67-N
50	54 minutes runtime BOL	VRLA	BC53050-1BR-68-N
50	58 minutes runtime BOL	VRLA	BC53050-2BR-65-N
50	77 minutes runtime BOL	VRLA	BC53050-2BR-66-N
80	6 minutes runtime BOL	VRLA	BC41080-1BR-64-N
80	10 minutes runtime BOL	VRLA	BC53080-1BR-65-N
80	15 minutes runtime BOL	VRLA	BC53080-1BR-66-N
80	19 minutes runtime BOL	VRLA	BC53080-1BR-67-N
80	28 minutes runtime BOL	VRLA	BC53080-1BR-68-N
80	31 minutes runtime BOL	VRLA	BC53080-2BR-65-N
80	41 minutes runtime BOL	VRLA	BC53080-2BR-66-N
80	50 minutes runtime BOL	VRLA	BC53080-2BR-67-N
80	73 minutes runtime BOL	VRLA	BC53080-2BR-68-N
100	6 minutes runtime BOL	VRLA	BC53100-1BR-65-N
100	10 minutes runtime BOL	VRLA	BC53100-1BR-66-N
100	13 minutes runtime BOL	VRLA	BC53100-1BR-67-N
100	19 minutes runtime BOL	VRLA	BC53100-1BR-68-N
100	22 minutes runtime BOL	VRLA	BC53100-2BR-65-N
100	29 minutes runtime BOL	VRLA	BC53100-2BR-66-N
100	38 minutes runtime BOL	VRLA	BC53100-2BR-67-N
100	54 minutes runtime BOL	VRLA	BC53100-2BR-68-N
100	63 minutes runtime BOL	VRLA	BC53100-3BR-67-N
120	7 minutes runtime BOL	VRLA	BC53120-1BR-66-N
120	9 minutes runtime BOL	VRLA	BC53120-1BR-67-N
120	15 minutes runtime BOL	VRLA	BC53120-1BR-68-N
120	17 minutes runtime BOL	VRLA	BC53120-2BR-65-N
120	23 minutes runtime BOL	VRLA	BC53120-2BR-66-N
120	29 minutes runtime BOL	VRLA	BC53120-2BR-67-N
120	42 minutes runtime BOL	VRLA	BC53120-2BR-68-N
120	50 minutes runtime BOL	VRLA	BC53120-3BR-67-N
120	73 minutes runtime BOL	VRLA	BC53120-3BR-68-N
150	5 minutes runtime BOL	VRLA	BC53150-1BR-67-N
150	9 minutes runtime BOL	VRLA	BC53150-1BR-68-N
150	12 minutes runtime BOL	VRLA	BC53150-2BR-65-N
150	17 minutes runtime BOL	VRLA	BC53150-2BR-66-N
150	21 minutes runtime BOL	VRLA	BC53150-2BR-67-N
150	30 minutes runtime BOL	VRLA	BC53150-2BR-68-N
150	38 minutes runtime BOL	VRLA	BC53150-3BR-67-N
150	54 minutes runtime BOL	VRLA	BC53150-3BR-68-N
150	78 minutes runtime BOL	VRLA	BC53150-4BR-68-N

UPS 3-phase monolithic scalable

TLE Series 40-150 KVA/kW, 480 VAC

Ordering tables (continued)

Start-up, services and warranty

Description	Power range	Part number
Full service maintenance contract	40-150	FSTLE40-150
Startup service, level 1	40-150	FSUTLE40-150N
Startup service, level 2	40-150	FSUTLE40-150P1
Startup service, level 3	40-150	FSUTLE40-150P2
Preventative maintenance agreement unit only	40-150	PMTLE-40-150
Extended warranty- unit only	40-150	WARTL40-150
Extended warranty- unit only	40-150	WARTL40-150
Hi power extd war - no pm ups only	40-150	WARTLENOPM
Spares, Lvl A	40-150	SK40-150TLA
Spares, Lvl B	40-150	SK40-150TLB
Spares, Lvl C	40-50	SK40-50TLC
Spares, Lvl C	80-100	SK80-100TLC
Spares, Lvl C	120-150	SK120-150TLC

UPS 3-phase monolithic

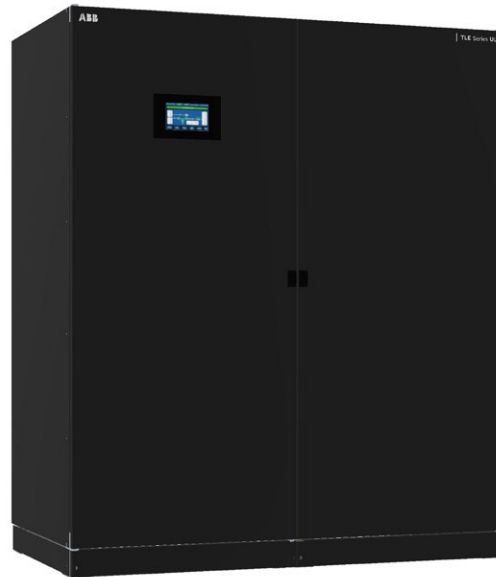
TLE Series 160-1000kW

ABB's TLE Series UPS is one of the most efficient and reliable three-phase UPS systems on the market, providing excellent efficiency, output performance and critical power protection for data centers and many other applications. TLE Series UPS solutions are optimized to provide high efficiency under part-load conditions.

This UPS ensures low current total harmonic distortion (THDi), ideal output voltage regulation and excellent dynamic response. These attributes help customers cut operational costs while implementing an environmentally friendly solution.

Features

- eBoost, lithium batteries and RPA with intelligent energy management™ (IEM) further improve efficiency
- Input from mains conditioned to a sinusoid with 0.99 input power factor and <3%TH Di
- Double conversion efficiency up to 96.8%
- Output power factor: 1
- True front access design
- Compact footprint
- Intuitive user interface
- Extremely low output voltage distortion
- Superior battery management



TLE Series 160-1000kW

UPS 3-phase monolithic

TLE Series 160-1000kW

Technical specifications

Power Rating ¹								
Output power rating (kva)	160	200	225	250	400	500	750	1000
Oputut power rating (kw)	160	200	225	250	400	500	750	1000
Energy usage								
eboost mode efficiency at 50% load	98.2%	98.3%	98.2%	98.3%	98.2%	98.3%	98.2%	98.4%
eboost mode efficiency at 100% load	98.6%	98.8%	98.6%	98.8%	98.7%	98.8%	98.8%	98.9%
Dbl conv mode efficiency at 50% load	96.3%	96.5%	96.3%	96.5%	96.2%	96.4%	96.3%	96.4%
Dbl conv mode efficiency at 100% load	95.8%	96.0%	95.8%	96.0%	96.2%	96.3%	96.2%	96.2%
Physical data								
Dimensions, w x d x h (in.)	43x34x75	43x34x75	43x34x75	43x34x75	67x34x75	67x34x75	102x34x75 ¹	130x34x75 ¹
Weight, module only (lbs.)	1,433	1,433	1,433	1,433	2,314	2,314	4,409	5,510
Input								
Voltage	480V 3W or 4W + gnd							
Topology	IGBT rectifier							
Single or dual input capability	Field selectable							
Voltage range (w/o battery discharge)	-15% to +15%							
Power factor (lagging)	0.99							
Current THD	< 5.0%							
Frequency	60 Hz +/- 10%							
Output								
Voltage	480/277V 3W or 4W + gnd							
Topology	PWM 3-level IGBT inverter							
Frequency	60 Hz +/- 10%							
Crest factor	3:1							
Static voltage regulation	+/- 1%							
100% Step load voltage regulation	+/- 3%							
100% Linear load voltage distortion	<3.0% THD maximum							
100% Non-linear load voltage distortion	<5.0% THD maximum							
eboost transfer time	< 2msec transfer to Inverter, within ITI/CBEMA voltage compliance curve							
Overload capability / inverter	125% / 1 min ; 150% / 30 sec							
Overload capability / static bypass	110% continuous; 150% for 1 minute							
Battery plant								
Compatible technologies	VRLA, Wet Cell, NiCad, Lithium Ion, and Flywheel							
Float voltage	540 VDC, 240 cell system							
Recharge time	10X discharge time (at 30 min. battery runtime)							
General								
Ambient operating temperature	UPS Module: 32–104°F (0–40°C)							
Humidity	0–95% non-condensing							
Audible noise	160–500kVA: 75 db(A) at 5 ft. 625–1000kVA: 78 db(A) at 5 ft.							
Audible noise (eboost mode)	160–500kVA: 66 db(A) at 5 ft. 625–1000kVA: 68 db(A) at 5 ft.							
Listings	ETL as tested to UL1778							
Seismic	All kVA: IBC 2015, ASCE, and OSHPD up to 500kW							
Enclosure	IP20 and NEMA PE-1							
EMC/EMI/RFI	IEC/EN 62040-2/EN50091-2/IEEE C62.41 – Recommended practice for surge withstand ability							
Communication/ connectivity	RS232, programmable contacts, programmable relays, iUPSGuard, optional SNMP and Modbus							
Color	RAL 9005 Black							
Warranty	12 months after startup or 18 months after shipment (whichever first). Extended warranties available.							

¹Estimated data. Consult factory for updated information.

UPS 3-phase monolithic

TLE Series 160-1000kW

Ordering tables

TLE 480V UL UPS - 160 to 1000kW (monolithic)

Power (kW)	Voltage	Part number
160	480V 60HZ	4NWP105706R0004
200	480V 60HZ	4NWP105706R0003
225	480V 60HZ	4NWP105706R0002
250	480V 60HZ	4NWP105706R0001
300	480V 60HZ	4NWP105709R0004
400	480V 60HZ	4NWP105709R0002
500	480V 60HZ	4NWP105709R0001
625	480V 60HZ	4NWP105711R0002
750	480V 60HZ	4NWP105711R0001
1000	480V 60HZ	4NWP105712R0001

Maintenance bypass cabinet

Power range	Breaker ¹ -Ampere/KAIC/interlock	Output transformer	Part number
225	UIB=400A, MIB/MBB=350A, 65 KAIC, SKRU INTRLK	none	MBC224-35400T-K600
225	UIB=400A, MIB/MBB=350A, 65 KAIC, SKRU INTRLK	480/208V output xfmr	MBC224-35400T-K622
250	UIB=450A, MIB/MBB=400A, 65 KAIC, SKRU INTRLK	none	MBC254-40450T-K600
250	UIB=450A, MIB/MBB=400A, 65 KAIC, SKRU INTRLK	480/208V output xfmr	MBC254-40450T-K625
400	UIB/MIB/MBB=600A, 65 KAIC, SKRU INTRLK	none	MBC404-60600T-K600
750	UIB=700A, MIB/MBB=800A, 50 KAIC, SKRU INTRLK	none	MBC754-A0000T-K600
750	UIB=1200A, MIB/MBB=1000A, 65 KAIC, SKRU INTRLK	none	MBC754-A0A20T-K600
1000	UIB/MIB/MBB=1600A, 65 KAIC, SKRU INTRLK	none	MBCA04-A6A60T-K600
1000	UIB/MIB/MBB=1600A, 65 KAIC, SKRU INTRLK	none	MBSA04-A6A60T-K600
1000	UIB/MIB/MBB=1600A, 100 KAIC, SKRU INTRLK	none	MBSA04-A6A60T-KA00

¹KEY: UIB-UPS input breaker, MIB-Module isolation breaker, MBB-main bypass breaker

External batteries

Power (kW)	Battery runtime @100% load	Battery type	Part number
160	5 minutes BOL; 3 minutes EOL, 1 cabinets	VRLA	TLD160-1-54-ALT
160	9 minutes Bol; 6 minutes EOL, 1 cabinet	VRLA	TLD160-1-56-ALT
160	24 minutes BOL; 18 minutes EOL, 2 cabinets	VRLA	TLD160-2-55-ALT
160	41 minutes BOL; 31 minutes EOL, 3 cabinets	VRLA	TLD160-3-55-ALT
160	64 minutes BOL; 49 minutes EOL, 4 cabinets	VRLA	TLD160-4-56-ALT
160	84 minutes BOL; 64 minutes EOL, 5 cabinets	VRLA	TLD160-5-56-ALT
160	104 minutes BOL; 80 minutes EOL, 6 cabinets	VRLA	TLD160-6-56-ALT
200	5 minutes BOL; 2 minutes EOL, 1 cabinet	VRLA	TLD200-1-55-ALT
200	10 minutes BOL; 6 minutes EOL, 2 cabinets	VRLA	TLD200-2-53-ALT
200	18 minutes BOL; 13 minutes EOL, 2 cabinets	VRLA	TLD200-2-55-ALT
200	31 minutes BOL; 23 minutes EOL, 3 cabinets	VRLA	TLD200-3-55-ALT
200	45 minutes BOL; 33 minutes EOL, 4 cabinets	VRLA	TLD200-4-55-ALT
200	64 minutes BOL; 49 minutes EOL, 5 cabinets	VRLA	TLD200-5-56-ALT
200	80 minutes BOL; 61 minutes EOL, 6 cabinets	VRLA	TLD200-6-56-ALT
225	4 minutes BOL; 1 minute EOL, 1 cabinet	VRLA	TLD225-1-56-ALT
225	10 minutes BOL; 7 minutes EOL, 2 cabinets	VRLA	TLD225-2-54-ALT
225	15 minutes BOL; 11 minutes EOL, 2 cabinets	VRLA	TLD225-2-55-ALT
225	27 minutes BOL; 20 minutes EOL, 3 cabinets	VRLA	TLD225-3-55-ALT
225	39 minutes BOL; 29 minutes EOL, 4 cabinets	VRLA	TLD225-4-55-ALT
225	55 minutes BOL; 42 minutes EOL, 5 cabinets	VRLA	TLD225-5-56-ALT
225	69 minutes BOL; 61 minutes EOL, 6 cabinets	VRLA	TLD225-6-56-ALT

Table continued on next page

UPS 3-phase monolithic

TLE Series 160-1000kW

Ordering tables (continued)

External batteries (continued)

Power (kW)	Battery time	Battery type	Part number
250	5 minutes BOL; 3 minutes EOL, 2 cabinets	VRLA	TLD250-2-52-ALT
250	8 minutes BOL; 5 minutes EOL, 2 cabinets	VRLA	TLD250-2-54-ALT
250	13 minutes BOL; 9 minutes EOL, 2 cabinets	VRLA	TLD250-2-55-ALT
250	23 minutes BOL; 17 minutes EOL, 3 cabinets	VRLA	TLD250-3-55-ALT
250	26 minutes BOL; 19 minutes EOL, 3 cabinets	VRLA	TLD250-3-56-ALT
250	37 minutes BOL; 28 minutes EOL, 4 cabinets	VRLA	TLD250-4-56-ALT
250	49 minutes BOL; 37 minutes EOL, 5 cabinets	VRLA	TLD250-5-56-ALT
250	61 minutes BOL; 46 minutes EOL, 6 cabinets	VRLA	TLD250-6-56-ALT
300	6 minutes BOL; 3 minutes EOL, 2 cabinets	VRLA	TLD300-2-54-ALT
300	10 minutes BOL; 6 minutes EOL, 2 cabinets	VRLA	TLD300-2-55-ALT
300	18 minutes BOL; 13 minutes EOL, 3 cabinets	VRLA	TLD300-3-55-ALT
300	27 minutes BOL; 20 minutes EOL, 4 cabinets	VRLA	TLD300-4-55-ALT
300	39 minutes BOL; 29 minutes EOL, 5 cabinets	VRLA	TLD300-5-56-ALT
300	49 minutes BOL; 37 minutes EOL, 6 cabinets	VRLA	TLD300-6-56-ALT
400	5 minutes BOL; 2 minutes EOL, 2 cabinets	VRLA	TLD400-2-55-ALT
400	6 minutes BOL; 2 minutes EOL, 2 cabinets	VRLA	TLD400-2-56-ALT
400	12 minutes BOL; 8 minutes EOL, 3 cabinets	VRLA	TLD400-3-55-ALT
400	18 minutes BOL; 13 minutes EOL, 4 cabinets	VRLA	TLD400-4-55-ALT
400	25 minutes BOL; 18 minutes EOL, 5 cabinets	VRLA	TLD400-5-55-ALT
400	34 minutes BOL; 26 minutes EOL, 6 cabinets	VRLA	TLD400-6-56-ALT
500	5 minutes BOL; 2 minutes EOL, 3 cabinets	VRLA	TLD500-3-54-ALT
500	9 minutes BOL; 5 minutes EOL, 3 cabinets	VRLA	TLD500-3-56-ALT
500	14 minutes BOL; 10 minutes EOL, 4 cabinets	VRLA	TLD500-4-56-ALT
500	20 minutes BOL; 14 minutes EOL, 5 cabinets	VRLA	TLD500-5-56-ALT
500	26 minutes BOL; 19 minutes EOL, 6 cabinets	VRLA	TLD500-6-56-ALT
625	5 minutes BOL; 2 minutes EOL, 3 cabinets	VRLA	TLD625-3-56-ALT
625	10 minutes BOL; 6 minutes EOL, 4 cabinets	VRLA	TLD625-4-56-ALT
625	14 minutes BOL; 10 minutes EOL, 5 cabinets	VRLA	TLD625-5-56-ALT
625	19 minutes BOL; 13 minutes EOL, 6 cabinets	VRLA	TLD625-6-56-ALT
750	6 minutes BOL; 2 minutes EOL, 4 cabinets	VRLA	TLD750-4-55-ALT
750	11 minutes BOL; 7 minutes EOL, 5 cabinets	VRLA	TLD750-5-56-ALT
750	14 minutes BOL; 10 minutes EOL, 6 cabinets	VRLA	TLD750-6-56-ALT
1000	5 minutes BOL; 2 minutes EOL, 5 cabinets	VRLA	TLD1000-5-55-ALT
1000	6 minutes BOL; 2 minutes EOL, 5 cabinets	VRLA	TLD1000-5-56-ALT
1000	9 minutes BOL; 5 minutes EOL, 6 cabinets	VRLA	TLD1000-6-56-ALT
1000	12 minutes BOL; 7 minutes EOL, 7 cabinets	VRLA	TLD1000-7-56-ALT
1000	14 minutes BOL; 10 minutes EOL, 8 cabinets	VRLA	TLD1000-8-56-ALT

Accessories

Description	Part number
Top hat fascia for TLE	TLE-TOPHAT40-150

UPS 3-phase monolithic

TLE Series 160-1000kW

Ordering tables

Start-up, services and warranty

Description	Power range	On-site schedule	Part number
Full service	160	One annual visit per year	FSTLE160
Full service	200	One annual visit per year	FSTLE200
Full service	225	One annual visit per year	FSTLE225
Full service	250	One annual visit per year	FSTLE250
Full service	300	One annual visit per year	FSTLE300
Full service	400	One annual visit per year	FSTLE400
Full service	500	One annual visit per year	FSTLE500
Full service	625	One annual visit per year	FSTLE625
Full service	750	One annual visit per year	FSTLE750
Full service	1000	One annual visit per year	FSTLE1000
Start-up	160	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE160N
Start-up	160	Monday-Saturday, anytime	FSUTLE160P1
Start-up	160	Anytime, including holidays	FSUTLE160P2
Start-up	200	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE200N
Start-up	200	Monday-Saturday, anytime	FSUTLE200P1
Start-up	200	Anytime, including holidays	FSUTLE200P2
Start-up	225	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE225N
Start-up	225	Monday-Saturday, anytime	FSUTLE225P1
Start-up	225	Anytime, including holidays	FSUTLE225P2
Start-up	250	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE250N
Start-up	250	Monday-Saturday, anytime	FSUTLE250P1
Start-up	250	Anytime, including holidays	FSUTLE250P2
Start-up	300	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE300N
Start-up	300	Monday-Saturday, anytime	FSUTLE300P1
Start-up	300	Anytime, including holidays	FSUTLE300P2
Start-up	400	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE400N
Start-up	400	Monday-Saturday, anytime	FSUTLE400P1
Start-up	400	Anytime, including holidays	FSUTLE400P2
Start-up	500	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE500N
Start-up	500	Monday-Saturday, anytime	FSUTLE500P1
Start-up	500	Anytime, including holidays	FSUTLE500P2
Start-up	625	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE625N
Start-up	625	Monday-Saturday, anytime	FSUTLE625P1
Start-up	625	Anytime, including holidays	FSUTLE625P2
Start-up	750	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE750N
Start-up	750	Monday-Saturday, anytime	FSUTLE750P1
Start-up	750	Anytime, including holidays	FSUTLE750P2
Start-up	1000	Monday-Friday, 8:00am-5:00pm, local time	FSUTLE1000N
Start-up	1000	Monday-Saturday, anytime	FSUTLE1000P1
Start-up	1000	Anytime, including holidays	FSUTLE1000P2
Extended warranty	160	Additional one year	WARTLE160
Extended warranty	200	Additional one year	WARTLE200
Extended warranty	225	Additional one year	WARTLE225
Extended warranty	250	Additional one year	WARTLE250
Extended warranty	300	Additional one year	WARTLE300
Extended warranty	400	Additional one year	WARTLE400
Extended warranty	500	Additional one year	WARTLE500
Extended warranty	625	Additional one year	WARTLE625
Extended warranty	750	Additional one year	WARTLE750
Extended warranty	1000	Additional one year	WARTLE1000

UPS 3-phase modular/208V

DPA 60 and DPA 120

Today's data centers require continuous uptime, especially the smaller but rapidly growing edge data centers. That high reliability target is why ABB's DPA 60 and 120 are based on Decentralized Parallel Architecture (DPA). Only a truly redundant architecture like DPA with no single point of failure allows modules to be swapped out while the system is running in double conversion.

Each high-reliability, standardized module is self-contained and can be swapped at any time, so nothing will ever need to be switched off – making routine maintenance safe, fast and easy. The DPA 60 and 120 are designed to secure continuity of critical operations for small to mid-sized data centers, server rooms and other IT applications. It also protects industrial automation processes, healthcare facilities and many other vertical markets where operations are of a critical nature.

Features

• Basic system configuration

The module includes:

- 20kW rectifier and inverters
- Decentralized static bypass switch
- True online double conversion UPS
- Built-in modular isolation
- Built-in backfeed protection
- Individual module display
- HMI interface with mimic diagram and LCD providing information in five languages

• The cabinet includes:

- Optimized cabinets, with either 60kW or 120kW of rated power
- Bottom cable entry (standard) and top cable entry (optional)
- Rectifier, bypass terminals (single or dual-input mains connection available) and UPS output terminals
- Battery breakers and output switches for each module set. DPA 60 (standard); DPA 120 (optional)
- Graphical color touch screen system display
- Communication interfaces: RS-232 and USB ports, I/O dry contacts (e.g. EPO, GEN On) and external bypass interlock

• Options

- Internal battery options for optimized 60kW cabinet
- Matching external battery cabinets
- Maintenance bypass cabinet (matching or wall mount)
- Control and monitoring (Modbus RS-485, Modbus TCP/IP, SNMP, Bacnet and others)
- Battery monitoring
- Seismic bracing



DPA 60



DPA 120

UPS 3-phase modular/208V

DPA 60 and DPA 120

Technical specifications

Specific technical data	DPA 60 UL cabinet	DPA 120 UL cabinet
Power ratings		
Cabinet power range	20–60kW	20–120kW
Nominal power/module	20kW	20kW
Max number of power modules/cabinet	3	6
Maximum loading/cabinet (non-redundant)	60kW	120kW
Maximum loading/cabinet (N+1 redundant)	40kW	100kW
Battery configurations		
Internal battery	Yes (2–6 strings)	No
External battery cabinets	Yes	Yes
Minimum battery runtimes	5–10 minutes	5–10 minutes
Maximum battery runtimes	10 min. @ 60kW; 17 min. @ 40kW; 40 min. @ 20kW	>120 min. at 120kW
Types	VRLA (NiCd and Lithium ion available for external option)	VRLA, NiCd, Lithium ion
Battery charger	Decentralized charger in each module set	Decentralized charger in each module set
Battery configuration and options	(See technical data sheet for specific battery options and runtimes)	(See technical data sheet for specific battery options and runtimes)
Cabinet dimensions and weights (DPA 60 UL and DPA 120 UL)		
Dimensions (W x H x D)	31.0" x 77.8" x 36.4" (787mm x 1976mm x 925mm)	
Weight	(See technical data sheets for weights by kW rating and battery runtime)	
Common technical data (DPA 60 UL and DPA 120 UL)		
General information		
Output power factor	1.0 unity	
Topology	Online, double conversion, transformerless, modular, Decentralized parallel architecture	
Parallel configuration	Up to 5 cabinets in parallel (Up to 300kW for DPA 60, Up to 600kW for DPA 120)	
Cable entry	Bottom (standard), top (optional)	
Serviceability	Front access only	
Back-feed protection	Built-in (standard)	
Connection	5-wires, 3-phase + neutral + ground	
Input		
Nominal input voltage	3 x 208/120V + neutral + ground	
Voltage tolerance	< 100% load (-15%, +10%), < 80% load (-20%, +10%), < 60% load (-30%, +10%)	
Input distortion THDi	< 4% at 100% load	
Frequency range	50/60Hz ± 5%	
Power factor	0.99 @ 100% load	
Walk in/soft start	Yes	
Output		
Rated output voltage	3 x 208/120V + neutral + ground	
Voltage tolerance	± 2.5%	
Voltage distortion	< 2% in linear mode	
Frequency	50/60Hz	
Efficiency		
Double conversion (VFI)	Up to 94% at nominal load	
Eco mode (VFD)	Up to 99% at nominal load	
Environment		
Protection rating	IP 20	
Storage temperature	–25° to +70°C	
Operating temperature	0° to +40°C	
Altitude (above sea level)	1000 m without de-rating	
Communications		
User interface	Graphical touch screen (one per cabinet standard) Decentralized LCD + mimic diagram (one per module standard)	
Communication ports	USB, RS-232, voltage-free contacts, SNMP (optional)	
Customer interface	Remote shutdown, gen-set interface, external bypass contact	
Standard compliance		
Safety	UL 1778 5th edition, CSA C22.2 No. 107.3-14, Third Edition	
EMC	IEC/EN 62040-2 C3	
Manufacturing	ISO 9001:2008	

Note: Please refer to ABB DPA 60 and 120 technical documents for configurations, features, recommendations and guidelines.

[Download Technical Data Sheet for more information on DPA 60.](#)

[Download Technical Data Sheet for more information on DPA 120.](#)

UPS 3-phase modular/208V

DPA 60 and DPA 120

Ordering tables

DPA UPS - 208V (modular)

Power (kW)	Internal battery capacity	Frame size	Part number
20	10 minutes at BOL	20-60	UBSB020DP224FR2
20	15 minutes at BOL	20-60	UBSB020DP224FR3
20	20 minutes at BOL	20-60	UBSB020DP224FR4
20	30 minutes at BOL	20-60	UBSB020DP224FR5
20	40 minutes at BOL	20-60	UBSB020DP224FR6
40	6 minutes at BOL	20-60	UBSB040DP224FR3
40	10 minutes at BOL	20-60	UBSB040DP224FR4
40	13 minutes at BOL	20-60	UBSB040DP224FR5
40	17 minutes at BOL	20-60	UBSB040DP224FR6
60	5 minutes at BOL	20-60	UBSB060DP224FR4
60	8 minutes at BOL	20-60	UBSB060DP224FR5
60	10 minutes at BOL	20-60	UBSB060DP224FR6
20	External battery only	20-120	UBS0020DP224FR
40	External battery only	20-120	UBS0040DP224FR
60	External battery only	20-120	UBS0060DP224FR
80	External battery only	20-120	UBS0080DP224FR
100	External battery only	20-120	UBS0100DP224FR
120	External battery only	20-120	UBS0120DP224FR

External batteries

Power	Battery life	Frame size	Part number
20	13 minutes at BOL	20-120	BC43020-1BR-61-N
20	19 minutes at BOL	20-120	BC43020-1BR-62-N
20	27 minutes at BOL	20-120	BC43020-1BR-63-N
20	44 minutes at BOL	20-120	BC43020-1BR-64-N
20	60 minutes at BOL	20-120	BC43020-1BR-65-N
20	84 minutes at BOL	20-120	BC43020-1BR-66-N
20	99 minutes at BOL	20-120	BC43020-1BR-67-N
20	120+ minutes at BOL	20-120	BC43020-1BR-68-N
20	125+ minutes at BOL	20-120	BC43020-1BR-69-N
40	7.3 minutes at BOL	20-120	BC43040-1BR-62-N
40	9.2 minutes at BOL	20-120	BC43040-1BR-63-N
40	17 minutes at BOL	20-120	BC43040-1BR-64-N
40	25 minutes at BOL	20-120	BC43040-1BR-65-N
40	33 minutes at BOL	20-120	BC43040-1BR-66-N
40	41 minutes at BOL	20-120	BC43040-1BR-67-N
40	59 minutes at BOL	20-120	BC43040-1BR-68-N
40	60 minutes at BOL	20-120	BC43040-1BR-69-N
60	8.6 minutes at BOL	20-120	BC43060-1BR-64-N
60	13 minutes at BOL	20-120	BC43060-1BR-65-N
60	19 minutes at BOL	20-120	BC43060-1BR-66-N
60	24 minutes at BOL	20-120	BC43060-1BR-67-N
60	35 minutes at BOL	20-120	BC43060-1BR-68-N
60	41 minutes at BOL	20-120	BC43060-1BR-69-N
80	7.7 minutes at BOL	20-120	BC43080-1BR-65-N
80	12 minutes at BOL	20-120	BC43080-1BR-66-N
80	15 minutes at BOL	20-120	BC43080-1BR-67-N
80	23 minutes at BOL	20-120	BC43080-1BR-68-N
80	27 minutes at BOL	20-120	BC43080-1BR-69-N
100	5.1 minutes at BOL	20-120	BC43100-1BR-65-N
100	8.3 minutes at BOL	20-120	BC43100-1BR-66-N
100	11 minutes at BOL	20-120	BC43100-1BR-67-N
100	16 minutes at BOL	20-120	BC43100-1BR-68-N
100	19 minutes at BOL	20-120	BC43100-1BR-69-N
120	5.5 minutes at BOL	20-120	BC43120-1BR-66-N
120	7.5 minutes at BOL	20-120	BC43120-1BR-67-N
120	12 minutes at BOL	20-120	BC43120-1BR-68-N
120	15 minutes at BOL	20-120	BC43120-1BR-69-N

UPS 3-phase modular/208V

DPA 60 and DPA 120

Ordering tables (continued)

Maintenance bypass cabinet

Power range	Capacity	Frame size	Part number
20-120	3 Breaker MBP - 65kAIC, Wall Mounted Bypass Panelboard 30"w x 10"d x 36"h, 110 LBS, KK Interlock - Fixed Thermal Mag.	60 & 120	79-5000-00000029
20-120	3 Breaker MBC - 65kAIC, Floor Mounted - Standalone UPS only 19"w x 35"d x 78"h, Kirk Key Vault PB	60 & 120	MBC-112065-LP0

Accessories

Description	Frame size	Part number
SNMP Slot Card - Basic - DPA Basic CS141BSC	60 & 120	49-9300-00002221
MODBUS Slot Card - DPA CS141SCM, RS 485	60 & 120	49-9300-00002222
SNMP Slot Card - Advanced - DPA Advanced MODBUS CS141SC	60 & 120	49-9300-00002245
MODBUS TCP/IP Kit - DPA CS141L External	60 & 120	49-9300-00002252
20kW Module - Qty 1	60 & 120	44-1000-00101696
Top Cable Entry Side Car - Qty 1	60 & 120	49-9301-00002272
Seismic Bracing Kit - Includes 6 brackets	60 & 120	FBS-DPA-00-101

Start-up, commissioning and training

Description	Frame size	Part number
Start up and Commissioning Level 1 M-F, 8a-5p, Contiguous US only Allow 2 weeks to schedule Technician	60 & 120	FSUDPA20-120N
Start up and Commissioning Level 2 M-F, Anytime, Contiguous US only Allow 2 weeks to schedule Technician	60 & 120	FSUDPA20-120P1
Start up and Commissioning Level 3 Weekends & Holidays - Anytime, Contiguous US only Allow 2 weeks to schedule Technician	60 & 120	FSUDPA20-120P2
On-site training, 208V units	60 & 120	TRNS208N

UPS 3-phase modular/480V

DPA 300 and DPA 500

Today's data centers require continuous 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 no load has to be ever switched off – making routine maintenance safe and easy. Conceptpower DPA 500 is designed to secure continuity of critical operations for data centers, colocations, server rooms and other IT applications. It also protects industrial automation processes, healthcare facilities and many other vertical markets where operations are of a critical nature.

Features

- **Basic system configuration**

The module includes:

- 100kW rated power module
- True online double conversion UPS
- Built-in modular isolation
- Built-in backfeed protection
- Individual module display
- HMI interface with mimic diagram and LCD providing information in five languages

- **The cabinet includes:**

- Optimized cabinets, with either 300 or 500kW of rated power
- Top or bottom cable entry (standard)
- Rectifier, bypass terminals (single or dual-input mains connection available) and UPS output terminals
- Battery breakers and output switches for each module set
- Graphical color touch screen system display
- Communication interfaces: RS-232 and USB ports, I/O dry contacts (e.g. EPO, GEN On) and external bypass interlock

- **Options**

- Centralized MCS / MCCB¹
- Battery monitoring
- Dual input feed
- Seismic bracing
- Maintenance bypass cabinet¹
- Control and monitoring (Modbus RS-485, Modbus TCP/IP, SNMP, Bacnet and others)
- Line-and-match battery cabinets

¹ Available for some models. Please contact factory for availability.



300kW cabinet



500kW cabinet

UPS 3-phase modular/480V

DPA 300 and DPA 500

Technical specifications

300kW cabinet	
General Data	
System power range	100kW–1.2MW
Nominal power/module	100kW
Nominal power/cabinet (capacity)	300kW
Output power factor	1.0
Topology	Double conversion, transformerless, modular, Decentralized Parallel Architecture
Parallel configuration	Up to 3 modules in one cabinet (300kW)/up to 4 cabinets in parallel (1.2MW)
Cable entry	Bottom or top as standard
Serviceability	Front access only
Back-feed protection	Built-in as (standard)
Input	
Nominal input voltage	3 x 480V + G
Voltage tolerance	± 10%
Input distortion THDi	< 3.5% at 100% load
Frequency range	60Hz ± 5%
Power factor	0.99 @ 100% load
Walk in/soft start	Yes
Output	
Rated output voltage	3 x 480 V
Voltage tolerance	< ±1% with static load/< ± 4% with step load (referred to 480V)
Voltage distortion	± 1.5%
Frequency	60 Hz
Efficiency	
AC-AC	> 96% (at nominal load)
Environment	
Protection rating	IP 20
Storage temperature	–25° to +70° C
Operating temperature	0° to +40° C
Altitude (above sea level)	1000 m without de-rating
Batteries	
Number of 12V jars/string	45 jars (540V nominal)
Types	VRLA, vented lead-acid, NiCd
Battery charger	Decentralized charger in each module set
Communications	
User interface	Graphical touch screen (one per cabinet as standard) Decentralized LCD + mimic diagram (one per module as standard)
Communication ports	USB, RS-232, voltage-free contacts, SNMP (optional)
Customer interface	Remote shutdown, gen-set interface, external bypass contact
Compliance	
Safety	UL 1778 5th edition, CSA C22.2 No. 107.3-14 Third Edition
EMC	IEC/EN 62040-2 C3
Manufacturing	ISO 9001:2008
Weight, Dimensions	
Weight	1944 lbs. (882 kg)
Dimensions WxHxD	53" x 77.75" x 36" (1347 x 1975 x 914 mm)

500kW cabinet	
General Data	
System power range	100kW–3MW
Nominal power/module	100kW
Nominal power/cabinet (capacity)	500kW
Output power factor	1.0
Topology	Double conversion, transformerless, modular, Decentralized Parallel Architecture
Parallel configuration	Up to 5 modules in one cabinet (500kW)/up to 6 cabinets in parallel (3MW)
Cable entry	Bottom or top as standard
Serviceability	Front access only
Back-feed protection	Built-in as (standard)
Input	
Nominal input voltage	3 x 480V + G
Voltage tolerance	± 10%
Input distortion THDi	< 3.5% at 100% load
Frequency range	60Hz ± 5%
Power factor	0.99 @ 100% load
Walk in/soft start	Yes
Output	
Rated output voltage	3 x 480 V
Voltage tolerance	< ±1% with static load/< ± 4% with step load (referred to 480V)
Voltage distortion	± 1.5%
Frequency	60 Hz
Efficiency	
AC-AC	> 96% (at nominal load)
Environment	
Protection rating	IP 20
Storage temperature	–25° to +70° C
Operating temperature	0° to +40° C
Altitude (above sea level)	1000 m without de-rating
Batteries	
Number of 12V jars/string	45 jars (540V nominal)
Types	VRLA, vented lead-acid, NiCd
Battery charger	Decentralized charger in each module set
Communications	
User interface	Graphical touch screen (one per cabinet as standard) Decentralized LCD + mimic diagram (one per module as standard)
Communication ports	USB, RS-232, voltage-free contacts, SNMP (optional)
Customer interface	Remote shutdown, gen-set interface, external bypass contact
Compliance	
Safety	UL 1778 5th edition, CSA C22.2 No. 107.3-14 Third Edition
EMC	IEC/EN 62040-2 C3
Manufacturing	ISO 9001:2008
Weight, Dimensions	
Weight	2700 lbs. (1225 kg)
Dimensions WxHxD	70" x 77.75" x 36" (1778 x 1975 x 914 mm)

Note: Please refer to ABB Conceptpower DPA 500 technical documents for configurations, features, recommendations and guidelines.

[Download Technical Data Sheet for more information on DPA 300.](#)



UPS 3-phase modular/480V

DPA 300 and DPA 500

Ordering tables

DPA UPS - 480V (modular)

Power (kW)	Cable entry	Frame size	Power modules included	Part number
100	Bottom	300	1	UBS010DP444FRBS
100	Top	300	1	UBS010DP444FRTS
200	Bottom	300	2	UBS020DP444FRBS
200	Top	300	2	UBS020DP444FRTS
300	Bottom	300	3	UBS030DP444FRBS
300	Top	300	3	UBS030DP444FRTS
300	Bottom	500	3	UBS030DP444FRBL
300	Top	500	3	UBS030DP444FRTL
400	Bottom	500	4	UBS040DP444FRBL
400	Top	500	4	UBS040DP444FRTL
500	Bottom	500	5	UBS050DP444FRBL
500	Top	500	5	UBS050DP444FRTL

External batteries

Power	Battery life	Frame size	Part number
100	5.6 minutes at BOL; 3.5 minutes at EOL	300	BC58100-1BR-51-N
100	9.3 minutes at BOL; 6.5 minutes at EOL	300	BC58100-1BR-52-N
100	11 minutes at BOL; 8.2 minutes at EOL	300	BC58100-1BR-53-N
100	14 minutes at BOL; 10.5 minutes at EOL	300	BC58100-1BR-54-N
100	21 minutes at BOL; 16 minutes at EOL	300	BC58100-1BR-55-N
100	23 minutes at BOL; 17.5 minutes at EOL	300	BC58100-1BR-56-N
100	32 minutes at BOL; 24 minutes at EOL	300	BC58100-2BR-53-N
100	37 minutes at BOL; 28 minutes at EOL	300	BC58100-2BR-54-N
100	51 minutes at BOL; 39 minutes at EOL	300	BC58100-2BR-55-N
100	56 minutes at BOL; 43 minutes at EOL	300	BC58100-2BR-56-N
200	4.2 minutes at BOL; 2 minutes at EOL	300	BC58200-1BR-54-N
200	6.8 minutes at BOL; 3 minutes at EOL	300	BC58200-1BR-55-N
200	7.8 minutes at BOL; 4 minutes at EOL	300	BC58200-1BR-56-N
200	11 minutes at BOL; 8 minutes at EOL	300	BC58200-2BR-53-N
200	14 minutes at BOL; 10 minutes at EOL	300	BC58200-2BR-54-N
200	21 minutes at BOL; 16 minutes at EOL	300	BC58200-2BR-55-N
200	23 minutes at BOL; 17 minutes at EOL	300	BC58200-2BR-56-N
300	4.5 minutes at BOL; 2 minutes at EOL	300 & 500	BC58300-2BR-52-N
300	5.9 minutes at BOL; 3 minutes at EOL	300 & 500	BC58300-2BR-53-N
300	7.6 minutes at BOL; 4.5 minutes at EOL	300 & 500	BC58300-2BR-54-N
300	12 minutes at BOL; 8 minutes at EOL	300 & 500	BC58300-2BR-55-N
300	13 minutes at BOL; 9 minutes at EOL	300 & 500	BC58300-2BR-56-N
300	21 minutes at BOL; 16 minutes at EOL	300 & 500	BC58300-3BR-55-N
300	23 minutes at BOL; 17 minutes at EOL	300 & 500	BC58300-3BR-56-N
300	31 minutes at BOL; 23 minutes at EOL	300 & 500	BC58300-4BR-55-N
300	34 minutes at BOL; 26 minutes at EOL	300 & 500	BC58300-4BR-56-N
400	4.2 minutes at BOL; 2 minutes at EOL	500	BC58400-2BR-54-N
400	6.8 minutes at BOL; 3 minutes at EOL	500	BC58400-2BR-55-N
400	7.8 minutes at BOL; 4 minutes at EOL	500	BC58400-2BR-56-N
400	9.3 minutes at BOL; 6 minutes at EOL	500	BC58400-3BR-54-N
400	14 minutes at BOL; 10 minutes at EOL	500	BC58400-3BR-55-N
400	15 minutes at BOL; 11 minutes at EOL	500	BC58400-3BR-56-N
400	21 minutes at BOL; 16 minutes at EOL	500	BC58400-4BR-55-N
400	23 minutes at BOL; 17 minutes at EOL	500	BC58400-4BR-56-N
400	31 minutes at BOL; 24 minutes at EOL	500	BC58400-5BR-56-N
500	3.4 minutes at BOL; 0.5 minutes at EOL	500	BC58500-2BR-55-N
500	4.3 minutes at BOL; 1.4 minutes at EOL	500	BC58500-2BR-56-N
500	6.2 minutes at BOL; 3.5 minutes at EOL	500	BC58500-3BR-54-N
500	10 minutes at BOL; 6 minutes at EOL	500	BC58500-3BR-55-N
500	11 minutes at BOL; 7 minutes at EOL	500	BC58500-3BR-56-N
500	15 minutes at BOL; 11 minutes at EOL	500	BC58500-4BR-55-N
500	23 minutes at BOL; 17 minutes at EOL	500	BC58500-5BR-56-N

UPS 3-phase modular/480V

DPA 300 and DPA 500

Ordering tables (continued)

Maintenance bypass cabinet

Power range	Capacity	Frame size	Part number
300-500	Standalone 3 breaker - 65KAIC, SKRU	100-500	MBC-112065-LP0
300-500	Standalone 3 breaker - 100KAIC, SKRU	100-500	MBC-6300100-LP0

Accessories

Description	Frame size	Part number
Communication card - Basic CS141BSC	300-500	49-9300-00002221
Communication card - RS 485 CS141SCM	300-500	49-9300-00002222
Communication card - Advanced modbus CS141SC	300-500	49-9300-00002245
Communication card - External CS141L	300-500	49-9300-00002252
Add-on module, 100kW	300-500	DPA-100M
Battery temperature probe	300-500	49-9300-00002250

Start-up, commissioning and training

Description	Frame size	Part number
Start up and Commissioning Level 1	300-500	FSUDPA100-500N
Start up and Commissioning Level 2	300-500	FSUDPA100-500P1
Start up and Commissioning Level 3	300-500	FSUDPA100-500P2

UPS Single-phase

ABB PowerValue RT G2 UL (1-10 kVA)

ABB's PowerValue RT G2 UL series are double-conversion online UPS systems that guarantee up to 40 kW of clean, reliable power for critical single-phase applications. Systems are ideal for advanced IT applications and small to mid-sized server rooms, as well as process control automation for medical, renewable energy and transportation environments.

The PowerValue RT G2 UL can be used as a standalone UPS device or installed into a standard 19" rack configuration, with connectivity options available for each. The 1-3 kVA has an internal battery, the 5-10 kVA does not and requires one minimum external battery module (EBM). All units can be fitted with additional EBMs to extend runtime.

Features

- **High reliability**
 - Reliable double conversion topology protects load from all input disturbances
 - Batteries can be added or replaced easily
 - Reduced recovery time from discharge
- **Low cost of ownership**
 - Unity or close to unity power factor (kW = kVA)
 - Scalable runtime
 - High operating efficiency, regardless of loading
 - Reduced installation and upgrading costs
 - Compact design
- **Flexible design**
 - Configurable in tower or rack-mount format
 - Rotatable display
 - UPS can be connected with up to six external battery modules (EBMs) for extended runtime
 - Full set of accessories and connectivity options
- **Efficient service concept**
 - Easy set-up and maintenance (plug-and-play)
 - User-friendly display
 - Hot-swap user-replaceable internal batteries



1 – 3 kVA + 1 EBM (tower & rack)
PowerValue 11 RT G2 UL



5–10kVA + 1 EBM (tower)
5-10kVA + 2 EBM (rack)
PowerValue RT G2 UL

UPS Single-phase

PowerValue 11 RT G2 UL (1-3 kVA)

Technical specifications



PowerValue 11 RT G2 UL UPS with no EBM

General data	1 kVA	1.5 kVA	2 kVA	3 kVA
Output rated power	1 kW	1.45 kW	1.93 kW	2.88 kW
Topology	Online double conversion			
Parallel configuration	No	No	No	No
Inbuilt batteries	Yes	Yes	Yes	Yes
Input				
Nominal input voltage	100 / 110 / 115 / 120 / 125 VAC			
Acceptance voltage	55-150VAC (de-rating to 60% @60V)			
Input current thdi	<5 % with full resistive load			
Frequency range	45-55 Hz for 50 Hz systems; 54-66 Hz for 60 Hz systems			
Power factor	0.99 @ 100% load			
Output				
Rated output voltage	100 / 110 / 115 / 120 / 125 VAC			
Voltage tolerance	±1 %			
Voltage distortion	< 2%	< 2%	< 2%	< 2%
Overload capacity (linear load) on inverter	1.5 s: 140% load; 30 s: 130% load; 300 s: 110% load (line mode) 1.5 s: 140% load; 10 s: 130% load; 120 s: 110% load (battery Mode)			
Nominal frequency	50 or 60 Hz			
Crest factor	3:1 (load supported)			
Efficiency				
Overall system efficiency	Up to 90 %			
In eco-mode	Up to 96 %			
Environment				
Protection rating	IP20			
Storage temperature	UPS: -4° F - +122° F (-20° C - +50° C); batteries: 32° F to 95° F (0° C to 35° C)			
Operating temperature	32° F to 104° F (0° C to 40° C)			
Relative humidity	0 % to 95 %			
Altitude (above sea level)	1000 m without derating			
Batteries				
Type	VRLA (valve regulated lead-acid)			
Internal batteries	1 x3 x 9Ah	1 x4 x 9Ah	1 x6 x 9Ah	1 x6 x 9Ah
Charging current	1/2(Default)/4/6A			
Battery autonomy				
UPS internal batteries	6/10/18/43	5/8/15/37	6/10/18/46	3/5/10/27
UPS +1 batt module	31/45/76/164	26/40/66/143	31/46/77/171	17/27/47/108
UPS + 2 batt module	61/87/140/288	51/76/122/254	61/88/142/301	36/53/89/194
UPS + 3 batt module	92/129/205/413	79/114/179/365	93/131/207/431	55/81/133/281
UPS + 4 batt module	124/172/270/539	106/153/237/476	125/174/273/561	76/109/177/368
UPS + 5 batt module U	147/209/345/758	129/182/299/643	147/209/350/784	92/133/217/462
UPS + 6 batt module	175/251/417/936	160/224/377/839	175/251/421/958	113/164/262/551
Battery autonomy in minutes at 100 / 75 / 50 / 25% load Given runtimes are estimates and valid at 20 degrees Celsius. Actual runtime of the system will depend, among many variables, on the age of the batteries and environmental conditions				
Communications				
User interface	LCD			
Optional communication cards	SNMP; ModBus; AS400; Environmental monitoring sensor probe			
Standards				
Safety	UL 1778 5th / CSA-C22.2 No. 107.3			
Emc	FCC part 15 class A			
Performance	IEC/EN 62040-3			
Manufacturing	ISO 9001:2015, ISO 14001:2015, OHSAS 18001			
Weight, dimensions				
Weight	31.7 lbs (14.4 kg)	43.0 lbs (19.5 kg)	49.6 lbs (22.5 kg)	60.6 lbs (27.5 kg)
Dimensions w x h x d	17.2" x 3.4" x 16.1" (438x88x410 mm)	17.2" x 3.4" x 20" (438x88x510 mm)	17.2" x 3.4" x 24.8" (438x88x630 mm)	17.2" x 3.4" x 24.8" (438x88x630 mm)

UPS Single-phase

PowerValue 11 RT G2 UL (1-3 kVA)

Ordering tables



PowerValue 11 RT G2 UL UPS with 1 EBM

PowerValue 11 RT G2

Power (kW)	Voltage	Part number
1 kVA	100 / 110 / 115 / 120 / 125 VAC	4NWP100200R0011
1.5 kVA	100 / 110 / 115 / 120 / 125 VAC	4NWP100200R0012
2 kVA	100 / 110 / 115 / 120 / 125 VAC	4NWP100201R0011
3 kVA	100 / 110 / 115 / 120 / 125 VAC	4NWP100202R0011

External battery module

Power (kW)	Battery time in minutes UPS + 1 batt module	Battery type	Part number
1 kVA	31/45/76/164	VRLA	4NWP100203R0003
1.5 kVA	26/40/66/143	VRLA	4NWP100203R0004
2 kVA	31/46/77/171	VRLA	4NWP100204R0004
3 kVA	17/27/47/108	VRLA	4NWP100204R0004

Battery autonomy in minutes at 100 / 75 / 50 / 25% load.

See tech data sheet for multiple module run times.

Accessories for 11 RT G2 1-3 kVA units

Description	Category	Part number
Webpro SNMP card	Connectivity options	4NWP100230R0001
Relay card with I/O contacts	Connectivity options	4NWP100220R0001
Environmental monitoring probe	Connectivity options	4NWP100222R0001
Webpro MODBUS CRD	Connectivity options	4NWP100221R0001
Rack mounting kit	Rack installation kits	4NWP100211R0001
Shelf for 2 post rack up to 150 lbs	Rack installation kits	UPS-19IN-SHELF2S
Shelf for 2 post rack up to 300 lbs	Rack installation kits	UPS-19IN-SHELF2L

UPS Single-phase

PowerValue RT G2 UL (5-10 kVA)

Technical specifications



PowerValue RT G2 UL UPS with no EBM

General data	5 kVA	6 kVA	8 kVA	10 kVA
Output rated power	5 kW	6 kW	8 kW	9 kW
Topology	on-line double conversion	on-line double conversion	on-line double conversion	on-line double conversion
Parallel configuration	up to 4 units¹	up to 4 units¹	up to 4 units¹	up to 4 units¹
Battery	Not included	Not included	Not included	Not included
Mechanical				
Dimensions (depth×height×width)	25.0" x 5.3" x 17.3" (635x131x438 mm)	25.0" x 5.3" x 17.3" (635x131x438 mm)	25.0" x 5.3" x 17.3" (635x131x438 mm)	25.0" x 5.3" x 17.3" (635x131x438 mm)
Weight (w/o batteries)	21kg/47lbs	21kg/47lbs	22.5kg/50lbs	22.5kg/50lbs
Acoustic noise (acc. To IEC 62040-3)				
In normal mode (at ≤25°C/ 77°F)	<58 dBA	<58 dBA	<58 dBA	<58 dBA
In battery mode (at ≤25°C/ 77°F)	<58 dBA	<58 dBA	<58 dBA	<58 dBA
Safety				
Access	Operator	Operator	Operator	Operator
Degree of protection against hazards and water ingress	IP20	IP20	IP20	IP20
Electromagnetic compatibility				
Compliant to FCC part 15	Class A	Class A	Class A	Class A
Category Emission / Immunity	Yes	Yes	Yes	Yes
Environmental				
Storage temperature range	-15°C – +60°C/5°F-140°F			
Operative temperature range	0°C – +40°C/32°F-104°F			
Storage (models with batteries)	0°C – +35°C/32°F-104°F			
Relative humidity	≤ 95% (non-condensing)			
Max. altitude without de-rating	1000m/3281 ft. without de-rating, up to 4000m/13,123 ft., 1% de-rating every 100m/328 ft.			
Additional and usual information				
Input connection	3 wires, 2 phase + N + PE			
Output connection	3 wires, 2 phase + N + PE or 3 wires, 1 phase + N + PE			
Cable entry	Rear	Rear	Rear	Rear
Battery cable entry	Rear	Rear	Rear	Rear
Accessibility	Front only	Front only	Front only	Front only
Air outlet	Front, Rear	Front, Rear	Front, Rear	Front, Rear
Included (Default)				
Parallel kit (parallel board pre-installed, parallel cable provided with each unit)	Included	Included	Included	Included
Sea freight packaging (carton box)	Included	Included	Included	Included
Back-feed protection	External	External	External	External

¹Refer to user manual

Accessory package list - the following items are included with each 5-10 kVA UPS:

- 1 x PowerValue RT G2 UPS
- 1 X USB flash drive
- 1 x USB communication cable
- 1 x RS232 communication cable
- 1 x RJ45 Parallel Cable
- 2 x AC Cable gland (5-6K) 3 x AC Cable gland (8-10K)
- 2 x Parallel Cable gland
- 2 x Parallel Cable bushing
- 4 x Standfoot
- 4 x Standfoot extension
- 2 x Mounting ear
- 32 x Screw/nut
- 1 x Slide (Left and Right)

UPS Single-phase

PowerValue RT G2 UL (5-10 kVA)

Technical specifications



PowerValue RT G2 UL UPS with EBM

Input characteristics	5 kVA	6 kVA	8 kVA	10 kVA
Acceptance voltage (steady-state, r.m.s)	88-155VAC (L-N)/ 152-269VAC (L-L)	88-155VAC (L-N)/ 152-269VAC (L-L)	88-155VAC (L-N)/ 152-269VAC (L-L)	88-155VAC (L-N)/ 152-269VAC (L-L)
Nominal voltage	120/208, 120/240, 100/200, 110/220, 115/230, 127/220 VAC	120/208, 120/240, 100/200, 110/220, 115/230, 127/220 VAC	120/208, 120/240, 100/200, 110/220, 115/230, 127/220 VAC	120/208, 120/240, 100/200, 110/220, 115/230, 127/220 VAC
Tolerance, referred to 120/208VAC	-20% / +25%	-20% / +25%	-20% / +25%	-20% / +25%
Frequency, rated	50 Hz / 60 Hz (selectable)	50 Hz / 60 Hz (selectable)	50 Hz / 60 Hz (selectable)	50 Hz / 60 Hz (selectable)
Frequency tolerance	46 Hz – 54 Hz (50 Hz system) / 56 Hz – 64 Hz (60 Hz system)	46 Hz – 54 Hz (50 Hz system) / 56 Hz – 64 Hz (60 Hz system)	46 Hz – 54 Hz (50 Hz system) / 56 Hz – 64 Hz (60 Hz system)	46 Hz – 54 Hz (50 Hz system) / 56 Hz – 64 Hz (60 Hz system)
Input phase (L1 to L2)	120°±10%, 180°±10%, 240°±10%			
Current (r.m.s), rated (with battery charged and input 120/208V)	20.8	25	33.3	41.7
Current (r.m.s), maximum (with charging batt. and input 120/208V)	21.8A	26A	34.3A	42.7A
Total harmonic distortion (THDi)	< 4 % @ 100% R Load	< 4 % @ 100% R Load	< 4 % @ 100% R Load	< 4 % @ 100% R Load
Power factor	≥0.99 @ 100% load	≥0.99 @ 100% load	≥0.99 @ 100% load	≥0.99 @ 100% load
Rated short-time withstand current (I_{cw})	6 kA for 1.5 cycles	6 kA for 1.5 cycles	6 kA for 1.5 cycles	6 kA for 1.5 cycles
AC power distribution system	TN-S, TT			
Phases required	2	2	2	2
Neutral required	Yes	Yes	Yes	Yes
Additional and usual information				
Connection	3 wires, 2 phase + N + PE			
Cable entry	Rear	Rear	Rear	Rear
Walk In/Soft Start	Yes (Power supply needed only for first start-up)			

UPS Single-phase

PowerValue RT G2 UL (5-10 kVA)

Technical specifications

Output characteristics	5 kVA	6 kVA	8 kVA	10 kVA
Rated power	5000 W	6000 W	8000 W	9000 W
AC power distribution system	TN-S, TT			
Available phases	2	2	2	2
Neutral required	Yes	Yes	Yes	Yes
Rated voltage (steady state, r.m.s.)	100/200(derating 90%), 120/208(default), 120/240, 110/220, 115/230, 127/220 VAC			
Variation in normal mode / battery mode	± 1%	± 1%	± 1%	± 1%
Total harmonic distortion (THDU), 100% load, normal mode				
Linear	< 2%	< 2%	< 2%	< 2%
Non-linear (acc. to IEC 62040-3)	< 4%	< 4%	< 4%	< 4%
Voltage transient and recovery time, 100% step load				
Linear	100 ms	100 ms	100 ms	100 ms
Non-linear (acc. to IEC 62040-3)	100 ms	100 ms	100 ms	100 ms
Transfer normal mode --> battery mode	0 ms	0 ms	0 ms	0 ms
Frequency (steady-state), rated	Synchronized with the input mains: 46-54 Hz for 50 Hz systems 56-64 Hz for 60 Hz systems			
Variation in free-running	± 0.1 Hz	± 0.1 Hz	± 0.1 Hz	± 0.1 Hz
Max synch phase error (referred to a 360° cycle)	≤3°	≤3°	≤3°	≤3°
Max slew-rate	1 Hz/s	1 Hz/s	1 Hz/s	1 Hz/s
Nominal current (In), r.m.s. rated	23 A	28 A	37 A	42 A
Overload on inverter	200ms: > 150% load; 10s: 130-150% load; 5min: 110-130% load; 30min: 100-110% load (Line Mode) 200ms: > 150% load; 10s: 130-150% load; 30s: 110-130% load; 3min: 100-110% load (Battery Mode)			
Fault clearing capability normal mode and battery mode (100ms) *default	1.5 x In	1.5 x In	1.5 x In	1.5 x In
Crest factor (Load supported)	3 : 1	3 : 1	3 : 1	3 : 1
Load power factor, rated	1.0	1.0	1.0	1.0
Displacement (permissible lead-lag range)	0.5 lead – 0.5 lag	0.5 lead – 0.5 lag	0.5 lead – 0.5 lag	0.5 lead – 0.5 lag
Double conversion efficiency in normal mode, linear load				
100% load	91%	91%	90%	91%
75% load	88%	90%	89%	90%
50% load	88%	89%	89%	90%
25% load	85%	88%	87%	88%
Eco-mode efficiency, linear load	97%	97%	97%	97%
Bypass—automatic: static switch				
transfer time: inverter to bypass / bypass to inverter / inverter to eco-mode / eco-mode to inv.	0 ms / 0 ms / 0 ms / 10ms	0 ms / 0 ms / 0 ms / 10ms	0 ms / 0 ms / 0 ms / 10ms	0 ms / 0 ms / 0 ms / 10ms
Fault clearing capability (bypass mode) for 20 ms	17.3xIn(400A)	14.3xIn(400A)	17xIn(630A)	15xIn(630A)
Overload on bypass mode	continuous @ 110-130% load (cut off when internal temperature > 85 °C) 1 minute @ >130% load			
Bypass - maintenance Optional, external	Optional, external	Optional, external	Optional, external	Optional, external
	40A*2P	40A*2P	63A*2P	63A*2P

*With recommended fuses, see section Cables and Fuses

UPS Single-phase

PowerValue RT G2 UL (5-10 kVA)

Technical specifications

Battery characteristics	5 kVA	6 kVA	8 kVA	10 kVA
Technology	VRLA, vented lead-acid	VRLA, vented lead-acid	VRLA, vented lead-acid	VRLA, vented lead-acid
Number of 12 V blocks (fixed)	20/10AH	20/10AH	20/10AH	20/10AH
Battery system voltage	±120V			
Battery charger max. current capability	8A	8A	8A	8A
Battery charger max. power capability	+/-1128 W	+/-1128 W	+/-1128 W	+/-1128 W
Floating voltage (VRLA)	2.28 VDC/cell	2.28 VDC/cell	2.28 VDC/cell	2.28 VDC/cell
End of discharge voltage (VRLA)	Load dependent, 1.6 VDC/cell@100% LoadI	Load dependent, 1.6 VDC/cell@100% LoadI	Load dependent, 1.6 VDC/cell@100% LoadI	Load dependent, 1.6 VDC/cell@100% LoadI
Temperature compensation	No	No	No	No
Battery test	Automatic and periodic battery test (selectable)	Automatic and periodic battery test (selectable)	Automatic and periodic battery test (selectable)	Automatic and periodic battery test (selectable)

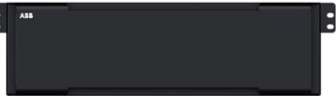
Battery autonomy

Power (kVA)	5 kVA	6 kVA	8 kVA	10 kVA
UPS + 1 batt module	14/20/35/78	11/16/27/61	7/11/19/48	6/9/16/42
UPS + 2 batt module	35/51/78/169	27/42/61/147	19/27/48/103	16/24/42/86
UPS + 3 batt module	56/78/132/277	48/61/103/221	31/48/73/161	27/42/61/147
UPS + 4 batt module	78/114/169/404	61/86/147/311	48/61/103/221	42/56/86/180

Battery autonomy in minutes at 100 / 75 / 50 / 25% load

Given runtimes are estimates and valid at 20 degrees Celsius. Actual runtime of the system will depend, among many variables, on the age of the batteries and environmental conditions

External battery type module

	Power	Dimensions (DxHxW)	Weight	Battery
	5-10 kVA	633x131x438 mm /25x5.25x17.3 inch	72 kg/159 lbs	2 x10 x 10Ah

UPS Single-phase

PowerValue RT G2 UL (5-10 kVA)

Ordering tables

PowerValue RT G2 UL

Power (kW)	Voltage	Part Number
5 kVA		4NWP100150R0008
6 kVA	100/200 (derating 90%), 110/220, 115/230, 120/208 (default),	4NWP100150R0003
8 kVA	120/240, 127/220 VAC	4NWP100151R0008
10 kVA		4NWP100151R0003

External battery module	See Battery Autonomy table for run times	Battery Type	Part Number
EBM for PowerValue RT G2 5-10 kVA UL		VRLA	4NWP100152R0005

Communication options		Part Number
EMBS RT G2 5-10 kVA UL	External maintenance bypass switch	4NWP101737R0005
Webpro SNMP UL	Network interface card	4NWP100230R0004
Relay card with I/O contacts	Relay interface card	4NWP100220R0001
Relay card AS400 dual COM port	Relay interface card	4NWP100220R0002
Environmental monitoring probe	EMD Sensor	4NWP100222R0001
Webpro MODBUS UL	Network interface card	4NWP100221R0002

Isolation Transformer		Part Number
ISO TX RT G2 5-6 kVA UL	Isolation Transformer	4NWP101738R0001
ISO TX RT G2 8-10 kVA UL	Isolation Transformer	4NWP101738R0002

UPS Industrial

PCS100 UPS-I

The PCS100 UPS-I is a robust single conversion UPS providing continuous current flow to the load during transfer due to the revolutionary high-speed Utility Disconnect and fast PCS100 Inverter technology. The modular inverter construction and robust Fail-Safe Bypass provides the highest efficiency and system availability. The single conversion design with Coupling Transformer enables simple, low footprint construction with wide range of operation voltages, galvanic isolation of DC Energy Storage system and robustness for industrial loads.

Features

- **Very high efficiency**

Typically, greater than 99%, even on partial loading. The PCS100 UPS-I is an industrial single conversion UPS. It remains inactive unless the voltage swells or sags outside of a user set window.

- **Small footprint**

Single conversion UPS topology does not require rectifiers in the system. Furthermore, use of advanced ultracapacitor or high discharge rate battery storage further assists in reducing the footprint of the system.

- **Specifically designed for industrial loads**

The PCS100 UPS-I is specifically designed for industrial loads such as motors, drives, transformers and tools.

With high overloadability of the system the PCS100 UPS-I does not require unnecessary upsizing to cater for industrial loads, which is often required for IT-purpose double conversion UPS.

- **Very high fault current capacity**

Up to 65 kA (model specific) to ensure that the PCS100 UPS-I can ride through in case of a fault.

- **Modular design**

Provides high reliability and low MTTR (mean time to repair), 30 minutes or less.

- **Generator walk-in algorithm**

Controlled transfer of the load to backup generators to avoid backup generators tripping.



PCS100 UPS-I

- **Wide power and voltage range**

Ratings from 150 kVA to 3000 kVA and voltages 208 VAC to 480 VAC.

- **Connectivity**

- Ethernet
- Modbus TCP
- E-mail notifications

- **Modular construction**

Proven PCS100 power converter platform, with more than 1800 MVA installed base, enabling fast and easy maintenance

- **Sophisticated control software**

Based on 20 years voltage conditioning industry experience

- **Multilingual graphical touch screen interface**

Simple user controls, easy to understand event log and voltage event data logging

UPS Industrial

PCS100 UPS-I

Technical specifications

Utility – Input	
Rated voltage	220 V – application range 208 – 220 V 400 V – application range 380 – 400 V 480 V – application range 415 – 480 V
Voltage tolerance	±10%
Nominal supply frequency	50 or 60 Hz
Frequency tolerance	±5 Hz
Maximum continuous voltage	110%
Power system ¹	3 phase + neutral (4-wire) center ground reference (TN-S)
Overvoltage category	III
Fault capacity	Refer to the model tables in this catalogue
Efficiency	99% (typical) – 400 & 480 V models 98% (typical) – 220 V models
Overload and short circuit protection	Circuit breaker (not included)
Overload capacity ²	120% for 60 s 150% for 30 s 200% for 10 s 300% for 5 s
Harmonics ³	IEC 61000-2-4 Class 2 (THDV < 8%)
Load - Output	
Rated power	150 to 3000 kVA
Displacement power factor of connected load	0.5 lagging to 0.9 leading
Crest factor for rated kVA	2.0
Maximum allowed regenerative load ⁴	25% of rated kVA
Inverter supply	
Maximum operating period	30 s at 100% rated capacity
Transfer time	≤ 1.8 ms (typical)
Voltage settling time	≤ 5 ms (typical)
Cooling	Forced ventilation
Minimum output voltage	> 95% at end of discharge
Output frequency	50 or 60 Hz, matching the supply frequency
Frequency accuracy	0.1%
Overload capacity	110% for 30 s
Voltage distortion	< 2.5% THDV for linear loads
Voltage unbalance	< 3% for 100% unbalanced loads
Fault capacity (short circuit)	120% of rated current
Fail-Safe Bypass	
900 A Utility Disconnect	Integrated normally closed contactors
2200 & 4200 A Utility Disconnect	Optional air circuit breaker (ACB)
Overload capacity ⁵	150% for 500 s 200% for 300 s 300% for 120 s 500% for 30 s
Closing time	
900 A	20 ms
2200 & 4200 A	80 ms
Cooling	Natural convection
Coupling Transformer	
Capacity rating	110% of PCS100 UPS-I kVA rating for 30 s
Type	Dry
UL insulation class	N (200 °C)
Design temperature	Temperature rise 60 °C for short term full load operation
Typical impedance ⁶	8%

¹ For use in other power systems refer to 2UCD120000E017

² Not more than once every 10 minutes. For more information refer to the Input Circuit Protection section of this catalogue

³ For THDV > 8%, please refer to factory. For applications where THDV is above 10% lifetime of components may be significantly affected, please refer to factory

⁴ Contact ABB for applications with greater than 25%

⁵ Not more than once every 30 minutes

⁶ The PCS100 UPS-I incorporates impedance voltage compensation control methods

UPS Industrial

PCS100 UPS-I

Technical specifications (continued)

Energy Storage - Ultracapacitors	
Nominal DC voltage	750 VDC
Discharging voltage range	750 to 554 VDC
Overload capacity	100%
Rated power	300 kW per string
Autonomy period ⁷	2 s @ 300 kW
Operating temperature	15 to 25 °C recommended
Design life	15 years at 25 °C
Cycle life	> 500,000
Recharge time	< 45 s
Energy storage - Batteries	
Nominal DC voltage	672 V (56 × 12 VDC)
Discharging voltage range	780 to 554 VDC
Overload capacity	100%
Rated power	240 kW per string
Autonomy period ⁸	30 s @ 240 kW
Operating temperature	15 to 25 °C recommended
Design life	10 years at 25 °C
Cycle life	> 800 (full load 30 s discharge)
Recharge time	< 30 min
Event Recording	
Measurement method	Line to line
Sample time	125 µs
Resolution of time stamp in event log	10 ms
Measurement type	Half-cycle RMS according to IEC 61000-4-30
Environmental	
Operating temperature range	0 to 40 °C 32 to 104 °F
Operating altitude	< 1000 m without derating
Capacity derating with altitude	1% every 100 m above 1000 m, 2000 m maximum
Humidity	< 95%, non-condensing
Pollution degree rating	2
Noise	< 75 dBA @ 2 m
Enclosure	
Enclosure rating	IP20/NEMA 1
Material	Electrogalvanized steel
Panel thickness	
Side and rear	1.5 mm
Door	2 mm
Finish	Standard epoxy-polyester powder coating textured
Color	RAL 7035
Enclosure access	Hinged door with key lock
User Interface	
User interface	10.1" color touch panel
Touch panel	Full parameter control
Control inputs	Start / Stop / Reset digital inputs
Control outputs	Running / Warning / Fault relays
Serial Communications	
Access protocol	Ethernet connectivity, Modbus TCP
Standards and Certifications Quality	
Quality	ISO 9001
Marking	CE
Construction and safety	IEC 62040-1, IEC 62477-1
Electromagnetic compatibility	IEC 62040-2, Category C3
Performance	IEC 62040-3, VFD SX 211 ≤ 450 kVA, VFD SS 211 > 450 kVA

⁷ For more information refer to the autonomy calculations in this catalogue

⁸ For more information refer to the autonomy calculations in this catalogue

UPS Industrial

PCS100 UPS-I

Ordering tables

400 V Ultracapacitor Models													Frame Size		Type Code
Rated power kVA @ 400 V	Rated power kVA @ 380 V	Autonomy time Sec (Rated kVA @ 0.8PF)	Autonomy time Sec (Rated kVA @ 1.0PF)	Inverter Rated Current A	Inverters Quantity	Utility Disconnect Rated Current A	Terminal Position Utility & Load	Losses kW (typical)	Efficiency % (typical)	Airflow (m³/min) Standby	Fault Capacity (lcw) kA / Withstand Period ms		PCS100 UPS-I	Energy Storage	
150	143	8	6.5	217	1	900	L	2.3	98.5	27	25 / 10		1xB	1xA	PCS100-12-400/50-01-L-EC01
300	285	3	2	433	2	900	L	3.3	98.9	27	25 / 10		1xB	1xA	PCS100-12-400/50-02-L-EC01

220 V Ultracapacitor Models													Frame Size		Type Code ¹
Rated power kVA @ 220 V	Rated power kVA @ 208 V	Autonomy time Seconds (Rated kVA @ 0.8PF)	Autonomy time Seconds (Rated kVA @ 1.0PF)	Inverter Rated Current A	Inverters Quantity	Utility Disconnect Rated Current A	Terminal Position Utility & Load	Losses kW (typical)	Efficiency % (typical)	Airflow (m³/min) Standby	Fault Capacity (lcw) kA / Withstand Period ms		PCS100 UPS-I	Energy Storage	
150	142	8	6.5	394	1	900	L	2.9	98.0	27	25 / 10		1xB	1xA	PCS100-12-220/x0-01-L-EC01
300	284	3	2	787	2	900	L	4.8	98.4	27	25 / 10		1xB	1xA	PCS100-12-220/x0-02-L-EC01
450	425	5	3.5	1181	3	2200	R	6.7	98.5	35	50 / 120		2xA 1xC	1xA	PCS100-12-220/x0-03-R-EC02
600	567	3	2	1575	4	2200	R	8.9	98.5	35	50 / 120		1xA 2xC	1xA	PCS100-12-220/x0-04-R-EC02
750	709	2	-	1968	5	2200	R	11.0	98.5	35	50 / 120		1xA 2xC	1xA	PCS100-12-220/x00-5-R-EC02
750	709	4	3	1968	5	2200	R	11.0	98.5	35	50 / 120		1xA 2xC	2xA	PCS100-12-220/x0-05-R-EC03
900	851	3	2	2362	6	4200	R	11.8	98.7	45	65 / 120		1xA 2xC	2xA	PCS100-12-220/x0-06-R-EC03
1200	1135	3	2	3149	8	4200	R	15.7	98.7	45	65 / 120		2xA 2xC	2xA	PCS100-12-220/x0-08-R-EC04
1500	1418	2	-	3936	10	4200	R	19.8	98.7	45	65 / 120		2xA 1xC 1xF	2xA	PCS100-12-220/x0-10-R-EC04
1500	1418	3	2	3936	10	4200	R	19.8	98.7	45	65 / 120		2xA 1xC 1xF	3xA	PCS100-12-220/x0-10-R-EC05

¹To complete the Type Code:
Place 5 for 50Hz or 6 for 60Hz in place of the X

UPS Industrial

PCS100 UPS-I

Ordering tables (continued)

400 V Ultracapacitor Models												Frame Size		Type Code
Rated power kVA @ 400 V	Rated power kVA @ 380 V	Autonomy time Sec (Rated kVA @ 0.8PF)	Autonomy time Sec (Rated kVA @ 1.0PF)	Inverter Rated Current A	Inverters Quantity	Utility Disconnect Rated Current A	Terminal Position Utility & Load	Losses kW (typical)	Efficiency % (typical)	Airflow (m ³ /min) Standby	Fault Capacity (Icw) kA / Withstand Period ms	PCS100 UPS-I	Energy Storage	
150	143	8	6.5	217	1	900	L	2.3	98.5	27	25 / 10	1xB	1xA	PCS100-12-400/50-01-L-EC01
300	285	3	2	433	2	900	L	3.3	98.9	27	25 / 10	1xB	1xA	PCS100-12-400/50-02-L-EC01
450	428	5	3.5	650	3	900	L	4.5	99.0	27	25 / 10	1xA 1xB	1xA	PCS100-12-400/50-03-L-EC02
600	570	3	2	866	4	900	L	5.9	99.0	27	25 / 10	1xB 1xC	1xA	PCS100-12-400/50-04-L-EC02
750	709	2	-	1083	5	2200	R	7.1	99.1	35	50 / 120	1xA 2xC	1xA	PCS100-12-400/50-05-R-EC02
750	713	4	3	1083	5	2200	R	7.1	99.1	35	50 / 120	1xA 2xC	2xA	PCS100-12-400/50-05-R-EC03
900	855	3	2	1299	6	2200	R	7.7	99.1	35	50 / 120	1xA 2xC	2xA	PCS100-12-400/50-06-R-EC03
1200	1140	3	2	1732	8	2200	R	10.1	99.2	35	50 / 120	2xA 2xC	2xA	PCS100-12-400/50-08-R-EC04
1500	1425	2	-	2165	10	2200	R	12.6	99.2	35	50 / 120	2xA 1xC 1xF	2xA	PCS100-12-400/50-10-R-EC04
1500	1425	3	2	2165	10	2200	R	12.6	99.2	35	50 / 120	2xA 1xC 1xF	3xA	PCS100-12-400/50-10-R-EC05
1800	1710	2.2	-	2598	12	4200	R	14.3	99.2	45	65 / 120	2xA 1xC 1xF	3xA	PCS100-12-400/50-12-R-EC05
1800	1710	3	2	2598	12	4200	R	14.3	99.2	45	65 / 120	2xA 1xC 1xF	3xA	PCS100-12-400/50-12-R-EC06
2100	1995	2.3	-	3031	14	4200	R	16.7	99.2	45	65 / 120	3xA 1xC 1xF	3xA	PCS100-12-400/50-14-R-EC06
2100	1995	3	2	3031	14	4200	R	16.7	99.2	45	65 / 120	3xA 1xC 1xF	4xA	PCS100-12-400/50-14-R-EC07
2400	2280	2.5	-	3464	16	4200	R	18.9	99.2	45	65 / 120	3xA 1xC 1xF	4xA	PCS100-12-400/50-16-R-EC07
2400	2280	3	2	3464	16	4200	R	18.9	99.2	45	65 / 120	3xA 1xC 1xF	4xA	PCS100-12-400/50-16-R-EC08

UPS Industrial

PCS100 UPS-I

Ordering tables (continued)

480 V Ultracapacitor Models													Frame Size		Type Code ¹
Rated power kVA @ 480 V	Rated power kVA @ 440 V	Rated power kVA @ 415 V	Autonomy time Sec (Rated kVA @ 0.8PF)	Autonomy time Sec (Rated kVA @ 1.0PF)	Inverter Rated Current A	Inverters Quantity	Utility Disconnect Rated Current A	Terminal Position Utility & Load	Losses kW (typical)	Efficiency % (typical)	Airflow (m ³ /min) Standby	Fault Capacity (I _{cw}) kA / Withstand Period ms	PCS100 UPS-I	Energy Storage	
150	138	130	8	6.5	180	1	900	L	2.3	98.5	27	25 / 10	1xB	1xA	PCS100-12-480/x0-01-L-EC01
300	275	259	3	2	361	2	900	L	3.2	98.9	27	25 / 10	1xB	1xA	PCS100-12-480/x0-02-L-EC01
450	413	389	5	3.5	541	3	900	L	4.3	99.1	27	25 / 10	1xA 1xB	1xA	PCS100-12-480/x0-03-L-EC02
600	550	519	3	2	722	4	900	L	5.5	99.1	27	25 / 10	1xB 1xC	1xA	PCS100-12-480/x0-04-L-EC02
750	688	648	2	-	902	5	900	L	6.6	99.1	35	50 / 120	1xB 1xC	1xA	PCS100-12-480/x0-05-L-EC02
750	688	648	4	3	902	5	900	L	6.6	99.1	35	50 / 120	1xB 1xC	2xA	PCS100-12-480/x0-05-L-EC03
900	825	778	3	2	1083	6	2200	R	7.1	99.2	35	50 / 120	1xA 1xB 1xC	2xA	PCS100-12-480/x0-06-R-EC03
1200	1100	1038	3	2	1443	8	2200	R	9.1	99.2	35	50 / 120	2xA 2xC	2xA	PCS100-12-480/x0-08-R-EC04
1500	1375	1297	2	-	1804	10	2200	R	11.2	99.3	35	50 / 120	2xA 1xC 1xF	2xA	PCS100-12-480/x0-10-R-EC04
1500	1375	1297	3	2	1804	10	2200	R	11.2	99.3	35	50 / 120	2xA 1xC 1xF	3xA	PCS100-12-480/x0-10-R-EC05
1800	1650	1556	2.2	-	2165	12	2200	R	13.6	99.2	35	50 / 120	2xA 1xC 1xF	3xA	PCS100-12-480/x0-12-R-EC05
1800	1650	1556	3	2	2165	12	2200	R	13.6	99.2	35	50 / 120	2xA 1xC 1xF	3xA	PCS100-12-480/x0-12-R-EC06
2100	1925	1816	2.3	-	2526	14	4200	R	14.9	99.3	45	65 / 120	3xA 1xC 1xF	3xA	PCS100-12-480/x0-14-R-EC06
2100	1925	1816	3	2	2526	14	4200	R	14.9	99.3	45	65 / 120	3xA 1xC 1xF	4xA	PCS100-12-480/x0-14-R-EC07
2400	2200	2075	2.5	-	2887	16	4200	R	16.6	99.3	45	65 / 120	3xA 1xC 1xF	4xA	PCS100-12-480/x0-16-R-EC07
2400	2200	2075	3	2	2887	16	4200	R	16.6	99.3	45	65 / 120	3xA 1xC 1xF	4xA	PCS100-12-480/x0-16-R-EC08

¹To complete the Type Code:
Place 5 for 50Hz or 6 for 60Hz in place of the X

UPS Industrial

PCS100 UPS-I

Ordering tables (continued)

220 V Battery Models													Frame Size	Type Code ¹
Rated power kVA @ 220 V	Rated power kVA @ 208 V	Autonomy time Seconds (Rated kVA @ 0.8PF)	Autonomy time Seconds (Rated kVA @ 1.0PF)	Inverter Rated Current A	Inverters Quantity	Utility Disconnect Rated Current A	Terminal Position Utility & Load	Losses kW (typical)	Efficiency % (typical)	Airflow (m ³ /min) Standby	Fault Capacity (Icw) kA / Withstand Period ms	PCS100 UPS-I	Energy Storage	
150	142	30	30	394	1	900	L	2.3	2.9	98.0	25 / 10	1xB	1xA	PCS100-12-220/x0-01-L-EB01
300	284	30	-	787	2	900	L	3.3	4.8	98.4	25 / 10	1xB	1xA	PCS100-12-220/x0-02-L-EB01
300	284	30	30	787	2	900	L	4.5	4.8	98.4	25 / 10	1xB	2xA	PCS100-12-220/x0-02-L-EB02
450	425	30	30	1181	3	2200	R	5.9	6.7	98.5	50 / 120	2xA 1xC	2xA	PCS100-12-220/x0-03-R-EB02
600	567	30	-	1575	4	2200	R	7.1	8.9	98.5	50 / 120	1xA 2xC	2xA	PCS100-12-220/x0-04-R-EB02
600	567	30	30	1575	4	2200	R	7.1	8.9	98.5	50 / 120	1xA 2xC	3xA	PCS100-12-220/x0-04-R-EB03
750	709	30	-	1968	5	2200	R	7.7	11.0	98.5	50 / 120	1xA 2xC	3xA	PCS100-12-220/x0-05-R-EB03
750	709	30	30	1968	5	2200	R	10.1	11.0	98.5	50 / 120	1xA 2xC	4xA	PCS100-12-220/x0-05-R-EB04
900	851	30	-	2362	6	4200	R	12.6	11.8	98.7	65 / 120	1xA 2xC	3xA	PCS100-12-220/x0-06-R-EB03
900	851	30	30	2362	6	4200	R	12.6	11.8	98.7	65 / 120	1xA 2xC	4xA	PCS100-12-220/x0-06-R-EB04
1200	1135	30	-	3149	8	4200	R	14.3	15.7	98.7	65 / 120	1xA 2xC	4xA	PCS100-12-220/x0-08-R-EB04
1200	1135	30	30	3149	8	4200	R	14.3	15.7	98.7	65 / 120	2xA 2xC	5xA	PCS100-12-220/x0-08-R-EB05
1500	1418	30	-	3936	10	4200	R	16.7	19.8	98.7	65 / 120	2xA 2xC	5xA	PCS100-12-220/x0-10-R-EB05
1500	1418	30	30	3936	10	4200	R	16.7	19.8	98.7	65 / 120	2xA 1xC 1xF	7xA	PCS100-12-220/x0-10-R-EB07

¹To complete the Type Code:

Place 5 for 50Hz or 6 for 60Hz in place of the X

UPS Industrial

PCS100 UPS-I

Ordering tables (continued)

400 V Battery Models												Frame Size		Type Code
Rated power kVA @ 400 V	Rated power kVA @ 380 V	Autonomy time Sec (Rated kVA @ 0.8PF)	Autonomy time Sec (Rated kVA @ 1.0PF)	Inverter Rated Current A	Inverters Quantity	Utility Disconnect Rated Current A	Terminal Position Utility & Load	Losses kW (typical)	Efficiency % (typical)	Airflow (m³/min) Standby	Fault Capacity (I _{cw}) kA / Withstand Period ms	PCS100 UPS-I	Energy Storage	
150	143	30	30	217	1	900	L	2.3	98.5	27	25 / 10	1xB	1xA	PCS100-12-400/50-01-L-EB01
300	285	30	-	433	2	900	L	3.3	98.9	27	25 / 10	1xB	1xA	PCS100-12-400/50-02-L-EB01
300	285	30	30	433	2	900	L	3.3	98.9	27	25 / 10	1xB	2xA	PCS100-12-400/50-02-L-EB02
450	428	30	30	650	3	900	L	4.5	99.0	27	25 / 10	1xA 1xB	2xA	PCS100-12-400/50-03-L-EB02
600	570	30	-	866	4	900	L	5.9	99.0	27	25 / 10	1xB 1xC	2xA	PCS100-12-400/50-04-L-EB02
600	570	30	30	866	4	900	L	5.9	99.0	27	25 / 10	1xB 1xC	3xA	PCS100-12-400/50-04-L-EB03
750	713	30	-	1083	5	2200	R	7.1	99.1	35	50 / 120	1xA 2xC	3xA	PCS100-12-400/50-05-R-EB03
750	713	30	30	1083	5	2200	R	7.1	99.1	35	50 / 120	1xA 2xC	4xA	PCS100-12-400/50-05-R-EB04
900	855	30	-	1299	6	2200	R	7.7	99.1	35	50 / 120	1xA 2xC	3xA	PCS100-12-400/50-06-R-EB03
900	855	30	30	1299	6	2200	R	7.7	99.1	35	50 / 120	1xA 2xC	4xA	PCS100-12-400/50-06-R-EB04
1200	1140	30	-	1732	8	2200	R	10.1	99.2	35	50 / 120	2xA 2xC	4xA	PCS100-12-400/50-08-R-EB04
1200	1140	30	30	1732	8	2200	R	10.1	99.2	35	50 / 120	2xA 2xC	5xA	PCS100-12-400/50-08-R-EB05
1500	1425	30	-	2165	10	2200	R	12.6	99.2	35	50 / 120	2xA 1xC 1xF	5xA	PCS100-12-400/50-10-R-EB05
1500	1425	30	30	2165	10	2200	R	12.6	99.2	35	50 / 120	2xA 1xC 1xF	7xA	PCS100-12-400/50-10-R-EB07
1800	1710	30	-	2598	12	4200	R	14.3	99.2	45	65 / 120	2xA 1xC 1xF	6xA	PCS100-12-400/50-12-R-EB06
1800	1710	30	30	2598	12	4200	R	14.3	99.2	45	65 / 120	2xA 1xC 1xF	8xA	PCS100-12-400/50-12-R-EB08
2100	1995	30	-	3031	14	4200	R	16.7	99.2	45	65 / 120	3xA 1xC 1xF	7xA	PCS100-12-400/50-14-R-EB07
2100	1995	30	30	3031	14	4200	R	16.7	99.2	45	65 / 120	2xA 1xC 1xF	9xA	PCS100-12-400/50-14-R-EB09
2400	2280	30	-	3464	16	4200	R	18.9	99.2	45	65 / 120	2xA 1xC 1xF	8xA	PCS100-12-400/50-16-R-EB08
2400	2280	30	30	3464	16	4200	R	18.9	99.2	45	65 / 120	2xA 1xC 1xF	10xA	PCS100-12-400/50-16-R-EB010

UPS Industrial

PCS100 UPS-I

Ordering tables (continued)

480 V Battery Models													Frame Size		Type Code ¹
Rated power kVA @ 480 V	Rated power kVA @ 440 V	Rated power kVA @ 415 V	Autonomy time Sec (Rated kVA @ 0.8PF)	Autonomy time Sec (Rated kVA @ 1.0PF)	Inverter Rated Current A	Inverters Quantity	Utility Disconnect Rated Current A	Terminal Position Utility & Load	Losses kW (typical)	Efficiency % (typical)	Airflow (m ³ /min) Standby	Fault Capacity (Icw) kA / Withstand Period ms	PCS100 UPS-I	Energy Storage	
150	138	130	30		180	1	900	L	2.3	98.5	27	25 / 10	1xB	1xA	PCS100-12-480/x0-01-L-EB01
300	275	259	30	-	361	2	900	L	3.2	98.9	27	25 / 10	1xB	1xA	PCS100-12-480/x0-02-L-EB01
300	275	259	30	30	361	2	900	L	3.2	98.9	27	25 / 10	1xB	2xA	PCS100-12-480/x0-02-L-EB02
450	413	389	30	30	541	3	900	L	4.3	99.1	27	25 / 10	1xA 1xB	2xA	PCS100-12-480/x0-03-L-EB02
600	550	519	30	-	722	4	900	L	5.5	99.1	27	25 / 10	1xB 1xC	2xA	PCS100-12-480/x0-04-L-EB02
600	550	519	30	30	722	4	900	L	5.5	99.1	27	25 / 10	1xB 1xC	3xA	PCS100-12-480/x0-04-L-EB03
750	688	648	30	-	902	5	900	L	6.6	99.1	35	50 / 120	1xB 1xC	3xA	PCS100-12-480/x0-05-L-EB03
750	688	648	30	30	902	5	900	L	6.6	99.1	35	50 / 120	1xB 1xC	4xA	PCS100-12-480/x0-05-L-EB04
900	825	778	30	-	1083	6	2200	R	7.1	99.2	35	50 / 120	1xA 2xC	3xA	PCS100-12-480/x0-06-R-EB03
900	825	778	30	30	1083	6	2200	R	7.1	99.2	35	50 / 120	1xA 2xC	4xA	PCS100-12-480/x0-06-R-EB04
1200	1100	1038	30	-	1443	8	2200	R	9.1	99.2	35	50 / 120	2xA 2xC	4xA	PCS100-12-480/x0-08-R-EB04
1200	1100	1038	30	30	1443	8	2200	R	9.1	99.2	35	50 / 120	2xA 2xC	5xA	PCS100-12-480/x0-08-R-EB05
1500	1375	1297	30	-	1804	10	2200	R	11.2	99.3	35	50 / 120	2xA 1xC 1xF	5xA	PCS100-12-480/x0-10-R-EB05
1500	1375	1297	30	30	1804	10	2200	R	11.2	99.3	35	50 / 120	2xA 1xC 1xF	7xA	PCS100-12-480/x0-10-R-EB07
1800	1650	1556	30	-	2165	12	2200	R	13.6	99.2	35	50 / 120	2xA 1xC 1xF	6xA	PCS100-12-480/x0-12-R-EB06
1800	1650	1556	30	30	2165	12	2200	R	13.6	99.2	35	50 / 120	2xA 1xC 1xF	8xA	PCS100-12-480/x0-12-R-EB08
2100	1925	1816	30	-	2526	14	4200	R	14.9	99.3	45	65 / 120	3xA 1xC 1xF	7xA	PCS100-12-480/x0-14-R-EB07
2100	1925	1816	30	30	2526	14	4200	R	14.9	99.3	45	65 / 120	2xA 1xC 1xF	9xA	PCS100-12-480/x0-14-R-EB09
2400	2200	2075	30	-	2887	16	4200	R	16.6	99.3	45	65 / 120	2xA 1xC 1xF	8xA	PCS100-12-480/x0-16-R-EB08
2400	2200	2075	30	30	2887	16	4200	R	16.6	99.3	45	65 / 120	2xA 1xC 1xF	10xA	PCS100-12-480/x0-16-R-EB10

¹To complete the Type Code:

Place 5 for 50Hz or 6 for 60Hz in place of the X

UPS medium voltage

PCS120

ABB's PCS120 MV UPS is the next generation of medium voltage UPS intended for multi megawatt power protection. Based on the ZISC architecture, the PCS120 MV UPS introduces a flexible solution for higher reliability and efficiency in critical power installations.

Features

- **Cost effective**
 - Class leading efficiency - 98% at 50% to 100% loading
 - Reduced maintenance compared to rotary systems
- **Performance**
 - Performance in line with IEC62040-3 Class 1
 - High fault clearing capability
 - Higher availability due to modular design
- **Flexibility**
 - Paralleling capability
 - Distributed layouts
 - Versatile energy storage options
 - Indoor or outdoor solutions
- **Connectivity and monitoring**
 - IEC 61850 digital communication
 - Event analysis and waveform capture
 - Remote monitoring and diagnostics
 - ABB Ability™ to increase productivity and safety at lower costs
- **Serviceability**
 - Plug and play power converters
 - Power converters and energy storage at low voltage
 - MTTR typically less than fifteen minutes
 - Comprehensive service log
 - Shutdown every 5 years for maintenance
- **Grid support**
 - Up to 20% of system energy storage reserve available for grid support services



PCS120

UPS medium voltage

PCS120

Technical specifications

Item	Value
Nominal Voltage	12 kV IEC (10 - 11 kV)
	15 kV ANSI (12 - 15 kV)
	24 kV IEC (20 - 24 kV)
Power Rating	2.25 MW - 22.5 MW
Efficiency	>98%
Configurations	Single Unit
	Parallel
Energy Storage	Li-Ion batteries
	VRLA batteries
Construction	Indoor solution
	Outdoor solution



Notes

Lined area for notes, consisting of multiple horizontal lines.