PowerHub

MODULAR THREE PHASE UPS SERIES

PRESTIGE PRO UPS

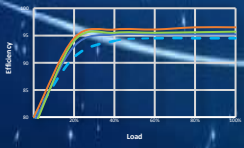
400kW – 1200kW (Up to 4.8MW)

Reliable High Power Modular UPS solution tailored for all mission critical environment

- Modular 100kW
- Energy Efficiency > 99%
- Support VRLA/Li-on Batteries

The genuine safe-swap modularity of the modules contributes to maximizing system uptime. This feature allows for effortless addition or removal of modules without necessitating a UPS bypass.

The 10inch touch-screen LCD control panel provides administrators with the capability to oversee and control the UPS status effectively.



Enhanced energy efficiency substantially lowers both operational expenses of the system and the associated air-conditioning costs for the site.

LITHIUM ION BATTERY COMPATIBLE

Lithium-ion Battery system exhibits superior traits in UPS applications, leading to advantages such as high energy density, extended lifespan, versatile installation options, enhanced cycle life, and a reduced Total Cost of Ownership (TCO).

The Use of Modular UPS in Data Centers

Modular Uninterruptible Power Supply (UPS) systems are increasingly popular in data centers due to their flexibility, scalability, and efficiency.

Maximise Capital Investment Resources

Modular power system architecture approach allows infrastructure to be deployed as needed to meet demand, instead of being deployed up front.

Maximise Energy Efficiency

The number one cause of data center inefficiency is overcapacity. Scalable modular power system avoids this problem through rightsizing. Many other causes of inefficiency are also mitigated by pre-engineering and standardization.

Flexible Design For Power Density

Modular design allows decisions such as power density to be deferred until time of deployment, instead of being made years in advance

Improve Cost Efficiency And Ease Of Maintenance

Implementing a modular power system architecture not only allows data centers to grow their capacity, but also improves cost efficiency and ease of maintenance.

Solutions for Optimizing Space

Modular UPS are smaller in footprints and capacity can be increased at any time, simply by adding power modules to the existing UPS or by adding a new UPS in parallel to the existing installation.

PRESTIGE PRO UPS

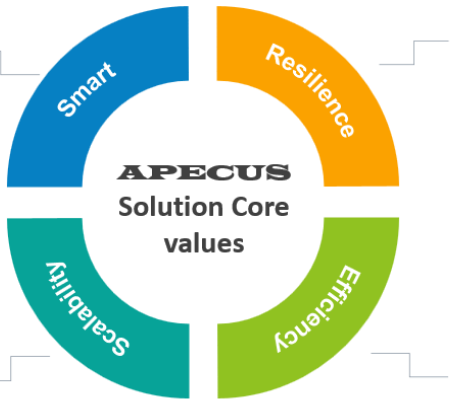
The PRESTIGE Pro UPS is a modular system known for its high AC/AC efficiency, compact design, and flexible, scalable architecture. It can support up to 1200 kVA. The system cabinets come in various sizes, accommodating 4, 5, 6, 8, 10, or 12 power modules, including redundancy options.

EASE OF MANAGEMENT

Smart monitoring increases reliability significantly and enables advanced actions to ensure business continuity.

HIGHEST AVAILABILITY

The ability of a system to absorb faults and still remain in its desired operational state is paramount to minimizing costly downtime.



EASE OF DEPLOYMENT

Scalability helps to optimize capital expenditure by enabling the pay-as-you-grow approach. The UPS capacity can be increased at any time, simply by adding power modules to the existing UPS or by adding a new UPS in parallel to the existing installation..

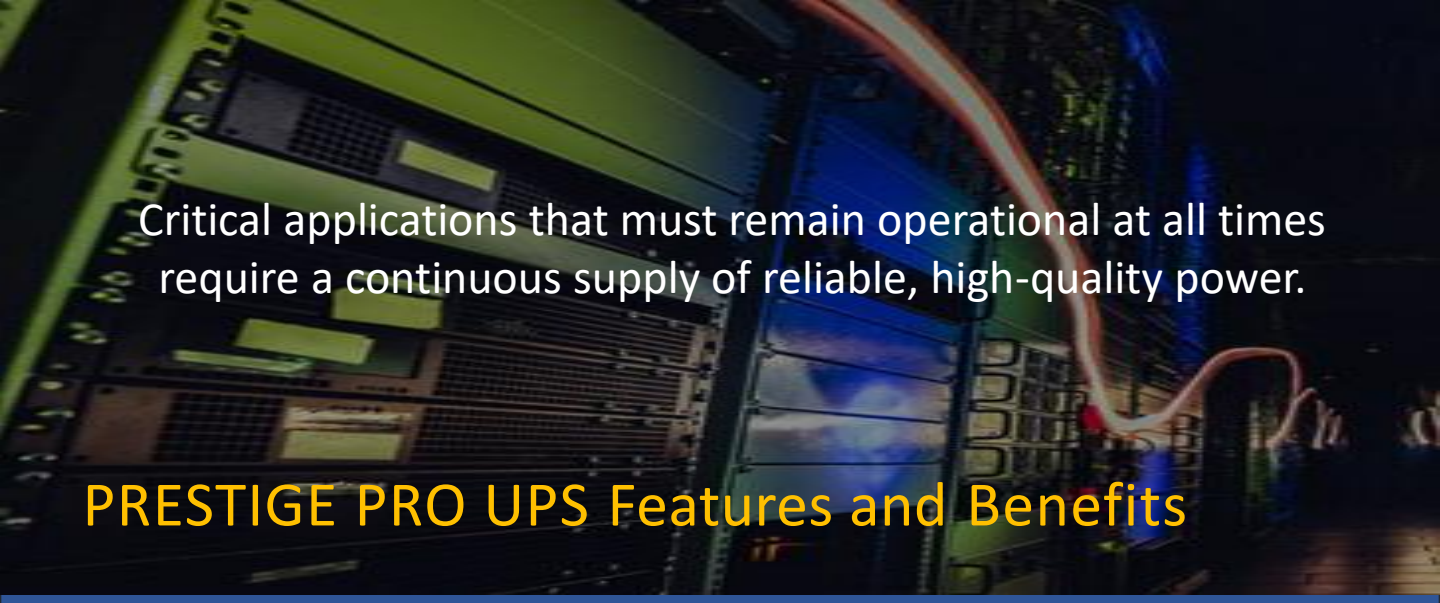
LOWER TOTAL COST OF OWNERSHIP

Reduced power losses leads to higher sustainability thus reduced carbon emissions

Power Rating

400 – 1200kVA

Can be parallel up to 4.8MVA



Critical applications that must remain operational at all times require a continuous supply of reliable, high-quality power.

PRESTIGE PRO UPS Features and Benefits

The Prestige Pro Modular UPS integrates cutting-edge 3 Layer IGBT Technology, offering a compelling combination of high efficiency and reliability. This system is not only space-saving, robust, scalable, and flexible but is also straightforward to deploy and manage. It stands out as an ideal backup power solution for modern data centers, commercial buildings, the healthcare industry, and various other applications.

Modular Design

- All units feature a modular design, including the power module, bypass module, and monitoring module, allowing for easy integration. The power module, bypass module, monitoring module, and ECU control module are all hot-swappable.

High Reliability

- Wide input voltage range, line voltage range is 138-485V, UPS will derate to 40% when input voltage is below 323V.
- UPS adopts multiple digital bus and redundancy parallel control system, making sure the whole system remains online if any single circuit fail.
- Thickened conformal coating, applicable for harsh environment such as high heat, high humidity and dust.

Green and Power Saving

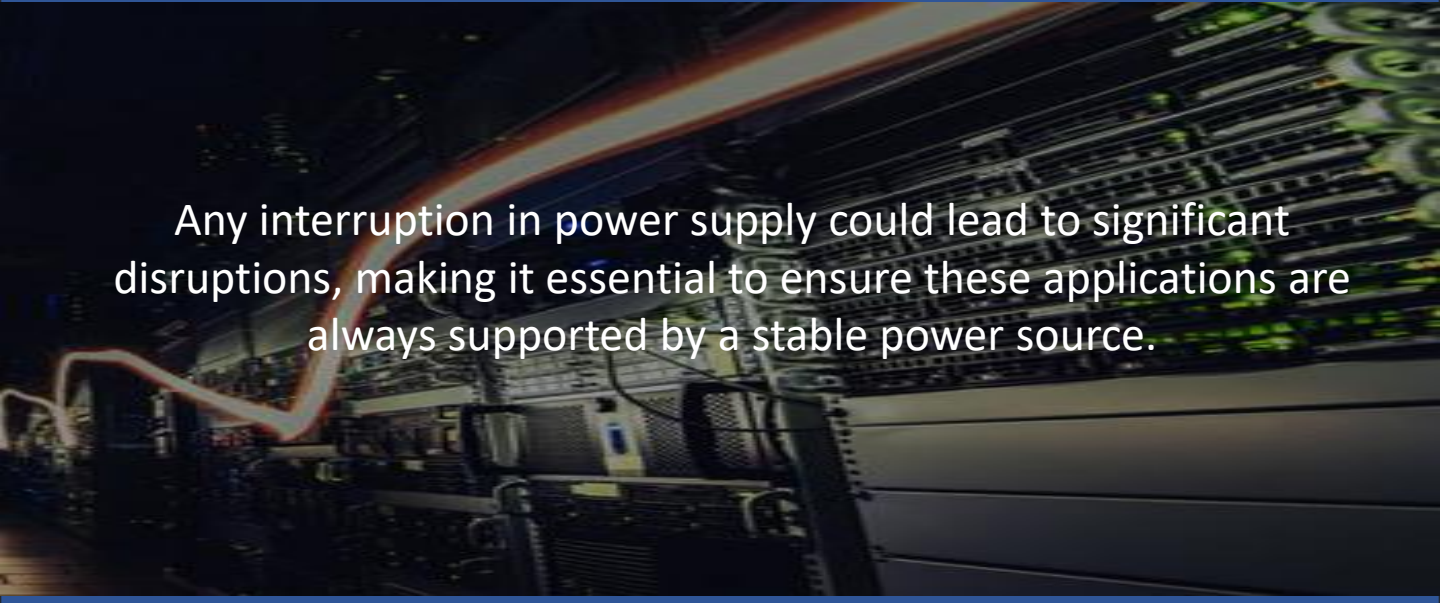
- High input power factor of up to 0.99.
- 3-level topology design, online efficiency up to 97%.
- Total Harmonics Distortion (Current) < 3% (100% linear load).
- The UPS can enter a sleeping mode when the load is very small, and this setting is adjustable.

HECO Mode

- High performance mode, system efficiency up to 99% Inverter is in working state and has reactive power compensation and active power filter functions, improving input power factor and quality
- Automatic adjustment of inverter control mode to power the load when bypass is abnormal

Intelligent Management

- Support recording and exporting history logs and fault logs
- Support SNMP, RS232, RS485, BMS, Dry contact interface
- Support upgrading FW&SW on line (In bypass mode)
- EPO & REPO function
- Support wave recording when fault occurs
- Support key components lifecycle management



Any interruption in power supply could lead to significant disruptions, making it essential to ensure these applications are always supported by a stable power source.

Strong Load Capability

- The UPS has an output power factor of 1.0, allowing it to supply power to a fully unbalanced load. It is highly adaptable to various loads, capable of connecting to either fully inductive or capacitive loads with a power factor greater than 0.7 without any derating."

Parallel Redundancy Function

- Supports parallel expansion with up to 6 units and allows for shared battery usage among the UPS units in parallel.
- Parallel operation enhances system reliability. If one UPS unit fails, the remaining units can continue to supply power, ensuring uninterrupted operation. This is particularly useful in critical applications where downtime is not an option.
- The connected UPS units share the load among them. This balanced distribution of power demand helps in optimizing the performance and lifespan of each UPS unit.
- The UPS units in parallel can share a common battery bank. This reduces the need for individual battery sets for each UPS, simplifying maintenance and reducing costs. Shared batteries also ensure that all UPS units have access to the same backup power source, enhancing overall system reliability

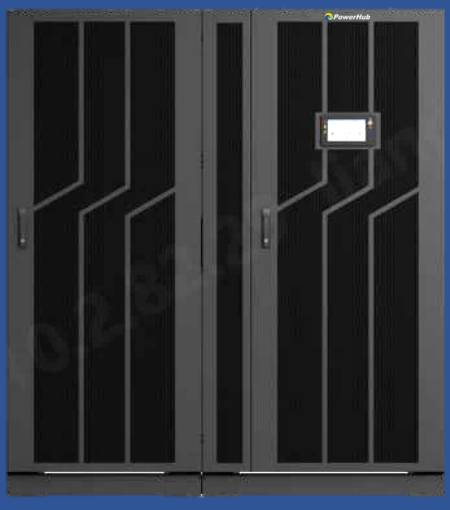
Compatible with Generator

- The Power Walk In function is designed to manage the initial surge of current when the UPS system starts up. This feature gradually ramps up the power demand from the generator, rather than drawing a large amount of current all at once. Here are the key benefits:

LBS Function

- The LBS function enables two independent UPS systems to operate in synchronization, enhancing the overall reliability of the system. By synchronizing two UPS systems, the overall reliability of the power supply is significantly improved. If one UPS system encounters a fault or failure, the other synchronized system can seamlessly take over, ensuring continuous power supply without interruption.

Prestige Pro 400/500/600kVA

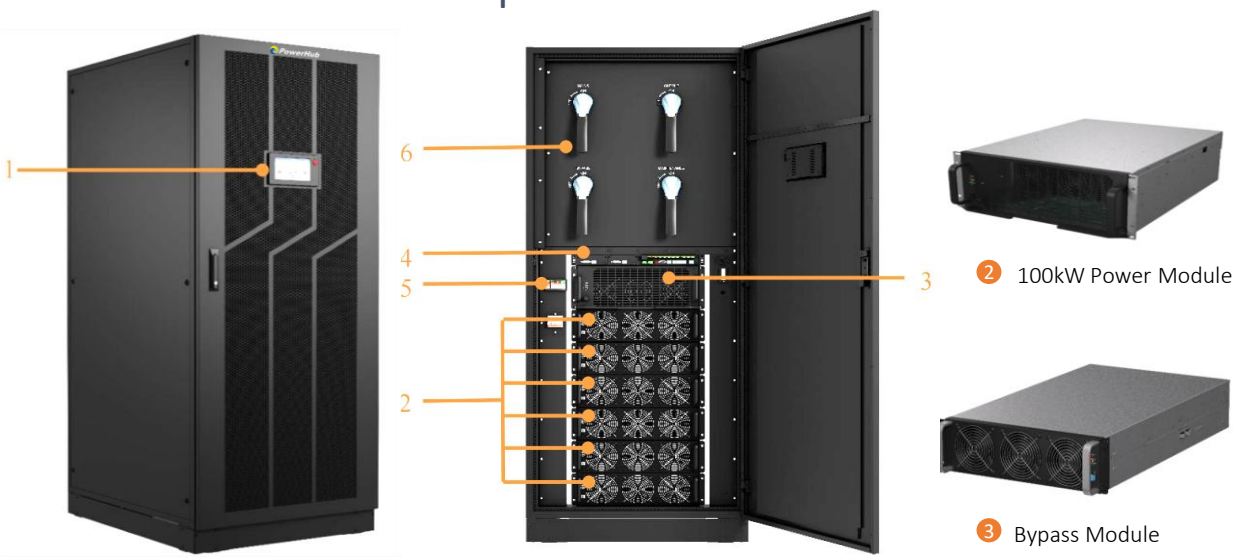


Prestige Pro 1000/1200kVA

Functional Core of Prestige Pro UPS

The Prestige Pro UPS is more efficient than a conventional monolithic UPS, thanks to a number of leading technologies.

General Product Description



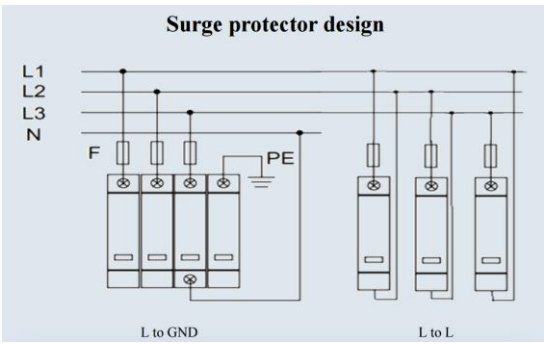
2 100kW Power Module

3 Bypass Module

1 LCD Touch Screen 4 Centralized Monitoring Unit 5 Surge Protector 6 Power Distribution Unit

Illustrated with Prestige Pro 400/500/600kVA UPS model

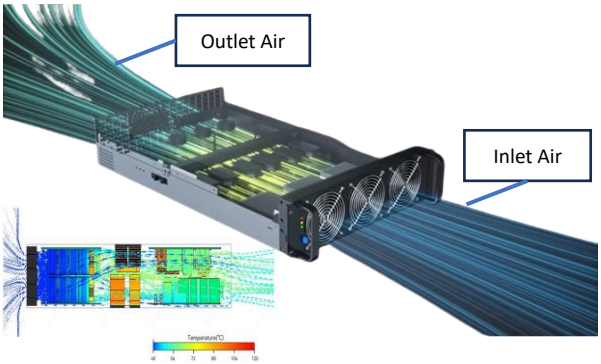
High Reliability: 6kV+6kV surge prevention design



L to L 6kV+ L to GND 6kV surge prevention design, suitable for harsh power grid environment

Line to ground anti-surge design: Efficiently discharges surge current to the ground.
Line to line anti-surge design: Effectively mitigates surges between live lines.

Patent Heat Dissipation Design



The inlet and outlet air temperature difference is less than 25 ℃.

Optimized airflow, achieved through strategic fan placement and efficient inlet and outlet design, ensures uniform temperature distribution and prevents hotspots thus maintains consistent performance and prolongs the lifespan of the power module.

Reduce Total Cost of Ownership

The Prestige Pro UPS is more efficient than a conventional monolithic UPS, thanks to a number of leading technologies.

Enhancing Efficiency Technologies

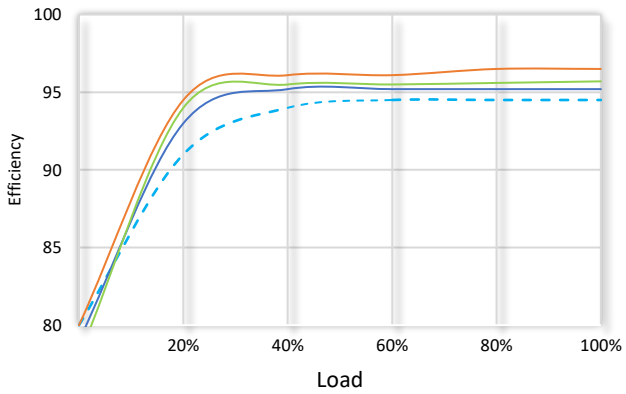
Lower energy consumption

The utilization of market-leading double conversion technology in Prestige Pro UPS results in minimized losses and energy consumption. With an efficiency of up to 99%, this technology ensures optimal performance. The system completely isolates output power from all input power anomalies, providing 100% conditioned, perfect sine-wave output even in the face of severe power disturbances.

High efficiency produces less heat rejection, lower cooling costs, and reduced overall Total Cost of Ownership.

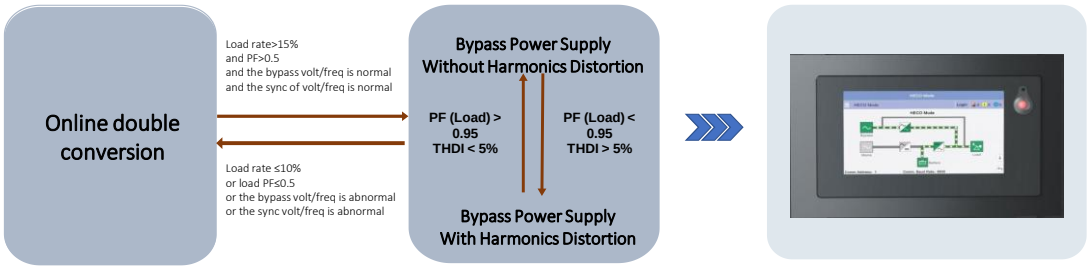
- 96.82% ^ Efficiency at > 25% load
- 97.14% ^ Efficiency at > 50% load
- 96.8% ^ Efficiency at > 75% load
- 96.44% ^ Efficiency at > 100% load

^ Efficiency results are based on IEC62040-3 test reports of Prestige Pro UPS.



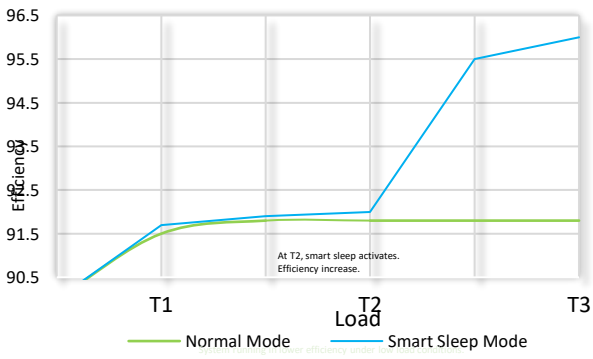
VI mode: efficiency up to 99.0%

- Continuous supply during transfer
- Compared with ECO mode, HECO mode has better power quality by harmonic compensation



Optimized double conversion - Smart Sleep Function

The Smart Sleep function is essential for maintaining high efficiency, particularly when UPS load levels are generally low, such as in redundant UPS systems. This feature optimizes power module load levels in both single and parallel UPS systems by suspending unnecessary UPS capacity. As a result, it ensures optimal online efficiency across all load levels. The technology is robust enough to handle sudden changes in load levels, and users can select sleep mode and rotation periods. This allows power modules to operate on a rotational basis, thereby extending the system's overall lifespan.



Achieving High Availability and MTBF *(Mean Time Between Failure)*

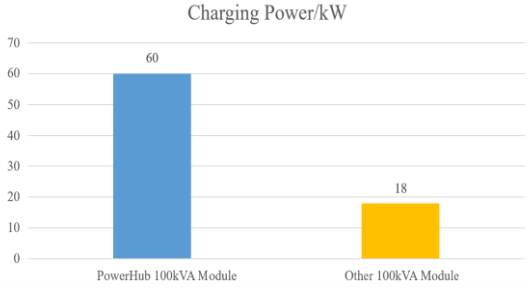
Dynamic Performance

N+X Parallel Redundancy

The PRESTIGE PRO UPS series incorporates N+X Parallel Redundancy technology, allowing modules to be configured based on the desired protection level for connected equipment. The standard frame includes all essential accessories and devices for future expansion. Adding a new module is a straightforward process – it can be easily plugged into the system. The system automatically detects the paralleled modules and configures itself for parallel operations. This feature enhances flexibility and scalability while ensuring seamless integration of additional modules.

High charging power and current capacity

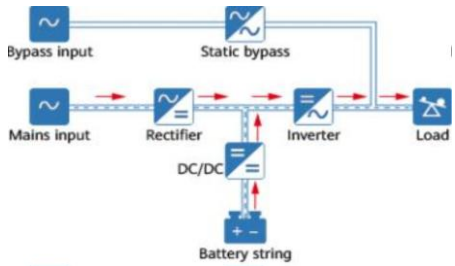
- Charging current up to 100A per module (less than 50% load ratio)
- Large charging current perfectly supports LIB
- Energy storage system(ESS) function , Hybrid function



Function: Hybrid power supply

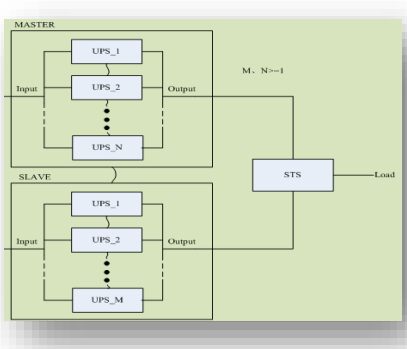
In situations where there is mains under-voltage or limitations in genset capacity, the power supply demand at the back-end can be supplemented by integrating a battery power supply. This approach helps extend backup time or postpone the need to upgrade the genset.

When the mains voltage is low, both the mains and the battery supply power simultaneously, extending the battery's backup time. If the genset capacity is insufficient, you can set the input power of the genset and combine it with the battery power supply. Activating the energy storage mode enables the peak shaving function.



Load Bus Synchronisation (LBS)

The Load Bus Synchronization (LBS) ensures that the outputs of two independent UPS systems remain synchronized, regardless of whether they consist of single or multiple units. This synchronization is maintained even when the systems operate in different modes, such as bypass, inverter, or battery mode. LBS is typically used with a Static Transfer Switch (STS) connected to the critical load, enabling a Dual Bus configuration. This setup enhances the reliability and resilience of the power supply system.



UPS Technical specifications

PowerHub Prestige Pro 400kW to 1200kW UPS Technical Specification (50kVA Power Module)							
MODEL(S)		Prestige Pro 400K-TTME (100) Prestige Pro 400K-TTMS (100)	Prestige Pro 500K-TTME (100) Prestige Pro 500K-TTMS (100)	Prestige Pro 600K-TTME (100) Prestige Pro 600K-TTMS (100)	Prestige Pro 800K-TTME (100) Prestige Pro 800K-TTMS (100)	Prestige Pro 1000K-TTME (100) Prestige Pro 1000K-TTMS (100)	Prestige Pro 1200K-TTME (100) Prestige Pro1200K-TTMS (100)
Capacity (VA/Watts)	UPS cabinet	400k	500k	600k	800k	1000k	1200k
	Power module	100K					
	Max. Number	4	5	6	8	10	12
Max. Parallel Number		6			4		
INPUT							
Nominal voltage		380/400/415Vac (3Ph+N+PE)					
Operating voltage range		138~324 for 40% Load; 323~485 for 100% Load;					
Operating frequency range		40Hz ~ 70Hz					
Power factor		≥0.99					
Harmonic distortion (THDi)		≤3% (100% Linear load)					
Bypass voltage range		Max. voltage: 220: +25% (Optional+10%, +15%, +20%) 230: +20% (Optional+10%, +15%) 240: +15% (Optional+10%) Min. voltage: -45% (Optional -10%, -15% -20%, -30%)					
Bypass Frequency range		50/60±10%					
Generator input		Supported					
OUTPUT							
Rated voltage		380/400/415, (3Ph+N+PE)					
Power factor		1					
Voltage regulation		±1%					
Output frequency	Line Mode	Line mode: ±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional)					
	Bat. Mode	(50/60±0.1%)Hz					
Crest factor		3:1					
Harmonic distortion (THDv)		≤1% with linear load ≤3% with nonlinear load					
EFFICIENCY							
AC Mode		Up to 97%					
ECO Mode		Up to 99%					
HECO Mode		Up to 99%					
BATTERY							
Battery voltage	VRLA Battery	360Vdc~600Vdc (30~50pcs continuously adjustable, 30pcs default, 36~50pcs no power derating; 32~35pcs output power factor 0.9; 30/31pcs output power factor 0.8)					
	Li-on Battery	512Vdc					
Charging Current (Max.)		100A					
SYSTEM FEATURES							
Transfer time		Utility to Battery : 0ms; Utility to bypass: 0ms					
Overload	Line Mode	105% - 110%, 60min; 110% - 125%, 10min; 125% - 150%, 1min to bypass; > 150%, shut down immediately					
	Bypass Mode	125% overload for long term; >1000% overload for 100 ms					
Overheat		Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately					
Low battery voltage		Alarm and Switch off					
Self-diagnostics		Upon Power On and Software Control					
Backfeed protection		Supported					
EPO(optional)		Shut down UPS immediately					
Battery		Advanced Battery Management					
Noise suppression		Complies with EN62040-3					
Audio and Visual Alarms		Line Failure, Battery Low, Overload, System Fault					
Status LED & LCD display		Line Mode, Bypass Mode, Battery Low, Battery Fault, Overload & UPS Fault					
Reading on the LCD display		Input, Output, Battery, Command, Setting, Maintenance					
Communication interface		RS232, RS485x2 (Users communication), BAT_T(NTC&RS485), Parallel, LBS, BMS, Dry contact port, Relay card(optional), SNMP card(optional), Battery temperature sensor(optional)					
Dry Contact Ports		**Input** (12Vdc): EPO (NO/NC), Battery breaker detection port x3, external maintenance breaker detection port, external output breaker detection port, external bypass breaker detection port, battery grounding detection port, SPD detection port, generator connection detection port and optional port x4. **Output**: Backfeed (Relay NO/NC), battery breaker tripx3 (24Vdc), optional port (relay)x6					
ENVIRONMENTAL							
Operating temperature		0℃ ~ 40℃					
Storage temperature		-25℃ ~ 55℃					
Humidity range		0 ~ 95% (non condensing)					
Altitude (m)		<1000, derating required when >1000					
Noise (dB)		<73		<74		<75	
PHYSICAL							
Dimension WxDxH (mm)	UPS cabinet(TTME)	800×1000×2000			800×1000×2000	1400×1000×2000	
	UPS cabinet(TTMS)				1400×1000×2000	1800×1000×2000	
	Power module	440×755×130 (3U)					
Net weight (kg)	UPS cabinet(TTME)	305	330	350	405	690	760
	UPS cabinet(TTMS)	350	380	410	780	850	920
	Power module	52.5					
STANDARDS							
Safety		IEC/EN62040-1, IEC/EN62477-1					
EMC		IEC/EN62040-2 (IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8)					
Performance		IEC62040-3					

*TTME – UPS Cabinet with Maintenance MCCB Only
*TTMS – UPS Cabinet with Maintenance Bypass MCCB, Bypass MCCB and Output MCCB
Specifications are subject to chances without prior notice.

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