



Prostar Industrial UPS

ET Series Digital UPS
(10kVA-120kVA) 3:3



LONG
BACKUP



AVR



TEL/MODEM
PORT



SOFTWARES



SURGE
PROTECTION



DIGITAL
DISPLAY



LIGHTNINGPROOF

System Overview



3:3 10kVA~120kVA



DSP Full Digital Control



ECO Mode



Strong Load Adaptability



Human-Machine interaction



Self-diagnosis function



Intelligent Battery Management

Features

- ✓ **Power Range:10-120kVA**
- ✓ **Flexible application**
- ✓ **Occupy small space**
- ✓ **Efficiency up to 93%**
- ✓ **Advanced communication function**
- ✓ **Small impact on power supply**

Prostar has meticulously and independently developed a new generation of ET series three phases in three phases out UPS. The design adopts advanced DSP digital processor and IGBT space vector pulse width modulation (SVPWM), which completely improved the disadvantage of traditional application of a large number of analog devices circuits that low control accuracy and slow control speed. And it can effectively solve the inherent problem of the drift of the analog circuit parameters. System detection and control are faster, more accurate and stable, and comprehensively improve UPS reliability, power supply quality and product consistency.

The new generation of ET series 10kVA -120kVA UPS output power factor has been improved from 0.8 to 1.0. Considering actual situation of most computer rooms' power factor is advanced, the new generation of UPS takes all account of the leading load characteristics, changes and optimizes the design. It can operate with all load in the range of 1.0 lagging to 1.0 leading.

The UPS with DSP full digital control technology, advanced IGBT inverter technology, double conversion pure online technology, SCR static bypass technology, UPS protection technology, green power technology, battery management technology, parallel technology, and network monitoring technology, such nine technical advantages, integration, digitization, intelligence, and modular integrated in one make the UPS become a true new generation of uninterruptible power supply.

Features Introduction

- DSP full digital control, stronger performance
- Advanced battery management technology, charge management technology designed according to the charge and discharge characteristics of the battery, effectively prolong the service life of the battery
- Equipped with combined utility power and battery power supply technology, support utility power and battery power distribution ratio setting, suitable for weak utility grid and large load working environment
- Strong load adaptability, can carry motor and impact loads
- Support 100% unbalanced load, single-phase full load, any two-phase full load, can operate normally
- With self-detection function, to ensure initial start-up safe
- With fan failure alarm, promptly notify users to replace it, to ensure reliable operation of the whole machine
- Unique structure design, full front maintenance, reliable wall installation for some models, easy maintenance
- Support ECO mode, efficiency up to 98% in ECO mode
- Support parallel function
- 7-inch LCD capacitive touch screen, providing users with intuitive and convenient operating experience
- Possess complete fault record, operation record and status record function to facilitate maintenance and repair
- Support RS232, RS485, CAN, USB, dry contact, SNMP card, WiFi/GPRS card, etc., to meet various needs



Performance Characteristics

Full Digital DSP Control

The core system adopts advanced DSP full digital control technology. UPS inverter control, phase synchronization, input rectification control, logic control, etc. are all controlled by DSP digital control, with high precision, high speed and good overall performance.

Advanced IGBT technology

The combination of high-efficiency and high-reliability IGBT inverter technology and space vector pulse width modulation (SVPWM) reduces system noise and power loss, ensuring that users can obtain high-quality voltage output and the highest economic benefits under various workload conditions. The efficiency of the whole machine exceeds 93%.

Humanized operation interface

The 7-inch color capacitance touch screen can provide both graphic display and digital display, which is suitable for users to view status, data and control operation. The internal CPU can record historical events and alarm information, and the information storage capacity is up to 1000.

Display content includes: input voltage, input frequency, output voltage, output current, output frequency, active power, apparent power, load rate, float charge voltage, equalizing charge voltage, charging current, charger temperature, battery voltage, battery pack temperature, remaining battery discharge time, percentage of remaining battery capacity, battery status, historical records, etc.

Intelligent

Advanced digital calibration function, voltage and current can be self-calibrated through software, without any adjustable resistance.

Self-diagnosis technology, real-time monitoring of the status of inverters, rectifiers and other circuits, detection of battery capacity and state, detection of equipment working environment temperature, and detection of each fan failure to avoid possible failures due to UPS hidden dangers risk.

Low power consumption and high efficiency

The output power factor reaches 1.0

Support ECO economy mode operation, with ECO fault self-cutting inverter function, allowing users to select online/ECO economy/bypass operation mode. In ECO economy mode, it achieves an ultra-high operating efficiency of more than 98%, which can effectively reduce the system electricity consumed by itself. And it's the first choice for low-carbon times.

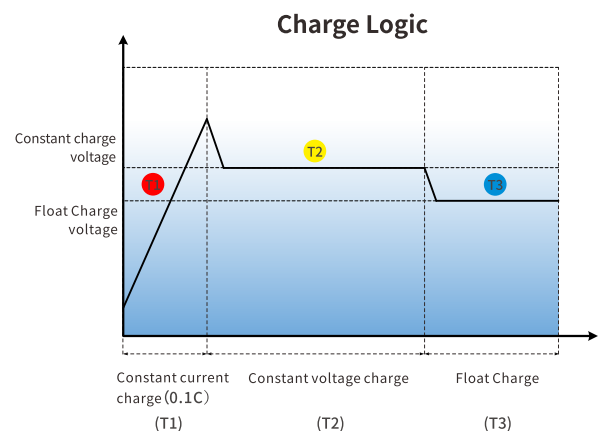
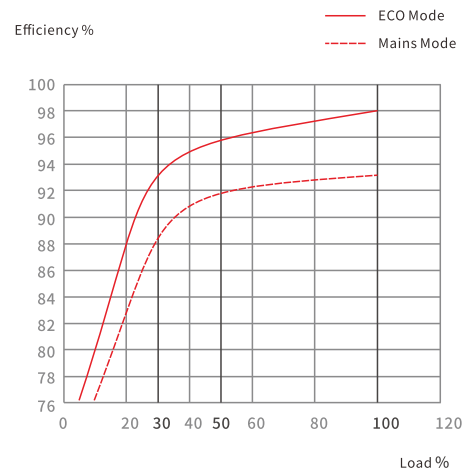
Intelligent battery management

Adopt intelligent battery management function (ABM) technology to reduce battery maintenance times.

The advanced constant current and constant voltage automatic conversion charging technology can maximize the activation of the battery and save charging time.

Battery capacity prediction, discharging time estimation, low voltage pre-warning.

The intelligent battery management function can perform self-diagnosis and self-checking of the battery pack, with charging voltage temperature compensation, intelligent adjustment of battery discharge termination voltage, automatic battery discharge activation at regular intervals, automatic setting of charging current and other functions (this part of the function requires Separate configuration components, non-standard), support lithium batteries (requires separate configuration components, non-standard).

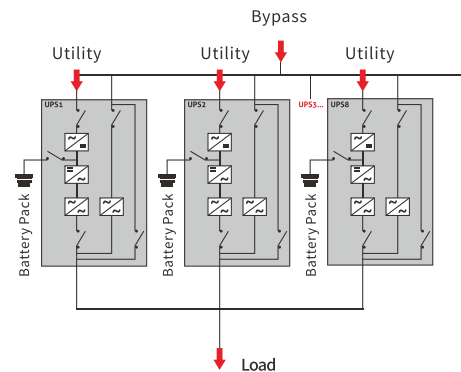


Predictive alarm system

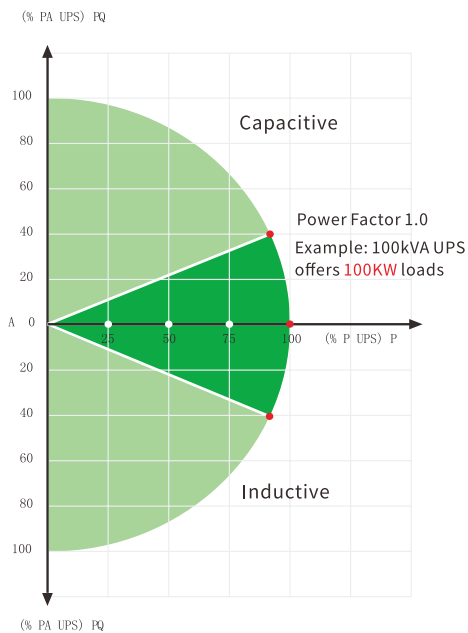
Automatic detection function, timely warning in advance, and self-diagnosis function when starting up, which can avoid the risk of failure and personal safety that may be caused by UPS hidden dangers in time. Supports automatic and manual battery online test functions. Users can set different test cycles such as day, week, and month to perform automatic battery test, provide sound and light alarms, and display corresponding information on the display panel to discover potential battery failures in time.

Powerful redundancy parallel function

The core system of DSP all-digital control technology, the ET series digital UPS not only has the ability to be used for N+1 or N+X redundant parallel or increase capacity, ≤ 8 can be paralleled arbitrarily, which greatly reduces the user's early stage Purchasing costs and subsequent growth costs.



Up to 8 UPS in parallel, each configured with independent bypass



Super environmental adaptability

The ET series digital UPS has a strong environmental adaptability and a wide AC input range, thereby reducing the frequency of battery use and effectively extending the battery life. The input frequency range is wide, and all kinds of fuel generators can work stably. The three-phase output allows 100% unbalance of the three-phase load. Strong load adaptability, supporting RCD nonlinear load, industrial impact load, motor load, etc. The circuit board adopts three-proof technology, dust-proof, anti-fog, and salt-proof. It can be used in harsh environments and the UPS has a longer service life.

Double conversion pure online technology

Double-conversion pure online technology makes the output of UPS a pure sine wave power supply with frequency tracking, phase-locking, voltage stabilization, and noise filtering, which is not interfered by grid fluctuations, and output zero conversion time, so that UPS can provide more comprehensive protection for users' precision equipment. Standard built-in output isolation transformer, static bypass switch and manual maintenance switch. This series of UPS has the ability to withstand short circuits and can be used in harsher environments.

Humanization of network management

Support RS232, USB, RS485, CAN, NET input and output dry contacts, SNMP card, WIFI card, GPRS card and 4G card and other communication interfaces to monitor the running status of UPS. Through the external "Prostar Smart Cloud Box" (optional), through computer monitoring, mobile APP monitoring, with remote network management functions, it can also send alarm information in the form of WeChat, mobile phone text messages, and provide real-time UPS data and power information.

Battery Cold Start Function

The UPS is equipped with a battery cold start switch, which can be directly started with the battery pack to meet emergency needs. After the battery is discharged to EOD, the UPS can be automatically started when the utility power is restored, and it has an unattended function.

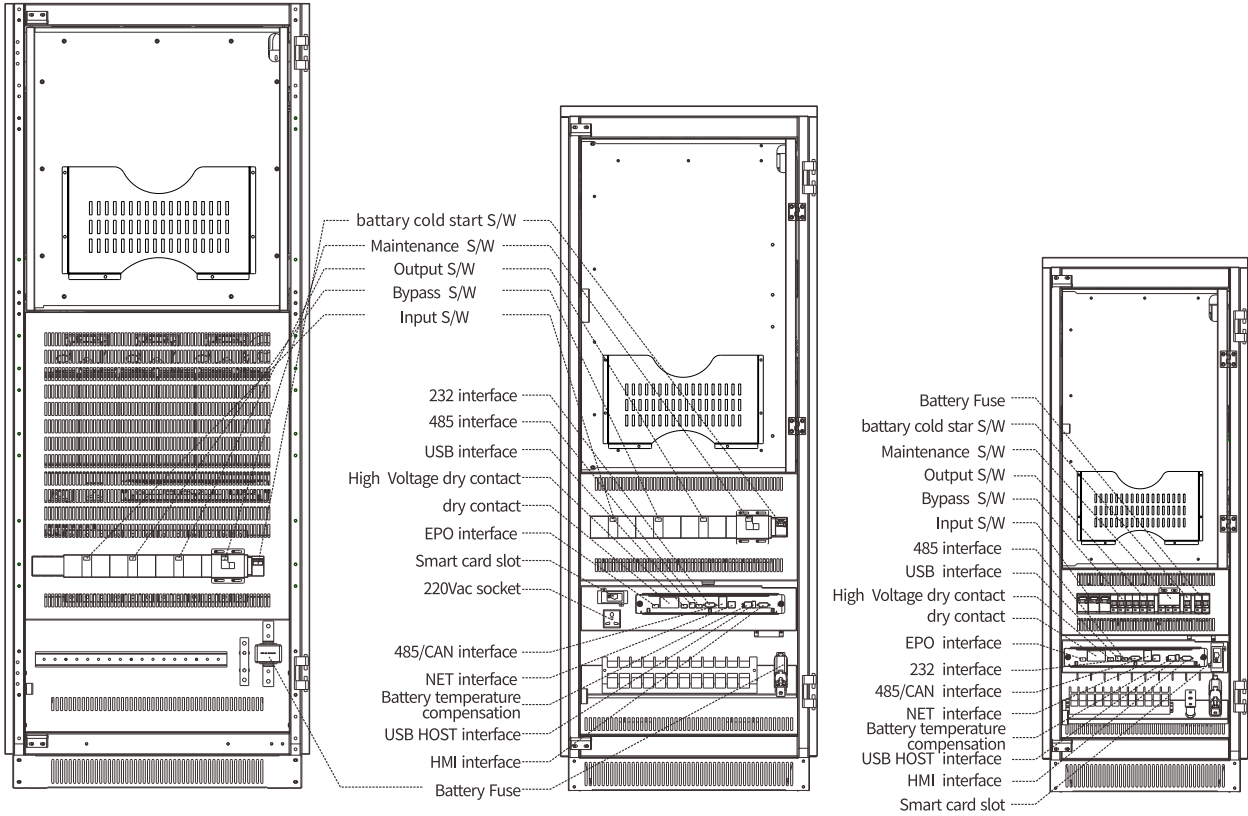
Enhanced combined structure cabinet

The cabinet has excellent material selection, mature technology, high structural strength and smooth appearance. It is suitable for multiple machines side-by-side, easy to install, clean and generous, and the user-friendly front-end maintenance design saves space.

Comprehensive and reliable protection

Perfect software and hardware protection, with fan failure alarm. With AC input over-voltage and under-voltage protection; output over-voltage, under-voltage, overload, short-circuit protection; inverter, rectifier over-temperature protection, battery under-voltage warning, protection, battery over-charge protection and other comprehensive protection functions to ensure the system operation Stability and reliability. Strong overload capacity, it can maintain 60 minutes/10 minutes/1 minute under 110%/125%/150% overload.

Internal View

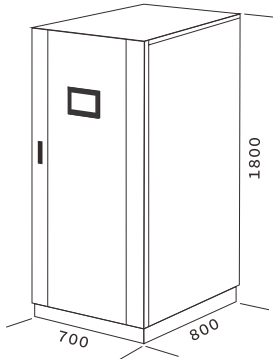


80K~120K

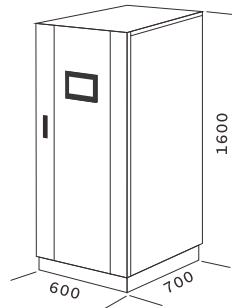
40K~60K

10K~30K

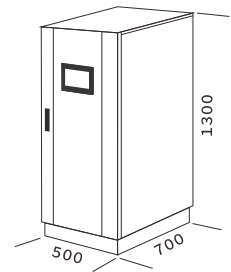
Product Size



80K~120K



40K~60K



10K~30K

Model	ET10K	ET15K	ET20K	ET30K	ET40K	ET50K	ET60K	ET80K	ET100K	ET120K
Rated Capacity	10kVA/10KW	15kVA/15KW	20kVA/20KW	30kVA/30KW	40kVA/40KW	50kVA/50KW	60kVA/60KW	80kVA/80KW	100kVA/100KW	120kVA/120KW
Size (WxDxH) mm	500×700×1300			600×700×1600			700×800×1800			
Net Weight (KG)	150	160	165	200	240	320	440	560	600	650
Input Index										
Input phase number	3 phases 5 wires (3Φ+N+PE)									
Input rated voltage	380 VAC /400 VAC /415VAC (Default 380VAC)									
Variable input voltage range	304V-456V									
Input frequency variation range	40Hz-70Hz									
Input power factor	>0.95									
Input current limit	1.25 times the rated current (0.1-1.25 can be set)									
Rectifier delay start range	Default 10s (1-300 S can be set)									
Bypass input voltage range	Upper limit 10%, 15%, 20%, 25% can be set,Default 20%; Lower limit 10%, 20%, 30%, 40%, 50%, 60% can be set,Default 20%									
Battery voltage	Default 360VDC (336VDC、348VDC、372VDC、384VDC can be set)									
Number of batteries	Default 12V 30 section (28, 29, 31, 32 sections can be set)									
Battery charging current	Charge rate X battery capacity X battery pack number (charge rate, battery capacity, battery pack number can be set)									
ECO Mode										
Bypass voltage range	Upper limit 5%, 10%, 15% can be set,Default 5%; Lower limit 5%, 10%, 15% can be set,Default 5%									
Bypass frequency range	±1Hz, ±2Hz, ±3Hz can be set, Default ±2Hz									
Output Index										
Output phase number	3 phases 5 wires (3Φ+N+PE)									
Rated output voltage	380 VAC /400 VAC /415VAC (Default 380VAC)									
Output voltage regulation accuracy	±1%									
Output voltage fine adjustment	0V (±1-±5V can be set)									
Output frequency accuracy	Mains mode: tracking bypass input in synchronization state; battery mode: 50Hz/60Hz±0.1%									
Output power factor	1.0									
Output waveform distortion	≤2% (Resistive load); ≤5% (non-linear load)									
Waveform	Pure sine wave									
Output current crest factor	3:1									
Inverter overload capacity	When the load is <105%, it can work for a long time; when 105%<load<110%, it will switch to bypass output after 60 minutes; when 110%<load<125%, switch to bypass output after 10 minutes; when 125% <load< 150%, switch to bypass output after 1 minute; when load> 150%, switch to bypass output after 200 milliseconds;									
System Indicators										
System efficiency	Online mode: >93%, ECO mode: >98%									
Switching time	0ms									
Number of parallel	≤ 8 sets									
Protective function	Output short circuit protection, output overload protection, over temperature protection, battery low voltage protection, output over and under voltage protection, fan failure protection, etc.									
Communication Interface	Standard configuration: USB, CAN, EPO, RS232, RS485, dry contact; Optional configuration: SNMP card, temperature compensation accessories									
Display	7 inch LCD touch screen									
Working Environment										
Operating temperature	0-40°C									
Storage temperature	-25°C-55°C (exclude battery)									
Relative humidity	0%-95% (No condensation)									
Altitude	Altitude ≤1000M,exceed 1000M,Power with increase of 100M it will reduce 1%									
Degree of protection	IP30									
Noise	<65dB (1 meter from the device)									

● Remarks:Products specifications are subject to change without notice.

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[Http://www.prostarpower.com](http://www.prostarpower.com)

Website

