VOLTAN

POWERING CONNECTIONS • ENERGIZING SOLUTIONS

3:3 Phase PF 0.9, 10~800KVA
E POWER Series UPS

- Wide input Range
- Power Factor 0.9 PFC
- Double Conversion VFI TYPE
- Long Back-up
- IFR
- ECO
- Interface SNMP
- Hot swappable

Transformer based design UPS are Low frequency UPS systems, which provides better compatibility with various types of loads and ensures higher levels of reliability and efficiency. They are often used in applications where reliability and performance are critical, such as data centres, medical facilities, and industrial environments. Voltan Low frequency UPS has salient features like Higher Power Capacity compared to High Frequency UPS, better compatibility with wide range of loads, greater surge capacity to handle sudden spike in power demand, Improved Voltage Regulation to regulate voltage more effectively, providing a stable and clean power supply to connected equipment, enhanced reliability less prone to failure and can withstand harsh operating conditions. Overall, low frequency UPS systems are preferred in applications where reliability, capacity and compatibility with various loads are paramount.

FEATURES

Online double conversion

Online Double Conversion design helps to output a pure sine wave, which is immune from the UPS input, so that the load can run steadily.

UPS transfers among different working mode without output interruption, thereby powering the load uninterruptedly.

Full DSP control

Double DSP control makes the whole system more stable and reliable.

High power factor

The output power factor up to 0.9 better matches the load

The input power factor 0.97 with filter helps to improve the efficiency, reduce the harmonic pollution to the Grid and lower the UPS running cost.

Optimized battery management

Intelligent battery management system and advanced battery auto float/boost charge technology, reduces the frequency of battery maintenance, greatly improves the battery efficiency and extends battery life.

Battery discharge time prediction: The system will display the backup time of battery calculated by discharge current and voltage.

Battery self-test: Battery is automatically tested at regular intervals.

Flexible battery voltage configuration.

N+X parallel redundancy

N+X parallel redundant design, up to 6 units available, makes the configuration more flexible.

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Any unit in parallel system fails, the faulty one will automatically cut off the output, and the load will be powered by the remained units.

It is easy to configure the parallel system just by connecting the parallel cables and doing proper settings.

Non-fixed Master-Slave relationship: Among several UPS in parallel, the unit startup first is Master UPS, the others are Slave. The master and slave may be exchanged.

Battery discharge time prediction:

The system will display the backup time of battery calculated by discharge current and voltage.

Battery self-test: Battery is automatically tested at regular intervals.

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Wide input adaptability

The range of AC input voltage is (380/400/415Vac) (-25%/ +20%), minimizing transfer to battery mode, thereby greatly prolonging the battery life.

Wide input frequency ranging from 45Hz to 65Hz, ensures stability of UPS while generator connected

Power walk in.

Specially designed power walk in function, in which rectifier of each unit in parallel system will be turned on in sequence at intervals to avoid the sudden load on the generator, thereby reducing the cost of the generator required.

Generator mode

Set the maximum output power of the generator when a smaller one than needed is employed to extend the battery duration time. In this case, the load is supplied by both the generator and battery.

LBS synchronization

Synchronize the output of the two independent UPS systems (Single unit or parallel) even when the two systems are operating on different modes (Bypass/Inverter) or on battery.

Multi-protection

Self-diagnosis function will take place before start-up for safety.

Multi-protection: AC input under/over voltage, overload, short-circuit, over-current, over bus voltage, overtemperature, fan failure, auxiliary power failure, battery under voltage, battery over-charge and so on.

EPO function

A concave red EPO button with transparent cover is embodied in the LCD control panel for emergency power off.

User-friendly network management

Chinese/English LCD and LED mimic diagram: Real time operation parameters and status (7 inch touch screen optional). RS232 & RS485 communication ports:

For local monitor with corresponding software, both can support MODBUS rotocol SNMP adapter (Optional): For remote monitor through network

Dry contacts (10-160kVA optional) for additional monitoring:

a) UPS on Inverter

b) Mains input failure

c) Remote EPO

d) Battery low voltage alarm

e) UPS fault

f) UPS alar

g) UPS on battery

h) UPS on bypass

Note：d)--h) optional

SPECIFICATIONS

Model	V10EP	V20EP	V30EP	V40EP	V60EP	V80EP	V100EP	V120EP	V160EP
Capacity	10kVA/9kW	20kVA/18kW	30kVA/27kW	40kVA/36kW	60kVA/54kW	80kVA/72kW	100kVA/90kW	120kVA/108kW	160kVA/144kW
Input									
Operating voltage range	380/400/415Vac (－25%/＋20%), (3Ph＋PE)								
Operating frequency range	50/60Hz (±5%)								
Power factor	≥0.97 *								
Output									
Output voltage	380/400/415Vac (±1%), (3Ph+N+PE)								
Output frequency	50/60Hz (±0.05%)								
Harmonic distortion (THDv)	≤2% (Linear load)						≤1% (Linear load)		
Crest factor	3:1 (Max)								
Efficiency	88%	89%		90%		90.5%	92%		92.5%
Bypass									
Rated voltage	380/400/415Vac, (3Ph＋N＋PE)								
Rated frequency	50/60Hz								
Voltage protection range	Upper limit: ＋20% (＋10%, ＋15%, ＋20% adjustable) Lower limit: －40% (－10%, －20%, －30%, －40% adjustable)								
Frequency protection range	±10% (±2.5%, ±5%, ±10%, ±20% adjustable)								

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Rated voltage	380/400/415Vac, (3Ph + N + PE)								
Rated frequency	50/60Hz								
Voltage protection range	Upper limit: +20% (+10%, +15%, +20% adjustable) Lower limit: −40% (−10%, −20%, −30%, −40% adjustable)								
Frequency protection range	±10% (±2.5%, ±5%, ±10%, ±20% adjustable)								
Battery									
Battery voltage	384Vdc (360~384Vdc)								
System Features									
Transfer time	0 ms (Line mode→ Battery mode)								
Overload	Load≤110%/60min; ≤125%/10mins; ≤150%/1 min, to Bypass								
LED display	Input, Inverter, Bypass, Battery, Output, Status								
LCD display	I/O voltage, frequency, power, power factor, battery voltage, current, battery status, load percentage, UPS status, history record								
Communication interface	RS232, RS485, EPO, Dry contact (Optional), SNMP card (Optional)								
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor								
Environmental									
Operating temperature	0~40℃								
Storage temperature	-25~55℃								
Humidity range	0~95% (Non-condensing)								
Altitude	<1500m								
Noise level	<58dB				<68dB				
Physical									
Dimension W×D×H (mm)	350×650×1050			430×830×1100		720×690×1400	720×690×1400 (6P) 1515×830×1600 (12P)	890×790×1600 (6P) 1515×830×1600 (12P)	890×790×1600 (6P) 1400×1000×1900 (12P)
Net weight (kg)	145	165	204	255	320	450	556 (6P)/ 1300 (12P)	693 (6P)/ 1450 (12P)	780 (6P)/ 1645 (12P)
Shipping weight (kg)	160	180	225	280	345	485	591 (6P)/ 1370 (12P)	738 (6P)/ 1520 (12P)	825 (6P)/ 1775 (12P)
Standards									
Safety	IEC/EN 62040-1; IEC 62477-1								
EMC	IEC/EN 62040-2 (IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, IEC 61000-2-2)								
Performance	IEC/EN 62040-3								

* With optional filter
1. Specifications are subject to change without prior notice
2. Data above are typical values for reference only, not as a basis for engineering design

SPECIFICATIONS

MODEL	V200EP	V300EP	V400EP	V500EP	V600EP	V800EP
Capacity	200kVA/180kW	300kVA/270kW	400kVA/360kW	500kVA/450kW	600kVA/540kW	800kVA/720kW
Input						
Operating voltage range	380/400/415Vac (-25%/+20%), (3Ph+PE)					
Operating frequency range	50/60Hz (±5%)					
Power factor	≥0.97 *					
Output						
Output voltage	380 / 400 / 415Vac (±1%), (3Ph+N+PE)					
Output frequency	50 / 60Hz (±0.05%)					
Harmonic distortion (THDv)	≤1% (Linear load)					
Crest factor	3:1 (Max)					
Efficiency	92.5%	93%		93.5%		94%
Bypass						
Rated voltage	380/400/415Vac, (3Ph+N+PE)					
Rated frequency	50/60Hz					
Voltage protection range	Upper limit: +20% (+10%, +15%, +20% adjustable) Lower limit: -40% (-10%, -20%, -30%, -40% adjustable)					
Frequency protection range	±10% (±2.5%, ±5%, ±10%, ±20% adjustable)					
Battery						
Battery voltage	384Vdc (360~408Vdc)			480Vdc		600Vdc

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Model	V200EP	V300EP	V400EP	V500EP	V600EP	V800EP
Capacity	200kVA/180kW	300kVA/270kW	400kVA/360kW	500kVA/450kW	600kVA/540kW	800kVA/720kW
System Features						
Transfer time	0 ms (Line mode → Battery mode)					
Overload	Load≤110%/60min; ≤125%/10mins; ≤150%/1 min, to Bypass					
LED display	Input, Inverter, Bypass, Battery, Output, Status					
LCD display	I/O voltage, frequency, power, power factor, battery voltage, current, battery status, load percentage, UPS status, history record, settings					
Communication interface	RS232, RS485, EPO, Dry contact, SNMP card (Optional)					
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor					
Environmental						
Operating temperature	0~40℃					
Storage temperature	-25~55℃					
Humidity range	0~95% (Non-condensing)					
Altitude	<1500m					
Noise level	<72dB			<75dB		
Physical						
Dimension W×D×H (mm)	1200×800×1600 (6P) 1400×1000×1900 (12P)	1400×1000×1900 (6P) 1640×1000×1900 (12P)		2580×1000×1900	2800×1040×1900	3280×1040×1900
Net weight (kg)	1030 (6P)/1715 (12P)	1560 (6P)/2395 (12P)	1640 (6P)/2510 (12P)	3510	3950	4950
Shipping weight (kg)	1130 (6P)/1845 (12P)	1690 (6P)/2545 (12P)	1770 (6P)/2665 (12P)	3730	4250	5245
Standards						
Safety	IEC/EN 62040-1; IEC 62477-1					
EMC	IEC/EN 62040-2 (IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, IEC 61000-2-2)					
Performance	IEC/EN 62040-3					

* With optional filter

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ORDERING INFORMATION

Part No.	Description
V10EP	10KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V20EP	20KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V30EP	30KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V40EP	40KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V60EP	60KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V80EP	80KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V100EP	100KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V120EP	120KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V160EP	160KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V200EP	200KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V300EP	300KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V400EP	400KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V500EP	500KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V600EP	600KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen
V800EP	800KVA, 3:3 Ph, PF0.9 transformer UPS, with energy backfilling protection function, Touch screen

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