

Volta Modular UPS Series, 20KVA Power Module

Reference Standard- Safety - IEC/EN62040-1, IEC/EN60950-1 EMC - IEC/EN62040-2 Category C3



Modular Design

- Modular design for power module, bypass module, monitoring module - reduces MTTR (Mean time to Repair) and simplifies maintenance and repair
- Power module, Bypass module, Monitoring module are all hot-swappable

High Reliability

- With 2 power supplies in STS, risk of shutdown is minimized
- UPS adopts multiple digital bus and redundancy parallel control system, make sure the whole system keep online if any single circuit fail.
- The UPS will keep on single or parallel working, if any module failed.

Green and Power Saving

- High input power factor, it is up to 0.99.
- Three level topology design, efficiency is up to 94.5%, reducing Total Cost of Ownership
- THDi<3% (100% nonlinear load)
- Unity Output Power Factor
- The UPS will be work on sleeping mode when the load is very less.

N+1/N+X Parallel Redundancy Function

- Support vertical expansion from 30kVA to 210kVA and achieve N+1/N+X redundancy
- Support parallel expansion upto 420kVA - 210kVA x 2

Flexible Battery Configuration

- Batteries number of each group can be selected from 32 to 40 pieces per string
- Large user adjustable charging current can meet the requirement of long time backup.



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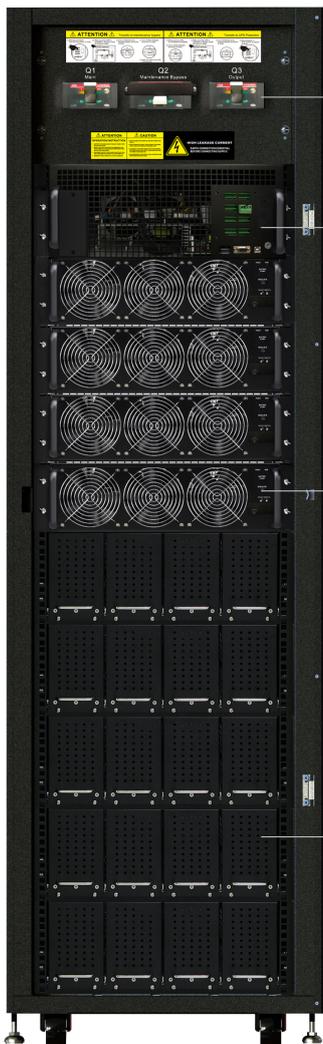
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Strong Load Capacity

- Output power factor is 1.0, UPS can supply power to 100% unbalance load.
- High adaptability for load, it can connect full inductive load or capacitive load.

Intelligent Management

- With 5.7 inches LCD screen for display
Support recording and exporting historic logs and fault logs.
- Support RS485, SNMP, Dry contact card , support RJ 45 interface and CAN interface.
- Support upgrade of CAN of power module inside of cabinet.



Maintenance Bypass
Breakers
Input/Output

STS Module

Power Module

Battery Module



20/30kVA Power Module



12V/9Ah Gel Battery

- Each Battery Module tray to hold 10 x 7/9Ah batteries.
- Each set can accommodate 4 Battery trays
- 5 sets of Battery trays to totally accommodate maximum of 200 x 7/9Ah Batteries



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Technical Specifications

Model		E120VIT33-20
Capacity (W)	UPS Cabinet	120kW
	Module	E020VPM33-BK
	Max. Number	4

Input

Nominal Voltage	380/400/415Vac, (3Ph+N+PE)
Operating Voltage Range	305~478Vac for 100% Load; 208~304Vac for 70% Load
Operating Frequency Range	40Hz-70Hz
Power Factor	≥0.99
Harmonic Distortion (THDi)	≤3% (100% linear load)
Bypass Voltage Range	Optional +10%,+15%,+20% (Upper Limit) -10%, -15%, -20% (Lower Limit)
Bypass Frequency Range	Frequency protection range: ±4%

Output

Rated Voltage	380/400/415Vac, (3Ph+N+PE)	
Power Factor	1.0	
Voltage Regulation	±1% (balanced load), ±2% (unbalanced load)	
Output Frequency	Line Mode	46 ~ 54Hz or 56 ~ 64Hz
	Bat. Mode	(50/60±0.1%)Hz
Crest Factor	3:1	
Harmonic Distortion (THDv)	≤2% with linear load; ≤4% with nonlinear load	

Efficiency

Efficiency	UP to 94.5%
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Environmental

Operating temperature	0- 40 °C
Relative Humidity	0- 95% non-condensing

Battery

Battery voltage	Nominal Voltage: ±216V (12V x 36 pcs) Maximum Voltage: ± 240V (12V x 40 pcs) Minimum Voltage: ± 192V (12V x 32 pcs)
Power module Charge Current	8A
Temperature Compensation	Yes



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System Features

Transfer time	Utility to Battery : 0ms; Utility to bypass: 0ms	
Overload	Line Mode	≤110% overload for 60 min; ≤125% overload for 10 min; ≥150% overload for 1 min
	Bypass Mode	135% overload for long term
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	Support	
EPO(optional)	Shut down UPS immediately	
Battery	Advanced Battery Management	
Noise suppression	Complies with EN62040-3	
Audible & 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	Smart RS232/USB, SNMP Manager, Web Browser	

Physical

Dimension W×HxD (mm)	UPS Cabinet	1100 x 600 x 2010
	Power Module	650x440x132 (3U)
Net weight (kg)	UPS Cabinet	932
	Power Module	34.5

