

ST33 Series Tower Online UPS

10-40kVA (380V/400V/415V)

ST33 series UPS offer advance technology that increases performance and reliability: two high speed DSPs with complete digital control to ensure high quality of power supply, high input power factor makes UPS energy saving power and low input current distortion.



Main Features:-

- Reliable, filtered, stabilised and regulated sine wave output with EMI suppression filters
- Double online conversion VFI-SS-111 technology as per standard EN50091-3/IEC62040-3/AS62040-3, offering load with best power quality
- Green power technology, high input power factor >0.99, low current THD <3%, high efficiency close to 96%
- Wide input voltage (-40% to +25%) and frequency (40Hz to 70 Hz) range, compatible with different utilities
- Fully digital control with two advanced DSPs including IGBT rectifier, inverter and charger
- 3 steps PWM modular IGBT Inverter ensures high reliability and efficiency close to 96%
- Digital circulating current control technology increases parallel reliability
- Intelligent battery management, greatly extend battery life
- Intelligent self-diagnose function, large capability of history record storage
- Multi protection, over-temperature protection with 8 sensors, overload, battery under voltage, fan failures, short circuit
- Redundant design of ventilation fans increases system reliability
- Modularized design of subsystem, convenient field maintenance
- High MTBT (mean time between failure) > 200,000 hours
- Friendly and safer operation interface, high resolution LCD screen
- All kind of options include mains back feed protection, bypass back feed protection, battery leakage protection, battery cold start kit, output isolation transformer and lightning surge protector

Application:-

ISP (Internet Service Provider)
Service Centre
Intelligent equipment

IDC (Internet Data Center)
Medical equipment

Computer Room
Precision instrument

1. Totally digital control system

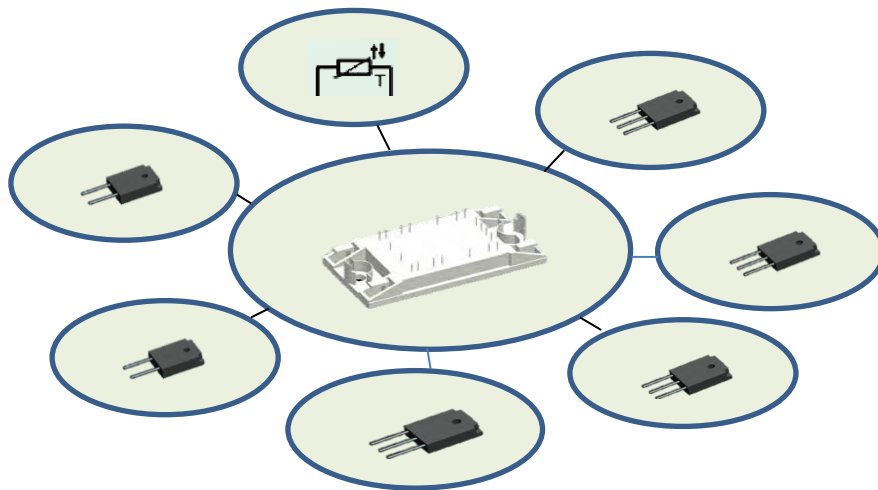


The double DSP based control system realized the digital control for all the power conversions of the UPS. Excellent performance is realized together with high reliability of the system.

2. Unique Design for High Reliability

Instead of discrete IGBT and SCR components, ST33 series UPS uses modular IGBT and SCR in Rectifier and Inverter, bringing in extremely high reliability.

- All components in one module, less fault points, higher reliability
- All components integrated as one modular design, smaller disparity
- Less space needed, UPS with compact design and higher power design
- Integrated inner thermal sensors display GBT inner temperature directly

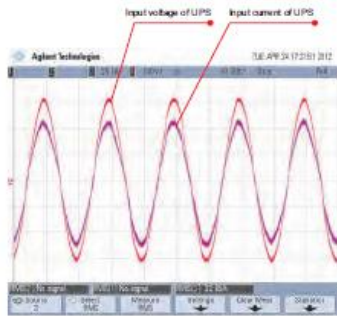


3. State of the art PCB design



Most of the components are SMT type, combine with the conformal coating technology, the reliability is much higher than the traditional DIP component design.

4. Excellent input performance

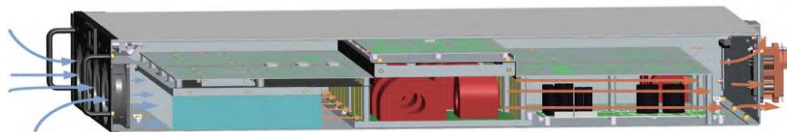


High input power factor, low input total harmonic distortion of current, ST33 is green power system and energy saving products.

5. Isolated Air Flow

The PCB boards and heat-sinkers are in two completely different layers, which allows the UPS run in dusty environments, significantly improving its stability and environmental adaptability.

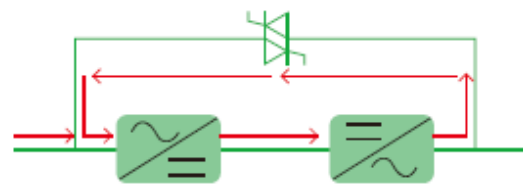
- Cooling air flows in the lower layer, keeping the upper PCB free of dust
- One air flow channel ensures fan redundancy, even one fan fails, power module can run normally



6. Self-aging

Self-aging function can test UPS under different load situations without real load, saving more than 90% of energy.

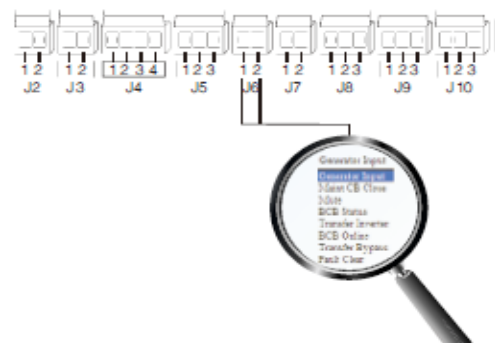
- Simulate different load conditions, without connecting to any real load, saving 90% of energy
- On site setting, easy for factory testing



7. Programmable Dry Contacts

Customers can easily expand or modify the definition of each port.

- Abundant options with three inputs and four outputs, all programmable
- Easy setting, just pull the drop-down menu and set



SPECIFICATION

MODEL	ST10K-S-33	ST15K-S-33	ST20K-S-33	ST30K-S-33	ST40K-S-33
	ST10K-L-33	ST15K-L-33	ST20K-L-33	ST30K-L-33	ST40K-L-33
Capacity	10kVA	15kVA	20kVA	30kVA	40kVA
INPUT					
Rated Voltage	380V / 400V / 415V (line to line), 3 Phase + N + PE				
Voltage Range	304 - 478Vac (line to line), full load; 228 - 304Vac (line to line), load decrease linearly according to the min phase voltage				
Rated Frequency	50 / 60Hz				
Frequency Range	40-70Hz				
Power Factor	>0.99				
THDi	THDi < 4% (100% Linear load)		THDi < 3% (100% Linear load)		
BYPASS					
Rated Voltage and Frequency	380V / 400V / 415V (line to line), 50 / 60Hz				
Voltage Range	Settable, -40% ~ +25%				
Frequency Range	Selectable: ± 1Hz, ± 3Hz, ± 5Hz				
Overload Capacity	125% long term operation: 130% for 10mins; 150% for 1min				
OUTPUT					
Rated Voltage and Frequency	380V / 400V / 415V (line to line), 50 / 60Hz				
Voltage Regulation	1% (balanced load), 1.5% (unbalanced load)				
THDu	THD < 1% (100% linear load), THD < 5.5% (non linear load)				
Power factor	1.0		0.9		
Frequency precision	0.1%				
Crest Factor	3:1				
Overload capacity	110% for 60min; 125% for 10min; 150% for 1min; >150% for 200ms				
BATTERY					
Voltage	± 240VDC				
Battery Number	32 to 42 pcs				
Float charge voltage	Selectable 2.20V/cell to 2.35V/cell				
Equalised / Boost charge voltage	Selectable 2.30V/cell to 2.45V/cell				
Temperature compensation	3.0 mV/°C/cl (selectable 0 to 5.0)				
Maximum charger power	Up to 20% * Output active power				
Charger voltage precision	±1%				
SYSTEM					
System Efficiency	Normal mode: 95%			Normal mode 96%	
	Eco mode: 98%				
	Battery mode: 95%			Battery mode 96%	
Display	LCD + LED + Keyboard				
IP Class	IP20				
Altitude	<1000m. Within 1000m to 2000m, power derate 1% for every 100m rise				
Interface	Standard: RS232, RS485 Optional: SNMP, Parallel kit, USB, Programmable Dry Contact				
Applicable Standards	Safety: IEC/EN 62040-1-1; EMC: IEC/EN 62040-2; Performance: IEC/EN 62040-3				
ENVIRONMENT					
Operation / Storage	0-40°C / -40-70°C				
Relative Humidity	0 ~ 95% (Non condensing)				
Noise (1 meter)	55dB @ 50% load				
PHYSICAL					
Weight (kg)	51.5	51.5	89	89	140
	31	31	50	52	61
Dimension (W*D*H)/(mm)	250x850x715	250x850x715	350x738x1335	350x738x1335	500x840x1400
	250x660x530	250x660x530	250x680x770	250x680x770	250x836x770