



SUNSHINE
新光宏锐

ST33 10-20K series specification

NO.

SDC-010607-14

Department

R&D

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Revision	Description	Prepared by	Checked by	Approved by	Data
01	First issue	guyuan			

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Index	ST33 10K	ST33 20K	Comments	
Input				
Input voltage				
Rated voltage	380VAC/220VAC			
Phase	three phase with ground			
Turn on voltage range	(120±5~274±5) VAC			
Bypass voltage range	(60±5~300±5) VAC		Could be adjusted by software.	
Bypass low loss	60VAC~220VAC (default 60VAC)			
Bypass low comeback	Low loss +5VAC			
Bypass high loss	220VAC~300VAC (default 300VAC)			
Bypass high comeback	High loss -5VAC			
Line low loss/comeback	(120±5) VAC / (140±5) VAC			load≤50%
	(140±5) VAC / (160±5) VAC			50% < load ≤ 90%
	(160±5) VAC / (175±5) VAC			load > 90%
Line high loss/comeback	(275±5) VAC / (260±5) VAC			
Input frequency				
Rated frequency	50Hz			
Frequency low loss	(40~49) ±0.2Hz (default:46Hz)		Could be adjusted by software.	
Frequency low comeback	Frequency low loss +0.5Hz			
Frequency high loss	(51~60) ±0.2Hz (default:54Hz)			
Frequency high comeback	Frequency high loss -0.5Hz			
Input power factor				
Input power factor	> 0.99		220VAC, full R load	
Generator	Support generator input		Generator rating ≥ 2*UPS rating	
Input current				
Rated current	14A	28A		
Input THDI	≤ 10%			
Output protection				
Rating protection	32A Breaker	50A Breaker		
Output power				
VA/watt	10KVA/8KW	20KVA/16KW		
Rated voltage	220VAC		Sine wave	
Voltage range	200/208/220/230/240VAC		Could be adjusted by software. 10% derating for 208VAC/200VAC.	
Voltage regulation	±1%			
Voltage distortion	≤5%		Full RCD load	
	≤3%		Full R load	



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DC offset	$\leq 200\text{mV}$	
Transient response	$\leq 9\%$	R load 0%~100%~0%
	$\leq 6\%$	R load 20%~100%~20%
Transient recovery	$\leq 60\text{ms}$ voltage recovery to 90%	Full RCD load
Bypass output before turn-on	YES	
Crest ration	3: 1	

Output frequency range

Normal mode	1, Same as input frequency (46Hz~54Hz) 2, 50Hz (Input frequency > 54Hz or Input frequency < 46Hz)	
Battery mode	$(50 \pm 0.1)\text{ Hz}$	
Slew rate	1 Hz/Sec	

Efficiency

Normal mode	> 93%	
Battery mode	> 90%	

Overload

Normal mode/battery mode	Overload warning only	$105\% \pm 5\% \leq \text{load}$
	t_{min} , then transfer to bypass and alarm.	$105\% \pm 5\% < \text{load} \leq 125\% \pm 5\%$
	30S, then transfer to bypass and alarm.	$125\% \pm 5\% < \text{load} \leq 150\% \pm 5\%$
	300mS, then transfer to bypass and alarm.	$\text{load} > 150\% \pm 5\%$
Automatically retransfer	YES	

Short protection

Normal/battery mode	YES	
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Transfer time

Normal to battery mode	0mS	
Battery to normal mode	0mS	
Normal to bypass mode	<4mS	
Bypass to normal mode	<4mS	

Battery and charger

Battery

Rated voltage	192VDC	240VDC	
Type/Rating			
Battery quantity	16	20	
Backup time			

Protection



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Low alarm voltage / comeback voltage	(180.8V ± 4V) / (188.8V ± 4V)	(226V ± 4V) / (236V ± 4V)	33 30K use two
Shutdown voltage / comeback voltage	160V ± 4V / 168V ± 4V	(200V ± 4V) / (210V ± 4V)	
DC protection			
Overcharge protection / comeback voltage	(249.6V ± 4V) / (216V ± 4V)	(312V ± 4V) / (270V ± 4V)	
Leakage current	< 500uA		
Over discharge protection	14.5h		Could be set by software
Battery test			
Battery weak	YES		
Battery fault	YES		
Charger			
Output voltage	(219.2 ± 3)VDC	(277 ± 3)VDC	
Charge time	Depends on the external battery capacity		
Charge current	7.5A	6A	
Interface			
Alarm silence	YES		
DC power turn-on	YES		
Automatically retransfer	YES		
Audio alarm			
Battery mode	Beep/4s		
Battery low/charger fault	Beep/1s		
UPS fault	Continue beep		
Overload	Beep/1s		
Bypass mode	Beep/2Min		
L/N inverse	Beep/2Min		
Communication			
RS232 interface	YES		
Intelligent slot	YES		
Monitor software	Appending with UPS		
Cooling			
Force air cooling			
Display			
LCD/LED displays UPS status			
Environment			
Work temperature	0°C ~ 40°C		
Altitude	< 1000m		



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Audible noise	$\leq 60\text{dB}$	
Storage temperature	$-15^{\circ}\text{C} \sim 45^{\circ}\text{C}$	
Work humidity	$20\% \sim 95\%$	
Standard		
EMS		
ESD	IEC61000-4-2	Level4
RS	IEC61000-4-3	Level3
EFT	IEC61000-4-4	Level4
Surge	IEC61000-4-5	Level4
EMI		
Conducted	EN55022	Class A
Radiated	EN55022	Class A
Safety		
Safety	GB4943-2001/IEC62040-1	
Machinery features		
Size		
Outline dimension and net weight		
length * width * height (mm)	710*260*717	
Net weight(Kg)	45/93	50/98
Optional functions		
60Hz		Set by software
Converter mode		Set by software
ECO	Optional	Available and set by software
EPO	Optional	
LCD display	Optional	

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