

	PRODUCT SPECIFICATIONS	REF. No. : B-WR1-235-217A : EN-010922-3C10/15/20
	PRODUCT SERIES : Santak Castle Series MODEL : 3C20KS-LCD TECHNOLOGY : Online double conversion	Page No.: 1 OF 4

INPUT

Nominal Voltage	: 380VAC/220VAC
Phase	: Three phase and Neutral with ground (4W + G) or Single phase with ground (2W + G)
Power Factor	: ≥ 0.99
Voltage Range	: 208 ~ 476VAC/120~275VAC
Volt. Low Detection / Comeback	: 208/242VAC 120/140VAC, at load $\leq 50\%$; 260/286VAC 150/165VAC, at $50\% < \text{load} \leq 70\%$; 286/312VAC 165/180VAC, at $70\% < \text{load} \leq 90\%$; 304/329VAC 176/190VAC, at load $> 90\%$;
Volt. High Detection / Comeback	: 476/459VAC 275/265VAC
Nominal Frequency	: 50/60Hz
Frequency Range	: 40 ~ 70Hz
Freq. Low Detection / Comeback	: 40Hz / 40.5Hz
Freq. High Detection / Comeback	: 70Hz / 69.5Hz
THDi	: $< 3\%$ (With R full load at Line normal)
Nominal RMS Current	: 31A
Protection	: 63Amp Breaker
Connection	: Terminal Block

BYPASS

Output before UPS power-on	: Default "YES", can be configured to "NO" through Winpower software
Voltage Range	: 187 ~ 264VAC
Bypass Low Detection	: Default 187VAC, can be set to 176 ~ 209VAC through Winpower software
Bypass Low comeback	: Bypass Low voltage detected plus 10VAC
Bypass High detection	: Default 264VAC, can be set to 231 ~ 264VAC through Winpower software
Bypass High comeback	: Bypass High voltage detected minus 10VAC
Bypass Frequency Range	: Default 50/60Hz $\pm 8\%$, can be set 50/60Hz $\pm (1\% \sim 10\%)$
Protection	: 100Amp Breaker
Auto transfer to bypass mode When UPS is overloaded, failed, low battery ...	

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OUTPUT

Power Capacity	: 20kVA / 18kW
Power Factor	: 0.9
Phase	: Single phase with ground (2W + G)
Voltage	: 220VAC, can be set 230/240VAC
Regulation	: $\pm 1\%$
Waveform Voltage	: True sine wave
Distortion	: $\leq 2\%$ (Full linear load) $\leq 4\%$ (Full RCD load)
Frequency	: Battery mode: 50/60Hz ± 0.05 Hz Line mode: Synchronized to 50/60Hz ± 4 Hz
Slew Rate	: < 1.0 Hz/sec
Phase Lock Error to Line	: $< 2^\circ$
Transient Recovery	: 60ms (R load from 0% to 100% and vice versa)
Current Crest Ratio	: 3:1
Efficiency	: Up to 93.5% at line mode Up to 98% at ECO mode
Overload Capability	: 105% < Load $\leq$ 125%, transfer to bypass mode after 10 min (0°C ~ <30°C) or 1 min (30°C ~ 40°C) Bypass over load > 30 minutes then turn off output; 125% < Load $\leq$ 150%, transfer to bypass mode after 30s Bypass over load > 1 minutes then turn off output; Over 150%, transfer to bypass after 0.5s Bypass over load > 30 seconds then turn off output;
Nominal Output Current	: 90A
Short Circuit Protection	: Cut off output within 100ms in Line mode & Battery mode; Input Breaker in Bypass mode
Bypass Output without turning on	: Yes
Maintenance Bypass Switch	: Option
Connection	: Terminal Block

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BATTERY AND CHARGER

Type	: Valve Regulated Lead Acid (VRLA), Maintenance Free
Rating	: Option
Quantity	: 20 pieces per string (N), (adjustable: 16/18)
Nominal DC Voltage	: 240VDC (adjustable: 192/216VDC)
Backup Time	: Depends on the external battery capacity
Auto Shutdown Voltage	: 11VDC*N $\pm$ 2VDC when load < 1kW 9.5VDC*N $\pm$ 2VDC when load > 1kW
Protection	: Fast-acting Fuse
Floating Charging Voltage	: 13.5VDC*N
Initial Charging Current	: 4A
Recharge Time	: Depends on the external battery capacity
Over Voltage Protection	: 14.7VDC*N $\pm$ 1%
Leakage Current	: < 3.5mA
Connection	: Terminal Block

INTERFACE

Control Panel	: Power On/Off, Self-test/Alarm silence
Indicators	: Graphical LED & LCD display: Line, Battery, Bypass, Inverter, Load level/Battery level, Fault
Diagnostics	: Full system self test on power up
Auto Restart Function	: Auto restart while AC source restored after discharge shutdown
DC Power-on Function	: On-battery power on
Audible Alarm	: Battery mode: Beeps every four seconds Battery low: Beeps every second Overload: Beeps twice every second Bypass: Beeps every two minutes Fault: Beeps continuously
Communications	
- DB-9 Port	: RS232 interface
- Intelligent Slot (SNMP)	: Available (Options : NMC, AS400 or CMC Card)
- Parallel Port	: Option
- Emergency Power Off(EPO)	: Option
Cooling	: Force air cooling

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PARALLEL FUNCTION

Parallel card : Option
Number of UPS in Parallel : Up to 3 units

TRANSFER TIME

Utility Power Failure : 0 ms
Bypass to Inverter and vice versa : 0 ms

ECO to Inverter and vice versa : < 4 ms

Auto Transfer : Automatically re-transfer to Inverter mode after overload is cleared

ENVIRONMENTAL

Operating Temperature : 0 ~ 40°C
Storage Temperature : -25°C ~ 55°C
Humidity : 20% ~ 90%, Non-condensing
Altitude : < 1000 m

STANDARD & SAFETY

Audible Noise : ≤ 50dB, at 1-meter distance in front of the front panel (Exclusive of Buzzer)
EMC : IEC/EN61000
IEC/EN62040-2
Safety : IECEN62040-1

MECHANICAL FEATURES

Unit
Dimensions: W x D x H (mm) : 248 x 500 x 616 mm
Weight (Kg) : 30.5 Kg
Packaging
Dimensions: W x D x H (mm) : 380 x 680 x 705 mm
Weight (Kg) : 35.5 Kg

Specifications are subject to change without notice.