

## **PRODUCT SPECIFICATIONS**

PRODUCT SERIES : Castle Series MODEL No. : C10K(e)

REF. No.:
A9104-32159-00
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# <u>INPUT</u>

Nominal Voltage	:	220VAC
Phase	:	Single phase with ground $(2W + G)$
Power Factor	:	≥ 0.98
Voltage Range	:	176 ~ 276VAC
Volt. Low Detection / Comeback	:	176VAC / 185VAC
Volt. High Detection / Comeback	:	276VAC / 266VAC
Nominal Frequency	:	50Hz
Frequency Range	:	46 ~ 54Hz
Freq. Low Detection / Comeback	:	46Hz / 46.5Hz
Freq. High Detection / Comeback	:	54Hz / 53.5Hz
Nominal RMS Current	:	37A
Protection	:	50Amp Breaker
Connection	:	Terminal Block

### <u>OUTPUT</u>

Power Capacity: $10kVA / 7kW$ Power Factor: $0.7$ Voltage: $220VAC$ Voltage Regulation: $\pm 1\%$ Waveform:Sine waveVoltage Distortion: $\leq 2\%$ (Full linear load) $\leq 6\%$ (Full RCD load)Frequency:Battery mode: $50Hz \pm 0.05Hz$ Line mode: $100\%$ to $50\%$ and vice versa)Transient Response: $\leq 5\%$ (R load from $100\%$ to $50\%$ and vice versa)Transient Recovery: $\leq 60ms$ Current Crest Ratio: $3:1$ Efficiency:> 88%Overload Capability:Line mode: $105\% ~ 130\%$ for $10$ minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. $\geq 130\%$ for $1$ second then transfer to bypass mode, and cut off output in $1$ minute		
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Voltage Regulation: $\pm 1\%$ Waveform: Sine waveVoltage Distortion: $\leq 2\%$ (Full linear load) $\leq 6\%$ (Full RCD load)Frequency: Battery mode: $50Hz \pm 0.05Hz$ Line mode: Same as InputTransient Response: $\leq 5\%$ (R load from $100\%$ to $50\%$ and vice versa)Transient Recovery: $\leq 60ms$ Current Crest Ratio: $3:1$ Efficiency: > 88%Overload Capability: Line mode: $105\% ~ 130\%$ for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. $\geq 130\%$ for 1 second then transfer to bypass mode, and cut	Power Factor	: 0.7
Waveform: Sine waveVoltage Distortion: $\leq 2\%$ (Full linear load) $\leq 6\%$ (Full RCD load)Frequency: Battery mode: $50Hz \pm 0.05Hz$ Line mode: Same as InputTransient Response: $\leq 5\%$ (R load from $100\%$ to $50\%$ and vice versa)Transient Recovery: $\leq 60ms$ Current Crest Ratio: $3:1$ Efficiency: > 88%Overload Capability: Line mode: $105\% ~ 130\%$ for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. $\geq 130\%$ for 1 second then transfer to bypass mode, and cut	Voltage	: 220VAC
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$\leq 6\%$ (Full RCD load)Frequency: Battery mode: $50Hz \pm 0.05Hz$ Line mode: Same as InputTransient Response: $\leq 5\%$ (R load from $100\%$ to $50\%$ and vice versa)Transient Recovery: $\leq 60ms$ Current Crest Ratio: $3:1$ Efficiency: $> 88\%$ Overload Capability: Line mode: $105\% ~ 130\%$ for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. $\geq 130\%$ for 1 second then transfer to bypass mode, and cut	Waveform	: Sine wave
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Transient Recovery: $\leq$ 60msCurrent Crest Ratio:3:1Efficiency:> 88%Overload Capability:Line mode: 105% ~ 130% for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. $\geq$ 130% for 1 second then transfer to bypass mode, and cut	Frequency	: Battery mode: 50Hz ±0.05Hz
Current Crest Ratio: 3:1Efficiency: > 88%Overload Capability: Line mode: $105\% \sim 130\%$ for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. $\geq 130\%$ for 1 second then transfer to bypass mode, and cut	Transient Response	: $\leq 5\%$ (R load from 100% to 50% and vice versa)
Efficiency: > 88%Overload Capability: Line mode: 105% ~ 130% for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. ≥ 130% for 1 second then transfer to bypass mode, and cut	Transient Recovery	: ≤ 60ms
Overload Capability : Line mode: 105% ~ 130% for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared.   ≥ 130% for 1 second then transfer to bypass mode, and cut	Current Crest Ratio	: 3:1
$105\% \sim 130\%$ for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. $\geq 130\%$ for 1 second then transfer to bypass mode, and cut	Efficiency	: > 88%
	Overload Capability	$105\% \sim 130\%$ for 10 minutes then transfer to bypass, automatically retransfer to Inverter mode after overload is cleared. $\geq 130\%$ for 1 second then transfer to bypass mode, and cut



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### <u>OUTPUT</u>

	Battery mode:
	105% ~ 130% for 10 seconds
	$\geq$ 130% for 1 second
Short Circuit Protection	: Cut off output within 300ms in Line mode & Battery mode; Input Breaker in Bypass mode
Bypass Output without turning on	: Yes
Connection	: Terminal Block

### **BATTERY AND CHARGER**

Туре	: Sealed, Maintenance Free, Lead-Acid (Panasonic)
Rating	: 12V45W (12V9Ah)
Quantity	: 20 pieces
Nominal DC Voltage	: 240VDC
Backup Time	: 5 minutes
Battery Low Alarm Voltage	: 220VDC ±3VDC
Auto Shutdown Voltage	: 200VDC ±3VDC
Protection	: Fast-acting Fuse
Floating Charging Voltage	: 274VDC ±1%
Initial Charging Current	: 2A
Recharge Time	: 8 Hours recharge to 90%
Over Voltage Protection	: 290Vdc
Leakage Current	: < 0.5mA
Connection	: Built-in

TRANSFER TIME			
Utility Power Failure	: 0 ms		
Bypass to Inverter and vice versa	: 0 ms		
Auto Transfer	: Automatically re-transfer to Inverter mode after overload is cleared		



EMI (Conducted & radiated)

Safety

## **PRODUCT SPECIFICATIONS**

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INTERFACE Control Panel	: Power On/Self-test/Alarm silence, Power Off
Indicators	: Graphical LED display:
maloatoro	Line, Battery, Bypass, Inverter, Load level/Battery level,
Diagnostics	Fault 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
Cooling	(Options : WebPower, AS400 or Winpower CMC) : Force air cooling
ENVIRONMENTAL	
Operating Temperature	: $0 \sim 40^{\circ}$ C
Storage Temperature	: -15°C ~ 40°C
Humidity	: 20% ~ 90%, Non-condensing
Altitude	: < 1000 m
STANDARD & SAFETY	
Audible Noise	$\leq$ 55dB, at 1-meter distance in front of the front panel
EMS	(Exclusive of Buzzer) : IEC 61000-4-2 Level 4 (ESD) IEC 61000-4-3 Level 3 (RS) IEC 61000-4-4 Level 4 (EFT) IEC 61000-4-5 Level 4 (Surge)

- : IEC62040-2, comply with I/P current  $\geq$ 25A
  - : IEC62040-1



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### **MECHANICAL FEATURES**

Unit	
Dimensions: W x H x D (mm)	: 260 x 717 x 570 mm
Weight (Kg)	: 93 Kg
Packaging	
Dimensions: W x H x D (mm)	: 430 x 845 x 700 mm
Weight (Kg)	: 101 Kg
Dimensions: W x H x D (mm)	

Specifications are subject to change without notice.