

## Hercules Combo Series

**HIGH PERFORMANCE  
TRUE ONLINE DOUBLE CONVERSION UPS**



### Features

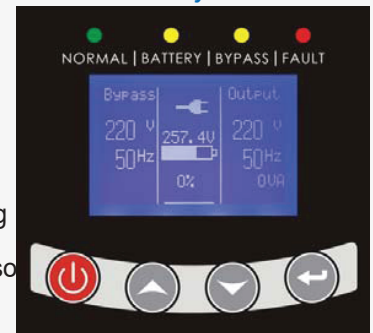
- DSP Control
- 0.9 Output Power Factor
- Wide Input Range
- High Efficiency Mode (ECO)
- Frequency Converter Mode
- Input THDI < 5%
- Output THDv < 2%
- Dual input ( 3 Phase or 1 Phase auto detection )
- Different source for Bypass
- Feedback protection
- Output Voltage Regulation <1%
- N+X Parallel Redundancy
- Dot Matrix LCD Display
- Extendable Run Time
- Fan Speed Control
- Free Power Management Software
- Multiple Communication Port
- Optional SNMP & Relay Cards

### Hercules Combo series, built for the most reliability, purity and power

Hercules Combo Series UPS make use of the unique True Online Double Conversion circuitry to detect the electricity current and voltage output of utility power supply. The current is input via high frequency PWM to maintain uniform wave form and phase in line with the voltage, so as to attain high input power factor over to 0.99 and avoid generating comparatively significant harmonic interference on the power network.

With the use of the outstanding IGBT as the power conversion component, the operating frequency of the Inverter of UPS is capable of reaching tens of KHz, due to the high frequency operating characteristics of IGBT. Higher working efficiency of the inverter also improves the overall efficiency of UPS and higher inversion frequency reduces the noise of the inverter as well.

*Trendy & Elegant LCD & LED Design  
for real-time UPS system information*



มอก. 1291 1001 - 2553  
มอก. 1291 1002 - 2553  
มอก. 1291 1003 - 2555



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# Hercules Combo Series

## SPECIFICATION

MODEL		HE-Combo10K	HE-Combo20K
CAPACITY	VA/WATT	10kVA/9kW (PF0.9)	20kVA/18kW (PF0.9)
INPUT	Voltage Range	110 - 276 Vac for 1 Phase input, 190 - 478 Vac for 3 Phase input	
	Frequency Range	45-55Hz / 54-66Hz	
	Phase	3 Phase 4 Wires + PE or Single Phase 2 Wires + PE	
	Current THDI	<5%	
	Power Factor	0.99	
	Generator Input	1.5 x UPS Rating Power	
OUTPUT	Voltage Range	208 Vac/220 Vac/230 Vac/240 Vac (± 1%)	
	Phase	Single Phase 2 Wires + PE	
	Frequency (Synchronized Range)	45-55Hz/54-66Hz	
	Frequency (Battery Mode)	50/60Hz ± 0.05Hz	
	Current Crest Ratio	3:1	
	Harmonic Distortion	≤ 2 % THD (Linear Load)	
	Protection	Short Circuit Protection & Overload Protection	
	Output Waform	Pure Sinewave	
	Outlet	Terminal Block	
	Overload Capacity	Line Mode Battery Mode	5 min @ 100%~110% ; 1 min @ 110% ~ 130% ; 10s @ 130% ~ 150% ; 2 sec @ > 150%
EFFICIENCY	AC to AC Mode at full load	> 93% @Full Load	
	ECO mode	> 97% @Full Load	
BATTERY	Number of Batteries Per Set	24	
	Battery Capacity (Ahr)	12V/(7/9)Ahr	
	Backup Time (depend on load)	>15 min	
	Recharge Time (to 90%)	3 Hours	
	Charging Current (Max.)	2.0A, 4.0A (Expandable to 8.0A)	
	Rated Battery Voltage	288 Vdc	
	Battery Type	Sealed Lead Acid Maintenance Free	
TRANSFER TIME	AD to DC	Zero	
Parallel	N+X Parallel Redundancy	Max 4 (Load Sharing)	
INDICATOR	LCD & LED	For LED: Bypass mode,UPS on,Line mode,Battery test mode,Fault mode,Waring mode For LCD: Input/Output Voltage&Frequency, Load level,Load Watt,Battery Voltage,Battery status,Converter mode, UPS status, Fault indicator, etc.	
AUDIBLE ALARM	Battery Mode	Sounding every 4 seconds	
	Low Battery	Sounding every second	
	Overload	Sounding twice every second	
	Fault	Continuously Sounding	
DIMENSION	W x H x D mm	350 x 89 x 650	
WEIGHT	kg	58 ex.bat	62 ex.bat
ENVIRONMENT	Operating Environment	0-40° C	
	Relative Humidity	0-95% (NON-CONDENSING)	
	Noise Level	<55dB @ 1 Meter	
INTERFACE	USB (built-in) / RS-232	Software supports Windows Family, Linux, Sun Solaris, IBM AIX, Compaq True64, SGI IRIX, FressBSD, HP-UX and MAC	
	Smart Slot (Option)	SNMP Adapter/ AS400 Relay Card / RS485 / USB	
STANDARDS	Product standard	TIS 1291 Part 1-2553 , TIS 1291 Part 2-2553 , TIS 1291 Part 3-2555 Class C	
	QMS	Certified Quality Management System ISO9001	
	EMS	Certified Environmental Management System ISO14001	



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