# Hercules Combo Series

# ำด้านระบบสำรองไฟฟ้

HIGH PERFORMANCE TRUE DOUBLE CONVERSION ONLINE UPS With Dual input (3 phase or 1 phase)

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

NORMAL | BATTERY | BYPASS | FAULT

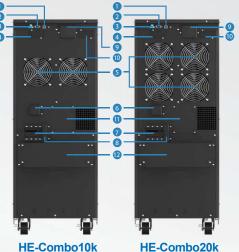


#### **Features**

- 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 Manangement Software
- Multiple Communication Port
- Optional SNMP & Relay Cards

#### **Rear Panel:**

- 1. USB Port
- 2. RS232 Port
- 3. EPO
- 4. AS400 Slot
- 5. Fan
- 6. Back Feed Connector
- 7. Input Breaker
- 8. Neutral Switch
- 9. Parallel Port (Optional)
- 10. Intelligent Slot
- 11. Maintenance Switch
- 12. Terminal Block (Input/Output/Batery)



HE-Combo20k

### 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 convertion 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. Excellent unique design for dual input utility (3 phase or 1 phase auto detection), the best for your utility choices of flexible.

## **Product Information**



MODEL		HE-Combo10k	HE-Combo20k
APACITY	VA/WATT	10kVA/9kW (PF0.9)	20kVA/18kW (PF0.9)
INPUT	Voltage Range	110 - 276 VAC for 1 phase input	, 190-478VAC for 3 phase input
	Frequency Range	45-55Hz / 54-66Hz	
	Phase	Three Phase with ground or Single phase with ground	
	Current THDI	<5%	
	Power Factor	≥0.99	
	Generator Input	1.5 x UPS Rating Power	
OUTPUT	Voltage Range	208VAC/220VAC/230VAC/240VAC (± 1%)	
	Phase	Single phase with ground	
	Frequency (Synchonized 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	
	Output Waform	Pure Sinewave	
	Outlet	Terminal Block	
	Line Mode		
	Overload Battery	5 min @ 100%~110% ; 1 min @ 110% ~ 130% ; 10s @ 130% ~ 150% ; 2 sec @ > 150%	
	Mode Line Mode/BAT Mode	> 0.20/ @Full load	
FFICIENCY	<u> </u>	> 93% @Full Load	
BATTERY	ECO mode  Number of Batteries	> 97% @Full Load	
	Per Set	24	
	Battery Capacity (Ahr)	12V/(7/9)Ahr	
	Backup Time (depend on load)		
	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 Fee	
RANSFER TIME	AD to DC	Zero	
arallel	N+X Parallel Redundancy	Max 4 (Load Sharing)  For LED: Bypass mode,UPS on,Line mode,Battery Mode, HE 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.	
NDICATOR	LCD & LED		
AUDIBLE ALARM	Battery Mode	Sounding every 4 seconds	
	Low Battery	Sounding every second	
	Overload	Sounding twice every second	
	Fault	Continuously Sounding	
IMENSION	W x H x D mm	350 x 89 x 650	
EIGHT	kg	58 ex.bat	62 ex.bat
ENVIRONMENT	Operating Environment	0-45° 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	
NTERNATIONAL TANDARDS	CE	Safety (IEC/EN62040-1-1), ESD (IEC/EN61000-4-2 L4),RS (IEC/EN61000-4-3 L3),EFT (IEC/EN61000-4-4 L4), Surge (IEC/EN61000-4-5 L4), Conduction (IEC/EN62040-2 C3), Radiation (IEC/EN62040-2 C3), Transportation (ETS300019-2-2 Class 2.3), Protection (IP20 static)	

Specification are subject to change without prior notice.







