Aytemiz MAKELSAN
Uninterruptible Power Supplies/Generator

POWER FORLIFE

HF POWERPACK SE
SERIES ON-LINE UPS

10-60kVA 3:3 PHASE

Three LEVEL 3 TECHNOLOGY



- Output power factor 1.0
- Dual input design, supporting independent bypass
- 50 Hz / 60 Hz auto-sensing frequency
- 50 Hz / 60 Hz frequency conversion mode
- Work efficiency up to 98% in EGO mode

DATA CENTER | INDUSTRY | COMPUTER ROOM | EMERGENCY

VFI TYPE ON-LINE UPS | PF 1.0 POWER FACTOR | 24H SERVICE

- High frequency on-line double conversion technology
- Advanced dual-core DSP control technology and 3-level technology
- Active power factor correction (APFC), input power factor up to 0.99
- System efficiency is improved to 96%, energy saving rate is doubled
- Advanced digital and parallel technology, providing higher reliability than single system
- Fan speed varies intelligently with load, reducing noise and extending its service life
- Conformal coating technology to make UPS operate in harsh environment fora long time
- Flexible battery configuration setting, selectable battery numbers: 32- 40 pcs
- Ability to switch on the UPS by battery in the absence of mains power (Cold start)
- Zero switching time for UPS power supply mode when the mains power is unstable, ensuring the output is uninterrupted
- 5 inches LCD colorful touch screen, friendly human & machine interface
- Wide input voltage range
- Digitally controlled charger
- Compact internal layout, small footprint
- Powerful background software for parameters configuration and online upgrade
- Advanced multi-platform communication for UPS monitoring: RS232, USB, RS485, dry contacts, SNMP card, Wi-Fi card and GPRS card
- Linear derating in low voltage input, reducing battery discharging times, extending the service life of battery
- Intelligent battery management, automatic equalized and float charging control, charger dormancy control, improving the reliability of charger and extending the battery life
- Effective hardware and software protection, robust self-diagnosis function, abundant event logs for future check
- Standard RS232, USB, RS485, EPO, Dry contacts, Parallel port
- Optional SNMP card, WI-FI card, GPRS card, SMS alarms

TSE TSE-HYB CE

MODEL						
Power rating	10kVA/10kW	15kVA/15kW	20kVA/20kW	30kVA/30kW	40kVA/40kW	60kVA/60kW
INPUT						
Phase	3:3 / 3:1 / 1:1					
Rated voltage	220/230/240Vac (L-N) 380/400/415Vac (3Φ + N + PE)					
Voltage range	132~275Vac (L-N) 228~478Vac					
Rated frequency	50 / 60 Hz					
Frequency range	40 ~ 70 Hz					
Power factor	> 0.99					
Bypass voltage range	Selectable, default -20%~+15% Up limited: +10%, +15%, +20%, +25%; Down limited: -10%, -15%, -20%, -30%, -40%					
Bypass frequency range	Selectable, ±1Hz, ±3Hz, ±5Hz					
Input current THDi	<3% (linear load)					
Bypass overload	125%: long term operation; 125%~130%: 10min; 130%~150%: 1min; 150%~400%: 1s; >400%, less than 200ms					
OUTPUT						
Rated voltage	220/230/240Vac (L-N) 380/400/415Vac (3Φ + N + PE)					
Voltage precision	±1% (linear load)					
Frequency	Synchronized with utility in mains mode, 50/60 Hz ± 0.1 Hz in battery mode					
Waveform	Sinusoidal					
Power factor	1					
Total harmonic distortion (THDv)	<1% (full linear load); <3% (full non-linear load according to IEC/EN62040-3)					
Crest factor	3:1					
Overload	<110%, 60min; 110%~125%, 10min; 125%~150%,1min; >150%, 200ms					
BATTERIES						
DC voltage	Long time model: ±240VDC					
Standard model battery voltage	(10+10) x 9AH	(20+20) x 7AH	(20+20) x 9AH	(15+15) x 9AH x 2 strings	(20+20) x 9AH x 2 strings	(selectable , 32 - 40pcs)
Charging current	10A Max.				15A Max.	20A Max.
Charger voltage precision	1%					
SYSTEM						
Display	5 inches touch screen					
Efficiency	95% Max.				96% Max.	
Transfer time	0 ms					
Max. number of parallel connections	4					
Interface	Standard: RS232, RS485, USB, battery cold start Option: programmable dry contact, SNMP, parallel kit					
ENVIRONMENT						
Operating temperature	0℃ ~ 40℃					
Storage temperature	-40℃ ~ 70℃					
Relative humidity	0 ~ 95% (non-condensing)					
Altitude	<1000m, load derated 1% per 100m from 1000 ~ 2000m					
Noise level at 1 m	58dB Max.			62dB Max.		
OTHERS						
Dimensions (W × D × H) (mm)	250 x 720 x 560 (S) 250 x 720 x 560 (H)	250 x 800 x 700 (S) 250 x 720 x 560 (H)		250 x 840 x 930 (S) 250 x 840 x 650 (H)	350 x 800 x 1280(S) 250 x 720 x 560 (H)	250 x 790 x 560 (H)
Packaged dimensions (W × D × H) (mm)	350 x 800 x 722 (S) 350 x 800 x 718 (H)	350 x 900 x 862 (S) 350 x 800 x 718 (H)		350 x 950 x 1102 (S) 350 x 980 x 810 (H)	450 x 900 x 1400 (S) 350 x 800 x 718 (H)	350 x 850 x 818 (H)
Net weight (kg)	82 (S) 31 (H)	131 (S) 33 (H)	145 (S) 33 (H)	215 (S) 42 (H)	300 (S) 42 (H)	48 (H)
Gross weight (kg)	93 (S) 40 (H)	142 (S) 42 (H)	156 (S) 42 (H)	227 (S) 52 (H)	310 (S) 52 (H)	58 (H)

- S means standard model, H means long time model.
- Derate capacity to 90% when the number of batteries is set to 32 pcs for 40kVA/60kVA model.
- Custom-made specifications are acceptable.
- All specifications are subject to change without notice.
- Derate capacity to 60% when used at 3:1.