DHF SS SERIES UPS

RANGE:1 KVA- 20 KVA 1:1/3:1

SINGLE-PHASE OUTPUT

Li READY

- SOHO
- EDUCATION
- TRANSPORT
- BPO
- FINANCE
- ANALYTICAL EQUIPMENTS
- DATA CENTER



FEATURES

- Advanced DSP And 3-Level Technology
- Output Power Factor 1.0
- Active Power Factor Correction (APFC), Input Power Factor Up To 0.99
- High Efficiency 95% (Up To 98% In ECO Mode)
- Advanced Digital Parallel Technology
- Flexible Battery Configuration (Settable 16 - 20 PCS Batteries)
- Digitally Controlled Charger

The DHF Series 1 kVA to 20 kVA UPS system is a single-phase UPS that uses advanced technology for a dependable power supply. The DHF Series utilises high frequency online double conversion technology, providing stable output and protection against fluctuations. Controlled by Digital Signal Processing (DSP) for accuracy and efficiency, it includes active power factor correction (APFC), achieving an input power factor of up to 0.99. This reduces reactive power and enhances energy efficiency. The system offers output power factor options of 0.9 or 1.0 to meet different load needs. With a broad input voltage range and a frequency range of 40 to 70 Hz, along with auto-sensing and 50/60 Hz conversion, it adapts to various power environments. The "cold start" function allows activation without external power, which is essential in emergencies. Battery configurations are flexible, supporting 16 to 20 batteries with digitally controlled charging for optimal health.

TECHNICAL SPECIFICATIONS

Single Phase Input - Single Phase Output

MODEL	DHF 101	DHF 102	DHF 103	DHF 106	DHF 110
CAPACITY	1kVA / 1kW	2kVA / 2kW	3kVA / 3kW	6kVA / 6kW	10kVA / 10kW
INPUT					
Rated voltage	208 / 220 / 230 / 240 Vac				
Voltage range	110 ~ 176 Vac (linear derating between 50% and 100% load); 176 ~ 280 Vac (no derating); 280 ~ 300 Vac (derating 50%)				
Frequency	40 ~ 70 Hz (auto-sensing)				
Power factor	≥ 0.99				
Bypass voltage range	-25% ~ +15% (settable)				
Total harmonic distortion (THDi)	≤ 6%				
OUTPUT					
Voltage	208 / 220 / 230 / 240 Vac (settable via LCD)				
Voltage regulation	±1%				
Frequency	45 – 65 Hz (Synchronized Range); 50 / 60 Hz ± 0.1 Hz (Battery Mode)				
Waveform	Sinusoidal				
Power factor	0.8/ 0.9 / 1.0 (Factory Settable)				
Total harmonic distortion (THDv)	≤ 2% (linear load); ≤ 5% (non-linear load)				
Crest factor	3:1				
Overload	105% ~ 125% for 1 min, 125% ~ 150% for 30 s, >150% for 300 ms				
BATTERIES					
DC voltage	24V / 36V	48V / 72V	72V/96V	192VDC (192–240 VDC settable)	
Charging current (max)	6A		12A		
Recharge time	6–8 hrs (depends on battery capacity)				
SYSTEM					
Efficiency	≥ 90% (Normal), up to 99% (ECO Mode)				
Transfer time	Mains Mode To Battery Mode : 0 ms; Inverter Mode To Bypass Mode : 4 ms (Typical)				
Protections	Short-Circuit, Overload, Over Temperature, Battery Discharge, Fan Failure				
Communications	RS232 (Standard), USB / RS485 / Dry Contacts / SNMP (Optional)				
Display	LCD + LED				
Standards	IEC 61000-2-2, IEC 62040-2, IEC 62040-1, IEC 62040-3				
OTHERS					
Operating temperature	0°C ~ 50°C				
Storage temperature	-25°C ~ 70°C (without batteries)				
Relative humidity	0 ~ 95% (non-condensing)				
Altitude	≥1000 m, derating 1% for each additional 100 m				
IP rating	IP 20/21				
Noise level @1m	≤ 50 dB	≤ 55 dB		≤ 58 dB (10kVA)	
Dimensions (W×D×H) mm	144×417×216 / 191×495×350				
Net weight (kg)	4	6	8	14.5	16.5
Gross weight (kg)	5.5	7.5	9.5	16	18

TECHNICAL SPECIFICATIONS

Three Phase Input - Single Phase Output

MODEL	DHF310	DHF315	DHF320
CAPACITY	**10kVA /10KW**	**15kVA /15KW**	**20kVA /20KW**
INPUT			
Rated voltage	380 / 400 / 415 Vac		
Voltage range	190 – 305 Vac (linear derating between 50% and 100% load); 305 – 499 Vac (no derating)		
Rated Frequency	50 / 60 Hz (auto-sensing)		
Power factor	≥ 0.99		
Bypass voltage range	-40% ~ +15% (settable)		
Total harmonic distortion (THDi)	≤ 5%		
OUTPUT			
Rated Voltage	208 (P.F.=0.9) / 220 / 230 / 240 Vac		
Voltage regulation	± 1%		
Frequency	Synchronized to Bypass In Mains Mode; 50 / 60 Hz ± 0.1 Hz In Battery Mode		
Waveform	Sinusoidal		
Power factor	0.8/ 0.9 / 1.0 (Factory Settable)		
Total harmonic distortion (THDv)	≤ 1% (linear load); ≤ 3% (non-linear load)		
Crest factor	3:1		
Overload	105% ~ 110% for 10 min, 110% ~ 125% for 1 min, 126% ~ 150% for 30 s		
BATTERIES			
DC voltage	192 VDC (192 ~ 240 VDC settable)		
Charging current	1 – 5 A settable, 10 A (optional)		
Recharge time	8 - 10 Hours (Depends on Battery Capacity)		
SYSTEM			
Efficiency	≥ 94% at 100% load, Max. 95% at 60% load , ≥ 98% in ECO mode		
Transfer time	0 ms		
Protections	Short-Circuit, Overload, Over Temperature, Battery Low Voltage, Over Voltage, Undervoltage, Fan Failure		
Max. Number Of Parallel Connections	4		
Communications	RS232 (standard), USB / RS485 / Dry Contacts / SNMP / Battery Temperature Compensation (optional)		
Display	LCD + LED		
OTHERS			
Operating temperature	0°C ~ 50°C		
Storage temperature	-25°C ~ 70°C (without battery)		
Relative humidity	0 ~ 95% (non-condensing)		
Altitude	≥ 1000 m, derating 1% for each additional 100 m		
IP rating	IP 20/21		
Noise level at 1m	≤ 58 dB		
Dimensions (W×D×H) mm	191 × 495 × 350	191 × 495 × 515	
Net weight (kg)	18.5	26.5	
Gross weight (kg)	20	28	