

SPM9100 - POWER SMART, ONLINE UPS (1:1)

1kVA ~ 3kVA

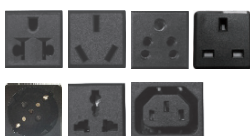
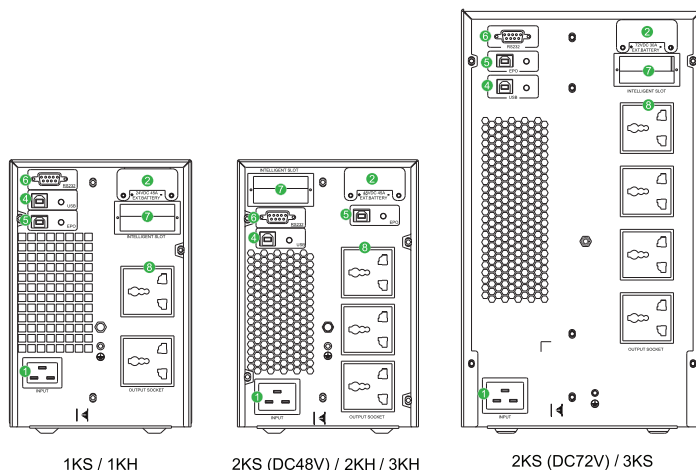
PF 1.0

Features

- High frequency on-line double conversion technology
- DSP (Digital signal processors) control technology
- Active power factor correction (APFC), input power factor up to 0.99
- Output power factor 0.9
- Wide input voltage range (110 V ~ 300 Vac) and frequency range (40 ~ 70 Hz)
- Auto sensing frequency
- 50 / 60 Hz frequency conversion
- Cold start
- Rear ventilation design and variable speed fan
- Effective software and hardware protection
- Quick and stable charging, 90% capacity restored in 4 h (standard model UPS)
- Linear derating in low voltage input reducing battery discharging times
- Settable delayed start when power is restored
- Advanced battery management (ABM)
- Multiple functions settable via LCD: output voltage, EOD, auto-start, bypass mode, ECO mode and frequency conversion mode
- Multi-platform communications: RS232 (standard), USB / RS485 / SNMP / dry contacts (optional)
- Optional USB, RS485 card, AS400 dry contacts, SNMP card, SMS alarms, EPO function, and 12 A charger (2 / 3 kVA only)

Rear Panel

1. AC input socket
2. Battery connector (Optional)
3. Fan
4. USB (optional)
5. EPO (optional)
6. RS232
7. Intelligent slot (Optional)
8. Output sockets



Optional Outlets

Specifications

MODEL	SPM9101				SPM9102				SPM9103			
Voltage range	1 kVA / 1kW				2 kVA / 2kW				3 kVA / 3kW			
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	50 / 60 Hz $\pm$ 5 Hz (auto-sensing)											
Power factor	$\geq$ 0.99											
Bypass voltage range	- 40% ~ +20% (settable)											
Rate Input Frequency	50 Hz / 60 Hz (auto-sense)											
Total harmonic distortion (THDi)	$\leq$ 6%											
OUTPUT												
Voltage	208 / 220 / 230 / 240 Vac (settable via LCD)											
Voltage regulation	$\pm$ 1%											
Frequency	45 ~ 55 Hz or 55 ~ 65 Hz (synchronized range); 50 / 60 Hz $\pm$ 0.1 Hz (battery mode)											
Waveform	Sinusoidal											
Power factor	1.0											
Total harmonic distortion (THDv)	$\leq$ 2% (linear load), $\leq$ 5% (non-linear load)											
Crest factor	3:1											
Overload	105% ~ 110% for 30 min, 110% ~ 130% for 10 min, 130% ~ 150% for 3 s, > 150% for 200 ms											
BATTERIES												
Battery type	Sealed lead acid maintenance-free battery											
DC voltage	24 V (S)	36 V (S)	36 V (H)	48 V (S)	72 V (S)	72 V (H)	72 V (S)	96 V (S)	96 V (H)			
Inbuilt battery	2 $\times$ 9 Ah	3 $\times$ 7 Ah	/	4 $\times$ 9 Ah	6 $\times$ 7 Ah	/	6 $\times$ 9 Ah	8 $\times$ 7 Ah	/			
Charging current (max.)	Standard model: 1A, Long time model: 12A (1 ~ 12A Settable)											
Recharge time	Standard model: 90% capacity restored in 3 hours; Long time model: depend on the capacity of battery											
SYSTEM												
Efficiency	$\geq$ 94.5% (Mains mode)				$\geq$ 95.5% (Mains mode)							
	$\geq$ 89.5% (Battery mode)				$\geq$ 91.5% (Battery mode)							
	$\geq$ 97.5% (ECO mode)				$\geq$ 98.5% (ECO mode)							
Transfer time	Mains mode to battery mode: 0 ms Inverter mode to bypass mode: 4 ms (typical)											
Protections	Short-circuit, overload, overtemperature, battery discharge protection and fan testing protection											
Communications	RS232 (standard), USB / RS485 / SNMP / dry contacts (optional)											
Display	LCD + LED											
ENVIRONMENT												
Operating humidity	0 ~ 95% RH @ 0° ~ 40°C (Non-condensing)											
Storage temperature	-25°C ~ 55°C (without batteries)											
Operating altitude	$\leq$ 1000 m, above 1000 m, derating 1% for each additional 100 m											
IP rating	IP 20											
Noise level at 1m	$\leq$ 50 dB											
OTHERS												
Dimensions (W $\times$ D $\times$ H) (mm)	144 $\times$ 312 $\times$ 216	144 $\times$ 317 $\times$ 216	144 $\times$ 336 $\times$ 216	144 $\times$ 417 $\times$ 216	191 $\times$ 419 $\times$ 335	144 $\times$ 217 $\times$ 216	191 $\times$ 419 $\times$ 335		144 $\times$ 417 $\times$ 216			
Packaged dimensions (W $\times$ D $\times$ H) (mm)	230 $\times$ 402 $\times$ 315	230 $\times$ 460 $\times$ 315	230 $\times$ 402 $\times$ 315	230 $\times$ 506 $\times$ 315	277 $\times$ 500 $\times$ 435	230 $\times$ 506 $\times$ 315	277 $\times$ 500 $\times$ 435		230 $\times$ 506 $\times$ 315			
Net weight (kg)	9.5	11.3	4.5	16.4	23.1	6.5	22.8		27.9		6.5	
Gross weight (kg)	10.5	12.3	5.5	17.9	24.6	8.0	24.3		29.4		8.0	

- * Derate capacity to 90% when the output voltage is adjusted to 208 Vac
- * **S** means standard model, **H** means long time model
- * All specifications are subject to change without notice
- * Custom-made specifications are acceptable