# SPM9110RT - RACKMOUNT / TOWER, ONLINE UPS (1:1)

6kVA ~ 10kVA PF 1.0

#### **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
- Wide input voltage range (110 ~ 288 Vac) and frequency range (40 ~ 70 Hz)
- 50 / 60 Hz frequency auto sensing
- Two modes of frequency conversion: 50 Hz input / 60 Hz output or 60 Hz input / 50 Hz output
- Hot-swappable battery
- Flexible battery configuration (settable 16 20 pcs batteries)
- Digitally controlled charger
- High charging current available (Max. 12 A)
- Charging voltage and current configured by demands
- Linear derating in low voltage input reducing battery discharging times, extending the service life of battery
- Intelligent battery management, automatic floating / equalizing charge control, charger dormancy control, increasing battery life by 50%
- Ability to switch on the UPS with batteries
- Settable delayed start time when mains power is restored, reducing the impact on power grid or generator
- Fan speed varies intelligently with temperature, reducing noise and extending its service life
- Equipped with self-aging function
- · Compact internal layout, miniaturized the complete unit for small footprint
- LCD+LED display, multi-functional keys operation, friendly human-machine interface
- Powerful background software for parameters configuration
- Advanced multi-platform communications: RS232, USB, RS485, SNMP and dry contacts communication interfaces
- Effective software and hardware protection function, robust self-diagnostic function, and abundant event log for check



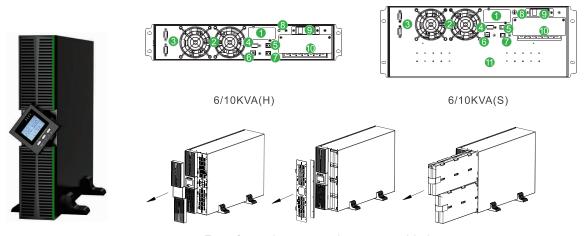
# **Available Options**

- RS232 and smart card slot included
- Optional parallel function, battery temperature compensation, SNMP card, USB, RS485 card, dry contacts, EMD, and SMS alarms



### **Rear Panel**

- 1. SNMP (Optional)
- 2. Fans
- 3. Parallel (Optional)
- 4. RS232
- **5.** EPO
- 6. USB (Optional)
- 7. Temperature Compensation (Optional)
- 8. GND
- 9. Bypass Breaker
- 10. Terminal Cover
- 11. Battery Pack



Display panel can be rotated

Easy for maintenance, hot-swappable battery



#### **Specifications**

MODEL	SPM9106RT	SPM9110RT
Capacity	6 kVA / 6 W	10 kVA / 10 W
INPUT		
Input wiring	Single-phase three-wire (1Φ + N + PE)	
Rated voltage	208 / 220 / 230 / 240 Vac	
Voltage range	110 ~ 176 Vac (linear derating between 50% and 100% load); 176 ~ 288 Vac (no derating)	
Rated frequency	50 / 60 Hz (auto-sensing)	
Frequency range	40 ~ 70 Hz	
Power factor	≥ 0.99	
Bypass voltage range	- 40% ~ +15% (settable)	
Total harmonic distortion (THDI)	≤ 5%	
OUTPUT		
Output wiring	Single-phase (L-N)	
Rated voltage	208 (PF=0.9) / 220 / 230 / 240 Vac	
Voltage regulation	± 1%	
Frequency	Synchronized to bypass in mains mode; 50 / 60 Hz $\pm$ 0.1% Hz in battery mode	
Waveform	Sinusoidal	
Power factor	1	
Total harmonic distortion (THDV)	≤ 1% (linear load); ≤ 4% (non-linear load)	
Crest factor	3:1	
Overload	102% ~ 110% for 10 min, 110% ~ 125% for 1 min,125% ~ 150% for 30 s	
BATTERIES		
DC voltage	192 Vdc (192 ~ 240 Vdc settable)	
Number of battery	16 pcs (16 ~ 20 settable)	
Inbuilt battery (standard model)	12 V / 7 Ah × 16	12 V / 9 Ah × 16
Charging current	Standard model: 1 A; Long time model: 5 A (default),1 ~ 5 A settable; 12 A (optional)	
Recharge time	Standard model: 90% capacity restored in 8 hours; Long time model: depend on the capacity of battery	
SYSTEM		
Efficiency	≥ 94% at 100% load, max. 94.5% at 60% load, ≥ 98% in ECO mode	
Transfer time	0 ms	
Protections	Short-circuit, overload, overtemperature, battery low voltage, overvoltage, undervoltage and 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 ~ 40°C	
Storage temperature	-25°C ~ 55°C (without battery)	
Relative humidity	0 ~ 95% (non-condensing)	
Altitude	≤ 1000 m, derating 1% for each additional 100 m	
IP rating	IP 20	
Noise level at 1 m	≤ 55 dB	≤ 58 dB
Dimensions (W × D × H) (mm)	440 × 660 × 176 (S), 440 × 580 × 88 (H)	
Packaged dimensions (W × D × H) (mm)	554 x 792 x 418 (S), 514 x 696 x 168 (H)	
Net weight (kg)	58 (S), 12 (H)	63 (S), 14 (H)
Gross weight (kg)	68 (S), 14 (H)	73 (S), 16 (H)



<sup>\*</sup> **S** means standard model, **H** means long time model \* All specifications are subject to change without notice