

RHEINDERS

MEMOPOWER RT

1:1 SERIES

6~10kVA

1:1 Phase PF:0.9



FEATURES

- Smart Online UPS
- Non Transfer Time of Output
- Full Digital Control (DSP)
- Power Factor 0.9
- ECO Function
- Charging/Rectifier Full Digital Control Technology
- Wide Input range 120 - 276 V
- Wide Frequency range
- Self Testing When UPS ON
- Over and Under Volt Protection
- Automatic Bypass
- Optional SNMP Card
- Communication RS232, USB



LCD PANEL CAN BE ROTATED



CONTROL PANEL



Battery Box



TECHNICAL SPECIFICATION

MODEL	RT 6	RT 10
PHASE	1 PHASE	
CAPACITY	6 KVA	10 KVA
	5,400 WATT	9,000 WATT
INPUT	220 / 230 / 240 Vac	
Input Voltage Range	120 - 276 Volt	
Input Frequency	45 - 55 Hz / 54 - 66 Hz	
Input Power factor	> 0.99	
Voltage Regulation	1%	
OUTPUT	220 / 230 / 240 Vac	
Output frequency	50 / 60 Hz	
Output Power Factor	90%	
Voltage Regulation	± 2%	
Transfer Time	0 second	
Waveform	Pure Sinewave	
Overload Capability Inverter Mode	110% to Bypass 60 min, 125% to Bypass 10 min	
	150% to Bypass 1 Sec	
INDICATOR		
LED + LCD	UPS Status, Backup Mode, ECO Mode, Bypass Mode, Battery Low	
BATTERY		
Battery	7 AH 20 Battery	9 AH 20 Battery
Charge Current	Maximum Current 10 A	
COMMUNICATION		
Interface	RS232, SNMP Card	
Optional	SNMP	
ENVIRONMENT		
Operation Temperature	0 - 40°C	
Relative Humidity	0 - 95% (Non Condensing)	
Altitude	<1500m	
Noise Level	<55dB	
STANDARDS		
Safety	IEC/EN62040-1, IEC/EN60950-1	
EMC	IEC/EN62040-2, IEC61000-4-2-8	
DIMENSION		
UPS W x D x H (mm)	443 x 580 x 131 (3U)	
UPS Weight (Kg)	23	25
Battery W x D x H (mm)	443 x 720 x 131 (3U)	
Batter Weight (Kg)	56	62



SMART PRO MY SERIES

Online UPS 10~40kVA

- » Adjustable input and output configuration
- » High AC/AC efficiency up to 96%
- » High output power factor up to 1.0
- » Common battery bank
- » Optional 4.3 inch touch screen

High Reliable

- Super wide input voltage range $-60\% \sim +25\%$ for higher grid adaptability
- Dual DSP control for top performance
- Intelligent fan speed control reduce noise and prolongs fan life
- Anti-corrosion resistant coating for all PCB boards
- Full protection with input, output, bypass, maintenance bypass and battery breaker
- ECO mode and EPO function

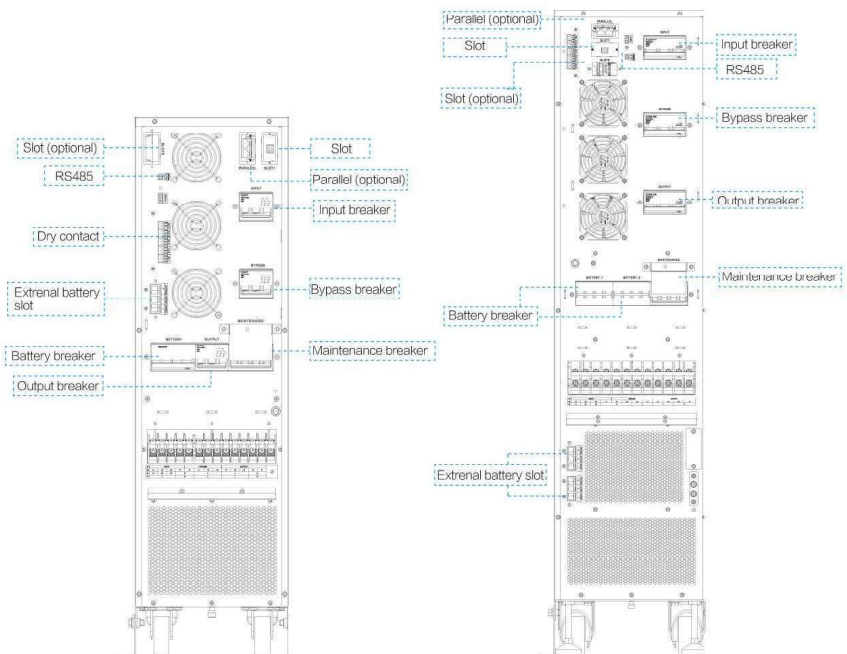
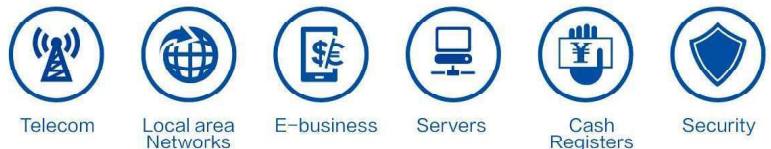
Green Power

- AC/AC efficiency up to 96%, less TCO and more energy saving
- Output power factor up to 1.0, more powerful to connect more critical loads
- 3 level IGBT technology for higher efficiency and minimized interference to grid

Flexible Design

- Adjustable input and output
- Built-in battery and flexible battery configuration
- Common battery bank
- Easy onsite parallel slot modification
- Wheel design
- Options are displayed in 7 languages: English, Russian, Chinese, Spanish, Polish, Italian and Korean

Typical Applications:



Ecological Power Network

Technical Specification

Rated Power	10kVA	15kVA	20kVA	30kVA	40kVA
Input					
Voltage (Vac)	80-280 (L-N)/138-485 (L-L)			138-485 (L-L)	
Phase	1:1/3:1/3:3			3:1/3:3	
Frequency (Hz)	40-70				
Power Factor	≥0.99				
THDi	<3%				
Output					
AC/AC Efficiency (Max.)	96%				
Power Factor	1.0				
Voltage (Vac)	220/230/240 ± 1% (L-N) 380/400/415 ± 1% (L-L)				
Frequency (Hz)	50/60 ± 0.1 (battery mode)				
THDv	THD <2% (linear load), THD <4% (nonlinear load)			THD <1% (linear load), THD <3% (nonlinear load)	
Crest Factor	3:1				
Overload ¹	115%~130% load for 15 min, 131%~155% load for 1 min, >155% load: change to bypass immediately				
ECO Mode	Yes				
Battery					
Voltage (Vdc)	± 96 default (± 96~± 240 adjustable)	± 192 default (± 144~± 240 adjustable) ²			
Internal Battery	16~40 × 7AH/12V	24~40 × 7AH/12V		48~80 × 7AH/12V	
Charging Current (A)	4 (1-10 settable)			15 (1-20 settable)	
Other					
Communication Interface	RS485, EPO, dry-contact Optional: RS232, SNMP				
Display	LCD/Touch screen				
Alarm	Low battery, abnormal AC input, UPS failure, etc.				
Protection	Low battery, overload, short-circuit and over temperature, etc.				
Noise (dB)	<55				
Working Temperature (°C)	-5~40				
Altitude	0 to 2,000 m at 100% load				
Relative Humidity	0 ~ 95%, no condensation				
Dimension (W × D × H)(mm)	250 × 755 × 880			300 × 785 × 1250	
Weight (kg)	with Battery	86 (16 × 7AH)	118.5 (32 × 7AH)		207 (64 × 7AH)
	without Battery	50			85

1. Test condition: PF=0.9

2. Capacity will derate to 75% when battery voltage between ±144~±180

• Specification is subject to change without prior notice

10 ~ 800kVA

3:3 phase PF: 0.9



Online double conversion

- Online Double Conversion design helps to output a pure sine wave, which is immune from the UPS input, so that the load can run steadily
- UPS transfers among different working mode without output interruption, thereby powering the load uninterruptedly

Full DSP control

- Double DSP control makes the whole system more stable and reliable

High power factor

- The output power factor up to 0.9 better matches the load
- The input power factor 0.97 with filter helps to improve the efficiency, reduce the harmonic pollution to the Grid and lower the UPS running cost

Optimized battery management

- Intelligent battery management system and advanced battery auto float/boost charge technology, reduces the frequency of battery maintenance, greatly improves the battery efficiency and extends battery life
- Battery discharge time prediction: The system will display the backup time of battery calculated by discharge current and voltage
- Battery self-test: Battery is automatically tested at regular intervals
- Flexible battery voltage configuration

N+X parallel redundancy

- N+X parallel redundant design, up to 6 units available, makes the configuration more flexible
- Any unit in parallel system fails, the faulty one will automatically cut off the output, and the load will be powered by the remained units

- It is easy to configure the parallel system just by connecting the parallel cables and doing proper settings
- Non-fixed Master-Slave relationship: Among several UPS in parallel, the unit startup first is Master UPS, the others are Slave. The master and slave may be exchanged

Wide input adaptability

- The range of AC input voltage is (380/400/415Vac) (-25%/+20%), minimizing transfer to battery mode, thereby greatly prolonging the battery life
- Wide input frequency ranging from 45Hz to 65Hz, ensures stability of UPS while generator connected

Power walk in

- Specially designed power walk in function, in which rectifier of each unit in parallel system will be turned on in sequence at intervals to avoid the sudden load on the generator, thereby reducing the cost of the generator required

Generator mode

- Set the maximum output power of the generator when a smaller one than needed is employed to extend the battery duration time. In this case, the load is supplied by both the generator and battery

LBS synchronization

- Synchronize the output of the two independent UPS systems (Single unit or parallel) even when the two systems are operating on different modes (Bypass/Inverter) or on battery

Multi-protection

- Self-diagnosis function will take place before start-up for safety
- Multi-protection: AC input under/over voltage, overload, short-circuit, over-current, over bus voltage, over-temperature, fan failure, auxiliary power failure, battery under voltage, battery over-charge and so on

EPO function

- A concave red EPO button with transparent cover is embodied in the LCD control panel for emergency power off

User-friendly network management

- Chinese/English LCD and LED mimic diagram: Real time operation parameters and status (7 inch touch screen optional)
- RS232 & RS485 communication ports: For local monitor with corresponding software, both can support MODBUS rotocol
- SNMP adapter (Optional): For remote monitor through network
- Dry contacts (10-160kVA optional) for additional monitoring:
 - a) UPS on Inverter
 - b) Mains input failure
 - c) Remote EPO
 - d) Battery low voltage alarm
 - e) UPS fault
 - f) UPS alarm
 - g) UPS on battery
 - h) UPS on bypassNote: d)--h) optional

Technical Specifications:

MODEL	EP10	EP20	EP30	EP40	EP60	EP80	EP100	EP120	EP160	
Capacity	10kVA/9kW	20kVA/18kW	30kVA/27kW	40kVA/36kW	60kVA/54kW	80kVA/72kW	100kVA/90kW	120kVA/108kW	160kVA/144kW	
INPUT										
Operating voltage range	380/400/415Vac (- 25%/ + 20%), (3Ph + PE)									
Operating frequency range	50/60Hz (± 5%)									
Power factor	≥0.97 *									
OUTPUT										
Output voltage	380/400/415Vac (± 1%), (3Ph+N+PE)									
Output frequency	50/60Hz (± 0.05%)									
Harmonic distortion (THDv)	≤2% (Linear load)						≤1% (Linear load)			
Crest factor	3:1 (Max)									
Efficiency	88%	89%		90%		90,5%	92%		92.5%	
BYPASS										
Rated voltage	380/400/415Vac, (3Ph + N + PE)									
Rated frequency	50/60Hz									
Voltage protection range	Upper limit: +20% (+10%, +15%, +20% adjustable) Lower limit: -40% (-10%, -20%, -30%, -40% adjustable)									
Frequency protection range	±10% (± 2.5%, ± 5%, ± 10%, ± 20% adjustable)									
BATTERY										
Battery voltage	384Vdc (360-384Vdc)									
SYSTEM FEATURES										
Transfer time	0 ms (Line mode → Battery mode)									
Overload	Load ≤ 110%/60min; ≤ 125%/10mins; ≤ 150%/1 min, to Bypass									
LED display	Input, Inverter, Bypass, Battery, Output, Status									
LCD display	I/O voltage, frequency, power, power factor, battery voltage, current, battery status, load percentage, UPS status, history record									
Communication interface	RS232, RS485, EPO, Dry contact (Optional), SNMP card (Optional)									
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor									
ENVIRONMENTAL										
Operating temperature	0 ~ 40°C									
Storage temperature	-25 ~ 55°C									
Humidity range	0 ~ 95% (Non-condensing)									
Altitude	<1500m									
Noise level	<58dB					<68dB				
PHYSICAL										
Dimension W × D × H (mm)	350 × 650 × 1050			430 × 830 × 1100		720 × 690 × 1400		720 × 690 × 1400 (6P) 1515 × 830 × 1600 (12P)	890 × 790 × 1600 (6P) 1515 × 830 × 1600 (12P)	890 × 790 × 1600 (6P) 1400 × 1000 × 1900 (12P)
Net weight (kg)	145	165	204	255	320	450	556 (6P)/ 1300 (12P)	693 (6P)/ 1450 (12P)	780 (6P)/ 1645 (12P)	
Shipping weight (kg)	160	180	225	280	345	485	591 (6P)/ 1370 (12P)	738 (6P)/ 1520 (12P)	825 (6P)/ 1775 (12P)	
STANDARDS										
Safety	IEC/EN 62040-1; IEC 62477-1									
EMC	IEC/EN 62040-2 (IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, IEC 61000-2-2)									
Performance	IEC/EN 62040-3									

* With optional filter

- Specifications are subject to change without prior notice
- Data above are typical values for reference only, not as a basis for engineering design

Technical Specifications:

MODEL	EP200	EP300	EP400	EP500-12P	EP600-12P	EP800-12P	
Capacity	200kVA/180kW	300kVA/270kW	400kVA/360kW	500kVA/450kW	600kVA/540kW	800kVA/720kW	
INPUT							
Operating voltage range	380/400/415Vac (-25%/+20%), (3Ph+PE)						
Operating frequency range	50/60Hz (±5%)						
Power factor	≥0.97 *						
OUTPUT							
Output voltage	380 / 400 / 415Vac (±1%), (3Ph+N+PE)						
Output frequency	50 / 60Hz (±0.05%)						
Harmonic distortion (THDv)	≤1% (Linear load)						
Crest factor	3:1 (Max)						
Efficiency	92.5%	93%		93.5%	94%		
BYPASS							
Rated voltage	380/400/415Vac, (3Ph+N+PE)						
Rated frequency	50/60Hz						
Voltage protection range	Upper limit: +20% (+10%, +15%, +20% adjustable) Lower limit: -40% (-10%, -20%, -30%, -40% adjustable)						
Frequency protection range	±10% (±2.5%, ±5%, ±10%, ±20% adjustable)						
BATTERY							
Battery voltage	384Vdc (360~408Vdc)			480Vdc	600Vdc		
SYSTEM FEATURES							
Transfer time	0 ms (Line mode → Battery mode)						
Overload	Load ≤ 110%/60min; ≤ 125%/10mins; ≤ 150%/1 min, to Bypass						
LED display	Input, Inverter, Bypass, Battery, Output, Status						
LCD display	I/O voltage, frequency, power, power factor, battery voltage, current, battery status, load percentage, UPS status, history record, settings						
Communication interface	RS232, RS485, EPO, Dry contact, SNMP card (Optional)						
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor						
ENVIRONMENTAL							
Operating temperature	0~40°C						
Storage temperature	-25~55°C						
Humidity range	0~95% (Non-condensing)						
Altitude	<1500m						
Noise level	<72dB			<75dB			
PHYSICAL							
Dimension W × D × H (mm)	1200 × 800 × 1600 (6P) 1400 × 1000 × 1900 (12P)	1400 × 1000 × 1900 (6P) 1640 × 1000 × 1900 (12P)		2580 × 1000 × 1900	2800 × 1040 × 1900	3280 × 1040 × 1900	
Net weight (kg)	1030 (6P)/1715 (12P)	1560 (6P)/2395 (12P)	1640 (6P)/2510 (12P)	3510	3950	4950	
Shipping weight (kg)	1130 (6P)/1845 (12P)	1690 (6P)/2545 (12P)	1770 (6P)/2665 (12P)	3730	4250	5245	
STANDARDS							
Safety	IEC/EN 62040-1; IEC 62477-1						
EMC	IEC/EN 62040-2 (IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, IEC 61000-2-2)						
Performance	IEC/EN 62040-3						

* With optional filter

1. Specifications are subject to change without prior notice

2. Data above are typical values for reference only, not as a basis for engineering design