

LT1E Line-interactive UPS Series



The LT1E series, featured with smart microprocessor control design, AVR boost and Buck, Smart RS232/USB interface and cold start function, is a cost-effective solution to your mission-critical PC and valuable peripherals.

Features

- **AVR Boost and Buck**
Automatically corrects either under-voltage or over-voltage condition without unnecessary battery drain and extend the life of the battery.
- **Cold Start Function**
Aids users to turn on the UPS without connecting the Utility.
- **Smart RS232/USB Interface for Power Management**
Supports real-time power and UPS status monitoring. Automatic shutdown, schedule and many other advance power management functions. The RS232 & USB ports of 1.2KVA up can be enabled simultaneously.
- **Built-in Self-diagnostic Function**
May execute automatically upon power-on or software-control.
- **Auto-restart Function**
The UPS will be automatically re-started when Utility recovers.
- **Compatible with Generator Set**
LT1E series supports wide range input voltage to fit with various generator sets.
- **Models with LCD Display are Available Now**
With comprehensive graphic display, it provides easy read-out status of the UPS from the screen, such as input voltage, output voltage, load level, battery leve... ..etc..
- **Fastest Charging Capacity**
With built-in powerful charger, the UPS can be fully charged back to 90% in 6-8 hours.
- **Auto Charging at Off Mode**
The battery may be charged continuously even though it is at OFF mode.
- **Modem/LAN Internet Protection**
Protects the Modem/LAN against spike or surge coming through network or telephone wires.

LT1E Line-interactive UPS Series

LT1E 400 | LT1E 600 | LT1E 800 | LT1E 1000 | LT1E 1200
LT1E 1500 | LT1E 2000 | LT1E 2400 | LT1E 3000

LT1E Line-interactive UPS Series

	LT1E								
Model	LT1E 400	LT1E 600	LT1E 800	LT1E 1000	LT1E 1200	LT1E 1500	LT1E 2000	LT1E 2400	LT1E 3000
Capacity	400VA	600VA	800VA	1000VA	1200VA	1500VA	2000VA	2400VA	3000VA
INPUT									
Voltage	110/120 VAC or 220/230/240 VAC								
Voltage range	81-145 VAC / 162-290 VAC								
Frequency range	60/50 Hz (auto sensing)								
OUTPUT									
AC Voltage Regulation (Batt. Mode)	±10%								
Frequency Range(Batt. Mode)	60 Hz or 50 Hz ±1 Hz								
Transfer Time	Typical 2-6 ms, 10ms max.							Typical 10 ms, 13 ms max.	
Waveform (Batt. Mode)	Simulated Sine Wave								
BATTERY									
Battery Type & Number	12 V/4.5AH x 1	12 V/7AH x 1	12 V/9AH x 1	12V/7AH x 2	12 V/7AH x 2	12 V/9AH x 2	12 V/9AH x 2	12 V/7AH x 4	12 V/9AH x 4
Typical Recharge Time	6-8 hours recover to 90% capacity								
INDICATORS									
AC Mode	Green LED lighting								
Battery Mode	Amber LED flashing					Green LED flashing			
Fault	Red LED lighting								
PROTECTION									
Full Protection	Overload and overcharge protection								
ALARM									
Battery Mode	Sounding every 10 seconds								
Low Battery	Sounding every second								
Overload	Sounding every 0.5 second								
Battery Replacement Alarm	Sounding every 2 seconds								
Fault	Continuously sounding								
PHYSICAL									
Dimension (W x H x D) mm	101 x 142 x 298			149.3 x 162 x 338		158 x 198 x 380		213 x 145 x 436	
Net Weight (kg)	3.55	4.25	4.7	7.8	8	10.1	10.5	19.8	23
OPERATING ENVIRONMENT									
Humidity	0-90 % RH @ 0- 40°C (non-condensing)								
Noise Level	Less than 40dB								
MANAGEMENT									
Optional USB/RS-232 Port	Supports Windows® 2000/2003/XP/Vista/2008, Windows® 7, Linux, Unix, and MAC								



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LR1E SERIES PF0.9 Power range: 1kVA~3kVA



The LR1E Line-interactive Sinewave VRLA convertible series, with output power factor 0.9 & Up to 92% high efficiency, hot-swappable battery, quiet operation with less than 45dB, complies highest EMC IEC62040-2 C1 standard and is a perfect solution to be installed in a quiet office or home environment.

Features:

- Rack/Tower Convertible Series
- Pure Sinewave output
- Output Power Factor 0.9
- Wide Input Voltage range 147~290Vac
- Hot-Swappable battery design
- Advanced 3.5" touch screen TFT LCD panel display also available
- Programmable receptacles(Optional)
- Comply with IEC62040-2 C1 standard
- Up to 98.5% in Mains mode
- Noise level <45dB
- Emergency Power Off
- Cold Start Function

LR Line-interactive Sinewave VRLA Convertible Series

LR1E RT 1K | LR1E RT 1.5K | LR1E RT 2K | LR1E RT 3K

LR1E Technical Specifications:

Model	LR1E			
	LR1E RT 1K	LR1E RT 1.5K	LR1E RT 2K	LR1E RT 3K
Capacity	1000VA/900W	1500VA/1350W	2000VA/1800W	3000VA/2700W
INPUT				
Nominal voltage	200/208/220/230/240Vac			
Input voltage range	147~290Vac			
FREQUENCY				
Frequency range	50/60Hz(Auto-Sensing)			
OUTPUT				
Output voltage	200/208/220/230/240Vac			
Voltage regulation	±1%			
Power factor	0.9			
Output frequency	50/60Hz			
Crest factor	3:1			
Harmonic distortion (THDv)	≤2% Linear load ≤5% Non linear load			
Transfer time	4-6ms(10ms max)			
Output waveform	Sinewave			
EFFICIENCY				
AC mode	98.5%	98.5%	98.5%	98.5%
Battery mode	89.5%	91.0%	92.0%	92.0%
BATTERY				
Battery type	Lead acid			
Battery time(Full load)	3.5min	4min	4min	3.5min
Battery voltage	24Vdc	48Vdc	72Vdc	72Vdc
Battery capacity	7Ah			
Charging current (Max.)	2A/4A			
External battery support	Yes (Up to four battery boxes(optional))			
INDICATORS				
LED/LCD display	Line mode, Bat.mode, Battery low voltage, Overload & UPS fault			
ALARM				
Battery mode	Beeping every 4 seconds			
Battery low	Beeping every second			
Overload	Beeping twice every second			
Fault	Continuously beeping			
PHYSICAL				
Dimension W×D×H	440×460×86.5mm	440×500×86.5mm	440×600×86.5mm	440×640×86.5mm
Net weight	15.3kg	20.8kg	31.4kg	33.7kg
ENVIRONMENT				
Operating temperature	0°C~40°C			
Storage temperature	-15°C~50°C			
Humidity range	0~90%RH @ 0~40°C (Non condensing)			
Altitude	Up to 3000m (No derating)			
Noise level	≤45dB@1M front side		≤45dB@Line mode 1M front side; ≤50dB@Battery mode 1M front side	
STANDARDS				
Safety	IEC/EN 62040-1, IEC/EN 62477-1			
EMC	IEC/EN 62040-2 (IEC61000-4-2, IEC61000-4-3, IEC 6100-4-4, IEC61000-4-5, IEC 61000-4-6, IEC61000-4-8, IEC 61000-4-11, IEC61000-2-2)			

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
3. When output voltage is 208Vac, need to derate to 80% of the unit capacity



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TM11E SERIES PF1(PF 0.9 optional) Power range: 1kVA~3kVA

1:1



3 kinds of LCD can be selected



Colourful LCD



Gray LCD



Blue LCD



Battery cabinet
(Optional)



Optimized battery configuration
7Ah/9Ah (12V)

Features:

- High power density
- Online double conversion with full digital control
- Wide input voltage range: 110~300Vac
- Input power factor 0.99 with PFC
- Selectable output voltage: 208/220/230/240Vac
- Smart charger design for optimized battery performance
- Maximum charging current can be expanded to 12A (Long run unit)
- Emergency power off function (EPO)
- ECO mode operation for energy saving
- Generator compatible
- Cold start function
- Intelligent fan speed regulation
- Load segment settable (Optional)
- Multiple communication interface:
RS232 (USB/EPO/Relay card/SNMP card optional)
- Multiple protection function: short-circuit, overload, overheat, battery overcharge and overdischarge, output low voltage and fan fault alarm



ON LINE



TOWER



DATA CENTRE



E-MEDICAL



INDUSTRY



TRANSPORT



EMERGENCY

TM11E Transformer-less Online Tower UPS

TM11E 1KS/H | TM11E 2KS/H | TM11E 3KS/H

TM11E Technical Specifications:

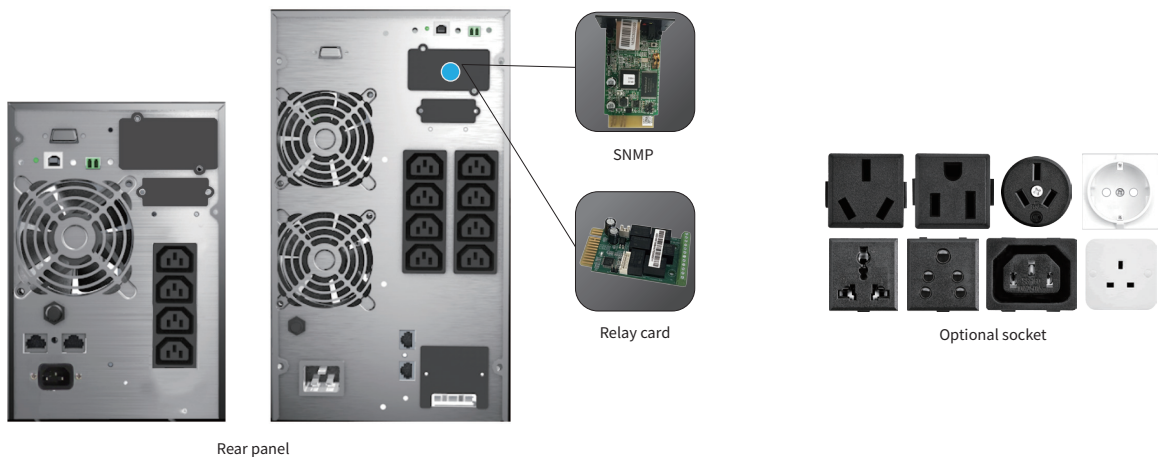
		TM11E											
Model		TM11E 1k H		TM11E 1k S		TM11E 2k H		TM11E 2k S		TM11E 3k H		TM11E 3k S	
Capacity		1000VA/1000W				2000VA/2000W				3000VA/3000W			
INPUT													
Nominal voltage		208/220/230/240Vac											
Input voltage range		110~300Vac (176~264Vac @ 100% load)											
Power factor		0.99											
FREQUENCY													
Frequency range		40~70Hz (50/60Hz Auto-Sensing)											
OUTPUT													
Output voltage		208/220/230/240Vac											
Voltage regulation		±1%											
Power factor		1											
Output frequency	Line mode	46~54Hz or 56~64Hz											
	Bat. mode	(50/60±0.1%)Hz											
Crest factor		3:1											
Harmonic distortion (THDv)		≤3% Linear load											
		≤5% Non linear load											
Transfer time	AC mode to Bat. mode	0ms											
	Inverter to Bypass	4ms (Typical)											
Output waveform		Pure Sinewave											
EFFICIENCY													
AC mode		88%				92%				92%			
Battery mode		85%				88%				89%			
BATTERY													
Battery number		2	3	2	3	4	6	4	6	6	8	6	8
Capacity (Standard unit)		9Ah/12V (7Ah/12V optional)											
Typical recharging time		4 hours (To 90% of full capacity)											
Charging voltage		27.4Vdc±1%	41.1Vdc±1%	27.4Vdc±1%	41.1Vdc±1%	54.8Vdc±1%	82.2Vdc±1%	54.8Vdc±1%	82.2Vdc±1%	82.2Vdc±1%	109.6Vdc±1%	82.2Vdc±1%	109.6Vdc±1%
Charging current (Max.)		6A/12A		1A		6A/12A		1A		6A/12A		1A	
INDICATORS													
LED display		Line mode, Bat. mode, ECO mode, Bypass mode, Battery low voltage, Overload & UPS fault											
LCD display		Input voltage, Input frequency, Output voltage, Output frequency, Load percentage, Battery voltage, Inner temperature & Remaining battery backup time											
ALARM													
Battery mode		Beeping every 4 seconds											
Battery low		Beeping every second											
Overload		Beeping twice every second											
Fault		Continuously beeping											
PHYSICAL													
Dimension W×D×H		144×293×209mm			144×399×209mm		191×460×337mm						
Net weight		4.1kg	9.3kg	12.5kg	10kg	19.5kg	24.5kg	10kg	24.5kg	29.5kg			
ENVIRONMENT													
Operating temperature		0°C~40°C											
Storage temperature		-25°C~55°C											
Humidity range		20~95%RH @ 0~40°C (Non condensing)											
Altitude		<1500m, derating required when >1500m											
Noise level		<50dB at 1 Meter											
STANDARDS													
Safety		IEC/EN 62040-1, IEC/EN 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)											

1. When output voltage is 208Vac, need to derate to 80% of the unit capacity
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TC 1-3kVA battery pack specification

	Tower Cabinet				
Model	TC04024C	TC06036C	TC08048C	TC12072C	TC16096C
BATTERY SYSTEM					
Battery type	VRLA (Lead acid maintenance free battery)				
Typical battery recharging time	6~8 hours (To 90% of full capacity)				
Typical battery life	3~5 years, depend on discharging cycle and ambient temperature				
System voltage	24Vdc	36Vdc	48Vdc	72Vdc	96Vdc
Charging current (Max.)	1.4A				
Battery quantity	4	6	8	12	16
Capacity	9Ah/12V (7Ah/12V optional)				
PHYSICAL					
Dimension W×D×H	144×399×209mm		191×460×337mm		
Net weight	13.5kg	18.5kg	28.5kg	38.5kg	47.5kg
ENVIRONMENT					
Safety	CE				
Operating environment	0°C~40°C				
Relative humidity	0~95% (Non condensing)				
Noise level	<40dB at 1 Meter				

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3. Remark: TC08048C ; "TC" means Tower cabinet; "08" means battery number inside the cabinet; "048" means the battery system voltage; "C" means the cabinet coming with charger



TM11E SERIES PF1 (PF 0.9 optional) Power range: 6kVA~10kVA

1:1



3 kinds of LCD can be selected



Colourful LCD



Gray LCD



Blue LCD

Battery cabinet
(Optional)

Optimized battery configuration
7Ah/9Ah (12V)

Features:

- N+X parallel redundancy, support maximum 4 units in parallel
- Online double conversion with full digital control
- Optimization battery group, the quantity of battery: 16/18/20pcs (Settable)
- Wide input voltage range: 110~286Vac
- Wide input frequency range
- Selectable output voltage: 208/220/230/240Vac
- Generator compatible
- ECO mode operation for energy saving
- Self-testing when UPS startup
- Multiple communication interface: RS232/USB/EPO (Relay card/SNMP card optional)
- Maximum charging current up to 10A
- Cold start function
- Design with maintenance switch (Optional)
- Intelligent fan speed regulation
- Multiple protection function: short-circuit, overload, overheat, battery overcharge and overdischarge, output low voltage and fan fault alarm



ON LINE



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EMERGENCY

TM11E Transformer-less Online Tower UPS

TM11E 6k H | TM11E 6k S | TM11E 10k H | TM11E 10k S

TM11E Technical Specifications:

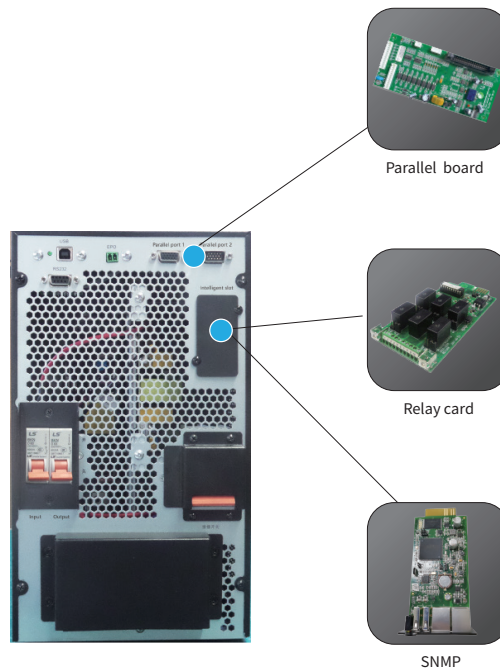
		TM11E			
Model		TM11E 6k H	TM11E 6k S	TM11E 10k H	TM11E 10k S
Capacity		6000VA/6000W		10000VA/10000W	
INPUT					
Nominal voltage		208/220/230/240Vac			
Input voltage range		110~286Vac			
Power factor		0.99			
Bypass voltage range		Max.voltage: 220V: +25% (Optional +10%, +15%, +20%) 230V: +20% (Optional +10%, +15%) 240V: +15% (Optional +10%) Min.voltage: -45% (Optional -20%, -30%)			
FREQUENCY					
Frequency range		40~70Hz (50/60Hz Auto-Sensing)			
OUTPUT					
Output voltage		208/220/230/240Vac			
Voltage regulation		±1%			
Power factor		1			
Output frequency	Line mode	±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional)			
	Bat. mode	(50/60±0.1%)Hz			
Crest factor		3:1			
Harmonic distortion (THDv)		≤2% Linear load			
		≤5% Non linear load			
Transfer time	AC mode to Bat.mode	0ms			
	Inverter to Bypass	0ms			
Output waveform		Pure Sinewave			
Overload	Line mode	Load≤110% last 60min; ≤125% last 10min; ≤150% last 1min; >150% turn to bypass mode immediately			
	Bypass mode	40A (Breaker)		63A (Breaker)	
Efficiency		up to 93.5%			
BATTERY					
Battery voltage		±96/±108/±120Vdc (Settable)	±120Vdc	±96/±108/±120Vdc (Settable)	±120Vdc
Capacity (Standard unit)		9Ah/12V (7Ah/12V optional)			
Typical recharging time		6~8 hours (To 90% of full capacity)			
Charging current		1.35A (Standard unit); Long run unit Max.current 10A (Charging current can be set according to battery capacity)			
INDICATORS					
LED display		Line mode, Bat.mode, ECO mode, Bypass mode, Battery low voltage, Overload & UPS fault			
LCD display		Input voltage, Input frequency, Output voltage, Output frequency, Load percentage, Battery voltage, Inner temperature & Remaining battery backup time			
ALARM					
Battery mode		Beeping every 4 seconds			
Battery low		Beeping every second			
Overload		Beeping twice every second			
Fault		Continuously beeping			
PHYSICAL					
Dimension W×D×H		H: 191×460×337mm; S: 191×460×720mm (With wheel)			
Net weight		12.5kg	70kg	14kg	71.5kg
ENVIRONMENT					
Operating temperature		0°C~40°C			
Storage temperature		-25°C~55°C			
Humidity range		20~95%RH @ 0~40°C (Non condensing)			
Altitude		<1500m, derating required when>1500m			
Noise level		<55dB at 1 Meter		<58dB at 1 Meter	
STANDARDS					
Safety		IEC/EN 62040-1, IEC/EN 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)			

1. When output voltage is 208Vac, need to derate to 80% of the unit capacity
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TC 6-10kVA battery pack specification

	TC40120N
BATTERY SYSTEM	
Battery type	VRLA (Lead acid maintenance free battery)
Typical battery recharging time	6~8 hours (To 90% of full capacity)
Typical battery life	3~5 years, depend on discharging cycle and ambient temperature
System voltage	±120Vdc
Battery quantity	2×20 PCS
Capacity	7Ah/9Ah (12V)
PHYSICAL	
Dimension W×D×H	250×619×616mm (With wheel)
Net weight	122kg/134kg
ENVIRONMENT	
Safety	CE
Operating environment	0°C~40°C
Relative humidity	0~95% (Non condensing)
Noise level	<40dB at 1 Meter

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3. Remark: TC40120N; "TC" means Tower cabinet; "40" means battery number inside the cabinet; "120" means the battery system voltage; "N" means battery with neutral connection



RM11E SERIES PF1(PF 0.9 optional) Power range: 1kVA~3kVA

1:1



3 kinds of LCD can be selected



Colourful LCD



Gray LCD



Blue LCD



Battery cabinet
(Optional)



Optimized battery configuration
7Ah/9Ah (12V)

Features:

- Rack/Tower convertible design
- Online double conversion with full digital control
- Wide input voltage range: 110~300Vac
- Input power factor 0.99 with PFC
- Selectable output voltage: 208/220/230/240Vac
- Smart charger design for optimized battery performance
- Maximum charging current can be expanded to 12A (Long run unit)
- Emergency power off function (EPO)
- ECO mode operation for energy saving
- Generator compatible
- Hot-Swappable battery design
- Cold start function
- Intelligent fan speed regulation
- Load segment settable (Optional)
- Versatile LCD human-computer interface
- Multiple communication interface: RS232 (USB/EPO/Relay card/SNMP card optional)
- Multiple protection function: short-circuit, overload, overheat, battery overcharge and overdischarge, output low voltage and fan fault alarm
- PDU with maintenance bypass switch (Optional)



ON LINE



TowerRack



DATACENTRE



SOHO



E-MEDICAL



INDUSTRY



TRANSPORT



EMERGENCY

RM11E RT Convertible Double Conversion On-Line UPS

RM11E RT1K H/S | RM11E RT2K H/S | RM11E RT3K H/S

RM11E Technical Specifications:

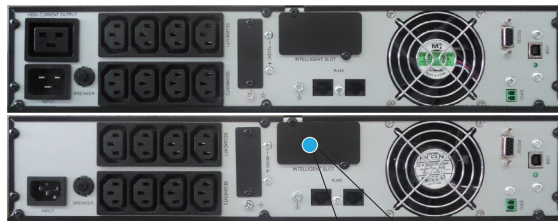
		RM11E															
Model		RM11E RT 1k H		RM11E RT 1k S		RM11E RT 2k H		RM11E RT 2k S		RM11E RT 3k H		RM11E RT 3k S					
Capacity		1000VA/1000W				2000VA/2000W				3000VA/3000W							
INPUT																	
Nominal voltage		208/220/230/240Vac															
Input voltage range		110~300Vac (176~264Vac @ 100% load)															
Power factor		1															
FREQUENCY																	
Frequency range		40~70Hz (50/60Hz Auto-Sensing)															
OUTPUT																	
Output voltage		208/220/230/240Vac															
Voltage regulation		±1%															
Power factor		1.0															
Output frequency	Line mode	46~54Hz or 56~64Hz															
	Bat. mode	(50/60±0.1%)Hz															
Crest factor		3:1															
Harmonic distortion (THDv)		≤3% Linear load															
		≤5% Non linear load															
Transfer time	AC mode to Bat.mode	0ms															
	Inverter to Bypass	4ms (Typical)															
Output waveform		Pure Sinewave															
EFFICIENCY																	
AC mode		90.9%				92%				92.3%							
BATTERY																	
Battery number		2	3	2	3	4	6	4	6	6	8	6					
Capacity (Standard unit)		9Ah/12V (7Ah/12V optional)															
Typical recharging time		4 hours (To 90% of full capacity)															
Charging voltage		27.4Vdc±1%	41.1Vdc±1%	27.4Vdc±1%	41.1Vdc±1%	54.8Vdc±1%	82.2Vdc±1%	54.8Vdc±1%	82.2Vdc±1%	82.2Vdc±1%	109.6Vdc±1%	82.2Vdc±1%					
Charging current (Max.)		6A/12A		1A		6A/12A		1A		6A/12A		1A					
INDICATORS																	
LED display		Line mode, Bat.mode, ECO mode, Bypass mode, Battery low voltage, Overload & UPS fault															
LCD display		Input voltage, Input frequency, Output voltage, Output frequency, Load percentage, Battery voltage, Inner temperature & Remaining battery backup time															
ALARM																	
Battery mode		Beeping every 4 seconds															
Battery low		Beeping every second															
Overload		Beeping twice every second															
Fault		Continuously beeping															
PHYSICAL																	
Dimension W×D×H		440×325×86.5mm			440×460×86.5mm		440×600×86.5mm		440×460×86.5mm		440×600×86.5mm						
Net weight		5.6kg		11.3kg		14kg		10.5kg		19.5kg		25kg		11kg		26kg	
ENVIRONMENT																	
Operating temperature		0°C~40°C															
Storage temperature		-25°C~55°C															
Humidity range		20~95%RH @ 0~40°C (Non condensing)															
Altitude		<1500m, derating required when >1500m															
Noise level		<50dB at 1 Meter															
STANDARDS																	
Safety		IEC/EN 62040-1, IEC/EN 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)															

1. When output voltage is 208Vac, need to derate to 80% of the unit capacity
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RC 1-3kVA battery pack specification

	Rack Cabinet				
Model	RC04024C	RC06036C	RC08048C	RC12072C	RC08096C
BATTERY SYSTEM					
Battery type	VRLA (Lead acid maintenance free battery)				
Typical battery recharging time	6~8 hours (To 90% of full capacity)				
Typical battery life	3~5 years, depend on discharging cycle and ambient temperature				
System voltage	24Vdc	36Vdc	48Vdc	72Vdc	96Vdc
Charging current (Max.)	1.4A				
Battery quantity	4	6	8	12	8
Capacity	9Ah/12V (7Ah/12V optional)				
PHYSICAL					
Dimension W×D×H	440×430×86.5mm		440×550×86.5mm	440×710×86.5mm	440×550×86.5mm
Net weight	17.4kg	22.5kg	31.5kg	44kg	31.5kg
ENVIRONMENT					
Safety	CE				
Operating environment	0°C~40°C				
Relative humidity	0~95% (Non condensing)				
Noise level	<40dB at 1 Meter				

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
3. Remark: RC08048C; "RC" means Rack Cabinet; "08" means battery number inside the Rack; "048" means the battery system voltage; "C" means the Rack coming with charger



Optional socket



Relay card

SNMP



Multifunctional bracket



The LCD panel can be rotated

ATENCO

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RM11E SERIES PF1(PF 0.9 optional) Power range: 6kVA~10kVA

1:1



3 kinds of LCD can be selected



Colourful LCD



Gray LCD



Blue LCD



Battery cabinet
(Optional)



Optimized battery configuration
7Ah/9Ah (12V)

Features:

- High power density
- LCD supports Rack/Tower convertible design
- N+X parallel redundancy, support maximum 4 units in parallel
- Online double conversion with full digital control
- Optimization battery group, the quantity of battery: 16/18/20pcs (Settable)
- Wide input voltage range: 110~286Vac
- Wide input frequency range
- Generator compatible
- ECO mode operation for energy saving
- Self-testing when UPS startup
- Multiple communication interface: RS232/USB/PO (Relay card/SNMP card optional)
- Parallel kit default
- Maximum charging current up to 10A
- Cold start function
- Intelligent fan speed regulation
- Multiple protection function: short-circuit, overload, overheat, battery overcharge and overdischarge, output low voltage and fan fault alarm
- PDU with maintenance bypass switch (Optional)



ON LINE



TowerRack



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RM11E RT Convertible Double Conversion On-Line UPS

RM11E RT6K | RM11E RT10K

RM11E Technical Specifications:

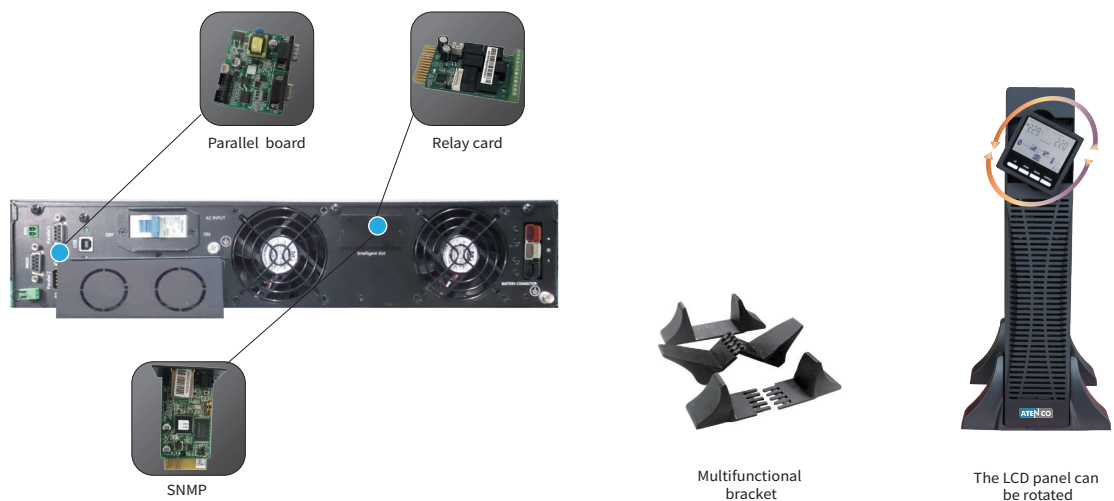
		RM11E	
Model		RM11E RT 6k	RM11E RT 10k
Capacity		6000VA/6000W	10000VA/10000W
INPUT			
Nominal voltage		208/220/230/240Vac	
Input voltage range		110~286Vac	
Power factor		1	
Bypass voltage range		Max.voltage: 220V: +25% (Optional +10%, +15%, +20%) 230V: +20% (Optional +10%, +15%) 240V: +15% (Optional +10%) Min.voltage: -45% (Optional -20%, -30%)	
FREQUENCY			
Frequency range		40~70Hz (50/60Hz Auto-Sensing)	
OUTPUT			
Output voltage		208/220/230/240Vac	
Voltage regulation		±1%	
Power factor		1	
Output frequency	Line mode	±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional)	
	Bat. mode	(50/60±0.1%)Hz	
Crest factor		3:1	
Harmonic distortion (THDv)		≤2% Linear load	
		≤5% Non linear load	
Transfer time	AC mode to Bat. mode	0ms	
	Inverter to Bypass	0ms	
Output waveform		Pure Sinewave	
Overload	Line mode	Load≤110% last 60min; ≤125% last 10min; ≤150% last 1min; >150% turn to bypass mode immediately	
	Bypass mode	40A (Breaker)	63A (Breaker)
Efficiency		up to 94%	
BATTERY			
Battery voltage		±96/±108/±120Vdc (Settable)	
Typical recharging time		6~8 hours (To 90% of full capacity)	
Charging current		Max.current 10A (Charging current can be set according to battery capacity)	
INDICATORS			
LED display		Line mode, Bat.mode, ECO mode, Bypass mode, Battery low voltage, Overload & UPS fault	
LCD display		Input voltage, Input frequency, Output voltage, Output frequency, Load percentage, Battery voltage, Inner temperature & Remaining battery backup time	
ALARM			
Battery mode		Beeping every 4 seconds	
Battery low		Beeping every second	
Overload		Beeping twice every second	
Fault		Continuously beeping	
PHYSICAL			
Dimension W×D×H		440×625×86.5mm	
Net weight		16kg	18kg
ENVIRONMENT			
Operating temperature		0°C~40°C	
Storage temperature		-25°C~55°C	
Humidity range		20~95%RH @ 0~40°C (Non condensing)	
Altitude		<1500m, derating required when>1500m	
Noise level		<55dB at 1 Meter	<58dB at 1 Meter
STANDARDS			
Safety		IEC/EN 62040-1, IEC/EN 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)	

1. When output voltage is 208Vac, need to derate to 80% of the unit capacity
2. Specifications are subject to change without prior notice
3. Data above are typical values for reference only, not as a basis for engineering design

RC 6-10kVA battery pack specification

Rack Cabinet	
Model	RC20120N
BATTERY SYSTEM	
Battery type	VRLA (Lead acid maintenance free battery)
Typical battery recharging time	6~8 hours (To 90% of full capacity)
Typical battery life	3~5 years, depend on discharging cycle and ambient temperature
System voltage	±120Vdc
Battery quantity	1×20 PCS
Capacity	7Ah/9Ah (12V)
PHYSICAL	
Dimension W×D×H	440×680×131mm (3U)
Net weight	58kg/63kg
ENVIRONMENT	
Safety	CE
Operating environment	0°C~40°C
Relative humidity	0~95% (Non condensing)
Noise level	<40dB at 1 Meter

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
3. Remark: RC20120N; "RC" means Rack Cabinet; "20" means battery number inside the Rack; "120" means the battery system voltage; "N" means battery with neutral connection



RM31E SERIES PF1.0 Power range: 6kVA~10kVA

3:1 **1:1**



Features:

- LCD supports Rack/Tower convertible design
- N+X parallel redundancy, support maximum 4 units in parallel
- Online double conversion with DSP control
- Input current harmonic: <3%
- Optimization battery group, the quantity of battery: 16/18/20pcs (32~40pcs)
- Wide input voltage range: 208~478Vac
- Wide input frequency range: 40~70Hz
- Dual input source
- Support 3/1 and 1/1 operation
- Generator compatible
- ECO mode operation for energy saving
- Cold start function
- Intelligent fan speed regulation
- Self-testing when UPS startup
- 50/60Hz frequency converter mode
- Multiple protection function: short-circuit, overload, overheat, battery overcharge and overdischarge, output low voltage and fan fault alarm
- Multiple communication interface: RS232/RS485/EPO/Output port/Maintain-AUXSWS port (Relay card/SNMP card/BMS optional)
- PDU with maintenance bypass switch (Optional)



ON LINE



TowerRack



DATACENTRE



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E-MEDICAL



INDUSTRY



TRANSPORT



EMERGENCY

RM31E RT Convertible Double Conversion On-Line UPS

RM31E RT 6K | RM31E RT 10K

RM31E Technical Specifications:

		RM31E	
Model		RM31E RT 6k	RM31E RT 10k
Capacity		6kVA/6kW	10kVA/10kW
INPUT			
Nominal voltage		380/400/415Vac (3PH+N+PE) 220/230/240Vac (L+N+PE)	
Operating voltage range		208~478Vac; 120~270Vac	
Operating frequency range		40~70Hz (50/60Hz Auto-Sensing)	
Power factor		≥0.99	
Harmonic distortion (THDi)		≤3% Linear load	
Bypass voltage range		Max.voltage: 220V: +25% (Optional +10%, +15%, +20%) 230V: +20% (Optional +10%, +15%) 240V: +15% (Optional +10%) Min.voltage: -45% (Optional -10%, -20%, -30%)	
FREQUENCY			
Frequency protection range		50/60Hz±10%	
OUTPUT			
Output voltage		220/230/240Vac (L+N+PE)	
Voltage regulation		±1%	
Power factor		1.0	
Output frequency	Line mode	±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional)	
	Bat. mode	(50/60±0.1%)Hz	
Transfer time	AC mode to Bat.mode	0ms	
	Inverter to Bypass	0ms	
Output waveform		Pure Sinewave	
Crest factor		3:1	
Harmonic distortion (THDv)		≤2% Linear load ≤5% Non linear load	
Overload	AC mode	Load≤110%: last 60min; ≤125%: last 10min; ≤150%: last 1min; ≥150%: turn to bypass mode immediately	
	Bat.mode	Load≤110%: last 10min; ≤125%: last 1min; ≤150%: last 5s; ≥150%: shut down UPS immediately	
	Bypass mode	Breaker (Load<125%, long-term operation)	
EFFICIENCY			
Efficiency		up to 93.5%	
BATTERY			
Battery voltage		±96/±108/±120Vdc (16/18/20pcs optional); (16pcs default, 20pcs no power derating; 18pcs output power factor 0.9; 16pcs output power factor 0.8); ±192/204/216/228/240Vdc (32/34/36/38/40pcs supportable)	
Charging current		12A (Max.)	14A (Max.)
PHYSICAL			
Dimension W×D×H		443×580×131mm (3U)	
Net weight		27kg	28kg
ENVIRONMENTAL			
Operating temperature		0°C~40°C	
Storage temperature		-25°C~55°C	
Humidity range		0~95% (Non condensing)	
Altitude		<1500m, derating required when >1500m	
Noise level		<53dB at 1 Meter	<55dB at 1 Meter
STANDARDS			
Safety		IEC/EN 62040-1, IEC/EN 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)	

- Specifications are subject to change without prior notice.
 - Data above are typical values for reference only, not as a basis for engineering design.
- *PF=0.9 models also available

RC 6-10kVA battery pack specification

Rack Cabinet	
Model	RC20120N
BATTERY SYSTEM	
Battery type	VRLA (Lead acid maintenance free battery)
Typical battery recharging time	6~8 hours (To 90% of full capacity)
Typical battery life	3~5 years, depend on discharging cycle and ambient temperature
System voltage	±120Vdc
Battery quantity	1×20 PCS
Capacity	7Ah/9Ah (12V)
PHYSICAL	
Dimension W×D×H	443×720×131mm (3U)
Net weight	58kg/63kg
ENVIRONMENT	
Safety	CE
Operating environment	0°C~40°C
Relative humidity	0~95% (Non condensing)
Noise level	<40dB at 1 Meter

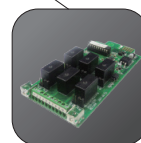
Specifications are subject to change without prior notice.
 Remark: RC20120N; "RC" means Rack Cabinet; "20" means battery number inside the Rack;
 "120" means the battery system voltage; "N" means battery with neutral connection.

Rack Cabinet	
Model	RC40120N
BATTERY SYSTEM	
Battery type	VRLA (Lead acid maintenance free battery)
Typical battery recharging time	6~8 hours (To 90% of full capacity)
Typical battery life	3~5 years, depend on discharging cycle and ambient temperature
System voltage	±120Vdc
Battery quantity	2×20 PCS
Capacity	7Ah/9Ah (12V)
PHYSICAL	
Dimension W×D×H	482×861.5×175mm (4U)
Net weight	138kg/154kg
ENVIRONMENT	
Safety	CE
Operating environment	0°C~40°C
Relative humidity	0~95% (Non condensing)
Noise level	<40dB at 1 Meter

- Specifications are subject to change without prior notice
- Data above are typical values for reference only, not as a basis for engineering design
- Remark: RC40120N; "RC" means Rack Cabinet; "40" means battery number inside the Rack;
 "120" means the battery system voltage; "N" means battery with neutral connection



SNMP



Relay card



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TM31E Series PF 1.0 (PF 0.9 optional) Power range: 10kVA~20kVA

3:1 1:1



Segment LCD

TFT colourful LCD

7 inch colourful LCD

Battery cabinet
(Optional)

Optimized battery configuration
7Ah/9Ah (12V)

Features

- N+X parallel redundancy, support maximum 4 units in parallel
- Online double conversion with DSP control
- Optimization battery group, the quantity of battery: 16/18/20pcs (32~40pcs supportable)
- Wide input voltage range: 208~478Vac
- Wide input frequency range: 40Hz~70Hz
- Input current harmonic: <3%
- Dual input source (Optional)
- Maximum charging current up to 18A (Settable)
- Support 3/1 and 1/1 operation
- Generator compatible
- ECO mode operation for energy saving
- Design with maintenance switch
- Cold start function
- Intelligent fan speed regulation
- Self-testing when UPS startup
- 50/60Hz frequency converter mode
- Colorful 2.4 inch TFT LCD display and 7 inch LCD display LCD are optional
- Multiple protection function: short-circuit, overload, overheat, battery overcharge and overdischarge, output low voltage and fan fault alarm
- Multiple communication interface: RS232/RS485/USB/EPO/Dry contact port (Relay card/SNMP card/Parallel cable/Battery temperature sensor optional)



ON LINE



TOWER



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INDUSTRY



TRANSPORT



EMERGENCY

TM31E
Transform-less Online Tower UPS

TM31E 10k H/S | TM31E 15k H/S | TM31E 20k H/S

TM31E Technical Specifications:

		TM31E					
Model		TM31E 10k H	TM31E 10k S	TM31E 15k H	TM31E 15k S	TM31E 20k H	TM31E 20k S
Capacity		10kVA/10kW		15kVA/15kW		20kVA/20kW	
INPUT							
Nominal voltage		380/400/415Vac (3PH+N+PE) 220/230/240Vac (L+N+PE)					
Operating voltage range		208~478Vac; 120~276Vac					
Operating frequency range		40~70Hz (50/60Hz Auto-Sensing)					
Power factor		≥0.99					
Harmonic distortion (THDi)		≤3% Linear load					
Bypass voltage range		Max.voltage: 220V: +25% (Optional +10%, +15%, +20%) 230V: +20% (Optional +10%, +15%) 240V: +15% (Optional +10%) Min.voltage: -45% (Optional -10%, -20%, -30%)					
FREQUENCY							
Frequency protection range		50/60Hz±10%					
OUTPUT							
Output voltage		220/230/240Vac (L+N+PE)					
Voltage regulation		±1%					
Power factor		1.0					
Output frequency	Line mode	±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional)					
	Bat. mode	(50/60±0.1%)Hz					
Transfer time	AC mode to Bat.mode	0ms					
	Inverter to Bypass	0ms					
Output waveform		Pure Sinewave					
Crest factor		3:1					
Harmonic distortion (THDv)		≤2% Linear load ≤5% Non linear load					
Overload	AC mode	Load≤110%: last 60min turn to bypass; ≤125%: last 10min turn to bypass; ≤150%: last 1min turn to bypass; ≥150%: shut down UPS immediately					
	Bat.mode	Load≤110%: last 10min; ≤125%: last 1min; ≤150%: last 5s; ≥150%: shut down UPS immediately					
	Bypass mode	Breaker 2×32A		Breaker 2×50A		Breaker 2×63A	
EFFICIENCY							
Efficiency		up to 93.5%			up to 94.5%		
BATTERY							
Battery voltage	Standard unit	Chassis 1: ±120Vdc (20pcs 9Ah) (20pcs 7Ah·2×20pcs 7/9Ah optional) Chassis 2: ±96Vdc (16pcs 9Ah)			±120Vdc (2×20pcs 9Ah) (2x20pcs 7Ah optional)		
	Long run unit	±96Vdc~±120Vdc (16~20pcs, 16pcs default, Standard unit and 20pcs no power derating; 18pcs output power factor 0.9; 16pcs output power factor 0.8) ±192/204/216/228/240Vdc (32/34/36/38/40pcs supportable)					
Charging current		14A (Max.)	1.35A (2.7A optional)	16A (Max.)	2.7A	18A (Max.)	2.7A
Charging current can be set according to battery capacity							
PHYSICAL							
Dimension W×D×H	Standard unit	Chassis 1: 250×900×868mm Chassis 2: 250×645×715mm			250×900×868mm		
	Long run unit	250×580×655mm					
Net weight	Standard unit	Chassis 1: 125kg (20pcs 9Ah) Chassis 2: 78kg (16pcs 9Ah)			180kg (2×20pcs 9Ah)		181kg (2×20pcs 9Ah)
	Long run unit	33kg		37kg		38kg	
ENVIRONMENTAL							
Operating temperature		0°C~40°C					
Storage temperature		-25°C~55°C					
Humidity range		0~95% (Non condensing)					
Altitude		<1500m, derating required when>1500m					
Noise level		<55dB at 1 Meter				<58dB at 1 Meter	
STANDARDS							
Safety		IEC/EN 62040-1, IEC/EN 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)					

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

TC 10-20kVA battery pack specification

Tower Cabinet	
Model	TM31E TC040120N
BATTERY SYSTEM	
Battery type	VRLA (Lead acid maintenance free battery)
Typical battery recharging time	6~8 hours (To 90% of full capacity)
Typical battery life	3~5 years, depend on discharging cycle and ambient temperature
System voltage	±120Vdc
Battery quantity	2×20 PCS
Capacity	7Ah/9Ah (12V)
PHYSICAL	
Dimension W×D×H	250×619×616mm (With wheel)
Net weight	122kg/134kg
ENVIRONMENT	
Safety	CE
Operating environment	0°C~40°C
Relative humidity	0~95% (Non condensing)
Noise level	<40dB at 1 Meter

Specifications are subject to change without prior notice.

Remark: TM31E TC040120N "TM31E" means series; "TC" means Tower cabinet; "40" means battery number inside the cabinet; "120" means the battery system voltage; "N" means battery with neutral connection.

Tower Cabinet	
Model	TM33E TC080120N
BATTERY SYSTEM	
Battery type	VRLA (Lead acid maintenance free battery)
Typical battery recharging time	6~8 hours (To 90% of full capacity)
Typical battery life	3~5 years, depend on discharging cycle and ambient temperature
System voltage	±120Vdc
Battery quantity	4×20 PCS
Capacity	7Ah/9Ah (12V)
PHYSICAL	
Dimension W×D×H	250×900×868mm (With wheel)
Net weight	244kg/265kg
ENVIRONMENT	
Safety	CE
Operating environment	0°C~40°C
Relative humidity	0~95% (Non condensing)
Noise level	<40dB at 1 Meter

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

3. Remark: TM33E TC080120N "TM33E" means series; "TC" means Tower cabinet; "80" means battery number inside the cabinet; "120" means the battery system voltage; "N" means battery with neutral connection

