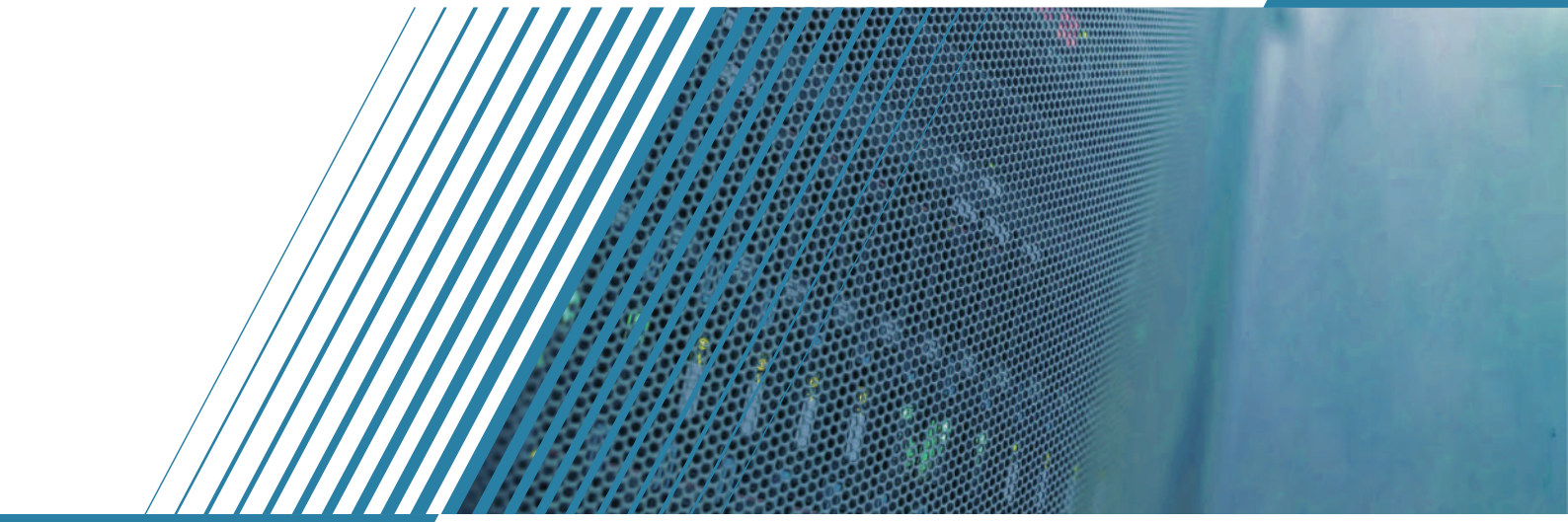
ATENCO POWER TECH CO. LTD



Solutions behind the power

1:1

93.5%
AC efficiency*
(6-10kVA)

≥0.99
Input PF (PFC)

0 ms
Transfer time

PF 0.9
Output PF
(Optional PF1)

40-70Hz
Auto-sensing

4× (N+X)
Parallel redundancy
(6-10kVA)

Always Online. Zero Transfer Time.

VFI online double-conversion · 1-10kVA · Input 110-300VAC (1-3kVA) / 110-286VAC (6-10kVA) · Selectable 208/220/230/240VAC output

Cold start · Generator compatible · Max charger 6A (1-3kVA-L) / 10A (6-10kVA-L) · AC-mode efficiency up to 92 % (2-3kVA) / up to 93.5 % (6-10kVA)

Applications

VFI TYPE ON LINE · Tower · Datacenter · E-Medical · Industry · Transport · Emergency

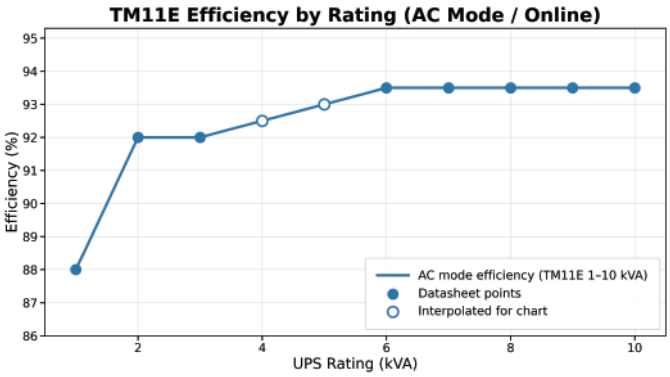
TM11E is a transformer-less, true online (VFI) tower UPS for 1-10kVA. ≥0.99 input PF, and 0 ms transfer for sensitive loads. Runtime scales from internal batteries (1-10kVA) to external strings, Parallel up to 4 units (6-10kVA). Standard USB/RS-232 and EPO are built in; SNMP/relay/RS-485 cards are optional.
Low distortion & efficiency: THDv ≤3% (linear) / ≤5% (non-linear) on 1-3kVA, and ≤2% / ≤5% on 6-10kVA.
Power architecture: 6-10kVA models offer a settable DC bus (±96/±108/±120V; 16/18/20 blocks) and robust overload handling (110% for 60 min, 125% for 10 min, 150% for 1 min), plus comprehensive protections and LCD/LED status for quick diagnostics.

Performance may vary by configuration and environment.

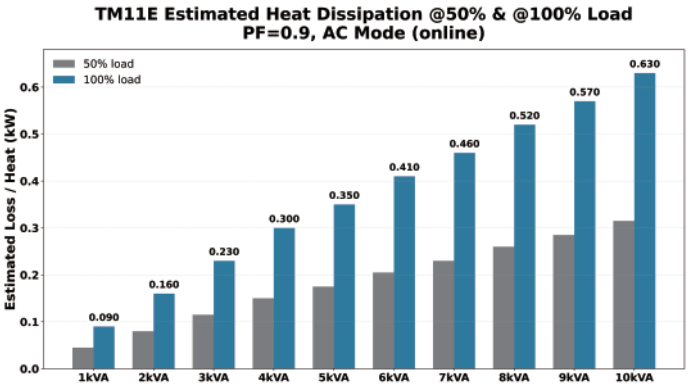
SCAN THE CODE
TO LEARN MORE

TM11E Features

- **True online double-conversion (VFI)**
- **Transformer-less tower UPS (1-10kVA)**
- **Input voltage range:**
  1-3kVA: 110-300Vac (176-264 Vac @ 100% load)
  6-10kVA: 110-286Vac
- **Output PF = 0.9** (Optional PF 1.0)
- **High input PF ≥ 0.99 (PFC)**
- **0 ms transfer time (AC mode → Battery mode)**
- **Up to 93.5% AC efficiency (6-10kVA)**
- **Parallel redundancy up to 4 units (6-10kVA) (optional)**
- **Generator compatible** and **ECO mode**



Performance



- **Input frequency range:** 40-70Hz, **auto-sensing**
- **Selectable output voltage:** 208/220/230/240Vac
- **Voltage regulation:** ±1%
- **Output waveform:** Pure sinewave
- **Crest factor:** 3:1
- **THDv (power quality):**
  1-3 kVA: ≤3% (linear) / ≤5% (non-linear)
  6-10 kVA: ≤2% (linear) / ≤5% (non-linear)
- **Overload capability (6-10kVA): ≤110% for 60min; ≤125% for 10min; ≤150% for 1min; >150% → bypass immediately**

Scalability, Battery Charging

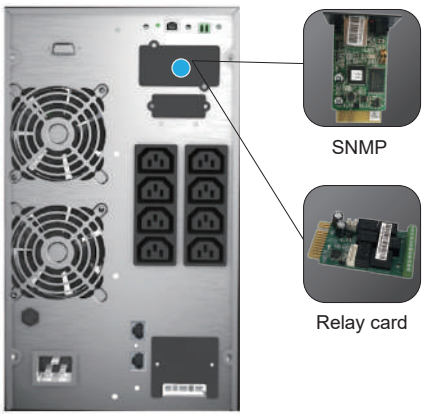
- Scale from **internal batteries (1-10kVA)** to **external strings**
- **Charging / recharge (to 90% capacity):**
  1-3kVA: 4hours; **6-10kVA**: 6-8hours
- **Charging current**:
  1-3kVA: up to 6A (long-run models)
  6-10kVA: default 1.35A, **max 10A** (configurable)
- **6-10kVA DC bus / battery system (settable)**: ±96 / ±108 / ±120Vdc (16/18/20 blocks)

Monitoring, Interfaces & Protections

- **Standard interfaces**: USB / RS-232 / EPO
- **Optional cards**: SNMP / Relay / RS-485
- **LCD/LED status monitoring**
- **Protections include**: short-circuit, overload, over-temperature, battery overcharge/over-discharge, fan fault, output low voltage
- **Startup & cooling features**: cold start (DC start), self-test at startup, intelligent fan speed regulation

Optional Accessories

- External Battery Cabinets for extended backup time
- Maintenance Bypass Switch
- SNMP Card TM220 – Remote monitoring with email alerts (1-3kVA)
- SNMP Card TM550 – Remote monitoring with email alerts (6-10kVA)

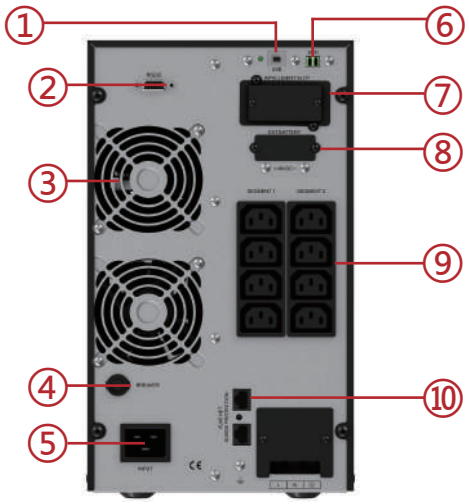


Rear panel

Note: Specifications are model-specific. Optionals (e.g., parallel kit, bigger charger, communications cards, accessories) are not supplied by default and vary by SKU/order.
Final deliverables and configurations are defined only by ATENCO's formal quotation and the customer's confirmed model/options.

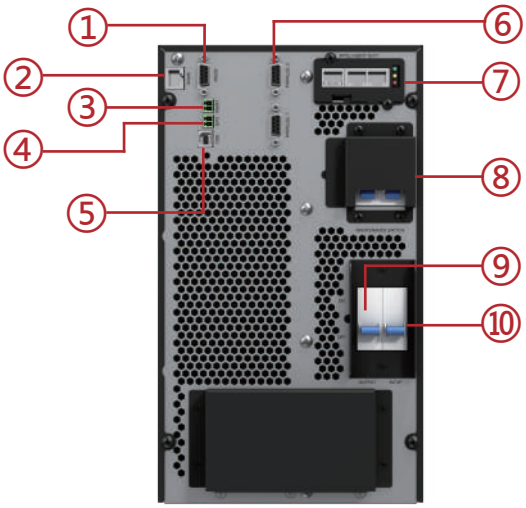
Rear Panel

TM11E-1kVA-L /S I TM11E-2kVA-L /S I TM11E-3kVA-L /S



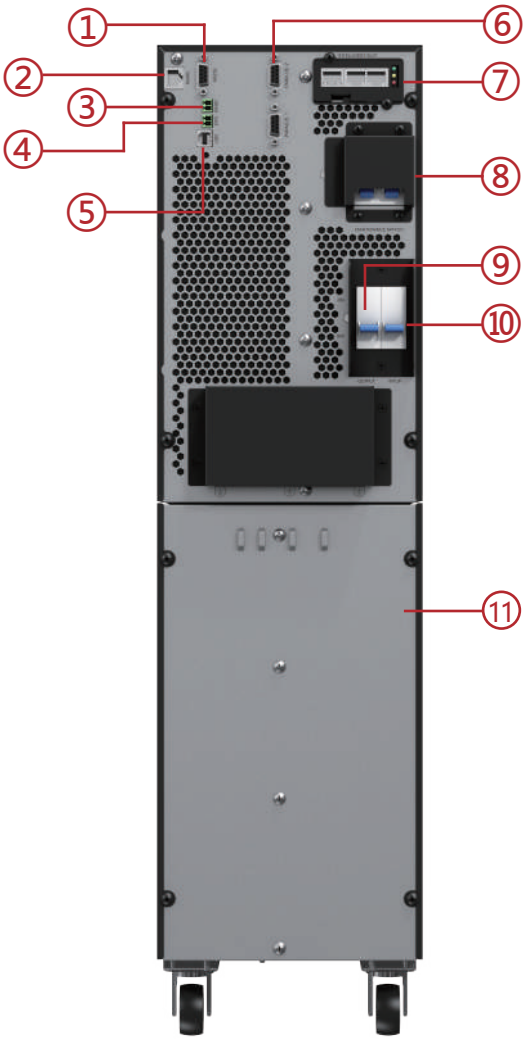
1. USB Port
2. RS232
3. Fan
4. Breaker
5. Main Input Socket
6. EPO “Emergency Power Off”
7. SNMP Intelligent Slot
8. External Battery Connector
9. Output Socket
10. RJ45 NET Surge Protection

TM11E-6kVA-L I TM11E-10kVA-L



1. RS232
2. RS485
3. Service/Maintenance interlock
4. EPO “Emergency Power Off”
5. USB Port
6. Parallel
7. SNMP Intelligent Slot
8. Maintenance Switch
9. Output Socket
10. Input Socket
11. Bulit in Battery space

TM11E-6kVA-S I TM11E-10kVA-S



TM11E 1-3kVA Technical Specifications

ATENCO POWER TECH CO. LTD

		TM11ESeries											
Model		TM11E-1kVA-24L TM11E-1kVA-36L	TM11E-1kVA-24S TM11E-1kVA-36S TM11E-1kVA-2X9 TM11E-1kVA-3X9		TM11E-2kVA-48L TM11E-2kVA-72L		TM11E-2kVA-48S TM11E-2kVA-72S TM11E-2kVA-4X9 TM11E-2kVA-6X9		TM11E-3kVA-72L TM11E-3kVA-96L		TM11E-3kVA-72S TM11E-3kVA-96S TM11E-3kVA-6X9 TM11E-3kVA-8X9		
Capacity		1000VA/900W			2000VA/1800W				3000VA/2700W				
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		0.9											
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		1.4A		6A		1.4A		6A		1.4A	
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		Continously 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)											

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

TM11E 6-10kVA Technical Specifications

ATENCO POWER TECH CO. LTD

		TM11E Series			
Model		TM11E-6kVA-L	TM11E-6kVA-S TM11E-6kVA-16X9	TM11E-10kVA-L	TM11E-10kVA-S TM11E-10kVA-20X9
Capacity		6000VA/5400W		10000VA/9000W	
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		0.9			
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 default; 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		Continously 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)			

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

TC 1-3kVA battery pack specification

	Tower Cabinet				
Model	TC04024C TC04024C-B	TC06036C TC06036C-B	TC08048C TC08048C-B	TC12072C TC12072C-B	TC16096C TC16096C-B
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 discharing 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				

Model remark: TC08048C-B ; "TC" means Tower cabinet; " 08" means battery number inside the cabinet; "048" means the battery system voltagel; "B" means the cabinet with internal battery.

TC 6-10kVA battery pack specification

	TC40120N / TC40120N-B
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 discharing cycle and ambient temperature
System voltage	±120Vdc
Battery quantity	2×20 PCS
Capacity	9Ah (12V)
PHYSICAL	
Dimension W×D×H	250×619×616mm (With wheel)
Net weight	134kg
ENVIRONMENT	
Safety	CE
Operating environment	0°C~40°C
Relative humidity	0~95% (Non condensing)
Noise level	＜40dB at 1 Meter

Model remark: TC40120N-B; "TC" means Tower cabinet; "40" means battery number inside the cabinet; "120" means the battery system voltage; "N" means battery with neutral connection; "B" means the cabinet with internal battery..

ATENCO POWER TECH CO. LTD

2 F.-7, No. 14, Xiwei St., Sanchong Dist., New Taipei City 241707, Taiwan
TEL：+886-2-2280-6939 info@atenco.com.tw
FAX：+886-2-2290-2939 www.atenco.com.tw

1:1

96%
ECO efficiency*

≥0.99
Input PF (PFC)

0 ms
Transfer time

PF 0.9
Output PF
(Optional PF1)

40-70Hz
Auto-sensing

Hot-swappable
Batteries
(1-3kVA)

Always Online. Zero Transfer Time.

2U Rack/Tower Convertible · True Online Double-Conversion (VFI) · DSP Control · Wide Input 110-300Vac (1-3kVA)
40-70Hz Auto-Sensing · Input PF ≥0.99 (PFC) · Output 208/220/230/240Vac · Pure Sinewave (THDv ≤3% linear / ≤5% non-linear)

Applications

VFI TYPE ON LINE | Rack/Tower | Datacenter | SOHO | E-Medical | Industry | Transport | Emergency

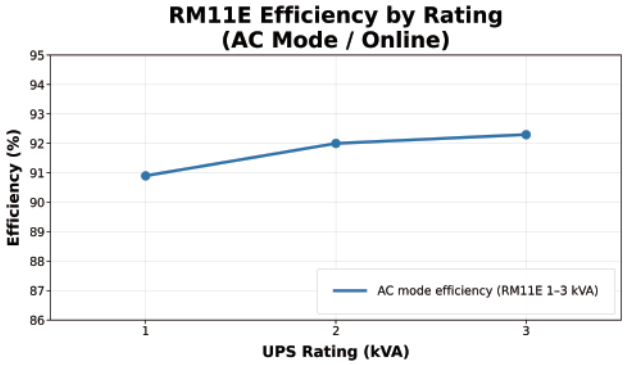
RM11E Series is a 2U rack/tower convertible UPS range for 1-3kVA with DSP digital control. It delivers PF 0.9 output with input PF ≥0.99 (PFC) and provides 0 ms transfer time from AC to battery operation. Input frequency is 40-70Hz auto-sensing, and output voltage is selectable at 208/220/230/240Vac with ±1% regulation.
Output is pure sinewave, 3:1 crest factor, with low distortion (THDv ≤3% linear / ≤5% non-linear). The UPS accepts 110-300Vac input (supports full load within 176-264Vac). Standard models use internal hot-swappable batteries; long-run models support up to 6A charging. Interfaces include USB / RS-232 / EPO, with optional intelligent-slot cards for monitoring and integration.

Performance may vary by configuration and environment.

SCAN THE CODE
TO LEARN MORE

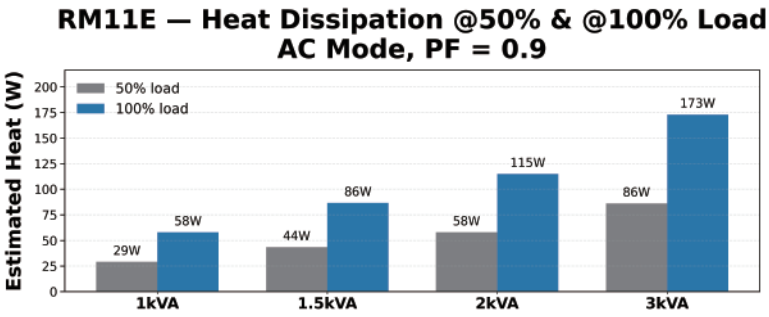
RM11E Features

- **True online double-conversion** UPS with DSP digital control
- **Output PF = 0.9** (optional PF 1.0)
- **High input PF ≥ 0.99 (PFC)**
- **0 ms transfer time (AC mode → Battery mode)**
- **High efficiency** up to 92%; ECO mode up to 96%
- **2U rack/tower** convertible compact design
- **Generator compatible** and **ECO mode**
- **Standard interfaces**: USB / RS-232 / EPO
- **LCD/LED status** monitoring with real-time parameters



(input/output, load %, battery voltage, temperature, remaining backup time) and alarms

Performance



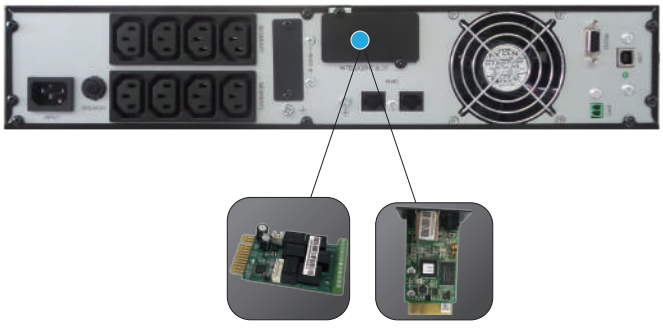
- **Input frequency range**: 40-70Hz, auto-sensing (50/60Hz)
- **Input voltage range**: 110-300Vac (176-264Vac @ 100% load)
- **Selectable output voltage**: 208/220/230/240Vac
- **Voltage regulation**: ±1%
- **Output waveform**: Pure sinewave; crest factor 3:1
- **THDv:** ≤3% (linear) / ≤5% (non-linear)
- **Transfer time** (Inverter → Bypass): 4ms typical
- **Overload Capability**: ≤110% for 60 min; ≤125% for 10 min; ≤150% for 1 min; >150% → bypass immediately

Scalability, Battery & Charging

- Runtime can scale from **internal batteries (1-3kVA)** to **external battery cabinets (RC Series)**
- **Charging / recharge (to 90% capacity): 1-3kVA**: 4 hours
- **Charging current**: **1-3kVA**: max 6A (long-run models) / 1.4A (standard models)
- **Configurable battery setup**: **1-3kVA**: 6/8/12 blocks
- **Hot-swappable internal batteries (1-3kVA models)**

Optional Accessories

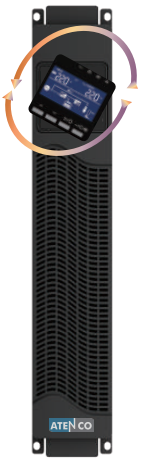
- **External Battery Cabinets** for extended runtime
- **External maintenance bypass** PDU options: RM11E-PDU1100E
- **Optional cards** (via **TM220** intelligent slot): SNMP / RS-485 / Relay (BMS/SCADA integration)
- **Rack Rail Kit** (Optional): Adjustable 19" rack-mount rails for secure installation of the RM11E UPS (2U)



Relay card SNMP

Multifunctional bracket

Rail Kit

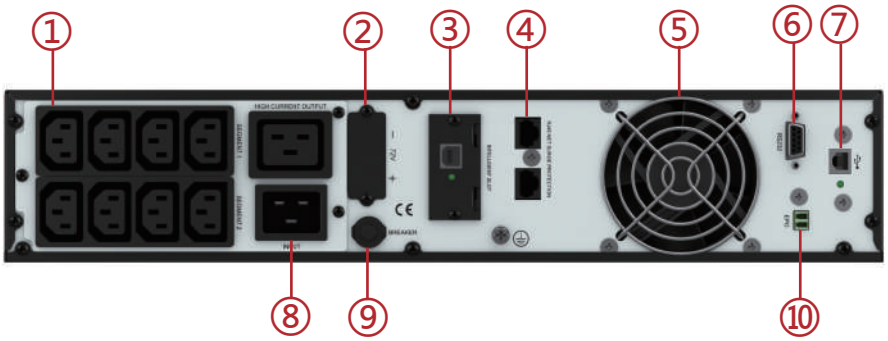


The LCD panel can be rotated

Note: Specifications are model-specific. Optionals (e.g., parallel kit, bigger charger, communications cards, accessories) are not supplied by default and vary by SKU/order.
Final deliverables and configurations are defined only by ATENCO's formal quotation and the customer's confirmed model/options.

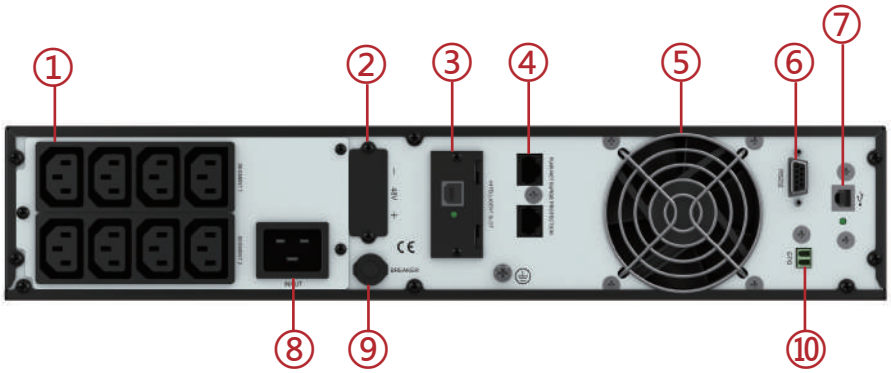
Rear Panel

RM11E-1kVA-L/S



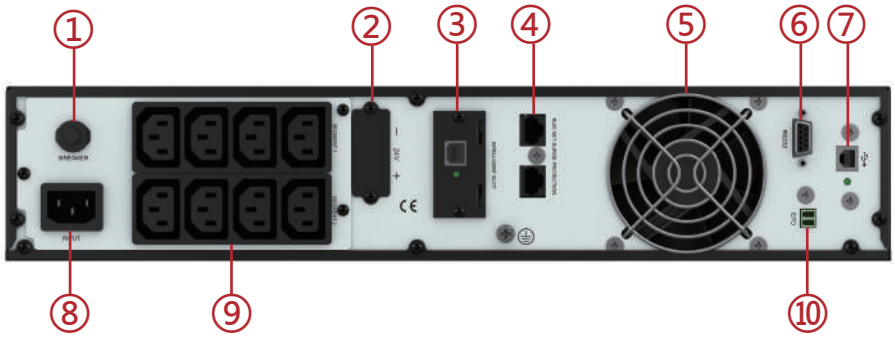
1. Output Socket
2. External Battery Connector
3. SNMP Intelligent Slot
4. RJ45 NET Surge Protection
5. Fan
6. RS232
7. USB Port
8. Main Input Socket
9. Breaker
10. EPO “Emergency Power Off”

RM11E-2kVA-L/S



1. Output Socket
2. External Battery Connector
3. SNMP Intelligent Slot
4. RJ45 NET Surge Protection
5. Fan
6. RS232
7. USB Port
8. Main Input Socket
9. Breaker
10. EPO “Emergency Power Off”

RM11E-3kVA-L/S



1. Breaker
2. External Battery Connector
3. SNMP Intelligent Slot
4. RJ45 NET Surge Protection
5. Fan
6. RS232
7. USB Port
8. Main Input Socket
9. Output Socket
10. EPO “Emergency Power Off”

RM11E 1-3kVA Technical Specifications

ATENCO POWER TECH CO. LTD

		RM11E Series									
Model		RM11E-1kVA-24L RM11E-1kVA-36L	RM11E-1kVA-24S RM11E-1kVA-36S RM11E-1kVA-2X9 RM11E-1kVA-3X9		RM11E-2kVA-48L RM11E-2kVA-72L		RM11E-2kVA-48S RM11E-2kVA-72S RM11E-2kVA-4X9 RM11E-2kVA-6X9		RM11E-3kVA-72L RM11E-3kVA-96L		RM11E-3kVA-72S RM11E-3kVA-6X9
Capacity		1000VA/900W			2000VA/1800W				3000VA/2700W		
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											
Voltage		208/220/230/240Vac									
Voltage regulation		±1%									
Power factor		0.9 (optional 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											
Quantity		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		1.4A		6A		1.4A		6A		1.4A
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		Continously 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)									

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

RC 1-3kVA battery pack specification

ATENCO POWER TECH CO. LTD

	Rack Cabinet				
Model	**RC04024E RC04024E-B**	**RC06036E RC06036E-B**	**RC08048E RC08048E-B**	**RC12072E RC12072E-B**	**RC08096E RC08096E-B**
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 discharing cycle and ambient temperature				
System voltage	24Vdc	36Vdc	48Vdc	72Vdc	96Vdc
Charging current (Max.)	2A (optional)				
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				

Disclaimer: Products are continuously improved and updated. As a result, actual product specifications may differ from promotional or technical materials due to asynchronous revisions. This document is provided for reference only and does not constitute an offer, warranty, or commitment.

ATENCO POWER TECH CO. LTD

2 F.-7, No. 14, Xiwei St., Sanchong Dist., New Taipei City 241707, Taiwan
TEL：+886-2-2280-6939 info@atenco.com.tw
FAX：+886-2-2290-2939 www.atenco.com.tw

1:1

95.5%
Online (VFI) efficiency*

10A
Maximum charging*

3-Level
IGBT Inverter

PF=1.0
kVA=kW

110/125/150%
Overload (60/10/1 min)

4× (N+X)
Parallel Redundancy 6/10kVA

Unity Power. 3-Level IGBT.

3-Level IGBT inverter for cleaner, lower-loss power · Up to 95.5% online efficiency · 10A* Charger · VRLA battery · Dual input source (Optional)

PF=1.0 · Input PF ≥0.99 · THDi ≤3% · 0 ms transfer · 40-70Hz · 110-300 Vac · ECO up to 98% · N+X=4 (6/10kVA) · Dual card slots (Optional)

Applications

ON LINE | Rack/Tower | Datacenter | Finance | E-Medical | Industry | Transport | Education

RM11E Elite is ATENCO's high-end 2U rack/tower VFI UPS built on **three-level IGBT** for cleaner, lower-loss power. It delivers **PF 1.0** output with **up to 95.5% online efficiency** (ECO up to 98%) to cut heat, noise, and operating cost. A wide **110-300** Vac input, **low THDi (≤3%)**, and **zero-transfer** switching protect sensitive servers and edge IT- even on generators.

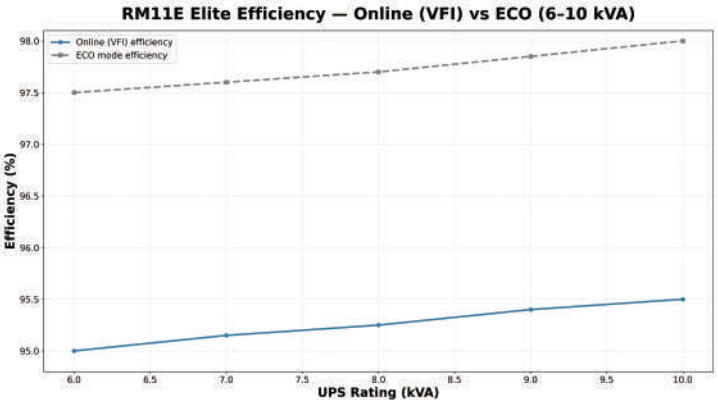
Battery-flexible by design, the **10A fast charger** speeds recovery with **AGM VRLA** strings. scalable redundancy **N+X up to 4 units**, with smart fan control for quiet operation. **Dual intelligent slots** (optional) rich I/O (USB/RS-232/485, EPO) streamline remote monitoring, integration, and lifecycle management.

Performance may vary by configuration and environment, charger size is based on offered model.

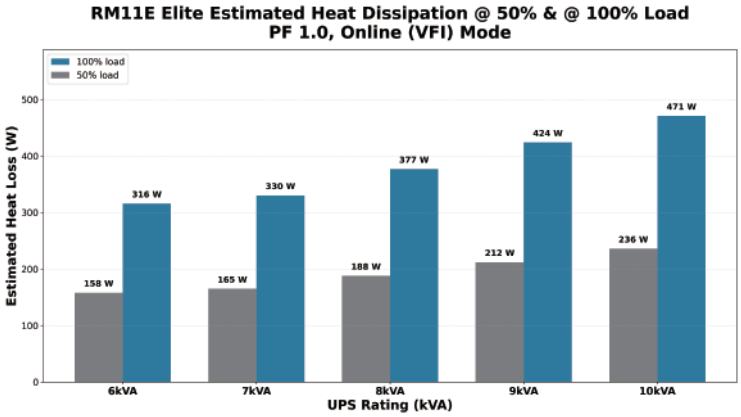
SCAN THE CODE TO LEARN MORE

RM11E Elite Features

- 2U rack/tower chassis 2.4 inch display
- **Optional Rotatable 3.5″ LCD/HMI**
- **Dual intelligent slots** (cards optional); USB/RS-232/ RS-485/EPO, dry contacts
- **Selectable output** 208/220/230/240 Vac; **40-70Hz**
- **Dual input source** (optional); generator-friendly with surge/EMI filtering
- **Cold start; auto self-test** at startup
- **Intelligent fan control** for low acoustics
- **Protection suite**: short-circuit, overload, over-temp, battery over/under-voltage, fan fault alarms



Performance



- **PF=1.0 output** (kVA=kW)
- **3-Level IGBT** online double-conversion (full digital control)
- **Up to 95.5% online efficiency; ECO up to 98%**
- **Input PF ≥0.99; THDi ≤3%**
- **0 ms transfer** (AC↔BAT, INV↔BYP)
- **±1% voltage regulation; crest factor 3:1**
- **Low noise**: <45 dB (6kVA), <50 dB (10kVA)

Internal battery (up to 16×9Ah) is SKU-specific based on ATENCO official offers.

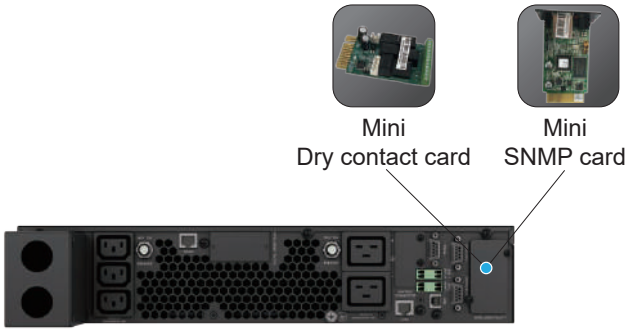
Optional Accessories

- **SNMP / Modbus-TCP / Relay** cards (dual-slot)
- **Parallel kit** (6/10kVA)
- **External maintenance bypass** box
- **VRLA battery cabinets** with cabling kits
- **Rack PDUs / Rail kits**

Options (cards, dual-input, parallel kit, bypass, larger charger, PDUs, accessories) are not standard.

Multifunctional bracket

Rail Kit

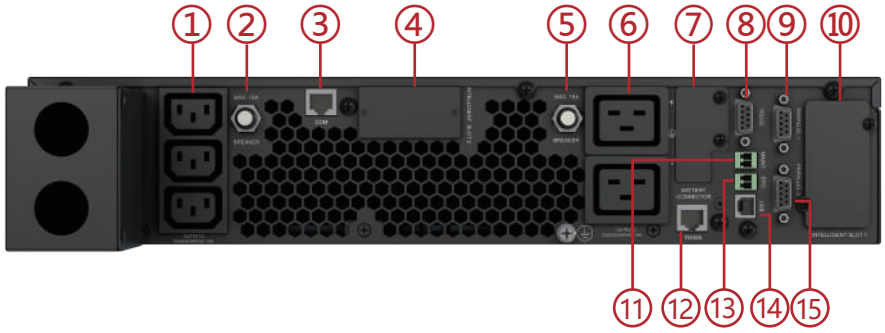


Note: Specifications are model-specific. Optionals (e.g., parallel kit, bigger charger, communications cards, accessories) are not supplied by default and vary by SKU/order.
Final deliverables and configurations are defined only by ATENCO's formal quotation and the customer's confirmed model/options.

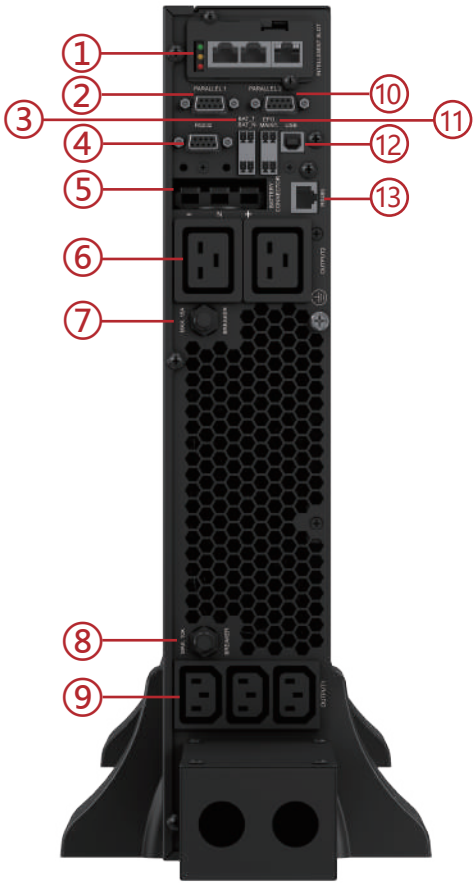
Rear Panel

RM11E-Elite-6-10kVA-2U

Option 1



Option 2



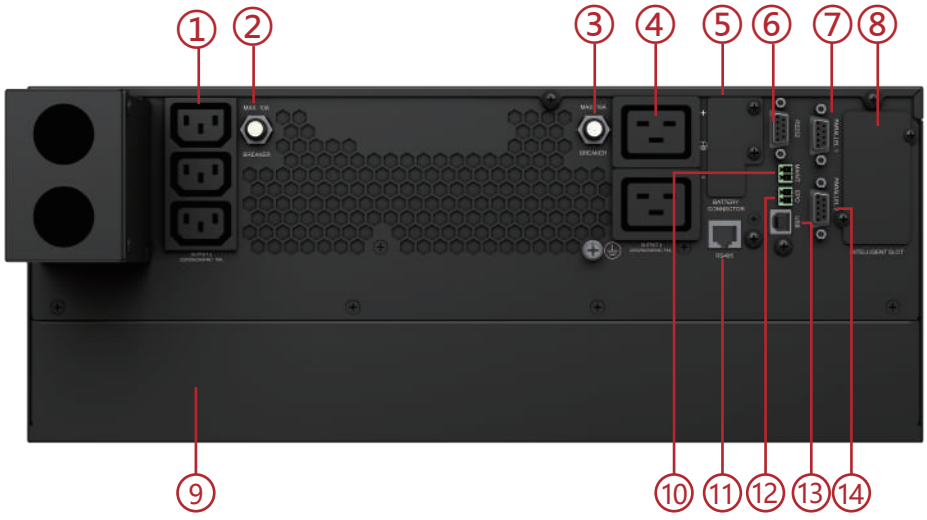
Option 1

1. Output 2 (220/230/240VAC 10A)
2. Breaker (Max.10A)
3. Communication Port
4. Intelligent Slot 2
5. Breaker (Max.16A)
6. Output 3 (220/230/240VAC 16A)
7. Battery Connector
8. RS232
9. Parallel 1
10. Intelligent Slot 1
11. MAINT
12. RS485
13. EPO
14. USB Port
15. Parallel 2

Option 2

1. Intelligent Slot
2. Parallel 1
3. BAT_T/BAT_N
4. RS232
5. Battery Connector
6. Output 2
7. Breaker (Max.16A)
8. Breaker (Max.10A)
9. Output 1
10. Parallel 2
11. EPO & MAINT
12. USB Port
13. RS485

RM11E-Elite-6-10kVA-4U



1. Output 2 (220/230/240VAC 10A)
2. Breaker (Max.10A)
3. Breaker (Max.16A)
4. Output 3 (220/230/240VAC 16A)
5. Battery Connector
6. RS232
7. Parallel 1
8. Intelligent Slot
9. Internal Battery Space
10. MAINT
11. RS485
12. EPO
13. USB Port
14. Parallel 2

Note:
EPO: Emergency Power Off
MAINT: Maintenance Bypass Senser - Dry-contact input
BAT_T/BAT_N: Battery Sensor

RM11E Elite Technical Specifications

ATENCO POWER TECH CO. LTD

		RM11E Elite Series	
Model		**RM11E-6K-EL-B / RM11E-6K-EL-S**	**RM11E-10K-EL-B / RM11E-10K-EL-S**
Capacity		6000VA/6000W	10000VA/10000W
INPUT			
Nominal voltage		208/220/230(Default)/240Vac	
Input voltage range		110~300Vac (110~176Vac@50% load/176~300Vac@100% load)	
Input frequency range		40~70Hz (50/60Hz Auto-Sensing)	
Harmonic distortion(THDi)		≤3%	
Power factor		≥0.99	
Input Connection		HW terminal (L+N+G)	
Bypass voltage range		Max.voltage: 208/220Vac: +25% (Optional +10%, +15%, +20%) 230V: +20% (Optional +10%, +15%) 240V: +15% (Optional +10%) Min.voltage: −45% (Optional -10%,−20%, −30%)	
OUTPUT			
Output voltage		208/220/230(Default)/240Vac	
Voltage regulation		±1%	
Output connection	Programmable	C19*2+C13*3	
	Non-programmable	HW terminal (L+N+G)	
Power factor		1.0	
Output frequency	Online mode	±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional)	
	Battery mode	(50/60±0.1%)Hz	
Crest factor		3:1	
Harmonic distortion (THDv)		≤1% Linear load ≤3% Non linear load	
Transfer time	AC mode to Bat.mode	0ms	
	Inverter to Bypass	0ms	
Output waveform		Pure Sinewave	
Overload	Online mode	Load≤110%, last 60min; ≤125%, last 10min; ≤150%, last 1min; >150%, turn to bypass mode immediately	
	Battery mode	Load≤110%, last 10min; ≤125%, last 1min; ≤150%, last 10 second; >150%, 0.2 second shut down	
	Bypass mode	105%≤load≤130%,only overload alarm; ≤150%, last 10min; ≤200%,last 1min; >200%, 0.2 second shut down	
Efficiency	Online mode	Up to 95%	Up to 95.5%
	ECO mode	Up to 97.5%	Up to 98%
BATTERY			
Battery voltage	VRLA battery	192/216/240Vdc (Settable)	
	Lithium battery	192Vdc	
Charging current (Max.)		8A	10A
		Charging current adapts to the battery type and battery capcacity	
INDICATORS			
LED display		Online 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		Continously beeping	
PHYSICAL			
Dimension W×D×H		440×621.5×86.5mm	
Net weight		15.4kg	17kg
ENVIRONMENT			
Operating temperature		0℃~40℃	
Storage temperature		-25℃~55℃	
Humidity range		0～95%RH @ 0～40℃ (Non condensing)	
Altitude		＜1500m, derating required when＞1500m	
Noise level*		＜45dB at 1 Meter	＜50dB at 1 Meter
STANDARDS			
Safety		CB: IEC 62040-1:2017, CE-LVD: EN 62040-1:2008+A1:2013	
EMC		IEC 62040-2-2016, EN 62040-2-2018 C2	
Performance		IEC/EN 62040-3	

Disclaimer: Products are continuously improved and updated. As a result, actual product specifications may differ from promotional or technical materials due to asynchronous revisions. This document is provided for reference only and does not constitute an offer, warranty, or commitment.

RC N 6-10kVA battery pack specification

	Rack Cabinet (Lead Acid)	
Model	**RC16192N / RC16192EL / RC16192EL-B**	**RC20240N-EL / RC20240N-EL-B**
BATTERY SYSTEM		
Battery type	VRLA (Lead acid maintenance free battery)	
Typical battery recharging time	4 hours (To 90% of full capacity)	
Typical battery life	3～5 years, depend on discharing cycle and ambient temperature	
System voltage	192Vdc	240Vdc
Battery quantity	1×16 PCS	1×20 PCS
Capacity	7Ah/9Ah (12V)	
PHYSICAL		
Dimension W×D×H	440×671.5×131mm(3U)	
Net weight	48kg/53kg	58kg/63kg
ENVIRONMENT		
Operating environment	0˚C~40˚C	
Relative humidity	0~95% (Non condensing)	
Noise level	＜40dB at 1 Meter	
STANDARDS		
Safety	UL1778 5th Edition CSA C22.2 NO.107.3-14 CB: IEC 62040-1:2017, CE-LVD: EN 62040-1:2008+A1:2013	

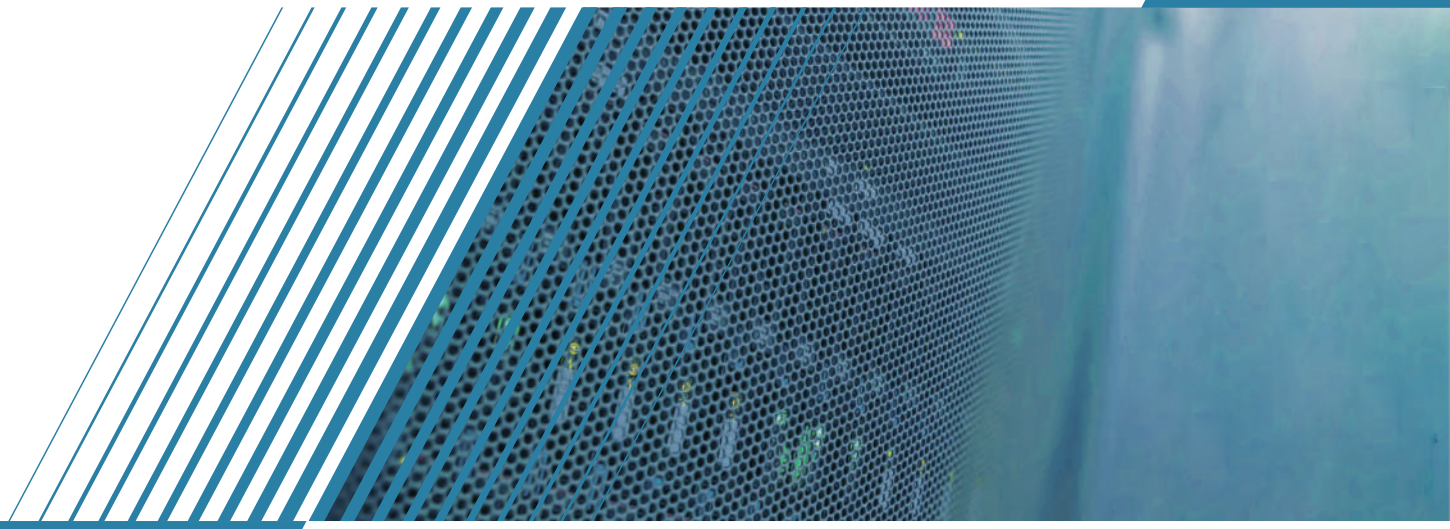
Model remark: RC16192N, "RC" means Rack Cabinet; "16" means battery number inside the Rack;
"192" means the battery system voltage; "N" means battery with neutral connection; "B" means the cabinet with internal battery.

Disclaimer: Products are continuously improved and updated. As a result, actual product specifications may differ from promotional or technical materials due to asynchronous revisions. This document is provided for reference only and does not constitute an offer, warranty, or commitment.

ATENCO POWER TECH CO. LTD

2 F.-7, No. 14, Xiwei St., Sanchong Dist., New Taipei City 241707, Taiwan
TEL：+886-2-2280-6939 info@atenco.com.tw
FAX：+886-2-2290-2939 www.atenco.com.tw

ATENCO POWER TECH CO. LTD



Solutions behind the power

3:3

94.5%
VFI efficiency*

≤3%
Input THDi

110/125/150%
Overload (60/10/1 min)

20-50
DC string range

7″
Touchscreen TFT

4× (N+X)
Parallel Redundancy

Clean Input. High Efficiency.

≤3% input THDi · up to 94.5% VFI efficiency · Unity PF 1.0 · IGBT topology · Parallel up to 4 · VRLA battery

DSP Control · Charger up to 20A · Dual-input optional · EPO & DC start · USB/RS232/RS485 · Generator compatible

Applications

Government · Telecom · Datacenter · Industrial · Transportation · Healthcare · Energy

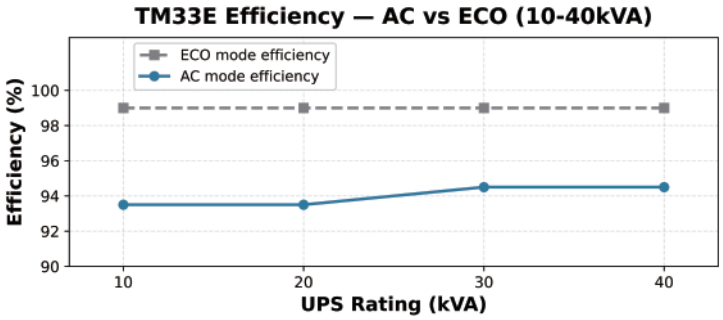
TM33E Series is a three-phase VFI online UPS (10-40kVA) with IGBT topology and DSP control for low input distortion (≤3% THDi) and high efficiency (up to 94.5%).
Parallel-optional up to 4 units with unity PF 1.0, generator-compatible operation, and a 7″ Touchscreen TFT HMI for clear control. Configurable DC strings for precise runtime: 10-30kVA: 16/18/20 blocks (Configurable to 30-50); 40kVA: 30-50 blocks; smart charging up to 20A. Optional dual-input, EPO/DC start, and ECO mode to reduce losses.
Open interfaces—USB/RS232/RS485, dry contacts, intelligent slot (SNMP/relay)—streamline commissioning, monitoring, and diagnostics.

Performance may vary by configuration and environment.

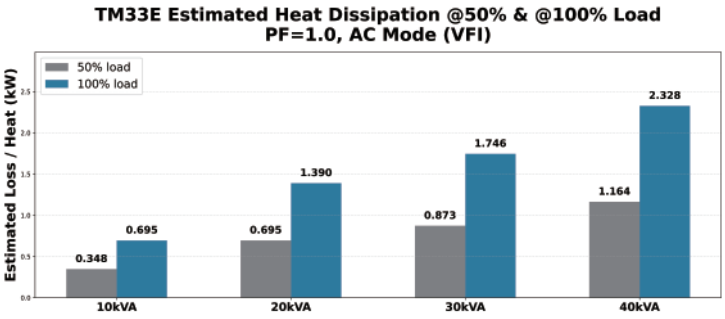
SCAN THE CODE
TO LEARN MORE

TM33E Key Features

- **True online double conversion** with DSP control
- **High efficiency**: ≥93.5% (10–20kVA) / ≥94.5% (30–40kVA); ECO mode up to 99%
- **Output power factor: 1.0** (full kW load support)
- **Input THDi**: ≤3% (100% non-linear load)
- **Parallel redundancy** (N+X): up to 4 units in parallel
- **7" touchscreen** TFT HMI (model-dependent)
- **Self-aging test mode**; automatic event & waveform recording
- **Generator compatible**; DC start function (cold start from battery)
- **Dual input source** (optional): separate input for bypass & rectifier
- **Integrated Emergency Power Off (EPO)**



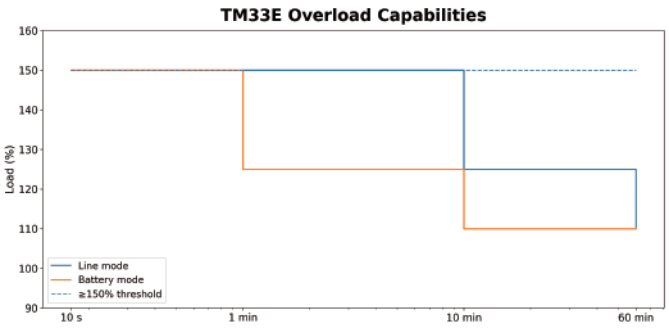
Performance & Power Quality



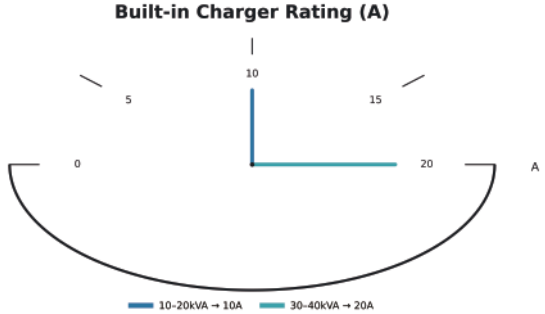
- **Nominal input voltage**: 380/400/415Vac (3PH+N+PE)
- **Operating input voltage range**: 208-478Vac (10-30kVA); 323-478Vac (40kVA)
- **Operating input frequency range**: 45-55Hz @ 50Hz / 54-66Hz @ 60Hz (auto sensing)
- **Input power factor: ≥0.99**
- **Output voltage**: 380/400/415 Vac (3PH+N+PE)
- **Voltage regulation**: ±1%
- **Output frequency**: Line mode sync with input; Battery mode (50/60 ±0.1) Hz
- **Crest factor**: 3:1
- **Output THD**: ≤2% (linear load) / ≤5% (non-linear load)
- **Transfer time**: Utility → Battery: 0 ms; Utility → bypass: 0 ms

Overload Capability

- **Line mode (AC present):**
  ≤110% → **60 min** · ≤125% → **10 min** · ≤150% → **1 min** · **>150%** → overload protection engages.
- **Battery mode (on inverter):**
  ≤110% → **10 min** · ≤125% → **1 min** · ≤150% → **10 s** · **>150%** → immediate protection trip.



Battery Flexibility & Smart Charging

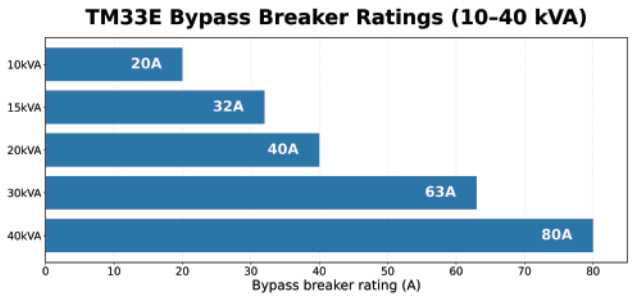


- **Configurable DC strings**: system supports **20-50 blocks** per string.
- **Rating defaults: 10-30kVA → 16/18/20 blocks** (field-configurable up to **30-50**); **40kVA → 30-50 blocks** per string.
- **Fast recharge**: built-in charger **up to 20A** for quicker battery recovery.
- **Extendable runtime**: internal-battery models plus matching **external battery packs (40/60/80 pcs)** to reach target backup time.
- **Battery management**: intelligent control and monitoring to protect batteries and optimize charge/discharge.

Note: Specifications are model-specific. Optionals (e.g., parallel kit, bigger charger, communications cards, accessories) are not supplied by default and vary by SKU/order.
Final deliverables and configurations are defined only by ATENCO's formal quotation and the customer's confirmed model/options.

Protections, Alarms & Bypass

- **Protections**: overload, short-circuit, input surge, fan fault, over-temperature, EPO.
- **Bypass window & sync**: selectable limits **220/230/240 Vac**; frequency-sync tracking **±10%**.
- **Alarm indications**: overload, mains abnormal, UPS fault, battery low, etc.
- **Noise level**: **≤55 dB** (10-30 kVA); **≤58 dB** (40 kVA).
- **Bypass mode breaker rating: 20A (10kVA) / 32A (15kVA) / 40A (20kVA) / 63A (30kVA) / 80A (40kVA).**

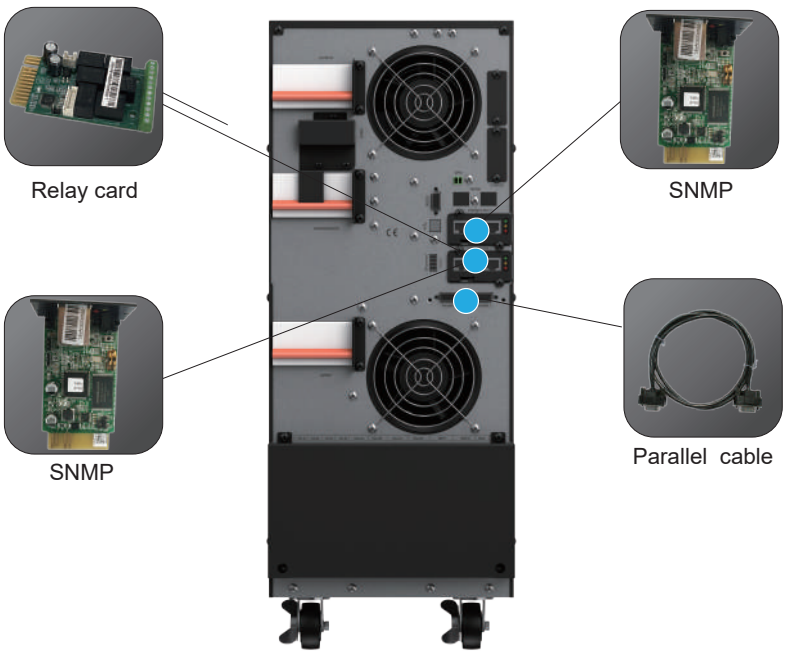


Environmental & Standards

- **Operating temperature**: 0°C-40°C; Storage temperature: -25°-55°C
- **Humidity range**: 0-95% (non-condensing)
- **Altitude**: <1500 m (derating required when >1500 m)
- **Safety**: IEC/EN 62040-1, IEC/EN 60950-1
- **EMC**: IEC/EN 62040-2 (IEC 61000-4-2/-4-3/-4-4/-4-5/-4-6/-4-8)

Optional Accessories

- **Battery Cabinets**: scalable runtime with 40-80pcs 9Ah/12Ah VRLA blocks
- **SNMP Card (TM550)**: remote monitoring via Ethernet
- **Modbus / RS485 Card**: integration with BMS and SCADA systems
- **External Maintenance Bypass**: safe service without load interruption
- **Temperature Sensor**: dynamic charging adjustment for battery life extension

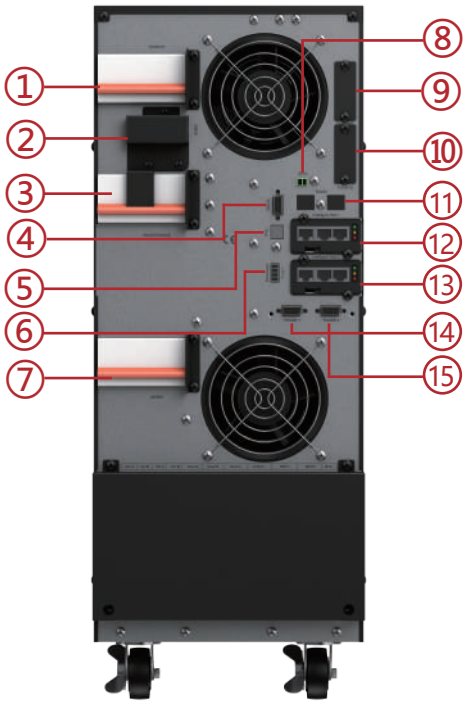


Note: Specifications are model-specific. Optionals (e.g., parallel kit, bigger charger, communications cards, accessories) are not supplied by default and vary by SKU/order.
Final deliverables and configurations are defined only by ATENCO's formal quotation and the customer's confirmed model/options.

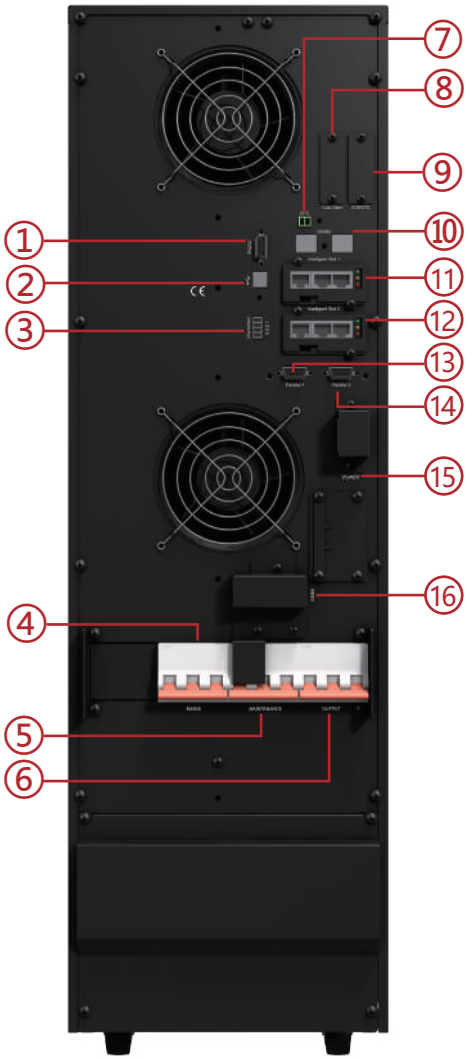
Rear Panel

TM33E 10~40kVA-L

1. Output Switch
2. External Maintenance Bypass Switch
3. Maintenance switch
4. RS232
5. USB port
6. Dry contact port
7. Input & Output terminals
8. EPO port
9. Cold start button
10. EVENTS port
11. RS485 port
12. Intelligent Slot 1 (SNMP card/ Relay card)
13. Intelligent Slot 2 (SNMP card/ Relay card)
14. Parallel port 1
15. Parallel port 2

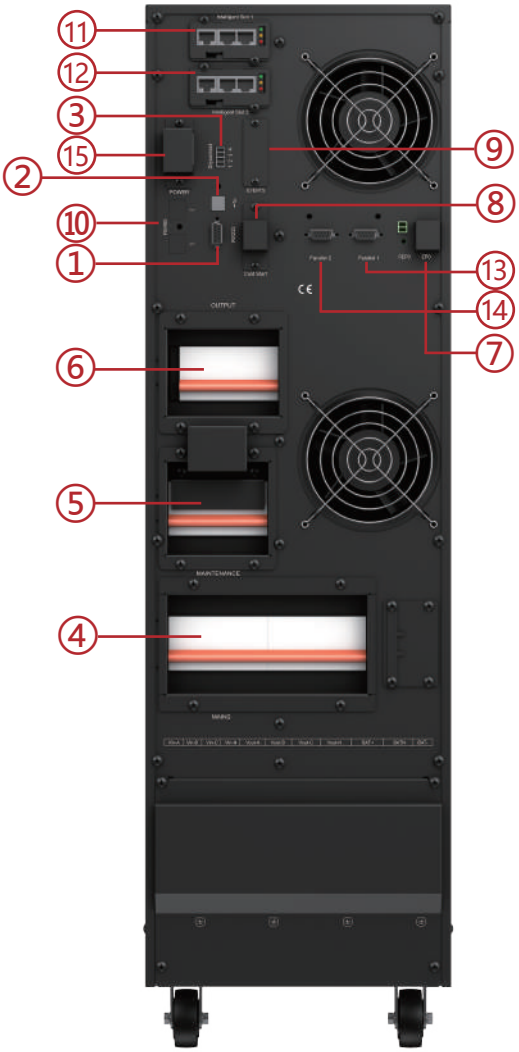


TM33E 10~20kVA-S



1. RS232
2. USB port
3. Dry contact port
4. I/P Switch
5. Maintenance switch
6. Output Switch
7. REPO port
8. Cold start button
9. EVENTS port
10. RS485 port
11. Intelligent Slot 1 (SNMP card/ Relay card)
12. Intelligent Slot 2 (SNMP card/ Relay card)
13. Parallel port 1
14. Parallel port 2
15. Power
16. External Maintenance Bypass Switch

TM33E 30~40kVA-S



TM33E Technical Specifications

ATENCO POWER TECH CO. LTD

		TM33E Series				
Model		**TM33E-10kVA-S/L**	**TM33E-15kVA-S/L**	**TM33E-20kVA-S/L**	**TM33E-30kVA-S/L**	**TM33E-40kVA-S/L**
Capacity		10kVA/ 10kW	15kVA/ 15kW	20kVA / 20kW	30kVA/ 30kW	40kVA/40kW
INPUT						
Nominal voltage		380/400/415Vac (3PH+N+PE)				
Operating voltage range		208~478Vac				323~478Vac
Operating frequency range		45-55Hz at 50Hz/54-66Hz at 60Hz (auto sensing)				
Power factor		≥0.99				
Harmonic distortion (THDi)		≤3% (100% non-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 −20%, −30%) Frequency synchronize tracing range:±10%				
Generator input		Support				
OUTPUT						
Output voltage		380/400/415Vac (3Ph+N+PE)				
Voltage regulation		±1%				
Power factor		1				
Output frequency		Line Mode: synchronize with input; when input frequency＞±10%(±1%/±2%/±4%/±5% optional), output (50/60±0.1)Hz Battery Mode: (50/60±0.1)Hz				
Crest factor		3:1				
Harmonic distortion (THD)		≤2% with linear load ≤5% with non linear load				
Efficiency		≥93.5%		≥94.5%		
SYSTEM FEATURES						
Transfer time		Utility to Battery: Oms; Utility to bypass: 0ms				
Overload	Line Mode	Load≤110%: last 60min, ≤125%: last 10min, ≤150%: last 1min, ≥150% to bypass				
	Bat. Mode	Load≤110%: last 10min, ≤125%: last 1 min, ≤150%: last 10S, ≥150% shut down UPS immediately				
	Bypass Mode	Breaker 20A	Breaker 32A	Breaker 40A	Breaker 63A	Breaker 80A
Alarm		overload, utility abnormal, UPS fault, battery low, etc.				
Protection		short circuit, overload, over temperature, battery low, fan fault alarm				
Communication		USB, RS485, Parallel port, Coupler dry contact, Intelligent slot, SNMP card (optional), Relay card (optional)				
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			＜58dB	
STANDARDS						
Safety		IEC/EN 62040-1, IEC/EN 60950-1				
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)				

Nomenclature: TM33E–[kVA]–[S/L] — TM: Tower-mount; 33: 3-phase in/3-phase out; [kVA]: UPS rating; S: with internal battery model; L: external-battery only (no space for internal battery).

TM33E Technical Specifications

	Standard Unit				
Model	**TM33E-10kVA-S**	**TM33E-15kVA-S**	**TM33E-20kVA-S**	**TM33E-30kVA-S**	**TM33E-40kVA-S**
Weight	95kgs	147kgs		225kgs	
Dimension W*H*D(mm)	250*868*900				
Battery DC Voltage	+/-120Vdc**				+/- 180Vdc
Built-in Charger	default 1.35A (Up to 10A)	default 2.7A (Up to 10A)		default 4A (Up to 20A)	default 2.7A (Up to 20A)
Built-in Battery Quantity	20pcs 12V/9AH(Max. 40pcs)	40pcs 12V/9AH		60pcs 12V/9AH	

	Long Backup Unit				
Model	**TM33E-10kVA-L**	**TM33E-15kVA-L**	**TM33E-20kVA-L**	**TM33E-30kVA-L**	**TM33E-40kVA-L**
Weight	42kgs	45kgs		66kgs	73kgs
Dimension W*H*D(mm)	250*868*900				
Battery DC Voltage	+/-96V / +/-108V / +/-120V				+/- 192V / +/- 204V / +/-216V / +/-228V / +/-240V
Built-in Charger	10A			20A	
Built-in Battery Quantity	N/A				

	Matching Battery Pack
Model	**TC080120N**
Weight	243kgs
Dimension W*H*D(mm)	250*868*900
Built-in Battery Quantity	80pcs 12V/9AH

Specifications subject to change without prior notice.
*PF=0.9 models also available

Disclaimer: Products are continuously improved and updated. As a result, actual product specifications may differ from promotional or technical materials due to asynchronous revisions. This document is provided for reference only and does not constitute an offer, warranty, or commitment.

ATENCO POWER TECH CO. LTD
2 F.-7, No. 14, Xiwei St., Sanchong Dist., New Taipei City 241707, Taiwan
TEL：+886-2-2280-6939 info@atenco.com.tw
FAX：+886-2-2290-2939 www.atenco.com.tw

3:3

95.5%
VFI efficiency*

≤3%
Input THDi

110/125/150%
Overload (60/10/1 min)

3-Level IGBT
Inverter Topology

LFP & VRLA
Lithium or lead-acid battery

8× (N+X)
Parallel Redundancy*

Mission-Critical Power Protection

3-Phase Online UPS · 3-Level IGBT Topology · DSP Control · PF 1.0 · ≤3% Input THDi · Parallel up to 8 units

Smart Charger up to 60A · Dual Input Source · EPO & DC Start · Generator Compatible · LFP & VRLA battery

Applications

Government · Finance · Data Center · Education · Transportation · Healthcare · Energy

TM33E is ATENCO's high-capacity **three-phase VFI (true online) UPS** series for **50-200kVA** mission-critical applications. Built on **3-level IGBT inverter topology** with **DSP digital control**, it delivers output **PF = 1**.0, low harmonics, and stable power quality. It supports **parallel operation** up to **8 units (N+X)** with **shared battery** capability and **programmable DC bus (±180 to ±300 VDC)** to match runtime needs. With a wide input range of **138-485 Vac (no derating above 305 Vac)**, plus ECO mode, dual-input source, and rich communications, TM33E is ideal for data centers, telecom core sites, industrial facilities, and critical buildings.

Performance may vary by configuration and environment.

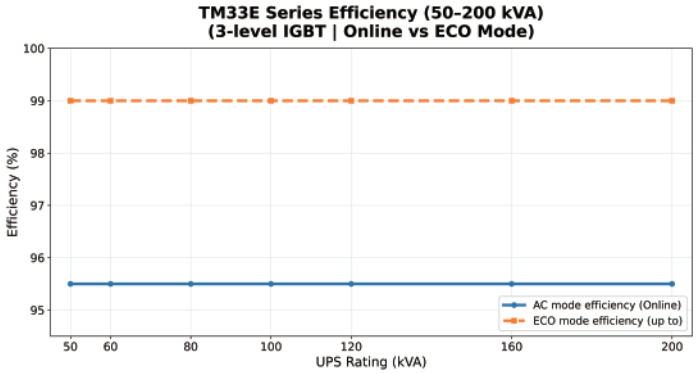
SCAN THE CODE TO LEARN MORE

ATENCO POWER TECH CO. LTD

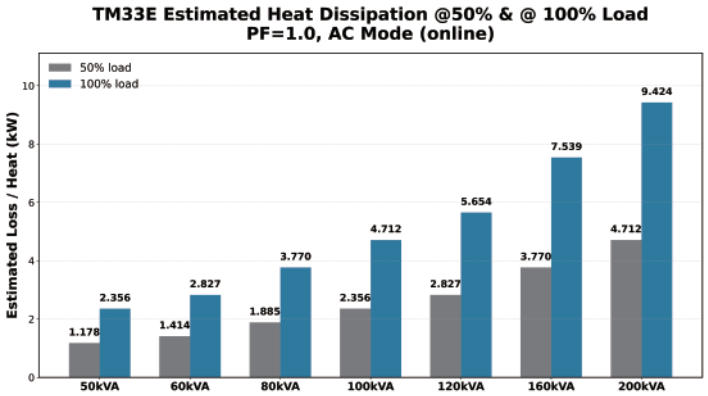
TM33E Key Features

Built for uptime, scalability, and easy operation

- **True Online Double Conversion (VFI)** topology
- **3-Level IGBT + DSP control** (better waveform, lower losses/heat)
- **Parallel up to 8 units (N+X)**, load sharing, shared battery
- **7" TFT touchscreen** + mimic diagram + event history
- **Dual input** (independent mains & bypass)
- **LBS** enables two independent UPS systems to operate in synchronized mode, improving overall system reliability.
- **Self-aging test mode**; automatic event & waveform recording
- **Generator compatible + input walk-in (limits inrush)**



Performance & Power Quality



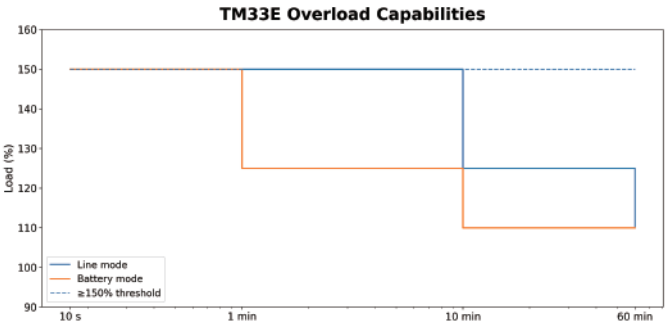
Clean output, high efficiency, and wide input tolerance

- **Input voltage: 380/400/415Vac, (3Ph+N+PE)**
- **Wide input 138-485 Vac,** no derating above 305 Vac
- **Output PF = 1.0** (full kW delivery)
- **Output voltage**: 380/400/415Vac (3Ph+N+PE)
- **Output voltage regulation ±1%**
- **Efficiency**: up to 95.5% (VFI), up to 99% (ECO)
- **Input PF ≥ 0.99**
- **Input THDi ≤ 3%**
- **Frequency stability ±0.1%** (free-running), 40-70 Hz

Bypass & Overload Capability

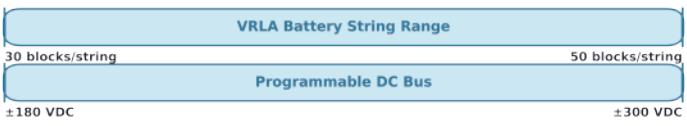
Overload endurance, safe bypass, and comprehensive protection

- **Line mode (AC present):**
  ≤110% → **60 min** · ≤125% → **10 min** · ≤150% → **1 min** · **>150%** → overload protection engages.
- **Battery mode (on inverter):**
  ≤110% → **10 min** · ≤125% → **1 min** · ≤150% → **10 s** · **>150%** → immediate protection trip.
- **Bypass / service**: Dual input source for independent mains & bypass
- Support for **external maintenance bypass**



Battery & Charging

Flexible battery options with smart, high-current charging



- **Supports VRLA and LFP (Lithium) systems**
- **Battery range**: 30-50 blocks/string (VRLA) or lithium cabinets
- **Programmable DC bus**: ±180 to ±300 VDC
- **Smart charger up to 60A**
- Battery temperature sensor + BMS communication (optional)
- **DC start function**

Note: Specifications are model-specific. Optionals (e.g., parallel kit, bigger charger, communications cards, accessories) are not supplied by default and vary by SKU/order.
Final deliverables and configurations are defined only by ATENCO's formal quotation and the customer's confirmed model/options.

Monitoring & Connectivity

Standard interfaces, optional cards, and clear local control

- **7” TFT touchscreen HMI** with **mimic diagram** and **event history** (local status + quick diagnostics).
- **Clear local control**: start/stop, mode/status view, alarms acknowledge, settings access (as applicable).
- **On-screen monitoring** of key operating parameters: input/output, load level, battery status, alarms/fault codes.
- **Event & alarm logging** for troubleshooting and service traceability.
- **Standard communications: USB / RS232 / RS485** interfaces for monitoring and system integration.

Protection & Safety

- Overload and short-circuit protection
- Over-temperature protection
- Battery over-voltage and under-voltage protection
- Fan and internal fault protection
- Backfeed protection
- Integrated Emergency Power Off (EPO)

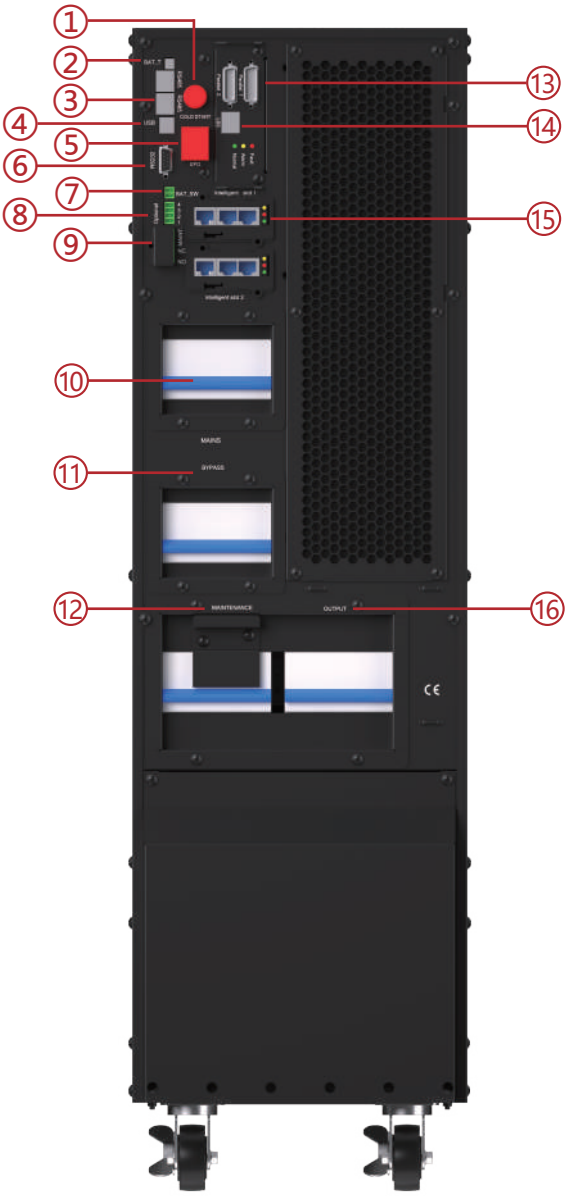
Optional Accessories

- **SNMP** for network monitoring (remote supervision when installed)
- **Modbus** (integration into BMS/SCADA environments when installed)
- **Relay cards** (dual-slot)
- **Parallel kit** for redundancy or capacity expansion
- **VRLA/LFP** battery cabinets with cabling kits

Note: Specifications are model-specific. Optionals (e.g., parallel kit, bigger charger, communications cards, accessories) are not supplied by default and vary by SKU/order.
Final deliverables and configurations are defined only by ATENCO’s formal quotation and the customer’s confirmed model/options.

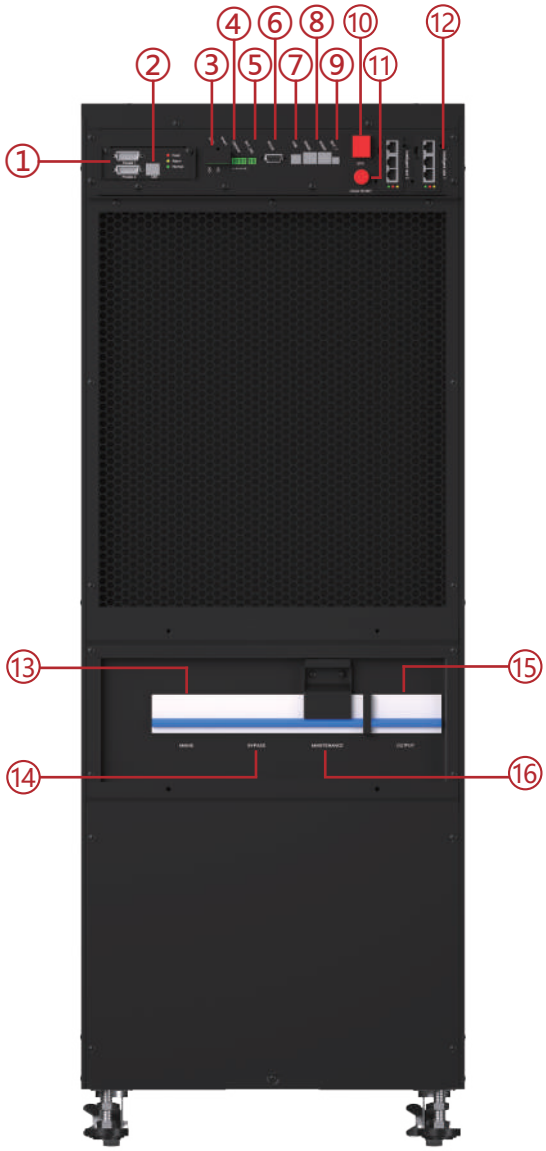
Rear Panel

TM33E 50-60kVA-L



1. Cold start
2. BAT_T
3. RS485 port
4. USB port
5. EPO port
6. RS232
7. BAT_SW
8. Optional 1/2/3/4
9. MAINT/ Dry contact
10. MAINS
11. Bypass
12. Maintenanice
13. Parallel port 1/2
14. LBS
15. Intelligent Slot
16. Output Switch

TM33E 80kVA-L

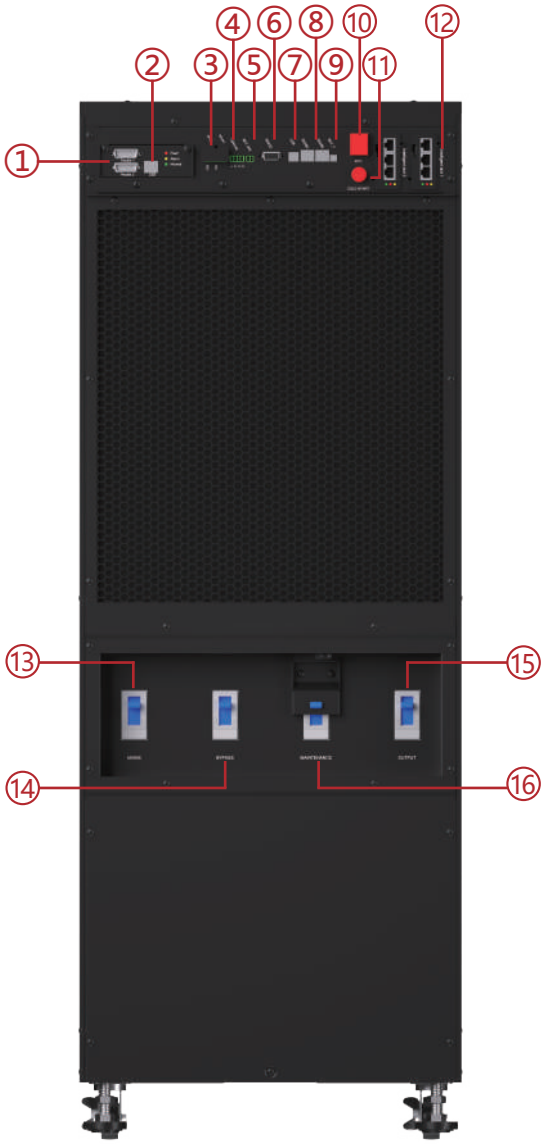


1. Parallel port 1/2
2. LBS
3. MAINT/ Dry contact
4. Optional 1/2/3/4
5. BAT_SW
6. RS232
7. USB port
8. RS485 port
9. BAT_T
10. EPO port
11. Cold start
12. Intelligent Slot
13. MAINS
14. Bypass
15. Output Switch
16. Maintenanice

Note:
EPO: Emergency Power Off
MAINT: Maintenance Bypass Senser - Dry-contact input
BAT_T/BAT_N: Battery Sensor
Intelligent slot: SNMP card/ Relay card

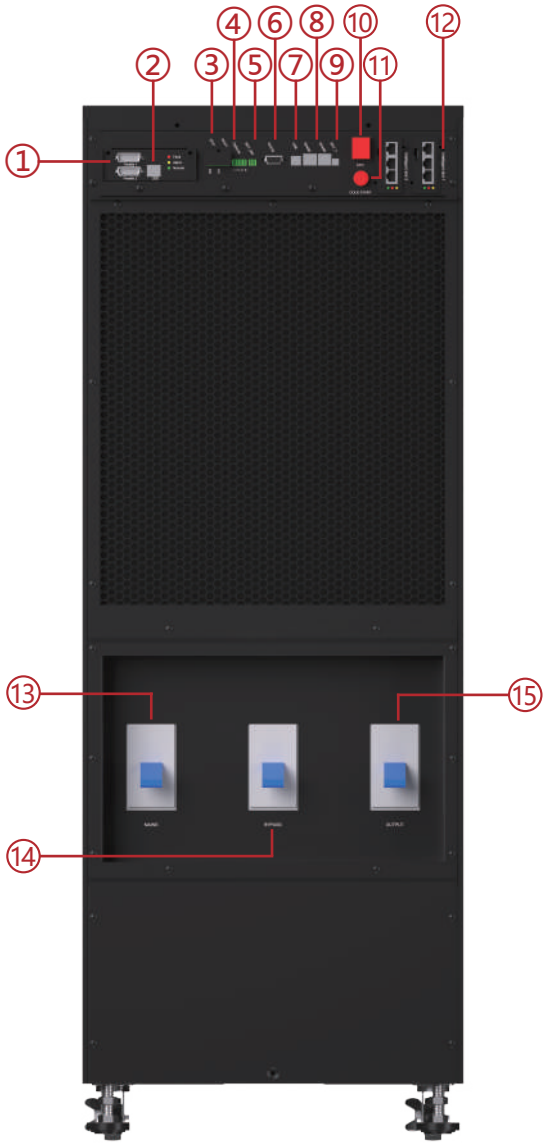
Rear Panel

TM33E 120-160kVA-L



1. Parallel port 1/2
2. LBS
3. MAINT/ Dry contact
4. Optional 1/2/3/4
5. BAT_SW
6. RS232
7. USB port
8. RS485 port
9. BAT_T
10. EPO port
11. Cold start
12. Intelligent Slot
13. MAINS
14. Bypass
15. Output Switch
16. Maintenanice

TM33E 180-200kVA-L



1. Parallel port 1/2
2. LBS
3. MAINT/ Dry contact
4. Optional 1/2/3/4
5. BAT_SW
6. RS232
7. USB port
8. RS485 port
9. BAT_T
10. EPO port
11. Cold start
12. Intelligent Slot
13. MAINS
14. Bypass
15. Output Switch

Note:
EPO: Emergency Power Off
MAINT: Maintenance Bypass Senser - Dry-contact input
BAT_T/BAT_N: Battery Sensor
Intelligent slot: SNMP card/ Relay card

TM33E Technical Specifications

	TM33E Series							
Model	**50kVA**	**60kVA**	**80kVA**	**100kVA**	**120kVA**	**160kVA**	**180kVA**	**200kVA**
Capacity(Watts)	50kW	60kW	80kW	100kW	120kW	160kW	180kW	200kW
INPUT								
Nominal voltage	380/400/415Vac, (3Ph+N+PE)							
Operating voltage range	138~485Vac							
Operating frequency range	40Hz-70Hz							
Power factor	≥0.99							
Harmonic distortion (THDi)	≤3% (100%non-linear load)							
Bypass voltage range	220Vac Max.voltage: +25%(optional +10%,+15%,+20%) 230Vac Max.voltage: +20%(optional +10%,+15%) 240Vac Max.voltage: +15%(optional +10%) Min. voltage: -45% (optional -20%,-30%) Frequency synchronize tracing range: ±10%							
Icc	10kA							
Generator input	Support							
OUTPUT								
Output voltage	380/400/415Vac (3Ph+N+PE)							
Voltage regulation	±1%							
Power factor	1							
Output frequency	1.Line Mode: synchronize with input; when input frequency >±10%(±1%/±2%/±4%/±5% optional) 2.Battery Mode:50/60*(1±0.02%)Hz							
Crest factor	3:1							
Harmonic distortion (THD)	≤2% with linear load ≤4% with non linear load							
Efficiency	95.50%							
BATTERY								
Battery Voltage	Optional Voltage: ±180V/±192V/±204V/±216V/±228V/±240/±252/±264/±276/±288/±300Vdc(30/32/34/36/38/40/42/44/46/48/50pcs optional) 360Vdc~600Vdc (30~50 pcs, 30 pcs define, 36~ 50 pcs no power derating; 32~34 pcs output power factor 0.9;30 pcs output power factor 0.8;)							
Charge Current(A) (charge current can be set according to battery capacity installed)	Max. current 20A		Max. current 40A			Max. current 60A		
SYSTEM FEATURES								
Transfer Time	Utility to Battery : 0ms; Utility to bypass: 0ms							
Overload	Load≤110%: last 60min,≤125%: last 10min,≤150%: last 1min							Load≤110%: last 60min,≤125%: last 1min,≤150%: last 1.2s
Alarm	overload, utility abnormal, UPS fault, battery low, etc.							
Backfeed	Support							
Protection	short circuit, overload, over temperature, battery low, fan fault alarm.							
Communication	USB, RS232, RS485, Parallel port, REPO port, LBS port, Backfeed port, Intelligent slot, SNMP card (optional), Relay card(optional)							
ENVIRONMENT								
Operating Temperature	0°C~40°C							
Storage Temperature	-25°C~55°C (no battery)							
Humidity Range	0～95%(non condensing)							
Altitude	<1500m.When>1500m, lower the rated power for use							
Noise Level	<58dB	<60dB	<61dB	<62dB	<63dB	<66dB		<68dB
PHYSICAL								
Dimension W*H*D(mm)	250*868*828		442*1200*850					
Net Weight(kg)	80	83	144	147	155	190	215	230
STANDARDS								
Safety	IEC/EN 62040-1, IEC/EN 60950-1							
EMC	IEC/EN 62040-3, IEC61000-4-2,IEC61000-4-3, IEC61000-4-4,IEC61000-4-5, IEC61000-4-6, IEC61000-4-8							

Disclaimer: Products are continuously improved and updated. As a result, actual product specifications may differ from promotional or technical materials due to asynchronous revisions. This document is provided for reference only and does not constitute an offer, warranty, or commitment.

ATENCO POWER TECH CO. LTD

2 F.-7, No. 14, Xiwei St., Sanchong Dist., New Taipei City 241707, Taiwan
TEL：+886-2-2280-6939 info@atenco.com.tw
FAX：+886-2-2290-2939 www.atenco.com.tw

3:3

95.5%
VFI online efficiency*

20A
Maximum charger current*

110/125/150%
Overload 60/10/1 min

PF=1.0
kVA=kW

THDi ≤3%
Input quality

6× (N+X)
Parallel Redundancy*

High Power Density. Clean 3-Phase Output.

Online Double-Conversion · DSP Digital Control · Static Bypass · EPO · DC Start · LBS synchronization (40-50kVA)

Direct Parallel Redundancy · Intelligent 3-Stage Charging · Adjustable Battery Strings (30-50 pcs) · LED+LCD Display · USB/RS232/RS485 (SNMP Optional)

Applications

VFI TYPE ON LINE | Rack/Tower | Datacenter | Finance | E-Medical | Industry | Transport | Education

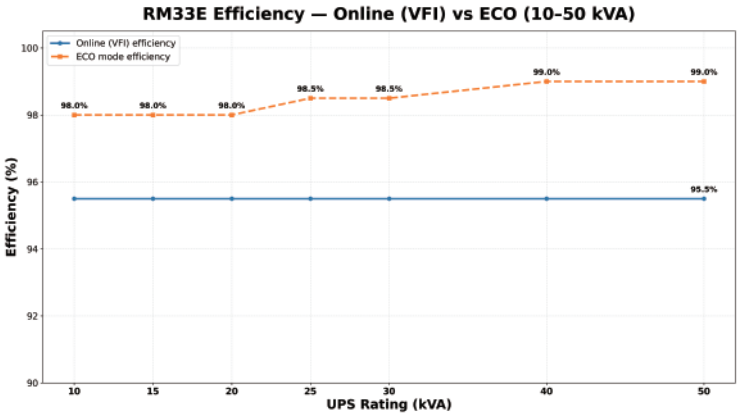
RM33E is a 3 phase online (VFI) rack UPS series covering 10-50kVA/kW with output PF 1.0. Built on DSP digital control with PFC, it delivers **Input PF ≥0.99** and **THDi ≤3%** (linear load) for clean grid interaction, while providing stable, regulated power for critical facilities. With **online efficiency up to 95.5%** and **ECO mode efficiency up to 99.0% (model-dependent)**, RM33E helps reduce operating cost and heat. It supports direct parallel redundancy (10-30kVA up to 4 units; 40-50kVA up to 6 units), intelligent 3-stage charging with user-set current, and adjustable battery strings (30-50 pcs) for flexible backup design. For multi-unit systems, **LBS synchronization (40-50kVA)** is supported to enhance system coordination and performance. Ideal for server rooms, small data centers, telecom/network sites, security systems, and industrial control applications requiring continuous conditioned power.

**Performance may vary by configuration and environment, charger size is based on offered model.*

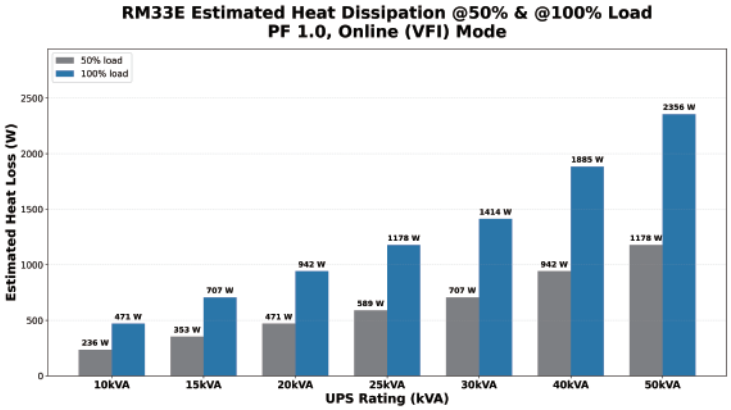
SCAN THE CODE TO LEARN MORE

RM33E Features

- True **Online Double-Conversion (VFI)** topology
- **DSP fully digital control** for stable and reliable operation
- **PFC input** for clean grid interaction and reduced upstream stress
- **Parallel redundancy** without a dedicated parallel cabinet
  10-30kVA: up to 4 units, 40-50kVA: up to 6 units
- **LBS synchronization (40-50kVA)** for coordinated multi-unit system operation
- **Intelligent fan speed control** longer fan life and better efficiency
- **LED + LCD** for clear status, metering, and alarm indications
- Comprehensive protection: overload, short circuit, inverter over-temperature, battery low/overcharge
- **EPO (Emergency Power Off)** for safety shutdown
- Communication interfaces: USB, RS232, RS485
- **Output load capacity**: Suitable for complete unbalanced load



Performance



- Output rating: **PF 1.0 (kVA = kW)**, designed for modern IT and power-electronic loads
- Input performance: **Input PF ≥0.99, THDi ≤3% (linear load)**
- Output quality **(THDv)**:
  - **≤2% (linear load)** across range
  - Non-linear load: **≤5% (10-30kVA) / ≤4% (40-50kVA)**
- Voltage regulation: **±1%**
- Crest factor: **3:1**
- Overload capability: **≤110%: 60 min; ≤125%: 10 min; ≤150%: 1 min**
- Efficiency: **up to 95.5% (Online), up to 99.0% (ECO, model-dependent)**

Battery & Charging

- Flexible DC system for runtime design: **adjustable battery strings 30-50 pcs (12V blocks)**
- Battery type: VRLA (maintenance-free lead-acid)
- Intelligent charging: user-set current + 3-stage charging (CC → CV → Float) with smooth automatic switching
- Max charger current: **18A (10-30kVA) / 20A (40-50kVA)**
- **DC start** capability (start from battery without utility)
- Static electronic bypass for operational continuity
- Wide input voltage operating window supports unstable utility environments (exact windows per model/spec table)
- **Common battery connection supported in parallel operation** to simplify battery system design and improve sharing efficiency

Optional Accessories (Model-Dependent)

- **SNMP card (optional)** for network monitoring / remote management
- **Relay card (optional)**
- **Battery temperature sensor (optional)**
- Dry contact I/O, REPO port, backfeed-related interface
- **Rack Rail Kit (optional)**

Note: Specifications are model-specific. Optionals (e.g., parallel kit, bigger charger, communications cards, accessories) are not supplied by default and vary by SKU/order.
Final deliverables and configurations are defined only by ATENCO's formal quotation and the customer's confirmed model/options.

Front Panel

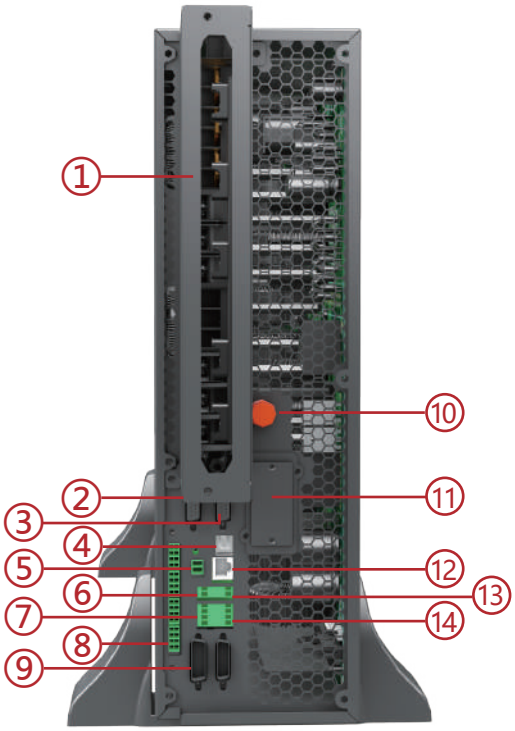
RM33E-10-30kVA (3U)

RM33E-40-50kVA (4U)

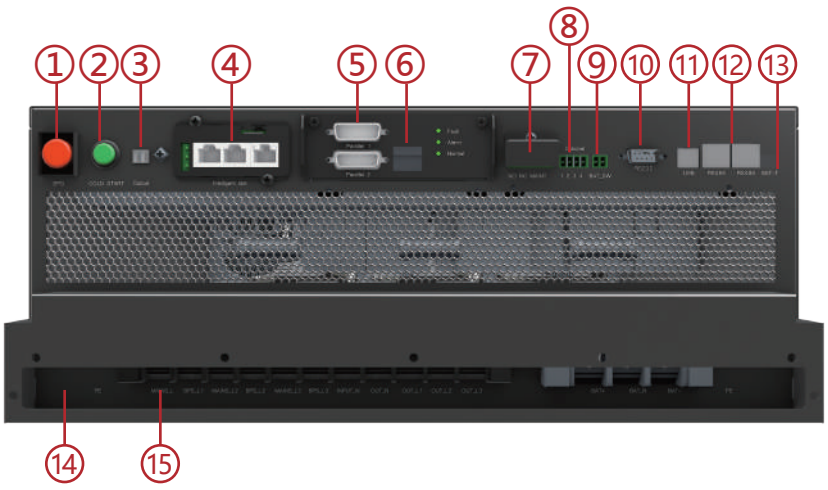
Rear Panel

RM33E-10-30kVA (3U)

1. Terminal block for Input, output & battery
2. RS232 port
3. BMS port (optional)
4. USB port
5. Output breaker aux contactor
6. MAINTAIN-AUXSWS port
7. Backfeed protection port
8. Dry contact port
9. Parallel port 1&2
10. Cold-start button
11. Intelligent Slot (SNMP card)
12. RS485 port
13. Temperature sensor port (for NTC)
14. EPO port



RM33E-40-50kVA (4U)



1. EPO port
2. Cold-start button
3. Output breaker aux contactor
4. Intelligent Slot (SNMP card/ Relay card)
5. Parallel port 1&2
6. LBS port
7. MAINTAIN-AUXSWS port and REPO port
8. Optional port
9. BAT_SW : detect battery switch status
10. RS232 port
11. USB port
12. RS485 port
13. Temperature sensor port (for NTC)
14. Terminal cover
15. Terminal

Note:
EPO: Emergency Power Off
MAINT: Maintenance Bypass Senser - Dry-contact input
BAT_T/BAT_N: Battery Sensor
Optional port: Port for backfeed protection, or battery breaker driver to prevent battery over-drain after UPS shuts down)

RM33E Technical Specifications

	RM33E					
Model	**RM33E-10kVA-L**	**RM33E-15kVA-L**	**RM33E-20kVA-L**	**RM33E-30kVA-L**	**RM33E-40kVA-L**	**RM33E-50kVA-L**
Capacity	10kVA/10kW	15kVA/15kW	20kVA/20kW	30kVA/30kW	40kVA/40kW	50kVA/50kW
INPUT						
Nominal voltage	380/400/415Vac, (3Ph+N+PE)					
Operating voltage range	138~480Vac					
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%)					
Bypass frequency range (Hz)	±10%					
OUTPUT						
Nominal voltage	380/400/415 (3Ph+N+PE)					
Voltage regulation	±1%					
Output frequency	Line mode: ±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional); Bat. mode: (50/60±0.1%)					
Crest factor	3:1					
Harmonic distortion (THDv)	≤2% Linear load; ≤5% Non linear load				≤2% Linear load; ≤4% Non linear load	
Overload	Load≤110%: last 60min; ≤125%: last 10min; ≤150%: last 1min					
EFFICIENCY						
AC Mode	up to 95.5%					
ECO Mode	up to 98%			up to 98.5%	up to 99%	
BATTERY						
Battery type	VRLA (Lead acid maintenance free battery)					
Battery voltage	Optional Voltage: ±180/±192/±204/±216/±228/±240/±252/±264/±276/±288/±300 (30/32/34/36/38/40/42/44/46/48/50pcs optional) 360~600 (30~50pcs, 30pcs default, 36~50pcs no power derating; 32~34pcs output power factor 0.9; 30pcs output power factor 0.8)					
Charging current (Max.)	18A				20A	
MANAGEMENT						
Alarm	Overload, utility abnormal, UPS fault, battery low, etc.					
Communication ports	USB, RS232, RS485, Parallel port, Dry contact port, REPO port, Backfeed port, SNMP card (optional), Battery temperature sensor (optional)				USB, RS232, RS485, Parallel port, Dry contact port, REPO port, Backfeed port, SNMP card (optional), Battery temperature sensor (optional)	
ENVIRONMENTAL						
Operating temperature	0°C~40°C					
Storage temperature	-25°C~55°C (No battery)					
Humidity range	0~95% (Non condensing)					
Altitude	<1000m, derating required when >1000m					
Noise level	<55dB				<56dB	<58dB
PHYSICAL						
Dimension (W×D×H)	440×670×130mm (3U)				440×800×175mm (4U)	
Weight	25kg	27kg		28kg	45kg	48kg
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)					
Performance	IEC 62040-3: 2021, EN IEC 62040-3: 2021				/	

Disclaimer: Products are continuously improved and updated. As a result, actual product specifications may differ from promotional or technical materials due to asynchronous revisions. This document is provided for reference only and does not constitute an offer, warranty, or commitment.

ATENCO POWER TECH CO. LTD

2 F.-7, No. 14, Xiwei St., Sanchong Dist., New Taipei City 241707, Taiwan
TEL：+886-2-2280-6939 info@atenco.com.tw
FAX：+886-2-2290-2939 www.atenco.com.tw