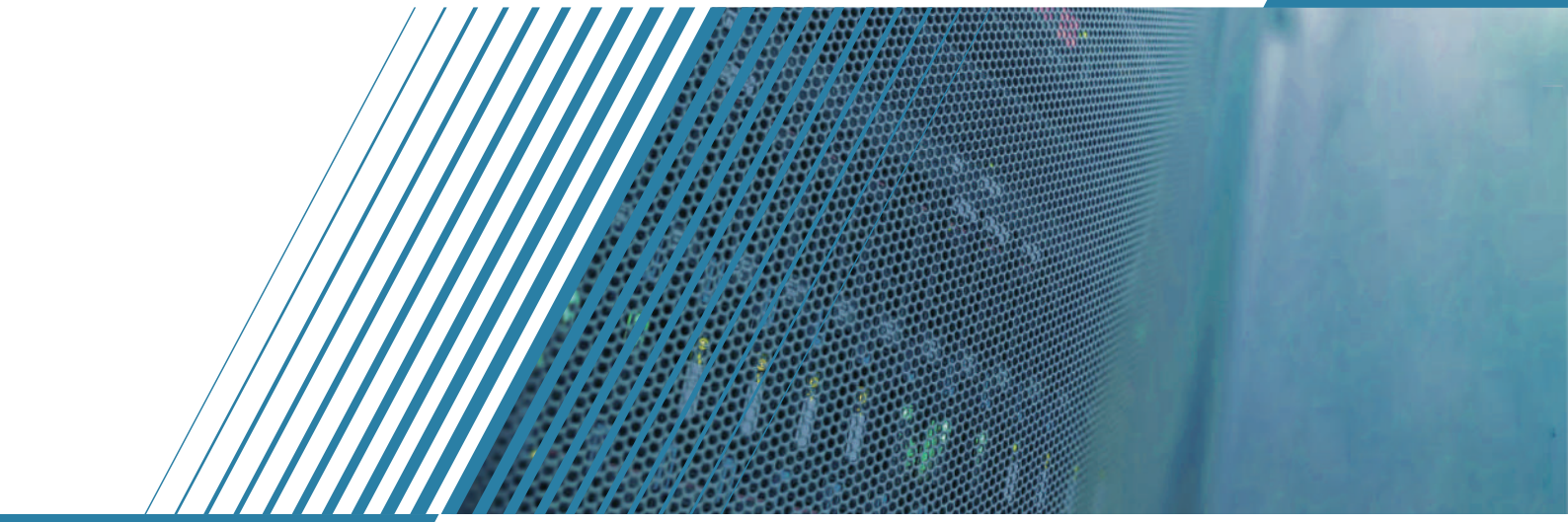
ATENCO POWER TECH CO. LTD



Solutions behind the power

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

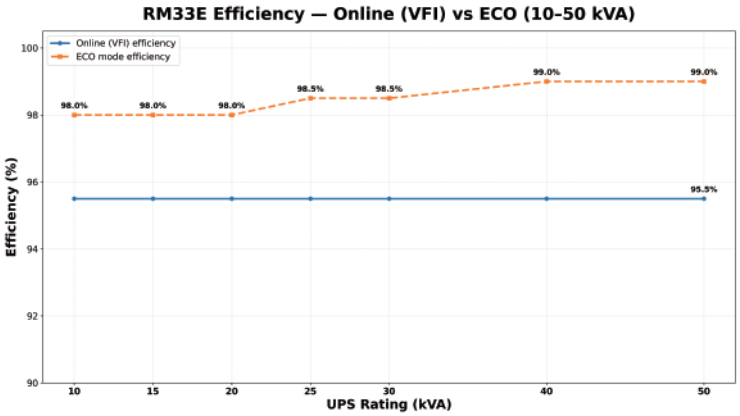
RM33E is a 3 phase online (VFI) rack UPS series covering 10-50kVA/kW with output PF 1.0. Built on DSP digital control with PFC, it delivers **Input PF ≥0.99** and **THDi ≤3%** (linear load) for clean grid interaction, while providing stable, regulated power for critical facilities. With **online efficiency 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.*

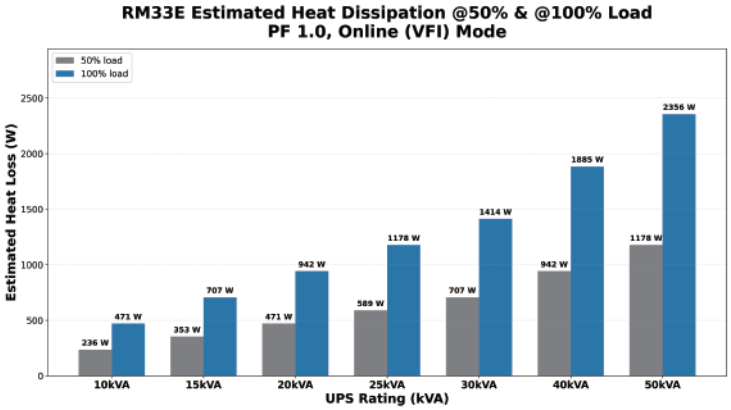
SCAN THE CODE TO LEARN MORE

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

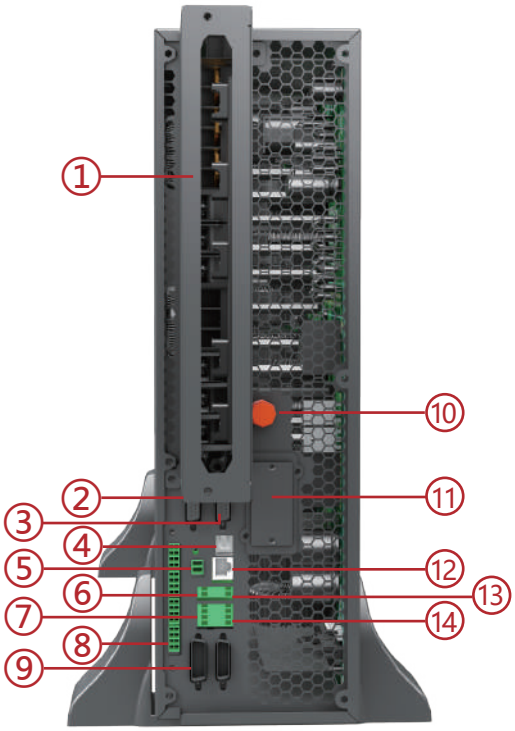
RM33E-10-30kVA (3U)

RM33E-40-50kVA (4U)

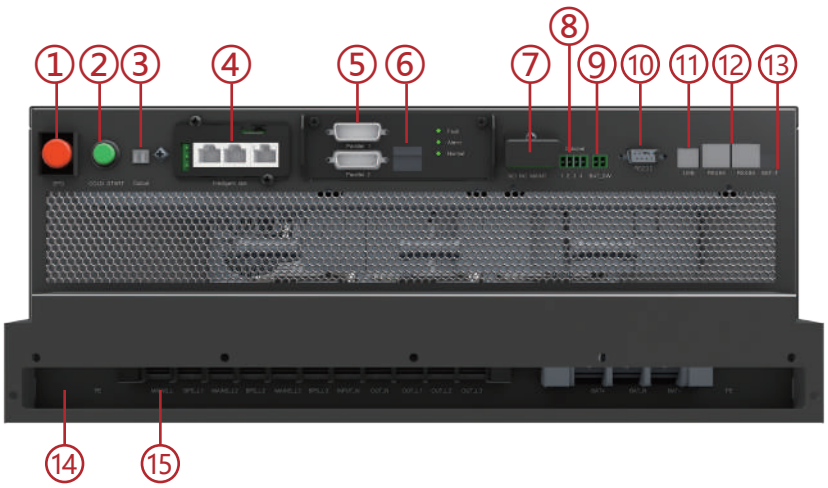
Rear Panel

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