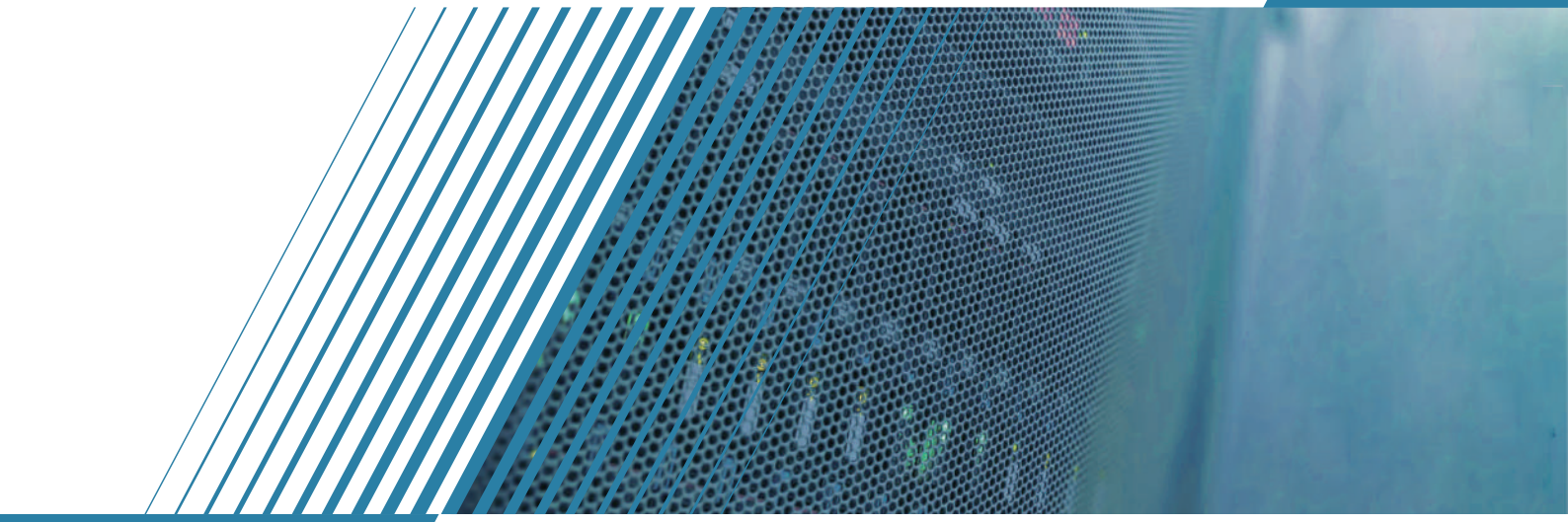
ATENCO POWER TECH CO. LTD



Solutions behind the power

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

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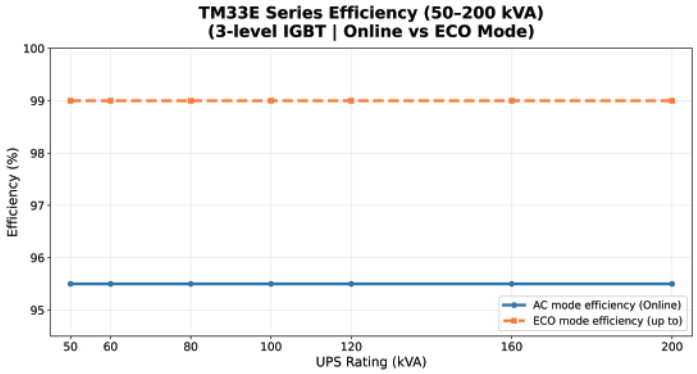
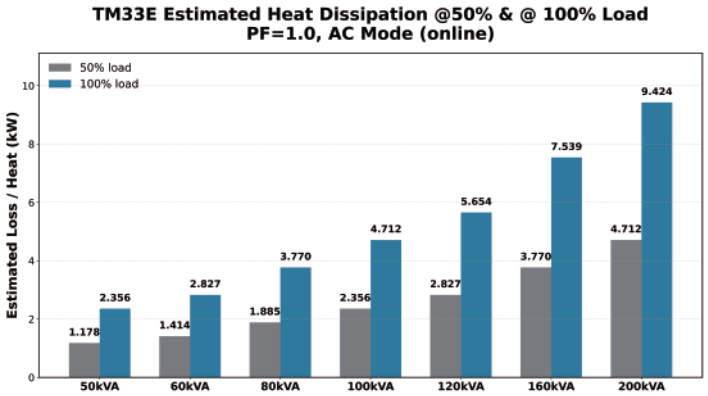
TM33E Key Features

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



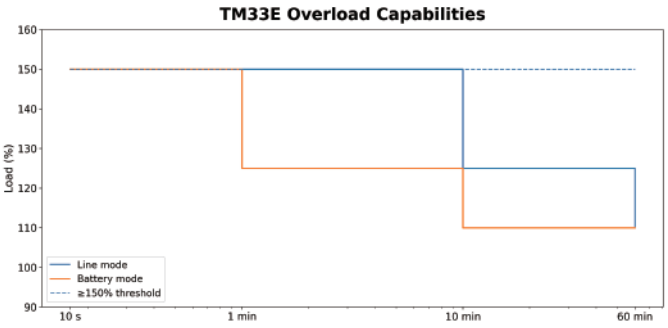
Clean output, high efficiency, and wide input tolerance

- **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

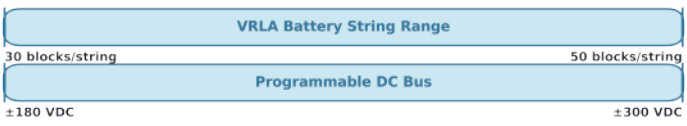
Overload endurance, safe bypass, and comprehensive protection

- **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.
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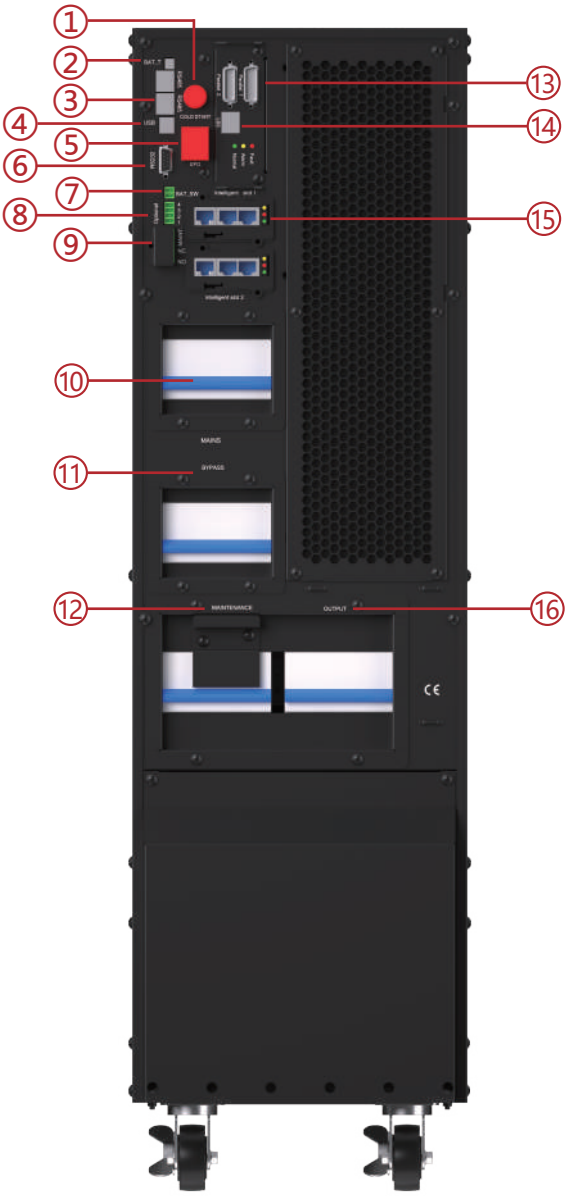
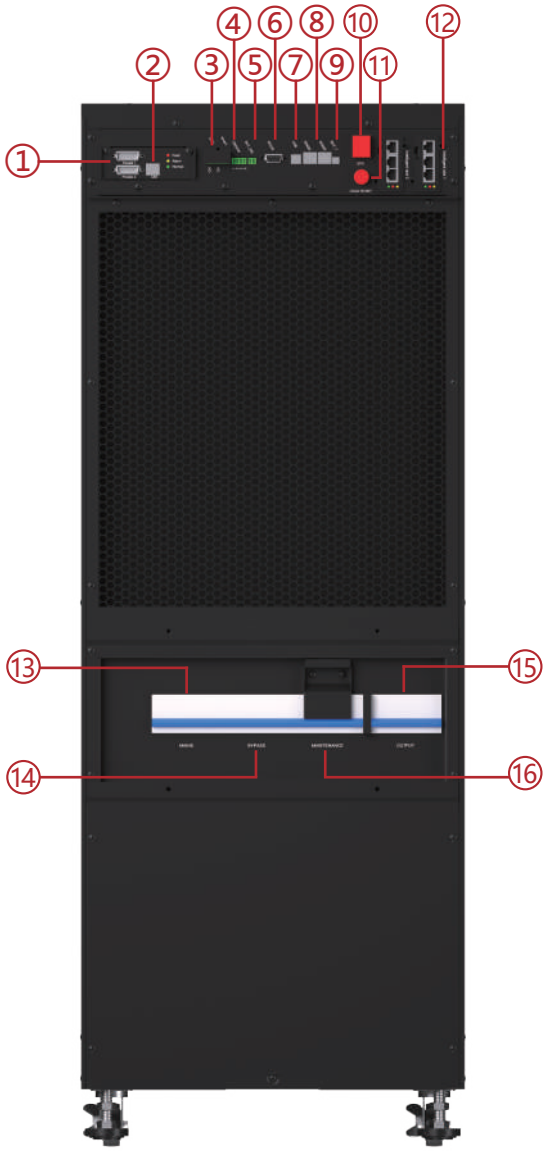
Rear Panel

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

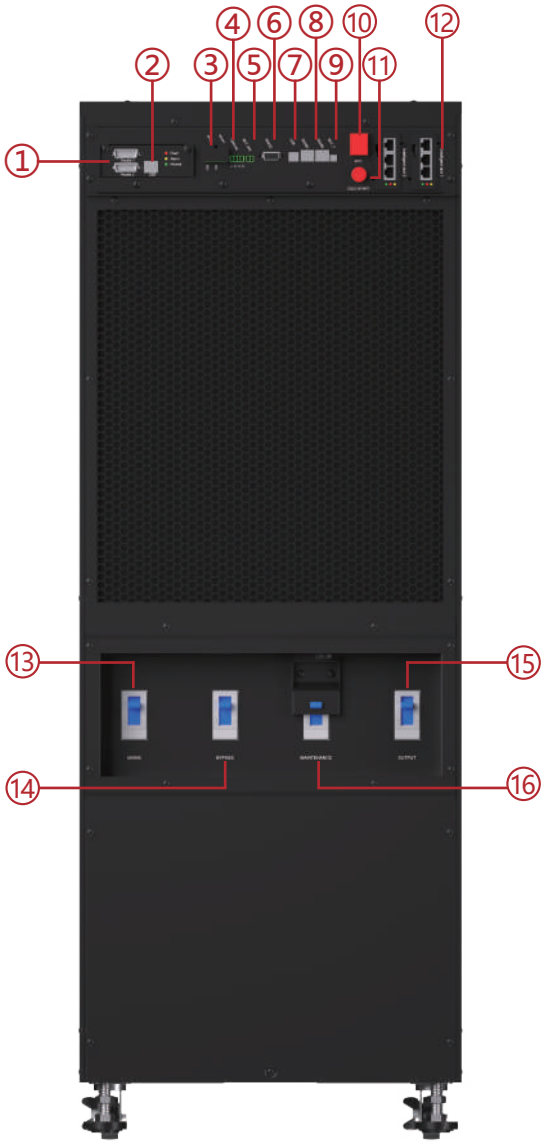


1. Parallel port 1/2
2. LBS
3. MAINT/ Dry contact
4. Optional 1/2/3/4
5. BAT_SW
6. RS232
7. USB port
8. RS485 port
9. BAT_T
10. EPO port
11. Cold start
12. Intelligent Slot
13. MAINS
14. Bypass
15. Output Switch
16. Maintenanice

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

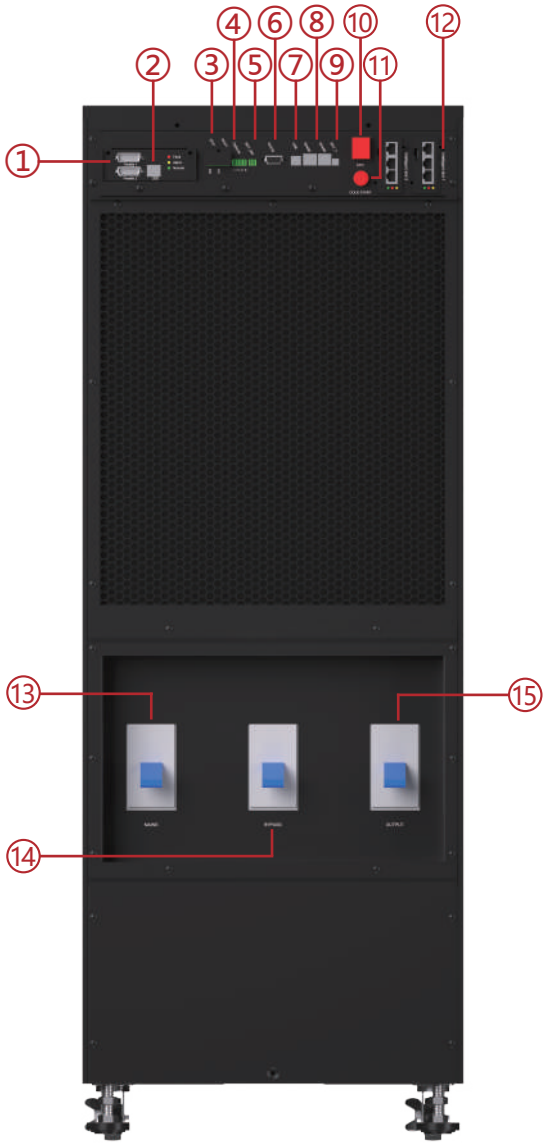
Rear Panel

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.

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