

3:3



97%

VFI efficiency

≤2%

Input THDi

110/125/150%

Overload 60/10/1 min

20-50

DC string range

7"

Touchscreen HMI

99%*

ECO mode

Low THDi. High Efficiency.

≤2% input THDi • up to 97% VFI efficiency • 10–200 kVA • 3-level IGBT • Parallel Option • VRLA/LFP

DSP Control • Conformal-coated PCBs • Adaptive thermal/fan control

Applications



Government



Finance



Datacenter



Education



Transportation



Medical



Energy

TM33 Series is a three-phase VFI online UPS (10–200 kVA) with 3-level IGBT and DSP control for low input distortion and high efficiency, Parallel option with configurable DC strings (VRLA/LFP) to meet runtime targets; overload ride-through 110%/60 min, 125%/10 min, 150%/1 min.

Reliability features include conformal-coated PCBs, an isolated clean compartment, and adaptive fan control.

A 7" HMI and open protocols (SNMP/Modbus, optional cloud) streamline commissioning, monitoring, and diagnostics.

* ECO depends on mains quality/load; efficiency & THDi per datasheet test conditions.

SCAN THE CODE
TO LEARN MORE



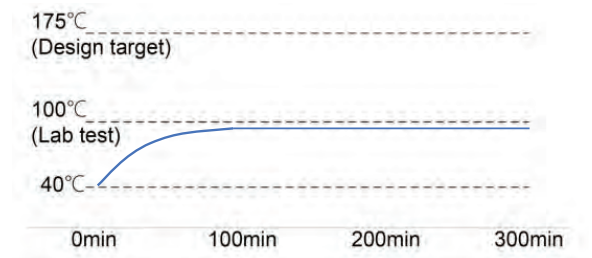
High Reliability

3-level IGBT topology raises efficiency and reduces THDi, delivering cleaner power to sensitive loads.

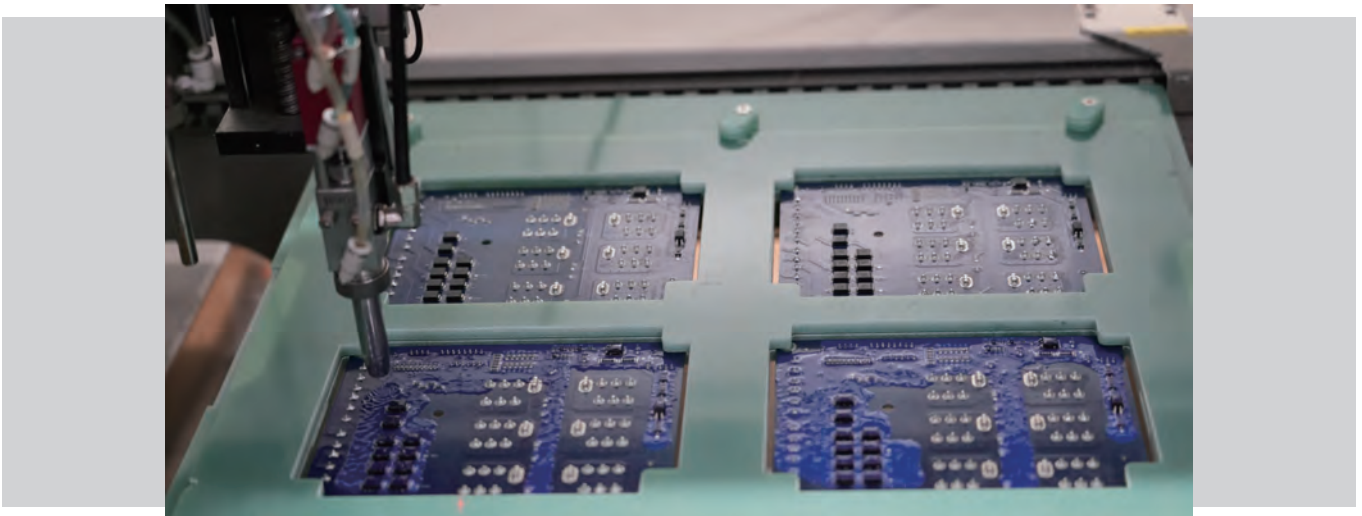
Overload tolerance: 110% for 60 min, 125% for 10 min, 150% for 1 min—rides through inrush/spikes without switching to bypass.

Thermal design keeps key components <100 °C at full load, extending service life.

Conformal-coated PCBs (standard) resist humidity, dust, and corrosion for dependable operation in harsh sites.



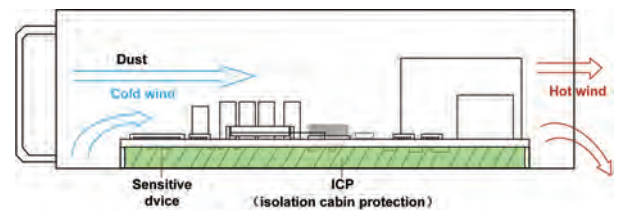
Full load temperature change curve



Source-share mode lets the grid and battery power the inverter simultaneously, keeping the UPS online when grid capacity is weak or unstable.

Isolation Cabinet Protection (ICP) places dust-sensitive components in a sealed, independent compartment, improving reliability in harsh or dusty environments.

Adaptive fan control varies speed with component temperature and load, reducing noise, saving energy, and extending fan life.



ICP Function

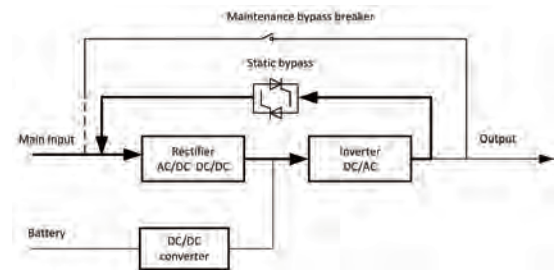
High Efficiency

Input PF up to **0.99** and input **THDi $\leq 2\%$** at full load, reducing upstream distortion and grid stress.

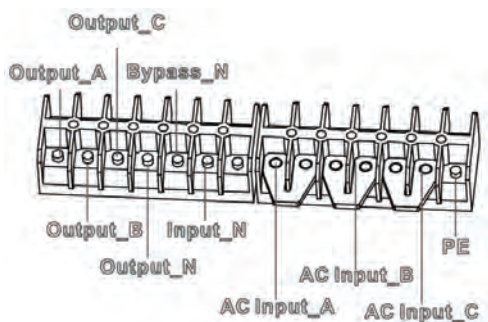
Double-conversion efficiency up to **97%** lowers losses in normal mode.

ECO mode up to **99%** for maximum energy savings where mains quality allows.

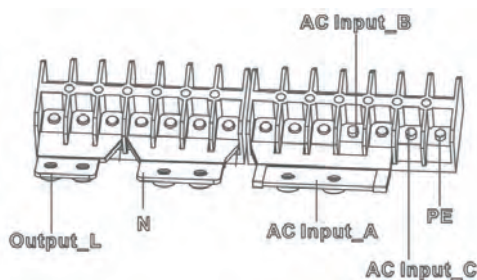
Self-aging test mode enables full-power commissioning without external load banks, temporary cabling, or breakers, saving time and energy.



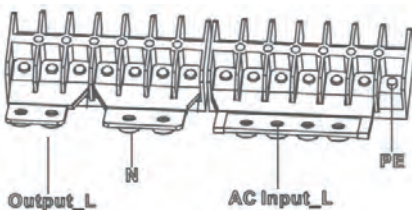
Self-aging test mode



3-phase in and 3 phase out,
common input (default)



3-phase in and 1 phase out,
common input



1-phase in and 1 phase out,
common input

Flexible Design

Selectable I/O: **3/3, 3/1, or 1/1** with common-input wiring.

Single power board architecture for easier service and lower MTTR.

Built-in parallel slot supports up to **4 units** in parallel.

Standard models support external battery packs to extend backup time.

Four breakers (**input, output, bypass, and manual bypass**) are standard for enhanced system protection (standard type with additional **battery breaker**).

Cold start allows start-up from battery when mains is unavailable.

Optional internal battery models (inside the UPS) for **20 / 40 / 80 pcs** batteries, enabling longer runtime without external cabinets.

Convenient Management

Multiple communication interfaces—**RS232, USB, RS485, dry contacts, and Ethernet**—ensure compatibility with mainstream monitoring systems.

Programmable **dry contacts** provide 3 inputs + 4 outputs for alarms and remote control.

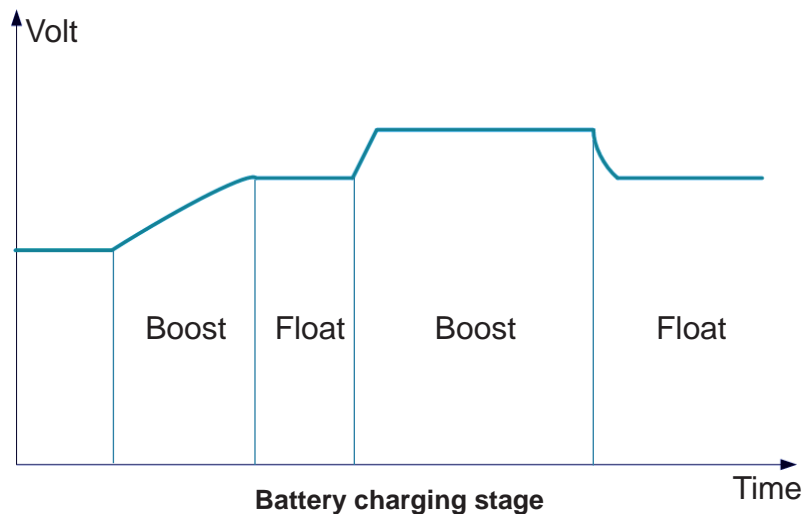
An intelligent slot optional supports **AS400 / RS485 / SNMP / Wi-Fi cards** for easy protocol and network expansion.

SNMP/MIB support enables centralized monitoring of multiple UPS units simultaneously.



Dry contact

Advanced Superior Charging Technology



Multi-stage Boost/Float charging optimizes recharge time and battery life.

Wide DC voltage range, configurable ± 120 to ± 300 Vdc (supports 20–50 battery blocks on 10 kVA models).

High-capacity charger rated up to **50% of Pout**, enabling faster recharge and longer-autonomy options.

Compatible with **lithium-ion (LFP)** and **VRLA lead-acid batteries**.

Reverse-polarity protection prevents installation damage.

Intelligent Screen

7-inch color touchscreen with LED status indicators for clear, at-a-glance operation; field-replaceable display module for easy service.

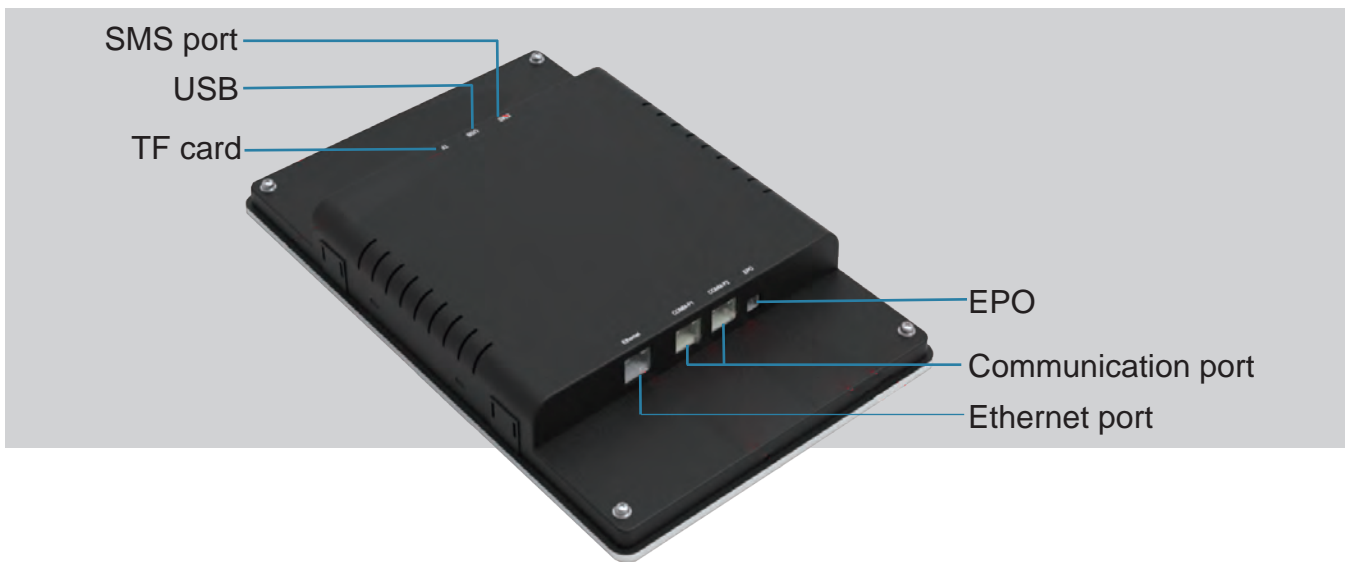
Onboard data storage for up to **100,000** event logs. Rear **physical ports** behind the panel provide convenient access to communication interfaces.

Multilingual UI (English, Spanish, Italian, French, Russian, etc.).

BMS integration shows real-time lithium-battery status; IoT (optional) enables cloud monitoring.



IOT function



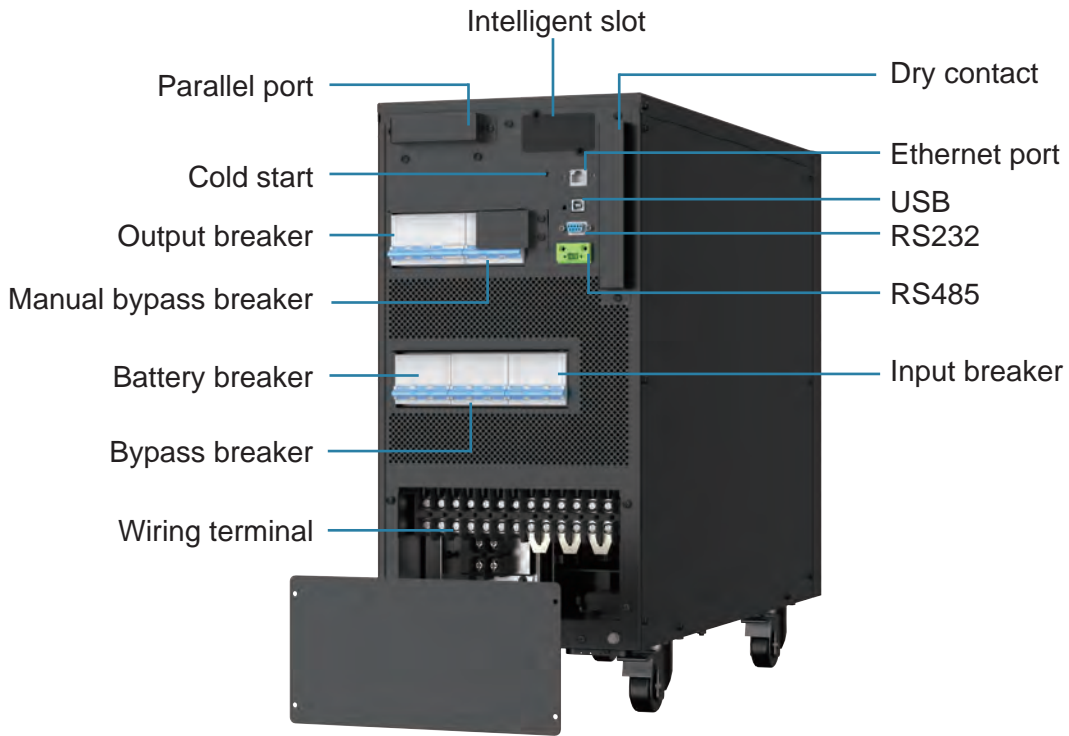
Main interface

Secure access with role-based passwords for User, FAE, and Engineer levels.

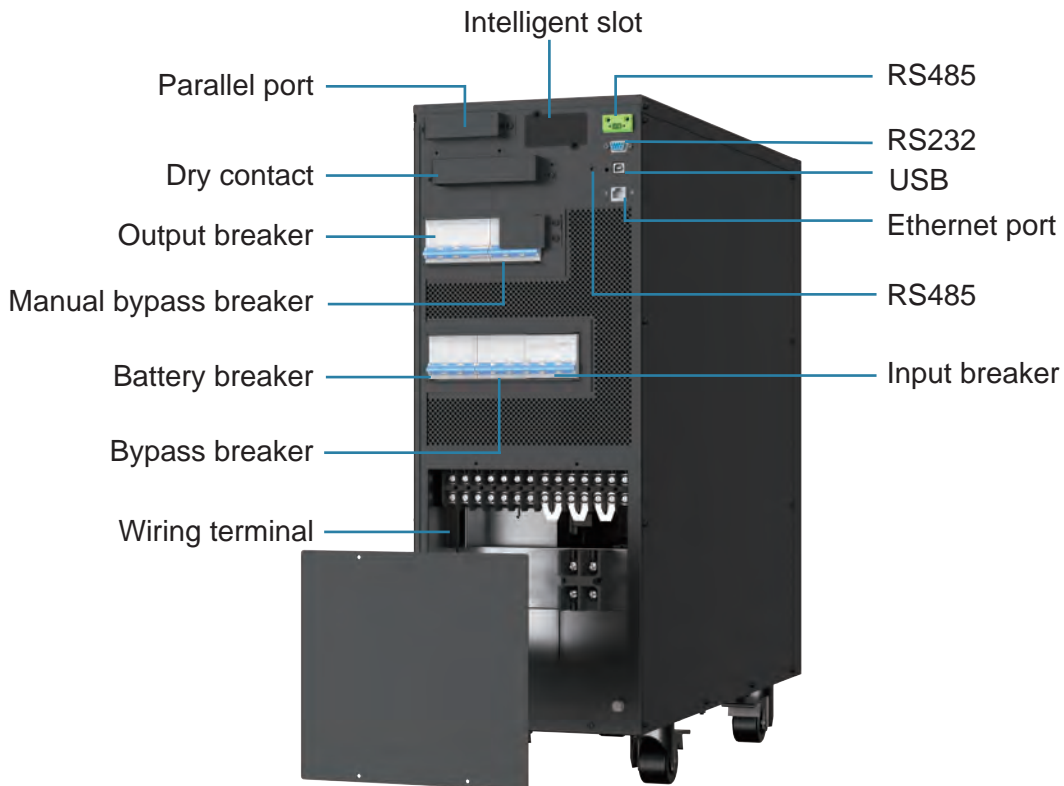
Maintenance reminders function prompt inspections and part checks at preset service intervals.

Comprehensive alarms and protections help prevent faults and extend equipment life.

UPS Structure

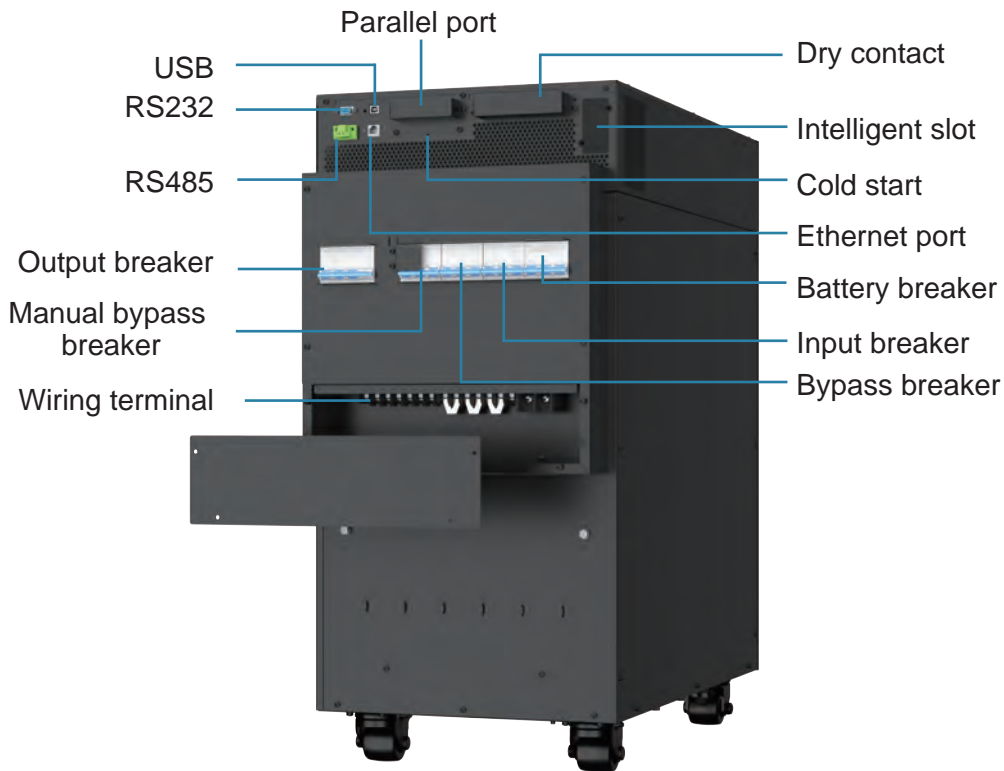


TM33-10kVA-20S

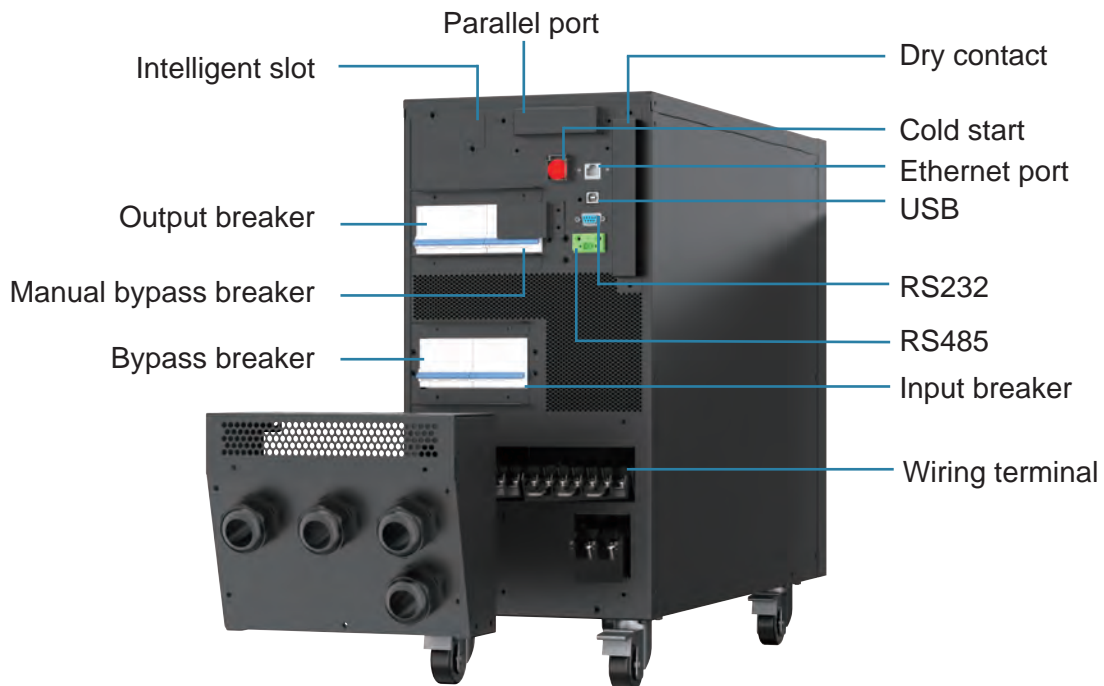


TM33-10kVA-40S/TM33-20kVA-40S



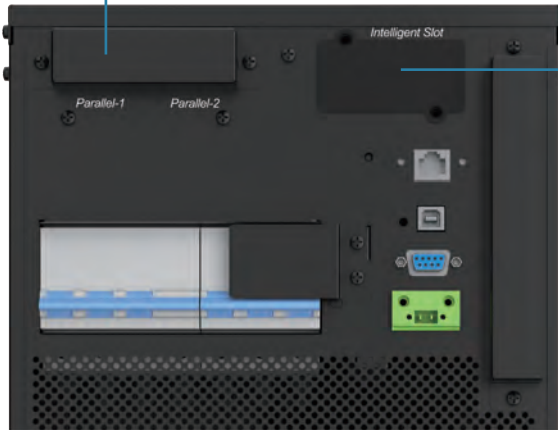
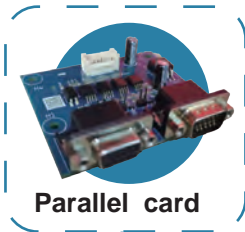


**TM33-10kVA-80S/TM33-20kVA-80S/
TM33-30kVA-80S**



**TM33-10kVA-L/TM33-20kVA-L/
TM33-30kVA-L**

Accessories



TM33 10-200kVA Technical Specifications

Internal battery mode		TM33-10kVA-20S	TM33-10kVA-40S	TM33-10kVA-80S	TM33-20kVA-40S	TM33-20kVA-80S	TM33-30kVA-80S
External battery model		TM33-10kVA-L			TM33-20kVA-L		TM33-30kVA-L
Capacity		10kVA			20kVA		30kVA
MAIN INPUT							
Input		3P5W (3P+N+PE)					
Rate Voltage		380/400/415VAC (L-L); 220/230/240VAC (L-N)					
Rate Freq.		50/60 Hz					
Input PF		>0.99					
Current Distortion		THDi<2%					
Voltage range		304~478VAC (L-L) full load; 304~228VAC (L-L) power derate from 100% to 50%					
FREQUENCY							
Frequency range		40~70 Hz					
OUTPUT							
Rate Voltage		380/400/415VAC (L-L); 220/230/240VAC (L-N)					
Rate Freq.		50/60 Hz					
Output PF		1					
BATTERY							
Rate Voltage		±120VDC	±240VDC				
Model	Internal BAT	UPS with internal batteries, 12VDC/7~9Ah					
	External BAT	UPS for external batteries, Settable					
Quantity	Internal BAT	20PCS	40PCS	80PCS	40PCS	80PCS	80PCS
	External BAT	Depend on external battery					
Charging capacity	Internal BAT	Max. 50% *Pout					
	External BAT						
Charging accuracy		±1%					
BYPASS							
Rate Voltage		380/400/415VAC (L-L); 220/230/240VAC (L-N)					
Voltage range		Range: -40% ~ +25%, Settable, default -20% ~ +15%					
Frequency range		50/60Hz, Settable: ±1Hz, ±3Hz, ±5Hz					
INVERTER							
Voltage accuracy		±1.0%					
Output THDu		<1% (linear load), <5% (non-linear load according to IEC 62040-3)					
Overload		110%, 1 hour; 125%, 10 mins; 150%, 1 min; >150%, 200ms					
Frequency accuracy		0.1%					
Synchronize window		Settable, ±0.5Hz - ±5Hz, default ±3Hz					
Slew rate		Settable, 0.5Hz/S - 3Hz/S, default 0.5Hz/S					
Crest factor		3:1					
Phase accuracy		120°±0.5°					
SYSTEM							
Efficiency		Up to 97%					
Display		LED + 7 inch touch LCD					
Certification - Safety		IEC 62040-1, IEC 60950-1					
Certification - EMS		IEC 62040-2, IEC 61000-4-2(ESD); IEC 61000-4-3(RS); IEC61000-4-4(EFT); IEC 61000-4-5(Surge)					
Certification - Perf.		IEC 62040-3					
IP degree		IP20					
ACCESSORIES							
Configuration		USB, RS232, RS485, Dry contact, Air filter, Cold start					
Option		SNMP card, AS400 card, Parallel kit					
ENVIRONMENT							
Environment		0°C~40°C (operation); -25°C~70°C (storage); 0°C-95°C (Humidity, non-condensing)					
PHYSICAL							
Dimension WxDxH	Internal BAT	250*645*556 mm	250*694*724 mm	400*770*854 mm	250*694*724 mm	400*770*854 mm	400*770*854 mm
	External BAT	250*745*556 mm					
Net weight	Internal BAT	90 kg	139 kg	245 kg	140 kg	248 kg	250kg
	External BAT	30.8 kg			31.8 kg		32.35 kg

Statement: The products will continue to be innovative and optimized, which may lead to asynchronous updates of the actual product and promotional materials. Therefore, this document is for reference only and does not constitute any offer or commitment.

TM33 10-200kVA Technical Specifications

Internal battery mode		TM33-40kVA-80S					/						
External battery model		TM33-40kVA-L		TM33-60kVA-L		TM33-100kVA-L		TM33-120kVA-L		TM33-150kVA-L		TM33-200kVA-L	
Capacity		40kVA		60kVA		100kVA		120kVA		150kVA		200kVA	
MAIN INPUT													
Input		3P5W (3P+N+PE)											
Rate Voltage		380/400/415VAC (L-L); 220/230/240VAC (L-N)											
Rate Freq.		50/60 Hz											
Input PF		>0.99											
Current Distortion		THDi<2%											
Voltage range		304~478VAC (L-L) full load; 304~228VAC (L-L) power derate from 100% to 50%											
FREQUENCY													
Frequency range		40~70 Hz											
OUTPUT													
Rate Voltage		380/400/415VAC (L-L); 220/230/240VAC (L-N)											
Rate Freq.		50/60 Hz											
Output PF		1											
BATTERY													
Rate Voltage		±240VDC											
Model	Internal BAT	UPS with internal batteries, 12VDC/7~9Ah											
	External BAT	UPS for external batteries, Settable											
Quantity	Internal BAT	80PCS		/									
	External BAT	Depend on external battery, 40 PCS (default, 30-50 PCS, selected)											
Charging capacity		Max. 20% *Pout											
Charging accuracy		±1%											
BYPASS													
Rate Voltage		380/400/415VAC (L-L); 220/230/240VAC (L-N)											
Voltage range		Range: -40% ~ +25%, Settable, default -20% ~ +15%											
Frequency range		50/60Hz, Settable: ±1Hz, ±3Hz, ±5Hz											
INVERTER													
Voltage accuracy		±1.0%											
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Frequency accuracy		0.1%											
Synchronize window		Settable, ±0.5Hz - ±5Hz, default ±3Hz											
Slew rate		Settable, 0.5Hz/S - 3Hz/S, default 0.5Hz/S											
Crest factor		3:1											
Phase accuracy		120°±0.5°											
SYSTEM													
Efficiency		Up to 97%											
Display		LED + 7 inch touch LCD											
Certification - Safety		IEC 62040-1, IEC 60950-1											
Certification - EMS		IEC 62040-2, IEC 61000-4-2(ESD); IEC 61000-4-3(RS); IEC61000-4-4(EFT); IEC 61000-4-5(Surge)											
IP degree		IP20											
ACCESSORIES													
Configuration		USB, RS232, RS485, Dry contact, Air filter, Cold start											
Option		SNMP card, AS400 card, Parallel kit											
ENVIRONMENT													
Environment		0°C~40°C (operation); -25°C~70°C (storage); 0°C-95°C (Humidity, non-condensing)											
PHYSICAL													
Dimension WxDxH	Internal BAT	400*800*950 mm		/									
	External BAT	250*728*650 mm				500*850*1350 mm				500*900*1300 mm			
Net weight	Internal BAT	270 kg		/									
	External BAT	66 kg		72 kg		91 kg		100 kg		143 kg			

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