



TM66E 100kVA Modular Series



Modular design

- All units adopt modular design, including power module, bypass module, monitoring module, can be easily integrated in MDC or customized cabinet
- Power module, Bypass module, Monitoring module, ECU control module, all these modules are hot-swappable

High reliability

- Wide input voltage range, line voltage range is 138-485V, UPS will derate to 40% when input voltage is below 323V
- UPS adopts multiple digital bus and redundancy parallel control system, making sure the whole system keep online if any single circuit fail
- The UPS will keep on single or parallel working, if any module fail
- Thickened conformal coating, applicable for harsh environment such as high heat, high humidity, dust, salt spray

Green and power saving

- High input power factor, it is up to 0.99
- 3-level topology design, online efficiency up to 97.1%
- THDi<3% (100% linear load)
- The UPS will work in sleeping mode when the load is very small

HECO mode

- High performance mode, system efficiency up to 99%
- Inverter is in working state and has reactive power compensation and active power filter functions, improving input power factor and quality
- Automatic adjustment of inverter control mode to power the load when bypass is abnormal

VRLA&Lithium battery supportable

- VRLA battery number of each group can be selected from 30pcs to 50pcs (Continuously adjustable)
- Match with Kstar KLi series lithium battery rack, providing higher power density, lower footprint and longer cycle life
- Configuration of VRLA or Lithium can be chose from LCD
- Two wire connection, simplify the construction on site and save the cost of battery neutral cable

Parallel redundancy function

- Support parallel expanded operation: maximum is 8 units
- Support sharing batteries for the UPS in parallel

Strong load capability

- Output power factor is 1.0, UPS can supply power to 100% unbalanced load
- High adaptability for load, it can connect full inductive load or capacitive load

Intelligent management

- With 7 inches (Standard) and 10 inches (Optional) colorful touch LCD screen
- Support recording and exporting history logs and fault logs
- Support SNMP, RS232, RS485, BMS, Dry contact interface
- Support upgrading FW&SW on line
- EPO & REPO function
- Support wave recording when any fault occurs
- Support key components lifecycle management

Compatible with generator

- Power Walk In function, it can reduce the start current impact to system, and it can reduce the capacity of generator

LBS function

- LBS function can realize 2 independent UPS system work in synchronization, and it enhances the reliability of the system

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Technical Specifications

		TM66E-RM-100		
Cabinet Model		TM66E-400	TM66E-500	TM66E-600
Cabinet capacity		400kVA	500kVA	600kVA
Module capacity			100kVA	
Max. number		4	5	6
INPUT				
Nominal voltage		380/400/415Vac, (3Ph+N+PE)		
Operating voltage range		138~322Vac for 40% Load; 323~485Vac for 100% Load;		
Operating frequency range		40Hz-70Hz		
Power factor		≥0.99		
Harmonic distortion (THDi)		≤3% (100% 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%, -15%, -20%, -30%)		
Bypass frequency range		Frequency protection range: ±10%		
Generator input		Support		
OUTPUT				
Rated voltage		380/400/415Vac, (3Ph+N+PE)		
Power factor		1.0		
Voltage regulation		±1%		
Output frequency	Line mode Bat. mode	Synchronize with input, when the input frequency > ±10% (±1%/±2%/±4%/±5% optional), output 50/60 (±0.1Hz) (50/60±0.1%)Hz		
Crest factor		3:1		
Harmonic distortion (THDv)		≤1% with linear load; ≤3% with nonlinear load		
Efficiency		up to 97.1%		
BATTERY				
Battery voltage	VRLA battery Lithium battery	360Vdc~600Vdc (30~50pcs continuously adjustable, 40~50pcs no power derating, 36~39pcs output power factor 0.9, 32~35pcs output power factor 0.8, 30/31pcs output power factor 0.7) 410Vdc/512Vdc(Default)/614Vdc		
Power module charge current		100A (Max.)		
SYSTEM FEATURES				
Transfer time		Utility to Battery: 0ms; Utility to bypass: 0ms		
Overload	Inverter mode Bypass mode	≤110% 60min, ≤125% 10min, ≤150% 1min, >150% 1.2s shut down inverter 30°C: 135% overload for long term; 40°C: 125% overload for long term; >100% overload for 100 ms		
Overheat		Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately Alarm and Switch off		
Low battery voltage		Alarm and Switch off		
Self-diagnostics		Upon Power On and Software Control		
Backfeed		Support		
EPO (Optional)		Shut down UPS immediately (Turn to bypass optional)		
Battery		Advanced Battery Management		
Noise suppression		Complies with EN62040-3		
Audible & visual alarms		Line Failure, Battery Low, Overload, System Fault		
Status LED & LCD display		Line Mode, Bypass Mode, Battery Low, Battery Fault, Overload & UPS Fault		
Reading on the LCD display		Input, Output, Battery, Command, Setting, Maintenance		
Communication interface		RS232, RS485, Parallel, LBS, BMS, Dry contact port, Relay card(Optional), SNMP card(Optional), Battery temperature sensor(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		<70dB		
PHYSICAL				
Dimension W×D×H	UPS cabinet (S) UPS cabinet (F) Power module	800×1000×2000mm 440×755×130mm (3U)		
Net weight	UPS cabinet (S) UPS cabinet (F) Power module	340kg 360kg	380kg 400kg 56kg	430kg 450kg
STANDARDS				
Safety		IEC/EN 62040-1, IEC/EN 62477-1		
EMC		IEC/EN 62040-2 (IEC 61000-2-2, 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)		

S: Without or only with one maintenance bypass breaker

F: With mains, bypass, maintenance bypass and output breakers

1. Specifications are subject to change without prior notice

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



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