

MT Series

MT-Plus Series Online Hot-Swappable Modular UPS (Each Module 40/50KVA)



System Introduction

MT Plus is our new generation of 3 Phase input 3 phase modular UPS. It has been adopted with full digitized control, modular design and N+X Parallel redundancy feature. It has been fully integrated with advanced electronic and electrical automation technology, becoming the leadership product in modular UPS field. Capacity covers from 40KW to 600KW for easy configuration and investments. User can parallel up to maximum 4 racks/cabinet to reach 2400KW.

System Features

High Performance Index

- ◆ All UPS operational sections are full-digital controlled. It provides better system stability and performance. MT Plus has self protection and fault analysis ability to eliminate risks due to analog component failure.
- ◆ System integrates with latest "3-level" inverter technology, overall efficiency can be up to 96%
- ◆ High Density and Smart Size design. 50KW module size is only (W x D x H) 440 x 620 x 130 mm.
- ◆ 100% unbalanced load allowed.

High Reliability

- ◆ N+X parallel redundancy design. System availability can be 99.9%. MTBF is more than 250K hours.
- ◆ Controlling System redundancy design. All modules are independently control but centralized management. Management systems are dual system design so UPS will not be affected if any controlling module defected. Centralized Bypass design can ensure system parallel safety.
- ◆ Hot-Swappable centralized monitoring and management module. When taking out the management and monitoring module, system can still work normally. System also integrates with centralized bypass design to enhance the bypass power supply ability.
- ◆ EPO function available with protection cover to prevent mis-operation. Remote EPO function is also available on MT Plus.

Flexible configuration

- ◆ Modular Design. System is formed by 1 to 12 modules in internal parallel redundancy feature. System power can be maximum 600KW. User can save investments by getting a big capacity rack but starting with small numbers of module. In the future user only needs to buy power module to expand the capacity of the system. Hot-swappable feature to ensure user can do online maintenance, repair and expansion. This can highly reduce the maintenance and repairing time.
- ◆ Short maintenance/repairing time. If the number of defected module is less than redundancy module, user can reach 0 minute system down time. If the number of defected module is more than redundancy module, the onsite repairing time can be less than 5 minutes by changing modules.
- ◆ Intuitive LCD touch screen provides rich UPS operational information, fault alarm. Single module also equipped with LED screen and indicators, user can also find out information about each single module working status.
- ◆ System equipped with automatically static bypass and manual maintenance bypass at the same time in case of any failure.



Intelligent design

- ◆ Charging current can be set via the front LCD screen according to user battery configurations. Charger equipped with multiple charging functions such as equalized/pulse charging, float charging, constant charging and etc.
- ◆ Intelligent battery management system. UPS will automatically select the best charging methods to suit battery current status. UPS will also take an evaluation thru the DSP controlled BMS (Battery Management System) to check battery lifetime and expand the battery lifetime thru the best charging and discharge cycles.
- ◆ Rich optional accessories. User can choose to install optional transformer kit, power distribution panel, SNMP adapter, dry contact adapter or etc.

Green Energy

- ◆ MT Plus is designed from 19 inch standard cabinet system to perfectly fit standard equipment room and save the initial investments.
- ◆ Share common battery bank in parallel racks/cabinets to high reduce the battery investments for end-users.
- ◆ Flexible battery configuration. User can choose from 30/32/34/36/38/40/42/44/46/48/50 units according to the actual requirements.

Specification

Model	MT3000L33 (50-300KVA/45-270KW)		MT4000L33 (40-400KVA/40-400KW)		MT5000L33 (50-500KVA/45-450KW)		MT6000L33 (50-600KVA/45-540KW)	
Capacity	50-300KVA		40-400KVA		50-500KVA		50-600KVA	
Single Module Capacity	50KW							
Host Machine Specification								
UPS Structure	Online Double Conversion							
Appearance	Standard Telecomm Cabinet with Modular Structure Design							
Overall Efficiency	> 96%							
Noise (In 2 Meters)	< 70dB							
Working Temp.	0-40℃							
Storage Temp.	-25 ~ 55℃ (Without Battery)							
Humidity	< 95% Non-Condensing							
Safety Standard	IEC62040							
EMC Standard	CE,YD/T1095-2008, EN /IEC 62040-2, EN/IEC 62040-1-1							
Parallel Redundancy	Modular Parallel upto 12 Units, Available for Rack Parallel.							
Protection	Overload, Short-Circuit, Over Temp., Utility Power Voltage High/low, BAT Voltage High/low							
DC Start	Available							
Generator Compatibility	Available							
Display	7 Inch LCD Color Touch Screen:multi-language with all kinds of messages+LED							
Mute	Auto							
Cabinet Standard	IP20							
Cooling System	Intelligent Speed Control Cooling Fan							
Elevation	< 1000M without derated, >1000M: Derated 1% every 100M							
Rectifier Specification								
Input Voltage	380/400/415Vac+N+W 3 Phase							
Input Voltage Range	138-485Vac							
Input Frequency Range	40-70Hz							
Soft-Start	> 60 Seconds							
Input PF	0.99							
THDI	≤ 3%(100% Non-Linear Load)							
Output Specification								
Output Voltage	Line Voltage: 380/400/415× (1±1%) AC or Phase Voltage 220× (1±1%) AC							
Output Power Factor	1							
Output Voltage Regulation	380Vac±1% (Static Load) ; 380Vac±2% (50-0% Sudden Change) ; 380Vac±3% (100-0% Sudden Change)							
Output Frequency	Synchronization with Input at online mode. When differences are greater than ±10% (Selectable±1%,2%,4%,5%) Output freq. will be 50×(±0.2)Hz							
Distortion	<1%(Linear Full Load); < 3%(Non-Linear Full Load)							
3 Phase Unbalanced	Allow 3 Phase 100% Unbalanced							
Output Volt. Unbalanced Degree	≤1% (Balanced Load) , ≤2% (50% Balanced Load)							
Input/Output Phase Shift	≤1° (Balanced Load) , ≤2° (50% Balanced Load)							
Frequency Tracking Range	47-63Hz							
Output Waveform	Pure Sine Wave							
Overload	110%: More than 60 mins > 125%: More than 10 min; > 150%: More than 60 Seconds then transfer to bypass							
Crest Ratio	3 : 1							
Efficiency	> 96%							
Short-Circuit	Circuit Auto-Protection, Bypass Switch Tripping							
Output Abnormal	INV. Output Auto-Locked Protection							
Bypass Specification								
Static Bypass Transfer Time	0ms							
Static Bypass Input Range	Bypass Protection upper limit: +15% (adjustable +5%、+10%、+25%) Bypass Protection lower limit: -45%(adjustable-20%、-30%) Bypass Frequency Protection Range: ±10%							
Frequency Range	±1Hz,							
Bypass --> INV Transfer Time	2ms							
Frequency Tracking Speed	0.5-2hz/s							
Manual Maintenance Bypass	Available							
Battery Specification								
Type	Sealed Lead Acid Maintenance Free							
BAT Rated Volts/Units	±180V/±192V/±204V/±216V/±228V/±240V/±252V/±264V/±276V/±288V/±300V DC; (30-50 Units Selectable)							
Charging Cabinet	Depending on Module Numbers							
Current Module	20A max							
BAT Low	Shutdown Protection							
Communication Specification								
Communication Port	RS232/SNMP/485/ Dry Contact (Optional Accessory)							
Remote Software	Multi-functional Monitoring System, Online and BAT Mode Status, BAT Fault, Remote Control							
Physical Parameters								
Module Size mm (W×D×H)	440×620×130/3U							
Cabinet Size mm (W×D×H)	600×850×2000		600×850×2000 (Standard) 1200 x 850 x 2000 (Full-Size)		1200×850×2000 (Full-Size)			
Module Net Weight Kg	32							
Cabinet Net Weight Kg	260		280/600		645		720	

Note: Specifications are subject to change without further notice.

