



MT Series

MT Series Online Hot-Swappable Modular UPS (Each Module 20KVA)

System Introduction

MT-Series is a true double conversion modular structure online UPS system with parallel redundancy feature, which can completely replace traditional 1+1 parallel UPS systems with Input Harmonic wave distortion $THDI \leq 5\%$ and overall efficiency AC~AC up to 95%, MT-Series can be defined as a high reliability and efficiency green power. It also integrates with remote monitoring and friendly user communication interface, which is ideal for medium to large data centers, precision equipment, and telecommunications industry.



System Features

High Performance Index

- ◆ MT-Series is designed with concept of disk array and system modular redundancy. It is formed by 1 to 10 rated capacity of 20KVA UPS Power modules, which are available for online hot-swappable expansion. Users can increase the number of modules for UPS system expansion without replacing or system parallel while Load capacity increases, which greatly reduces user investments;
- ◆ MT-Series integrates advanced power multi capacities and phase technology. MT-Series can be chosen between 3 Phase In/Out and 3 Phase In/1 Phase Out Structures, and kept net power consistent;
- ◆ All power modules in the systems arrays have the same average divided loads, and each parallel built-in redundant module is an intelligent independent monomer. This reduces systems and Loads risks, and extends external loads protection time under UPS protection;
- ◆ MT-Series Power System Hot-Swap feature overcome the traditional UPS maintenance (Loads switch to bypass) technical problems, which reduces system maintenance costs, and comprehensively protects the Loads normal operations;
- ◆ MT-Series Power System has the superior parallel ability, which raises the UPS reliability to a higher level. Its MTBF is 1.5 times longer than that of traditional UPS systems, and MTBCF is 3 times longer than that of traditional UPS systems. The MTTR is less in 5 minutes;
- ◆ MT-Series has dual way information monitoring and self-diagnostic functions with intelligent network monitoring software;
- ◆ MT-Series uses advanced PFC circuit design, which makes MT-series has series of advantages such as Input PF = 0.99, $THDI \leq 5\%$. THD is less than 2% under linear loads condition, and overall efficiency AC~AC up to 95%, which greatly reduce power consumption and pollution.

Safe and Reliable

- ◆ Parallel Redundancy Module Technology to increase system reliability;
- ◆ Online Hot-Swap feature to reduce system maintenance costs and comprehensively protects the Loads operations;
- ◆ MTBF is 1.5 times longer than traditional UPS systems;
- ◆ 90% of system components are from international famous brands. All devices has been aged and tested for 24 hours.

Compatible applications/loads

MT-Series is designed for small and medium important equipment/application systems, such as SME data exchange centers, communication equipment industry, and precision instruments.



Specification

Model	32U/Maximum 140KVA	42U/ Maximum 200KVA
Capacity	20KVA/16KW	
Host Machine Specification		
UPS Structure	Online Double Conversion	
Appearance	Standard Telecomm Cabinet with Modular Structure Design	
Overall Efficiency	> 95%	
Noise (In 2 Meters)	< 50-65dB	
Working Temp.	0-40°C	
Storage Temp.	-25 ~ 60°C (without batteries)	
Humidity	< 95% Non-Condensing	
Safety Standard	IEC62040-1	
EMC Standard	YD/T2165-2010, EN 50091-2, EN50082-2, EN62040-2	
Parallel Redundancy	Modular Parallel upto 10 Units	
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	380Vac+N+W, 3 Phase	
Input Voltage Range	380Vac+15% -25% (304-478Vac)	
Input Frequency Range	50Hz±5%	
Soft-Start	> 60 Seconds	
Input PF	0.99	
THDI	< 10%	
Input Current	20KVA:N×3×15A, Starting without surge current	
Output Specification		
Output Voltage	Line Voltage: 380× (1±1%) AC or Phase Voltage: 220× (1±1%) AC	
Output Power Factor	0.8	
Output Voltage Regulation	380Vac±1% (Static Load) ; 380Vac±2% (50-0% Sudden Change) ; 380Vac±3% (100-0% Sudden Change)	
Output Frequency	50Hz±0.1% (BAT Mode)	
Distortion	<2%(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 Swift	≤1° (Balanced Load) , ≤2° (50% Balanced Load)	
Frequency Tracking Range	47-63Hz	
Output Waveform	Pure Sine Wave	
Overload	110%: More than 10 mins	
	> 125%: More than 1 min;	
	> 150%: More than 30 Seconds then transfer to bypass	
Crest Ratio	3 : 1	
Efficiency	> 95%	
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	380Vac (-15~+15%)	
Frequency Range	50/60Hz±1Hz, ±2Hz, ±3Hz Adjustable	
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	± 360Vdc (±30 Units)	
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)	20KVA: 440 × 590 × 131/3U	
Cabinet Size mm (W×D×H)	32U Cabinet : 600×800×1516	42U Cabinet : 600×800×2050
Module Net Weight Kg	20KVA: 22	
Cabinet Net Weight Kg (including Bypass and Power Distribution)	32U Cabinet 80KVA : 85Kg	
	32U Cabinet 100KVA : 90Kg	
	32U Cabinet 140KVA : 95Kg	
	42U Cabinet 100KVA : 115Kg	
	42U Cabinet 160KVA : 120Kg	
	42U Cabinet 200KVA : 125Kg	

Note : Specifications are subject to change without further notice.



5/7 inch color touch screen+LED





MT Series

MT-B Series Online Hot-Swappable Modular UPS

(Each Module 30KVA)



System Introduction

MT-B Series is 30-300kVA Online HF double conversion topology. It adopts dual DSP controlled technology with modular parallel redundancy feature. System can parallel racks upto 4 racks. The system THDI $\leq 5\%$, and system overall efficiency AC~AC upto 95%. Thus, MT-B Series can be defined as a high reliability and efficiency green power and suitable for medium to large data centers, precision equipment, and telecommunications industry.

System Features

High Performance Index

- ◆ 3/3 Phase double conversion online technology. Input 3 phase load balanced design.
- ◆ System adopts dual DSP controlled to enhance the overall reliability and keep low defective rate.
- ◆ 19 inch standard cabinet design to perfectly match equipment room working environment with 1.4 or 2 meter cabinet heights.
- ◆ Modular structural design. Each module is 30KVA. System can add from 1 to 10 modules. Maximum capacity 300KVA, user can be flexible to choose different capacity to match requirements. UPS modules can be hot-swappable to do online maintenance.
- ◆ High density module design. Each module is 3U. 1.4 meter height system cabinet can put maximum 5 modules with total 150VA. 2 meter height system cabinet can put maximum 10 modules with total 300KVA.
- ◆ N+X Parallel Redundancy design. With $X \geq 2$ modules, UPS system reliable rate can be upto 99.9%, MTBF is upto 250K hours.
- ◆ Control module parallel redundancy. MT-B Series each module is independently controlled by own controlling systems. Any module failure will not be affecting the whole system. With hot-swappable technology, user can easily eliminate failed modules.
- ◆ Individual bypass design. Each module has built-in bypass breaker and bypass inductance to keep better system reliability.
- ◆ Share Common Battery Bank in parallel systems to reduce user initial battery investments.
- ◆ Flexible battery configuration (32-40 pieces selectable). User can choose customized configuration with 32/34/36/40 pieces.
- ◆ Charging current can be selectable. User can set battery capacity on the LCD panel to auto select the best charging rate for the batteries. Also various charging methods can be chose via front panel.
- ◆ Intelligent Charging Managements: Stage 1 with constant high charging current to reach 90% capacity. Stage 2 with constant voltage- flexible current charging to reach 99% battery capacity. Stage 3 will go to float charge. Charger will choose charging modes to activate battery lifetime and save battery investments.
- ◆ Big LCD touch screen (320*240 dot-matrix) display. Language can be chosen on the front screen. Rich operational information will be shown on the front screen such as all UPS parameters.
- ◆ Each module has additional LCD + LED display. User can simply check each module working status.
- ◆ Intelligent management system. User can choose SNMP adapter to remotely monitor UPS status.
- ◆ Standard Maintenance bypass feature. User does not need to pay extra for maintenance bypass.
- ◆ EPO equipped.

Safe and Reliable

- ◆ Parallel Redundancy Module Technology to increase system reliability;
- ◆ Online Hot-Swap feature to reduce system maintenance costs and comprehensively protects the Loads operations;
- ◆ MTBF is 1.5 times longer than traditional UPS systems;
- ◆ 90% of system components are from international famous brands. All devices has been aged and tested for 24 hours.



Compatible applications/loads

MT-B Series is designed for small and medium important equipment/application systems, such as SME data exchange centers, communication equipment industry, and precision instruments.



Specification

Model	90KVA (30-90KVA/27-81KW)	150KVA (30-150KVA/27-135KW)	300KVA (30-300KVA/27-270KW)
Capacity	30KVA/27KW		
Host Machine Specification			
UPS Structure	Online Double Conversion		
Appearance	Standard Telecomm Cabinet with Modular Structure Design		
Overall Efficiency	> 95%		
Noise (In 2 Meters)	< 50-65dB		
Working Temp.	0-40°C		
Storage Temp.	-25 ~ 55°C (Without Batteries)		
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 10 Units		
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	380Vac+N+W, 3 Phase		
Input Voltage Range	208-478Vac		
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× (1±1%) AC or Phase Voltage: 220× (1±1%) AC		
Output Power Factor	0.9		
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 50Hz±0.2% (BAT Mode)		
Distortion	<2%(Linear Full Load); < 5%(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 Swift	≤1° (Balanced Load) , ≤2° (50% Balanced Load)		
Frequency Tracking Range	47-63Hz		
Output Waveform	Pure Sine Wave		
Overload	110%: More than 10 mins		
	> 125%: More than 1 min; > 150%: More than 30 Seconds then transfer to bypass		
Crest Ratio	3 : 1		
Efficiency	> 95%		
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, ±2Hz, ±3Hz Adjustable		
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	±192V\±204V\±216V\±228V\±240V DC; (32、34、36、38、40 Units Selectable)		
Charging Current	Cabinet	30Amax	50Amax
	Module	10Amax	
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)	30KVA: 443×580×131/3U		
Cabinet Size mm (W×D×H)	600×840×1400	600×840×1400	600×1100×2000
Module Net Weight Kg	30KVA: 33		
Cabinet Net Weight Kg	157	169	306

Note Specifications are subject to change without further notice.

