

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 150KVA. 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	100Amax
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.

