AMEL
AMpliEnergy Limited





AME UNINTERRUPTIBLE POWER SUPPLY

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AEL is excited to introduce top-quality Uninterruptible Power Supply (UPS) solutions into our OEM supply line, tailored for the critical needs of Hong Kong. In a city where reliable power is crucial, our UPS systems ensure continuous operation and protect important infrastructure from power outages.

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1.1 Tower Series

Small Loading/Rack Mounted UPS

The Tower Series is an online double-conversion uninterruptible power supply that delivers stable sine-wave power to your essential equipment. It is designed to support personal computers, networks, servers, VoIP systems, and telecommunications.

Easy to Use

Rack/tower convertible design for easy installation

Optimized Battery Performance

Hot-Swappable battery design Maximum charging current can be expanded to 12A (Long run unit)





Colourful LCD

Blue LCD

Advanced Touch Screen



Battery Cabinet (Optional)



Optimized Battery Configuration 7/9Ah

Wide input voltage range

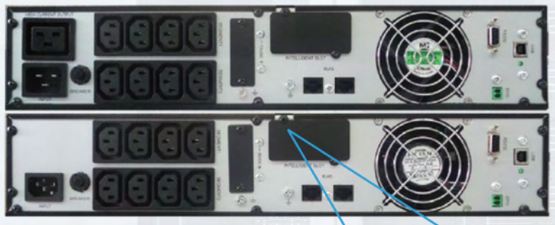
1. 110~300Vac
2. Input power factor 0.99 with PFC
3. Selectable output voltage: 208/220/230/240Vac

Energy Saving

ECO mode operation for energy saving

1.2 Key Features

- Rack/Tower convertible design
- Online double conversion with full digital control
- Wide input voltage range: 110~300Vac
- Input power factor 0.99 with PFC
- Selectable output voltage: 208/220/230/240Vac
- Smart charger design for optimized battery performance
- Maximum charging current can be expanded to 12A (Long run unit)
- Emergency power off function (EPO)
- ECO mode operation
- Generator compatible
- Hot-Swappable battery design
- Cold start
- Intelligent fan speed regulation
- Load segment settable (Optional)
- Versatile LCD human-computer interface
- Multiple communication interface: RS232 (USB/EPO/Dry
  Contact card/SNMP card optional)





Dry contact Card



SNMP Card



The 3.5 inch touch screen LCD panel can be rotated

1.3 Technical Specifications

MODEL	Tower 1k H	Tower 1k S	Tower 1.5k H	Tower 1.5k S	Tower 2k H	Tower 2k S	Tower 3k H	Tower 3k S
Capacity (VA/W)	1000/900		1500/1350		2000/1800		3000/2700	
INPUT								
Nominal Voltage (Vac)	208/220/230/240							
Operating Voltage Range (Vac)	110~300 (176~264 @ 100% load)							
Power Factor	≥0.99							
Bypass Frequency Range (Hz)	40~70 (50/60 Auto-Sensing)							
OUTPUT								
Nominal Voltage (Vac)	208/220/230/240							
Voltage Regulation	±1%							
Power Factor	0.9							
Output Frequency (Hz)	Line mode: 46~54 or 56~64; Bat. mode: (50/60±0.1%)							
Crest Factor	3:1							
Harmonic Distortion (THDv)	≤3% Linear load; ≤5% Non linear load							
Transfer Time (ms)	AC mode to Bat.mode: 0; Inverter to Bypass: 4 (Typical)							
Waveform	Pure Sinewave							
EFFICIENCY								
AC Mode	Up to 90%		Up to 90.5%		Up to 91%		Up to 92%	
ECO Mode	Up to 95%		Up to 96%		Up to 96%		Up to 97%	
BATTERY								
Battery Type	VRLA (Lead acid maintenance free battery)							
Battery Voltage (Vdc)	24	36	24	36	36	48	72	48	72	72	96	72
Battery Capacity (Ah)	S: 7/9; H: Depends on the capacity of external batteries							
Battery Quantity (pcs)	2	3	2	3	3	4	6	4	6	6	8	6
Typical Recharge Time (hours)	S: 4 (To 90% of full capacity)							
Charging Current (Max.) (A)	6/12		1		6/12	1	6/12		1	6/12		1
MANAGEMENT								
LED Display	Line mode, Bat.mode, ECO mode, Bypass mode, Battery low voltage, Overload & UPS fault							
LCD Display	Input voltage, Input frequency, Output voltage, Output frequency, Load percentage, Battery voltage, Inner temperature& Remaining battery backup time							
ENVIRONMENTAL								
Operating Temperature (°C)	0~40							
Storage Temperature (°C)	-25~55							
Humidity Range	20~95%RH @ 0~40°C (Non condensing)							
Altitude (m)	440×600×86.5		<1000, derating required between 1000 to 3000					
Noise Level (dB)	<50							
Dimension WxDxH (mm)	440(W)×325(D)×86.5(H)		440(W)×440(D)×86.5(H)	440(W)×600(D)×86.5(H)	440(W)×600(D)×86.5(H)	440(W)×600(D)×86.5(H)	440(W)×460(D)×86.5(H)	440(W)×460(D)×86.5(H)	440(W)×600(D)×86.5(H)	440(W)×600(D)×86.5(H)		
Weight (kg)	5.6	11.3	14	9.1	16.5	10.5	19.5	25	11	26		
STANDARDS								
Safety	IEC/EN 62040-1, IEC/EN 62477-1							
EMC	IEC/EN62040-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8							

1. When output voltage is 208Vac,need to derate to 80% of the unit capacity
2. Specifications are subject to change without prior notice
3. Data above are typical values for reference only, not as a basis for engineering design

2.1 Tower Max Series



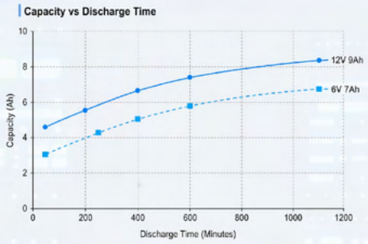
Features

- Lithium or VRLA battery selectable
- Wide input voltage range: 110~300Vac
- Dual input source (Optional)
- Generator compatible
- Support customized common battery banks, when UPSs are used in parallel and only for VRLA version

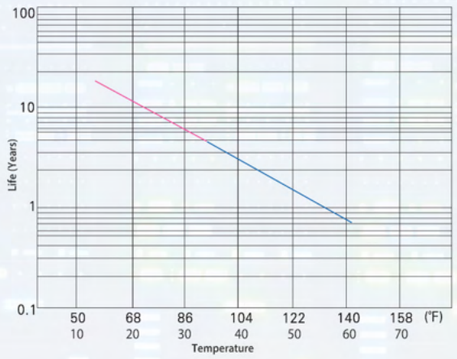
  (The battery banks should be configured with neutral line)
- 4U Standard version is available with external battery port (Optional)
- Programmable receptacles
- The 3.5 in touchscreen supports both lithium and VRLA battery versions, the three segment LCDs are compatible with VRLA version only
- Multiple communication interface: RS232/USB/RS485/EPO/PDU signal/Battery temperature signal/Battery group signal/Dual Intelligent card slot (Mini card slot optional)
- Maximum charging current up to 15A
- Cold start function (Only for VRLA battery)
- Dual Intelligent card slot for touch screen version (Segment LCD optional)
- Dry contact port optional (4 pins input and 4 pins output)
- Rail (Optional)
- PDU with maintenance bypass switch (Optional)
- Intelligent fan speed regulation
- Low noise design, less than 45dB for 6kVA
- Multiple protection function: short-circuit, overload, overheat, battery overcharge and overdischarge, output low voltage and fan fault alarm
- IEC62619/UL1973/UN 38.3 certified lithium battery pack

Parameter		12V 9Ah	6V 7Ah
■ Specifications			
Nominal Voltage		12V	6V
Rated Capacity (10 hour rate)		9Ah	7.0Ah
Total Height (with terminals)		100mm	101mm
Height		94mm	95mm
Length		151mm	151mm
Width		65mm	34mm
Weight		2.52kg	1.15kg
■ Characteristics			
Internal Resistance (Full Charged Battery 25°C)		18 mΩ	19 mΩ
Capacity @ 40°C		102%	
Capacity @ 0°C		100%	
Capacity @ 0°C		85%	
Self-Discharge	3 months	91%	91%
	6 months	81%	81%
	12 months	60%	60%
Max. Discharge Current (25°C)		135A (5S)	105A (5S)
Cycle Charge Initial Charging Current		Less than 2.7A	Less than 2.1A
Cycle Charge Voltage		14.4V	7.2V
Float Charge (@ 25°C)		13.8V	6.9V
Compensation Coefficient		-18mV/°C	-9mV/°C (Float) / -12mV/°C (Cycle)

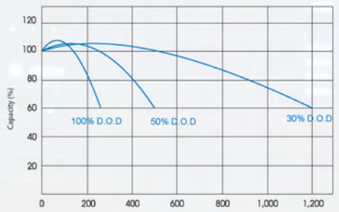
Capacity vs Discharge Time



Temperature Effects Float Life



Cycle Service Life in Relation to Depth of Discharge



2.2 Technical Specifications

MODEL		Tower 6k H	Tower 6k S	Tower 10k H	Tower 10k S
Capacity (VA/W)		6000/6000		10000/10000	
INPUT					
Nominal Voltage (Vac)		208/220/230 (Default)/240			
Operating Voltage Range (Vac)		110~300 (110~300@50% load/176~300@100% load)			
Power Factor		≥0.99			
Input Connection		HW terminal (L+N+G)			
Harmonic Distortion (THDi)		＜2%			
Bypass Voltage Range (Vac)		Max.voltage: 208/220: +25% (Optional +10%, +15%, +20%) 230: +20% (Optional +10%, +15%) 240: +15% (Optional +10%) Min.voltage: -45% (Optional -10%,-20%, -30%)			
OUTPUT					
Nominal Voltage (Vac)		208/220/230 (Default)/240			
Voltage regulation		±1%			
Power Factor		1.0			
Output Connection		Programmable: C19*2+C13*3; Non-programmable: HW terminal (L+N+G)			
Output Frequency (Hz)		Online mode: ±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional); Battery mode: 50/60±0.1%			
Crest Factor		3:1			
Harmonic Distortion (THDv)		<1% Linear load ; <3% Non linear load			
Transfer Time (ms)		AC mode to Bat.mode: 0; Inverter to Bypass: 0			
Waveform		Pure Sinewave			
Overload	Online mode	Load≤110%, last 60min; ≤125%, last 10min; ≤150%, last 1min; >150%, turn to bypass mode immediately			
	Battery mode	Load≤110%, last 10min; ≤125%, last 1min; ≤150%, last 10 second; >150%, 0.5 second shut down			
	Bypass mode	105%≤load≤130%, only overload alarm; ≤150%, last 10min; ≤200%, last 1min; >200%, 0.5 second shut down			
EFFICIENCY					
AC Mode		Up to 95%		Up to 95.5%	
ECO Mode		Up to 98.8%		Up to 99%	
BATTERY					
Battery Voltage (Vdc)	VRLA battery	192 (Default)/216/240	192 (7/9Ah)	192 (Default)/216/240	192 (9Ah)
	Lithium battery	192	/	192	/
Charging Current (Max.)(A)		12 (15 Optional)	1.35 Default (12, 15 Optional)	15	1.35 Default (15 Max.)
		Charging current adapts to the battery type and battery capcacity			
MANAGEMENT					
LED Display		Online mode, Bat.mode, ECO mode, Bypass mode, Battery low voltage, Overload & UPS fault			
LCD Display		Input voltage, Input frequency, Input current, Output voltage, Output frequency, Output current, Load percentage, Battery voltage, Battery charging/discharging current, Ambient temperature & Remaining battery backup time			
ENVIRONMENTAL					
Operating Temperature (℃)		0~40			
Storage Temperature(℃)		-25~55			
Humidity Range		0~95%RH @ 0~40oC (Non condensing)			
Altitude (m)		<1000, derating required between 1000 to 3000			
Noise Level (dB)		<45		<50	
PHYSICAL					
Dimension WxDxH (mm)		440×621.5×86.5 (2U)	440×621.5×175 (4U)	440×621.5×86.5 (2U)	440×621.5×175 (4U)
Weight (kg)		15	57/65	17	67
STANDARDS					
Safety		EN IEC 62040-1: 2019 + A11:2021			
EMC		IEC 62040-2: 2016, EN IEC 62040-2: 2018, C2			
Performance		IEC 62040-3: 2021, EN IEC 62040-3: 2021			

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
3. *Online mode, full load, float charging

3.1 Elite Series - Industrial UPS

The Elite Series is a transformer-based UPS, both input and output are 3 phase.The output power factor is 0.9. This ups can work in paralle and expand its power capacity. This series UPS is high reliable and have good impact resistance, it can suppply safe and reliable protection for load.



3.2 Features of the UPS

- Digital Technology: Dual-DSP control, advanced management, easy debugging, and diverse data for users.
- Reliable Structure: Uses thyristor phase-control for the rectifier and IGBT for the inverter, ensuring safety and zero transfer time between modes.
- Input/Output Capabilities: Supports various voltage systems (380V/400V/415V, 50/60Hz) with a high output power factor and a generator mode to extend battery life.

Online Double Conversion

- Online Double Conversion design helps to output a pure sine wave, which is immune from the UPS input, so that the
- UPS transfers among different working mode without output interruption, thereby powering the load uninterruptedly

Full DSP Control

- Double DSP control makes the whole system more stable and reliable

High Power Factor

- The output power factor up to 0.9 better matches the load
- The input power factor 0.97 with filter helps to improve the efficiency, reduce the harmonic pollution to the Grid and lower the UPS running cost

N+X Parallel Redundancy

- N+X parallel redundant design, up to 6 units available,makes the configuration more flexible
- Any unit in parallel system fails, the faulty one will automatically cut off the output, and the load will be powered by the remained units
- It is easy to configure the parallel system just by connecting the parallel cables and doing proper settings
- Non-fixed Master-Slave relationship: Among several UPS in parallel, the unit startup first is Master UPS, the others are Slave. The master and slave may be exchanged

Optimized Battery Management

- Intelligent battery management system and advanced
- Battery auto float/boost charge technology, reduces thefrequency of battery maintenance, greatly improves the battery efficiency and extends battery life
- Battery discharge time prediction: The system will display the backup time of battery calculated by discharge current and voltage
- Battery self-test: Battery is automatically tested at regular intervals
- Flexible battery voltage configuration

Power Walk In

- Specially designed power walk in function, in which rectifier of each unit in parallel system will be turned on in sequence at intervals to avoid the sudden load on the generator, thereby reducing the cost of the generator required

Generator Mode

- Set the maximum output power of the generator when a smaller one than needed is employed to extend the battery duration time. In this case, the load is supplied by both the generator and battery

LBS Synchronization

- Synchronize the output of the two independent UPSsystems (Single unit or parallel) even when the two systemsare operating on different modes (Bypass/Inverter) or on battery

Wide Input Adaptability

- The range of AC input voltage is (380/400/415Vac) (-25%/+20%), minimizing transfer to battery mode, the reby greatly prolonging the battery life
- Wide input frequency ranging from 45Hz to 65Hz, ensures stability of UPS while generator connected 10 efficiency, reduce the harmonic pollution to the Grid and lower the UPS running cost

Multi-Potection

- Self-diagnosis function will take place before start-up for safety
- Multi-protection: AC input under/over voltage, overload, short-circuit, over-current, over bus voltage, overtemperature, fan failure, auxiliary power failure, battery under voltage, battery over-charge and so on

EPO Function

- A concave red EPO button with transparent cover is embodied in the LCD control panel for emergency power off

User-friendly Network Management

- Chinese/English LCD and LED mimic diagram: Real time operation parameters and status (7 inch touch screen optional)
- RS232 & RS485 communication ports: For local monitor-with corresponding software, both can supportMODBUS rotocol
- SNMP adapter (Optional): For remote monitor through-network
- Dry contacts (10-160kVA optional) for additional monitoring:
  a) UPS on Inverter
  b) Mains input failure
  c) Remote EPO
  d) Battery low voltage alarm
  e) UPS fault
  f) UPS alarm
  g) UPS on battery
  h) UPS on bypass
  Note：d)--h) optional

3.3 Technical Specifications

This 1KVA&2KVA&3KVA high input power factor UPS system contains two major PCB assemblies. They are including:

MODEL	Elite 10K	Elite 20K	Elite 30K	Elite 40K	Elite 60K	Elite 80K	Elite100K	Elite120K	Elite160K
Capacity (kVA/KW)	10/9	20/18	30/27	40/36	60/54	80/72	100/90	120/108	160/144
INPUT									
Operating Voltage Range (Vac)	380/400/415 (-25%/＋20%), (3Ph＋PE)								
Operating Frequency Range (Hz)	50/60 (±5%)								
Power Factor	≥0.97 *								
OUTPUT									
Output Voltage (Vac)	380/400/415 (±1%), (3Ph+N+PE)								
Output Frequency (Hz)	50/60 (±0.05%)								
Harmonic Distortion (THDv)	≤2% (Linear load)						≤1% (Linear load)		
Crest Factor	3:1 (Max)								
Efficiency	Up to 88%	Up to 89%		Up to 90%		Up to 90.5%	Up to 92%		Up to 92.5%
BYPASS									
Rated Voltage	380/400/415, (3Ph＋N＋PE)								
Rated Frequency	50/60								
Voltage Protection Range	Upper limit: +20% (+10%, +15%, +20% adjustable) Lower limit: -40% (-10%, -20%, -30%, -40% adjustable)								
Frequency Protection Range	±10% (±2.5%, ±5%,±10%, ±20% adjustable)								
BATTERY									
Battery voltage (Vdc)	384 (360~384)								
SYSTEM FEATURES									
Transfer Time (ms)	0 (Line mode→ Battery mode)								
Overload	Load≤110%/60min; ≤125%/10mins; ≤150%/1 min, to Bypass								
LED Display	Input, Inverter, Bypass, Battery, Output, Status								
LCD Display	I/O voltage, frequency, power, power factor, battery voltage, current, battery status, load percentage, UPS status, history record								
Communication Interface	RS232, RS485, EPO, Dry contact (Optional), SNMP card (Optional)								
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor								
ENVIRONMENTAL									
Operating Temperature(℃)	0~40								
Storage Temperature (℃)	-25~55								
Humidity Range	0~95% (Non-condensing)								
Altitude (m)	<1500								
Noise Level (dB)	<58				<68				
PHYSICAL									
Dimension WxDxH (mm)	350×650×1050			430×830×1100		720×690×1400	720×690×1400 (6P) 1515×830×1600 (12P)	720×690×1400 (6P) 1515×830×1600 (12P)	890×790×1600 (6P) 1400×1000×1900 (12P)
Net Weight (kg)	145	165	204	255	320	450	556 (6P)/1300 (12P)	693 (6P)/1450 (12P)	780 (6P)/1645 (12P)
Shipping Weight (kg)	160	180	225	280	345	485	591 (6P)/1370 (12P)	738 (6P)/1520 (12P)	825 (6P)/1775 (12P)
STANDARDS									
Safety	IEC/EN 62040-1; IEC 62477-1								
EMC	IEC/EN 62040-2 (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, IEC 61000-2-2)								
Performance	IEC/EN 62040-3								

MODEL	Elite200K	Elite300K	Elite400K	Elite500K-12P	Elite600K-12P	Elite800K-12P
Capacity (kVA/KW)	200/180	300/270	400/360	500/450	600/540	800/720
INPUT						
Operating Voltage Range (Vac)	380/400/415 (-25%/+20%), (3Ph+PE)					
Operating Frequency Range (Hz)	50/60 (±5%)					
Power Factor	≥0.97 *					
OUTPUT						
Output Voltage (Vac)	380/400/415 (±1%), (3Ph+N+PE)					
Output Frequency (Hz)	50/60 (±0.05%)					
Harmonic Distortion (THDv)	≤1% (Linear load)					
Crest Factor	3:1 (Max)					
Efficiency	Up to 92.5%	Up to 93%		Up to 93.5%		Up to 94%
BYPASS						
Rated Voltage (Vac)	380/400/415, (3Ph+N+PE)					
Rated Frequency (Hz)	50/60					
Voltage Protection Range	Upper limit: +20% (+10%, +15%, +20% adjustable) Lower limit: -40% (-10%, -20%, -30%, -40% adjustable)					
Frequency Protection Range	±10% (±2.5%, ±5%, ±10%, ±20% adjustable)					
BATTERY						
Battery Voltage (Vdc)	384 (360~408)			480		600
SYSTEM FEATURES						
Transfer Time (ms)	0 (Line mode → Battery mode)					
Overload	Load≤110%/60min; ≤125%/10mins; ≤150%/1 min, to Bypass					
LED Display	Input, Inverter, Bypass, Battery, Output, Status					
LCD Display	I/O voltage, frequency, power, power factor, battery voltage, current, battery status, load percentage, UPS status, history record, settings					
Communication Interface	RS232, RS485, EPO, Dry contact, SNMP card (Optional)					
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor					
ENVIRONMENTAL						
Operating Temperature (℃)	0~40					
Storage Temperature (℃)	-25~55					
Humidity Range	0~95% (Non-condensing)					
Altitude (m)	<1500					
Noise Level (dB)	<72			<75		
PHYSICAL						
Dimension WxDxH (mm)	1200×800×1600 (6P) 1400×1000×1900 (12P)	1400×1000×1900 (6P) 1640×1000×1900 (12P)		2580×1000×1900	2800×1040×1900	3280×1040×1900
Net Weight (kg)	1030 (6P)/1715 (12P)	1560 (6P)/2395 (12P)	1640 (6P)/2510 (12P)	3510	3950	4950
Shipping Weight (kg)	1130 (6P)/1845 (12P)	1690 (6P)/2545 (12P)	1770 (6P)/2665 (12P)	3730	4250	5245
STANDARDS						
Safety	IEC/EN 62040-1; IEC 62477-1					
EMC	IEC/EN 62040-2 (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, IEC 61000-2-2)					
Performance	IEC/EN 62040-3					

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

4.1 Class Series - General Purpose

Class Series is a three-phase in and three-phase out high frequency UPS. Equipped with three-level inverter topology, it results in high efficiency reaching 95.5%. With higher power density, smaller footprint, it takes the leading position in the UPS industry with same power capacity.

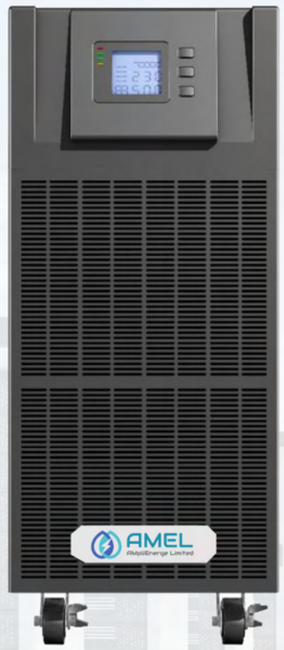
4.2 Product Appearance and Structure

- Efficiency up to 94.5%
- Maximum 4 units in parallel
- Dual mains (Optional)
- Generator compatible
- Cold start
- ECO mode
- Intelligent fan speed regulation
- 100% unbalanced load support
- Configure with input/output/bypass/maintenance bypass breakers
- RS232, RS485, Parallel port, Dry contact, Intelligent slot,
- Optional: SNMP card , Dry contact card, Battery temperature sensor



4.3 Core Advantages (UPS and Batteries)

Reliability	Safety	Supply Chain
More than **50,000 big unit** shipped (>=300kVA)	Dual DSP digital control Self-diagnosis on startup Battery self-check	3M+ units delivery/year No.1 in China for 23 Years No.1 exporter from China Cost advantage
Core supplier for the world's leading UPS brands **50 M+ units shipped**	External maintenance switch linkage control Remote EPO function Battery reverse protection	Full chain UPS factory, Battery factory Sheet metal factory Cost advantage
Guaranteed supply by the world's leading power semiconductor branders	Battery patented leakprooftray One-Gene design for UPS & Batt. & BMS	Intelligence Digital MES system Quality&Traceability
UPS/Battery/BMS one-stop provider	Bus capacitors discharge rapidly after shutdown Antiskid castors	Productivity UPS:3.5M units/year Battery:3M kVAh/year

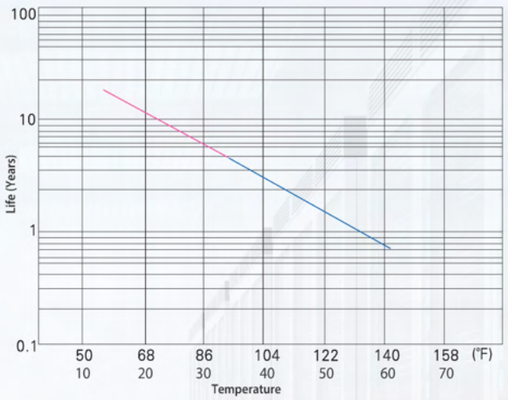


4.4 Classic Series - Battery For General Use

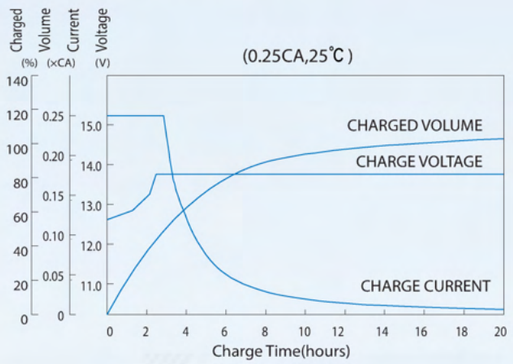
The operating environment temperature above 40 should be avoided. After long time storage, the battery actual capacity would be less than the rated capacity. Full capacity will be obtained through several charge/-discharge cycles. To get the longest life, the battery should be fully charged before storage.

Parameter		100Ah	150Ah	200Ah	250Ah
■ Specification					
Nominal Voltage		12V			
Rated Capacity (10 hour rate)		100Ah	150Ah	200Ah	250Ah
Total Height (with terminals)		236 mm	219 mm	230 mm	228 mm
Height		208 mm	214 mm	225 mm	223 mm
Length		407 mm	532 mm	523 mm	520 mm
Width		174 mm	207 mm	240 mm	269 mm
Weight		32.0 kg	47.5 kg	57.6 kg	71.4 kg
■ Characteristics					
Internal Resistance (Full Charged 25°C)		5 mΩ	3.5 mΩ	3.5 mΩ	3.1 mΩ
Capacity @ 40°C		102%			
Capacity @ 25°C		100%			
Capacity @ 0°C		85%			
Self-Discharge	3 months	91%			
	6 months	81%			
	12 months	60%			
Max. Discharge Current		800A (5S)	1000A (5S)	1333A (5S)	1666A (5S)
Terminal		T3	T3	T3	T5
Cycle Charge Initial Charging Current		Less than 30A	Less than 45A	Less than 60A	Less than 75A
Float Charge (@ 25°C)		13.5V-13.8V			

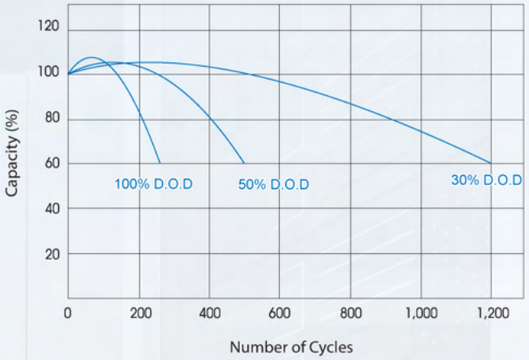
Temperature Effects Float Life



Constant Voltage Charge Characteristic



Cycle Service Life in Relation to Depth of Discharge



4.4 Technical Specifications

MODEL		Classic 10H	Classic 15H	Classic 20H	Classic 30H	Classic 40H
Capacity (VA/W)		10k/10k	15k/15k	20k/20k	30k/30k	40k/40k
INPUT						
Nominal Voltage (Vac)		380/400/415 (3Ph+N+PE)				
Operating Voltage Range (Vac)		305~478 (Full load); 208~478 (50% load)				
Power Factor		≥0.99				
Harmonic Distortion (THDi)		≤3% Linear load				
Bypass Voltage Range (Vac)		Max.voltage: 220: +25% (Optional +10%, +15%, +20%) 230: +20% (Optional +10%, +15%) 240: +15% (Optional +10%) Min.voltage: -45% (Optional -20%, -30%)				
Bypass Frequency Range (Hz)		50/60±10%				
OUTPUT						
Nominal Voltage (Vac)		380/400/415 (3Ph+N+PE)				
Voltage Regulation		±1%				
Output Frequency (Hz)		Line mode: ±1%/±2%/±4%/±5%/±10% of the rated frequency (Optional); Bat. mode: 50/60 (±0.1%)				
Crest Factor		3:1				
Harmonic Distortion (THDv)		≤2% Linear load; ≤5% Non linear load				
Overload	AC mode	≤110% 60min, ≤125% 10min, ≤150% 1min, >150% immediately turn to bypass				
	Bat.mode	≤110% 10min, ≤125% 1min, ≤150% 5s, >150% immediately shut down				
EFFICIENCY						
AC Mode		Up to 93.5%	Up to 94.5%		Up to 95.2%	
ECO Mode		Up to 98.0%	Up to 98.2%		Up to 98.6%	
BATTERY						
Battery Type		VRLA (Lead acid maintenance free battery)				
Battery Voltage (Vdc)		10~30kVA: ±96/108/120; battery quantity (16~20pcs, 16pcs default, 20pcs no power derating; 18pcs output power factor 0.8/0.9; 16pcs output power factor 0.7/0.8)				40kVA: ±180~300 (30~50pcs)
		±180~300				
Charging Current (Max.)(A)		14	16	18	20	20
ENVIRONMENTAL						
Operating Temperature (℃)		0~40				
Storage Temperature (℃)		-25~55 (No battery)				
Humidity Range		0~95% (Non condensing)				
Altitude (m)		<1000, derating required when>1000				
Noise Level (dB)		<55		<58	<61	<64
PHYSICAL						
Dimension WxDxH (mm)		250×580×655				
Weight (kg)		35	39	40	43	46
STANDARDS						
Safety		IEC/EN 62040-1, IEC/EN 62477-1				
EMC		IEC/EN 62040-2 (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, IEC 61000-2-2)				

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4.5 Technical Specifications

MODEL		Classic 50H	Classic 60H	Classic 80H	Classic 100H	Classic 120H	Classic 150H	Classic 160H	Classic 180H	Classic 200H
Capacity (VA/W)		50k/50k	60k/60k	80k/80k	100k/100k	120k/120k	150k/150k	160k/160k	180k/180k	200k/200k
INPUT										
Nominal Voltage (Vac)		380/400/415 (3Ph+N+PE)								
Operating Voltage Range (Vac)		138~305 for 40% load; 305~485 for 100% load								
Power Factor		≥0.99								
Harmonic Distortion (THDi)		≤3% Linear load								
Bypass Voltage Range (Vac)		Max.voltage: 220: +25% (Optional +10%, +15%, +20%) 230: +20% (Optional +10%, +15%) 240: +15% (Optional +10%) Min.voltage: -45% (Optional -10%, -15%, -20%, -30%)								
Bypass Frequency Range (Hz)		50/60±10%								
OUTPUT										
Nominal Voltage (Vac)		380/400/415 (3Ph+N+PE)								
Voltage Regulation		±1%								
Output Frequency (Hz)		Line mode: Synchronize with input, when the input frequency >±10% (±1%/±2%/±4%/±5% optional), output 50/60 (±0.1); Bat. mode: (50/60±0.2%)								
Crest Factor		3:1								
Harmonic Distortion (THDv)		≤2% with linear load; ≤4% with non linear load								
Overload	Inverter Mode	≤110% 60min, ≤125% 10min, ≤150% 1min, >150% 1.2s shut down inverter								≤110% 60min, ≤125% 1min, >125% 1.2s shut down inverter
	Bypass Mode	30K: 135% for long term; 40K: 125% for long term; >1000%, 100ms								
EFFICIENCY										
AC Mode		Up to 95.5%								
ECO Mode		Up to 99%								
BATTERY										
Battery Type		VRLA/Li-ion								
Battery Voltage (Vdc)		360~600								
Charging Current		20		40			60			
ENVIRONMENTAL										
Operating Temperature (℃)		0~40								
Storage Temperature (℃)		-25~55 (No battery)								
Humidity Range		0~95% (Non condensing)								
Altitude (m)		1000, derating required when >1000								
Noise Level (dB)		<55	<58	<60	<62		<63		<64	<66
PHYSICAL										
Dimension WxDxH (mm)		250×828×868		442×850×1200						
Weight (kg)		80	83	144	147	152	190	200	220	230
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)								

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5.1 Hyper Series - Heavy Loading Rack Mount



3 kinds of LCD can be selected



Colourful LCD



Blue LCD



Advanced Touch Screen



Battery Cabinet (Optional)



Optimized Battery Configuration7/9Ah

5.2 Features of the UPS

- High power density
- Online double conversion with full digital control
- Wide input voltage range: 110~300Vac
- Input power factor 0.99 with PFC
- Selectable output voltage: 208/220/230/240Vac
- Smart charger design for optimized battery performance
- Maximum charging current can be expanded to 12A (Long run unit)
- Emergency power off function (EPO)
- ECO mode operation for energy saving
- Generator compatible
- Cold start
- Intelligent fan speed regulation
- Load segment settable (Optional)
- Versatile LCD human-computer interface
- Multiple communication interface: RS232 (USB/EPO/ Dry contact card/SNMP card optional)
- Multiple protection function: short-circuit, overload, overheat, battery overcharge and overdischarge, output low voltage and fan fault alarm



Rear Panel



SNMP card



Dry contact card

Optional socket



5.3 Technical Specifications

MODEL	Hyper 1k H	Hyper 1k S	Hyper 1.5K H	Hyper 1.5K S	Hyper 2K H	Hyper 2K S	Hyper 3K H	Hyper 3K S
Capacity (VA/W)	1000/900		1500/1350		2000/1800		3000/2700	
INPUT								
Nominal Voltage (Vac)	208/220/230/240							
Operating Voltage Range (Vac)	110~300 (176~264 @ 100% load)							
Power Factor	≥0.99							
Bypass Frequency Range (Hz)	40~70 (50/60 Auto-Sensing)							
OUTPUT								
Nominal Voltage (Vac)	208/220/230/240							
Voltage Regulation	±1%							
Power Factor	0.9							
Output Frequency (Hz)	Line mode: 46~54 or 56~64; Bat. mode: (50/60±0.1%)							
Crest Factor	3:1							
Harmonic Distortion (THDv)	≤3% Linear load; ≤5% Non linear load							
Transfer Time (ms)	AC mode to Bat.mode: 0; Inverter to Bypass: 4 (Typical)							
Waveform	Pure Sinewave							
EFFICIENCY								
AC Mode	Up to 90%		Up to 90.5%		Up to 91%		Up to 92%	
ECO Mode	Up to 95%		Up to 96%		Up to 96%		Up to 97%	
BATTERY								
Battery Type	VRLA (Lead acid maintenance free battery)							
Battery Voltage (Vdc)	24	36	24	36	36	36	48	72
Battery Capacity (Ah)	S: 7/9; H: Depends on the capacity of external batteries							
Battery Quantity (pcs)	2	3	2	3	3	3	4	6
Typical Recharge Time (hours)	S: 4 (To 90% of full capacity)							
Charging Current (Max.)(A)	6/12		1		6/12	1	6/12	
MANAGEMENT								
LED Display	Line mode, Bat.mode, ECO mode, Bypass mode, Battery low voltage, Overload & UPS fault							
LCD Display	Input voltage, Input frequency, Output voltage, Output frequency, Load percentage, Battery voltage, Inner temperature& Remaining battery backup time							
ENVIRONMENTAL								
Operating Temperature (℃)	0~40							
Storage Temperature (℃)	-25~55							
Humidity Range	20~95%RH @ 0~40℃ (Non condensing)							
Altitude (m)	<1000, derating required between 1000 to 3000							
Noise Level (dB)	<50							
PHYSICAL								
Dimension WxDxH (mm)	144(W)×293(D)×209(H)		144(W)×399(D)×209(H)		191(W)×460(D)×337(H) (144(W)×399(D)×209(H))		191(W)×460(D)×337	
Weight (kg)	4.1	9.3	12.5	5.6	13.1	10 (5.8)	19.5 (15.4)	24.5
STANDARDS								
Safety	IEC/EN 62040-1, IEC/EN 62477-1							
EMC	IEC/EN 62040-2 (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, IEC 61000-2-2)							

1. When output voltage is 208Vac,need to derate to 80% of the unit capacity
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6.1 Bypass System

Features of the Auto Transfer Switch

- Master–slave power with manual/auto switching
- No power interruption during switching
- Dual input power support (same/different phase; neutral/ground configurations supported)
- Over-current protection on output (up to 110% over-load)
- Surge protection (Class C) on both inputs
- RS232 and dry-contact signals; dual-source tracking
- Real-time over-voltage / under-voltage / power-failure monitoring and protection



6.2 Technical Specifications

Model	MSTS - 16A/2P	MSTS - 25A/2P	MSTS - 3A/2P
Standard capacity	3.5KW	5.5KW	7KW
Rated current	16A	25A	32A
Switching time		6-12ms	
Input connector	GB standard 16A plug	Input wire end	Input wire end
Output interface	C13*6+C19	C19*3	C19*3
Input — M1 input voltage range		185V A C-260±5V A C	
Input — M2 input voltage range		185V A C-260±5V A C	
Input — Input frequency range		40HZ-60HZ	
Input — Voltage environment		Phase support: same phase and different phase	
Output — Output voltage range		185V A C-260±5V A C	
Output — Output over-current		110%	
Output — Output efficiency		≥98%	
Management — Status display		Display: LCD for battery/power parameters; LED status display	
Management — Interface Management		Communication & signals: RS232 and dry contacts	
Protection — Power Surge Protection		Lightning surge protection on inputs M1/M2	
Protection — Communication Surge Protection		RS232 port / dry-contact port	
Protection — Overload & Short-Circuit Protection		Over-current & short-circuit protector	
Standards Certifications — Design & Manufacturing		ISO9001:2015	
Standards Certifications — Product Certifications		CE	
Standards Certifications — Ambient operating temperature		-30℃-60℃	
Standards Certifications — Ambient humidity		10%-9C%	
Standards Certifications — Operating altitude		1000 m	
Physical Characteristics — Device dimensions (W × D × H), mm		482*250*44	
Physical Characteristics — Package dimensions (W × D × H), mm		540*360*110	
Physical Characteristics	5.5Kg	6Kg	6.5Kg

6.3 Manual Bypass Switch



6.4 Manual Bypass Switch Specification

Parallel PDU	MP PDU10000	MP PDU20000P
Capacity (VA/W)	10000/10000	20000/20000
Nominal Input / Output Voltage (Vac)		
Max Input Current (A)	60	120
Input Connection		
Input Protection	63A Breaker	63A Breakerx2
Output Connection	Terminal+IEC C19×4+IEC C13×6	Terminal+IEC C19×2+IEC C13×3
Output Protection	63A breaker+16A breakerx2+10A breakerx2	63A breakerx2+16A breaker+ 10A breaker
Maintenance Bypass Protection	63A Breaker	125A Breaker
Dimension W×D×H (mm)	440×621.5×86.5 (2U)	440×621.5×86.5 (2U)
Weight (kg)	10.5	11.5
ENVIRONMENT		
Operating Temperature (℃)	0-40	
Storage Temperature (℃)	-25~55	
Humidity Range	0~95%RH@ 0~40℃ (Non condensing)	
Altitude (m)	<1000, derating required between 1000 to 3000	
STANDARDS		
safety	EN IEC 62040-1: 2019 + A11: 2021	