KSTAR

UPS Solution

Robust Transformer-based
UPS Series
(1~800kVA)

Company Profile

Founded in 1993, Shenzhen KSTAR Science and Technology Co., Ltd. (Stock code: 002518) is a global leader in the smart energy field. Kstar focused on the R&D and manufacturing of UPS, Precision Cooling and MDC (Modular Data Center), Battery, PV, ESS and EV Charger.

Founded in: 1993 **30+ years**

Listed in: 2010 **Stock Code:002518**

Key Products

UPS | Cooling & MDC | Battery | PV | ESS | EV Charger

Listed
Listed on SZSE

2
R&D Centers

8
Facilities

180+
180+ Markets

670+
R&D Employees

4300+
4300+ Employees

Market Achievement

TOP 5

Global UPS Supplier

Data source: Omdia 2024

TOP 1

China UPS Selling Local Brands

Data source: CCID Consulting Annual Research Report on China's UPS Product Market in 2023-2024

TOP 1

China Single-rack Modular Data Center Market Share

Data source: ICT research Annual Report on China's Modular Data Center Product Market in 2023-2024

TOP 1

China Lead-acid Battery Market Share

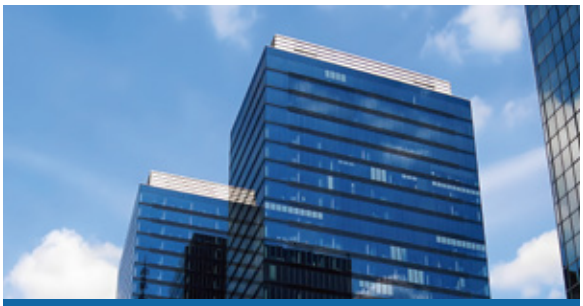
Data source: ICT research Report on China's UPS Supporting Lead-Acid Battery Product Market in 2023-2024

They Are Using Kstar

Beijing Olympic Games

Agricultural Bank of China Inner Mongolia Data Center

Shanghai Securities Waigaoqiao Earth Station



China's Leading Internet & E-commerce Giant A

Shanghai Telecom Data Center

Peking University Biomedical Imaging Technology Cluster Large Facility

Jinan Metro

Ruili to Menglian Expressway Electromechanical Project

Contents

GP800 Series

1~20kVA

1:1 phase PF: 0.8

High Reliability Design

- Double Conversion on-line design, which makes the output a pure sine wave source with tracking frequency, phase-lock and voltage regulation, low distortion and without power fluctuation interference, providing the load with more comprehensive protection

Battery Cold Start Function

- The UPS can be start directly by battery group when no utility access in, which meets the emergent needs of user
- Strong cold start ability, which can do the cold start operation when full load

Wide Input Range

- Wide input voltage range up to: 165~275Vac , avoid frequently switching to battery mode, which adapt to the areas with harsh environment
- Wide input frequency range, ensure all types of fuel generators connected work stable

Optimization of High-performance Battery

- Advanced floating switching and charging technology maximums the activation of the battery, thus saves the charging time and extends the battery life

Strong Protection for Load

- Built-in isolation transformer, strong anti-interference ability, provides more comprehensive protection

Comprehensive and Reliable Protection

- Self-diagnosis function before start-up, avoid the risks that the failure may lead to
- The multi-protections such as overload, short-circuit, over-temperature, battery under voltage, battery over-charge and so on greatly ensure the system stability and reliability
- Built-in static electronic bypass switch, when UPS fails, it can transfer to bypass mode and continue to provide power for load by AC
- DC start function The UPS can be started directly without AC , which meet the emergent needs of the user

User-friendly Network Management

- Communication with computer can be realized by RS232 with corresponding monitoring software. The various parameters can be shown on the communication interface
- External is optional The UPS with remote network management capability can provide real-time data for communication and management through a variety of network management systems

Technical Specifications

MODEL	GP801	GP802	GP803	GP804	GP806	GP808	GP810	GP812	GP815	GP820
Capacity (kVA/kW)	1/0.8	2/1.6	3/2.4	4/3.2	6/4.8	8/6.4	10/8	12/9.6	15/12	20/16
INPUT										
Nominal Voltage (Vac)	220/230									
Operating Voltage Range (Vac)	165~275									
Operating Frequency Range (Hz)	50/60 (±5%)									
Power Factor	≥0.97 *									
OUTPUT										
Output Voltage (Vac)	220 (±0.5%)/230 (±0.5%)									
Output Frequency (Hz)	50/60 (±0.5%)									
Crest Factor	3:1 (Max)									
Efficiency	Up to 82%			Up to 84%		Up to 85%				
Harmonic Distortion (THDv)	≤2% (Linear load)									
BATTERY										
Battery Voltage (Vdc)	48 or 192			192						
SYSTEM FEATURES										
Transfer Time (ms)	0 (Line mode → Battery mode)									
Overload	110%≤Load≤150%/1min; >150%/200ms, to Bypass									
Communication Interface	RS232, RS485 (Optional), EPO (Optional), Dry contact (Optional), SNMP (Optional)									
ENVIRONMENTAL										
Operating Temperature (℃)	0~40									
Storage Temperature (℃)	-25~55									
Humidity Range	0~95% (Non-condensing)									
Altitude (m)	<1500									
Noise Level (dB)	<60							<65		
PHYSICAL										
Dimension W×D×H (mm)	230×580×720 (S)/250×500×635 (H)					305×655×864 (S) 250×500×635 (H)		305×585×864		
Net Weight (kg)	80/32 (S/H)	85/36 (S/H)	99/40 (S/H)	102/45 (S/H)	108/50 (S/H)	110/60 (S/H)	115/65 (S/H)	115	130	145
Shipping Weight (kg)	88/40 (S/H)	93/44 (S/H)	107/48 (S/H)	110/53 (S/H)	116/58 (S/H)	118/68 (S/H)	123/73 (S/H)	125	140	155
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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MASTER Series

6~40kVA

3:1 phase PF: 0.8

High Reliability Design

- Double Conversion on-line design, which makes the output a pure sine wave source with tracking frequency, phase-lock and voltage regulation, low distortion and without power fluctuation interference, providing the load with more comprehensive protection

Battery Cold Start Function

- The UPS can be start directly by battery group when no utility access in, which meets the emergent needs of user.
- Strong cold start ability, which can do the cold start operation when full load

Wide Input Range

- Wide input voltage range up to: 304~456Vac, avoid frequently switching to battery mode, which adapt to the areas with harsh environment
- Wide input frequency range, ensure all types of fuel generators connected work stable

Optimization of High-performance Battery

- Adapt intelligent battery management (ABM) technology, thus extending battery life and reducing battery maintenance times
- Advanced floating switching and charging technology maximums the activation of the battery, thus saves the charging time and extends the battery life

Strong Protection for Load

- Built-in isolation transformer, strong anti-interference ability, provides more comprehensive protection

Comprehensive and Reliable Protection

- Self-diagnosis function before start-up, avoid the risks that maybe lead to the failure
- The multi-protections such as overload, short-circuit, over-temperature, battery under voltage, battery over-charge and so on greatly ensure the system stability and reliability
- Advanced phase-locked synchronization technology and dual electronic static output switches, ensure the switching operation between bypass and inverter without any disturbance. When UPS fails, it can transfer to bypass without interruption to provide AC power to load and provide the alarm information as well
- DC start function. The UPS can be started directly without AC, which meet the emergent needs of the user

User-friendly Network Management

- Chinese and English language selectable via LCD panel
- RS232 communication interface
- RS485 communication interface (Support ModBus protocal)
- SNMP card (Optional)
- Events log can be record in the LCD panel
- Dry contact signal port are available

Technical Specifications

MODEL	M6K	M8K	M10K	M15K	M20K	M30K	M40K
Capacity (kVA/kW)	6/4.8	8/6.4	10/8	15/12	20/16	30/24	40/32
INPUT							
Operating Voltage Range (Vac)	380/400 (±20%), (3Ph + N + PE)						
Operating Frequency Range (Hz)	50/60 (±5%)						
Power Factor	≥0.97 *						
OUTPUT							
Output Voltage (Vac)	220 (±0.5%)/230 (±0.5%)						
Output Frequency (Hz)	50/60 (±0.5%)						
Efficiency	Up to 86%					Up to 88%	
Harmonic Distortion (THDv)	≤2% (Linear load)						
Crest Factor	3:1 (Max)						
BATTERY							
Battery Voltage (Vdc)	192					240	
SYSTEM FEATURES							
Transfer Time (ms)	0 (Line mode → Battery mode)						
Overload	110%≤Load≤150%/1min; >150%/200ms, to Bypass						
LED Display	Battery low, Mains status, Inverter, Bypass, UPS failure, Overload						
LCD Display	I/O voltage, Frequency, Battery voltage, Load percentage, Internal temperature						
Communication Interface	RS232, RS485, EPO, Dry contact, SNMP (Optional)						
ENVIRONMENTAL							
Operating Temperature (℃)	0~40						
Storage Temperature (℃)	-25~55						
Humidity Range	0~95% (Non-condensing)						
Altitude (m)	<1500						
Noise Level (dB)	<60					<65	
PHYSICAL							
Dimension W×D×H (mm)	305×585×864					350×650×1050	
Net Weight (kg)	100	110	115	130	145	205	255
Shipping Weight (kg)	110	120	125	140	155	220	270
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						

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EPI Series

8~40kVA

3:1 phase PF: 0.8

High Reliability Design

- Double Conversion on-line design, which makes the output a pure sine wave source with tracking frequency, phase-lock and voltage regulation, noise suppression, and without power fluctuation interference, providing the load with more comprehensive protection
- Zero transfer time of output, satisfies high standard power requirements of precision equipment
- Modular design and dual-CPU control, high reliability and stability ensure the safe operation and high efficiency

Optimization of High-performance Battery

- Adapt intelligent battery management (ABM) technology, thus it extends battery life and reduces battery maintenance times
- Advanced CC (Constant current)/CV (Constant voltage) auto-conversion charging technology maximizes the activation of cells, thus it saves the charging time and extending the battery life

Strong Redundancy/Parallel Ability

- Some units can be directly connected in parallel, increasing the scalability of the system
- The parallel system can share a group of backup battery
- Non-fixed Master-Slave relationship: Among several UPS in parallel, the unit startup first is Master UPS, the others are Slave UPS. The master and slave can be exchanged. If the inverter of one UPS fails, the UPS will automati-cally cut off the output, then the load will be powered by remained UPS

Comprehensive and Reliable Protection

- Self-diagnosis function before start-up, avoid the risks that maybe lead to the failure
- The multi-protections such as overload, short-circuit, over-temperature, battery under voltage, battery over-charge and so on greatly ensure the system stability and reliability

High Reliability During Operation

- Pure online static bypass technology, provides a strong protection against overload and fault
- Built-in manual maintenance bypass, further improves the reliability of continuous operation

Wide Input Range

- The range of AC input voltage is 380V±20%, thereby it reduces the battery using frequency and greatly extending the battery life
- Wide input frequency range, ensure all types of fuel generators connected work stable

User-friendly Network Management

- Chinese and English language selectable via LCD panel
- RS232 communication interface
- RS485 communication interface (Support ModBus protocal)
- SNMP card (Optional)
- Events log can be record in the LCD panel
- Dry contact signal port are available

Technical Specifications

MODEL	EPI 8K	EPI 10K	EPI 15K	EPI 20K	EPI 30K	EPI 40K
Capacity (kVA/kW)	8/6.4	10/8	15/12	20/16	3/24	40/32
INPUT						
Operating Voltage Range (Vac)	380/400 (±20%), (3Ph+N+PE)					
Operating Frequency Range (Hz)	50/60 (±5%)					
Power Factor	≥0.97 *					
OUTPUT						
Output Voltage (Vac)	220 (±1%)					
Output Frequency (Hz)	50/60 (±0.5%)					
Crest Factor	3:1 (Max)					
Efficiency	Up to 86%				Up to 88%	
Harmonic Distortion (THDv)	≤2% (Linear load)					
BATTERY						
Battery Voltage (Vdc)	192				240	
SYSTEM FEATURES						
Transfer Time (ms)	0 (Line mode → Battery mode)					
Overload	110% ≤Load≤150%/1min; >150%/200ms, to Bypass					
LED Display	Low battery voltage, Mains status, Inverter, Bypass, UPS failure, Overload					
LCD Display	I/O voltage, Frequency, Battery voltage, Load percentage, Internal temperature					
Communication Interface	RS232, RS485, EPO, Dry contact, SNMP (Optional)					
ENVIRONMENTAL						
Operating Temperature (℃)	0~40					
Storage Temperature (℃)	-25~55					
Humidity Range	0~95% (Non-condensing)					
Altitude (m)	<1500					
Noise Level (dB)	<60				<65	
PHYSICAL						
Dimension W×D×H (mm)	305×585×864				350×650×1050	
Net Weight (kg)	110	115	130	145	205	255
Shipping Weight (kg)	120	125	140	155	220	270
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					

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EPOWER Series

10~800kVA

3:3 phase PF: 0.9

Online Double Conversion

- Online Double Conversion design helps to output a pure sine wave, which is immune from the UPS input, so that the load can run steadily
- 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

Wide Input Adaptability

- The range of AC input voltage is (380/400/415Vac) (-25%/+20%), minimizing transfer to battery mode, thereby greatly prolonging the battery life
- Wide input frequency ranging from 45Hz to 65Hz, ensures stability of UPS while generator connected

Optimized Battery Management

- Intelligent battery management system and advanced battery auto float/boost charge technology, reduces the frequency 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 UPS systems (Single unit or parallel) even when the two systems are operating on different modes (Bypass/Inverter) or on battery

Multi-protection

- 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, over-temperature, 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 support MODBUS 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

Technical Specifications

MODEL	EP10	EP20	EP30	EP40	EP60	EP80	EP100	EP120	EP160
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 W×D×H (mm)	350×650×1050			430×830×1100		720×690×1400	720×690×1400 (6P) 1515×830×1600 (12P)	890×790×1600 (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								

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Technical Specifications

MODEL	EP200	EP300	EP400	EP500-12P	EP600-12P	EP800-12P
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 W×D×H (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					

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EPOWER-L Series

10~160kVA

3:3 phase PF: 0.8

Online Double Conversion

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

Wide Input Range

- The range of AC input voltage is (380/400/415Vac) (-25%/+20%), minimizing transfer to battery mode, thereby greatly prolonging the battery life
- Wide input frequency ranging from 45Hz to 65Hz, ensures stability of UPS while generator connected

Optimized Battery Management

- Intelligent battery management system and advanced battery auto float/boost charge technology, reduces the frequency of battery maintenance, greatly improves the battery efficiency and extends battery life
- Battery self-test: Battery is automatically tested at regular intervals
- Flexible battery configuration ranging from 360-384Vdc

Full DSP Control

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

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 UPS systems (Single unit or parallel) even when the two systems are operating on different modes (Bypass/Inverter) or on battery

Multi-protection

- 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, over-temperature, fan failure, auxiliary power failure, battery under voltage, battery over-charge and so on

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

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 support MODBUS protocol
- SNMP adapter (Optional): For remote monitor through network
- Dry contacts (Optional): For additional monitoring

Technical Specifications

MODEL	EP10-L	EP20-L	EP30-L	EP40-L	EP60-L	EP80-L	EP100-L	EP120-L	EP160-L
Capacity (kVA/kW)	10/8	20/16	30/24	40/32	60/48	80/64	100/80	120/96	160/128
INPUT									
Operating Voltage Range (Vac)	380/400/415Vac (-25%/ + 20%), (3Ph + PE)								
Operating Frequency Range (Hz)	50/60Hz (±5%)								
Power factor	≥0.97 *								
OUTPUT									
Output Voltage (Vac)	380/400/415Vac (±1%), (3Ph + N + PE)								
Output Frequency (Hz)	50/60Hz (±0.05%)								
Harmonic Distortion (THDv)	≤2% (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 (Vac)	380/400/415Vac, (3Ph + N + PE)								
Rated Frequency (Hz)	50/60Hz								
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)	384Vdc (360~384Vdc)								
SYSTEM FEATURES									
Transfer Time (ms)	0 ms (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 (Optional), SNMP card (Optional)								
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor								
ENVIRONMENTAL									
Operating Temperature (mm)	0~40℃								
Storage Temperature (mm)	-25~55℃								
Humidity Range	0~95% (Non-condensing)								
Altitude (mm)	<1500m								
Noise Level (mm)	<58dB				<68dB				
PHYSICAL									
Dimension W×D×H (mm)	350×650×1050			430×830×1100		720×690×1400		890×790×1600	
Net weight (kg)	145	155	190	242	315	365	420	635	740
Shipping weight (kg)	160	170	215	267	340	400	455	680	785
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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EPOWER-H Series

10~600kVA

3:3 phase PF: 0.9

Operating Mode

- Adopt IGBT rectifier/inverter technology, output inverter isolation transformer, doule-conversion online design, zero transfer time.

Full DSP Control

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

Strong Environmental Adaptability

- Conformal coating, wide mains input range: 346~456vac, 45-65Hz, can work stably with various fuel generator.

Optimized Battery Management

- Intelligent battery management system, extend battery life; Auto float/boost charge technology, activates the battery maximally; Temperature compensation, discharging time prediction, timed self-testing function, etc.

N+X Parallel Redundancy

- N+X parallel redundancy design,up to 6 units available, two sets of UPS parallel current sharing less than 3%.

Smart and Friendly Human-machine Interface

- Standard 7-inch touch screen, displays the running status, working parameters and historical records of the machine; Chinese/English display; Intuitive LED flow chart.

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

Multi-protection

- Self-diagnosis when startup, AC input over/under voltage, overcurrent, bus overvoltage, overheat, output overload, short-circuit, auxiliary power failure, battery undervoltage early warning and battery overcharge etc., make sure the system's stable and reliable operation.

EPO Function

- EPO emergency power off function.

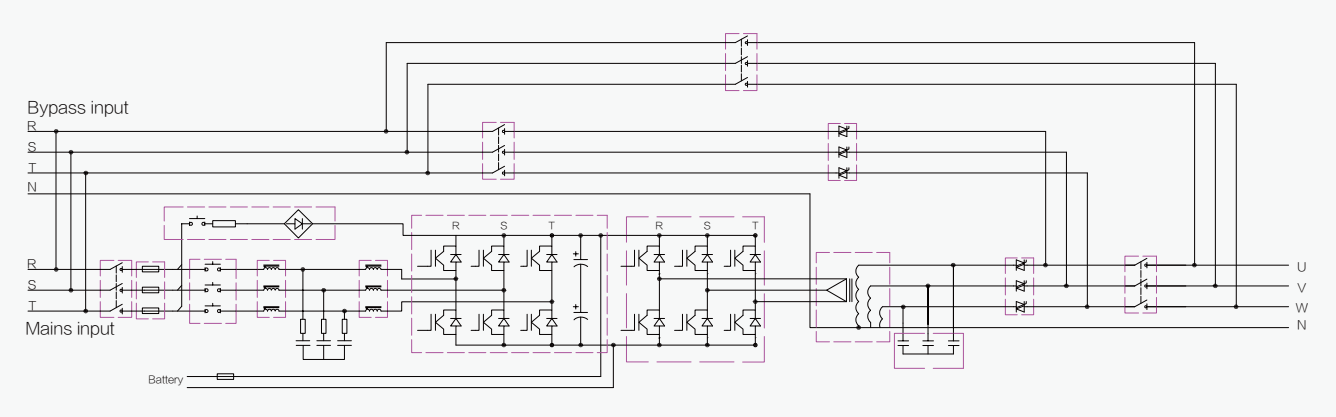
Manual Maintenance Bypass Design

- Maintenance bypass passage, holds the power supply when maintenance.

Communication Port

- USB, RS485 (MODBUS), SNMP adapter (Optional), 6 dry contacts (Optional)

Topological Schematic



Technical Specifications

MODEL	EP10-H	EP20-H	EP30-H	EP40-H	EP60-H	EP80-H	EP100-H	EP120-H	EP160-H
Capacity (kVA/kW)	10/9	20/18	30/27	40/36	60/54	80/72	100/90	120/108	160/144
INPUT									
Nominal Voltage & Range (Vac)	380/400/415 (346~456), (3Ph+PE, without N)								
Frequency & Range (Hz)	50/60 (45~65)								
Power Factor	≥0.99								
Harmonic Distortion (THDi)	≤3%								
Power Walk-in	0-200s (Settable)								
BYPASS INPUT									
Voltage (Vac)	380/400/415, (3Ph+N+PE)								
Frequency Tollerance (Hz)	±2 (0.5, 1, 2, 3 settable)								
ECO Mode	Support								
OUTPUT									
Voltage (Vac)	380/400/415 (±1%), (3Ph+N+PE)								
Frequency (Hz)	50/60 (±0.05%)								
Voltage Regulation	≤1%								
Waveform	Pure Sinewave								
Harmonic Distortion (THDv)	≤2% (100% Linear load)						≤1% (100% Linear load)		
Frequency Tracking Speed (Hz/s)	0.5-2 settable; 2 when paralleling								
Bypass Transfer Time (ms)	0 (Inverter and bypass in synchronization) <15 (Inverter and bypass out of synchronization)								
Battery Transfer Time (ms)	0								
Efficiency (Max.)	Up to 88%	Up to 89%		Up to 90%		Up to 90.5%	Up to 92%		Up to 92.5%
Overload	105%~110%, last 60min; 110%~125%, last 10min; 125%~150%, last 1min								
BATTERY									
Battery Voltage (Vdc)	600								
ENVIRONMENTAL									
Operating Temperature (℃)	0~40								
Storage Temperature (℃)	-25~55 (No battery)								
Humidity Range	0~95% (Non-condensing)								
Altitude (m)	<1500								
Noise level (dB)	<58				<68				
OTHERS									
Alarm Function	Output overload, utility abnormal, DC (Battery)low, UPS fault alarm & history, etc								
Protection Function	Short circuit, overload, over temperatue, DC (Battery) low, output low voltage, fan fault alarm (Optional)								
Communication Function	USB, RS485, EPO, dry contact (Optional), SNMP card (Optiomal)								
Optional Accessory	SNMP adapter, battery temperature sensor, bypass current-sharing inductor								
PHYSICAL									
Dimension W×D×H (mm)	720×690×1400				890×775×1600			1200×800×1600	
Net Weight (kg)	270	300	340	365	555	625	710	925	1065
Shipping Weight (kg)	300	335	375	400	600	670	755	995	1135
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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Technical Specifications

MODEL	EP200-H	EP300-H	EP400-H	EP500-H	EP600-H
Capacity (kVA/kW)	200/180	300/270	400/360	500/450	600/540
INPUT					
Nominal Voltage & Range (Vac)	380/400/415 (346~456), (3Ph+PE, without N)				
Frequency & Range (Hz)	50/60 (45~65)				
Power Factor	≥0.99				
Harmonic Distortion (THDi)	≤3%				
Power Walk-in	0-200s (Settable)				
BYPASS INPUT					
Voltage (Vac)	380/400/415, (3Ph+N+PE)				
Frequency Tollerance (Hz)	±2 (0.5, 1, 2, 3 settable)				
ECO Mode	Support				
OUTPUT					
Voltage (Vac)	380/400/415 (±1%), (3Ph+N+PE)				
Frequency (Hz)	50/60 (0.05%)				
Voltage Regulation	≤1%				
Waveform	Pure Sinewave				
Harmonic Distortion (THDv)	≤2% (100% Linear load)				
Frequency Tracking Speed (Hz/s)	0.5-2Hz/s settable; 2Hz/s when paralleling				
Bypass Transfer Time (ms)	0 (Inverter and bypass in synchronization) <15 (Inverter and bypass out of synchronization)				
Battery Transfer Time (ms)	0				
Efficiency (Max.)	Up to 92.5%	Up to 93%		Up to 93.5%	
Overload	105%~110%, last 60min; 110%~125%, last 10min; 125%~150%, last 1min				
BATTERY					
Battery Voltage (Vdc)	600				
ENVIRONMENTAL					
Operating Temperature (℃)	0~40				
Storage Temperature (℃)	-20~55 (No battery)				
Humidity Range	20~95% (Non-condensing)				
Altitude (m)	<1500				
Noise Level (dB)	<70			<75	
OTHERS					
Alarm Function	Output overload, utility abnormal, DC (Battery)low, UPS fault alarm & history, etc				
Protection Function	Short circuit, overload, over temperatue, DC (Battery) low, output low voltage, fan fault alarm (Optional)				
Communication Function	USB, RS485, EPO, dry contact (Optional), SNMP card (Optiomal)				
Optional Accessory	SNMP adapter, battery temperature sensor, bypass current-sharing inductor				
PHYSICAL					
Dimension W×D×H (mm)	1200×800×1600	1400×1000×1900		2580×1000×1900	
Net weight (kg)	1260	1650	2150	2800	2960
Shipping weight (kg)	1330	1750	2250	3040	3190
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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Our Solution

UPS Solution
Transformer-less
Memopower Series
1~40kVA

UPS Solution
Transformer-less
HPM3300E Series
30~1200kVA

UPS Solution
Robust Transformer-based
UPS Series
1~800kVA

Precision Cooling Series
5~300kW

Data Center Integrated Solution
IDU/IDM/IDB/IOU Series

Lead-acid Battery Series
3.5~250Ah (12V)
200~3000Ah (2V)

UPS Solution
Line Interactive UPS Series
0.4~3kVA

UPS Solution
Transformer-less
YDC3300 Series
10~200kVA

UPS Solution
Transformer-less UL
Products Series
1~100kVA

KSTAR

Kstar

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Add: Kstar Industrial Park, Fuyuan Industrial Zone, Guanlan, Shenzhen
Add: CATL-KSTAR Science and Technology Co.,Ltd.
Add: Jiangxi Changxin Golden Sunshine Power Co., Ltd.
Add: Jiangsu Kstar Energy Technology Co., Ltd.
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