



Robust Transformer-based UPS Series

COMPANY PROFILE

Founded in 1993, Shenzhen KSTAR Science & Technology Co., Ltd (Stock Code: 002518) is a National Torch Plan Key High-tech Enterprise, and also a pioneer of UPS industry and a total solution provider for Data Center Critical Infrastructure & Photovoltaic Inverter Systems in Mainland China. KSTAR is fully committed to the R&D and has been providing high-quality products with full service to over 150 countries and regions worldwide, leading the industrial development with innovation.



ISO9001



ISO14001



OHSAS18001



IECQ QC080000



Global Service Network



7 × 24 Response and Support



31 Domestic Service Centers
172 Domestic Service Stations



National Customer Service Hotline:
400-700-9662



17 Overseas Technical Service Centers
40 Overseas Service Engineers



KSTAR Industrial Park at Guangming industrial Zone, Shenzhen, China



KSTAR Industrial Park at Zhongkai Hi-Tech Zone, Huizhou, China



KSTAR Industrial Park at Guanlan Fuyuan industrial Zone, Shenzhen, China



KSTAR headquarters Software Park, Keji C.Rd. 2nd, Hi-Tech industrial Zone, Shenzhen, China



CATL-KSTAR SCIENCE & TECHNOLOGY CO., LTD.



Jiangxi Changxin Golden Sunshine Power Supply Co. LTD.

★ Robust Transformer-based UPS Series

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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	1kVA/0.8kW	2kVA/1.6kW	3kVA/2.4kW	4kVA/3.2kW	6kVA/4.8kW	8kVA/6.4kW	10kVA/8kW	12kVA/9.6kW	15kVA/12kW	20kVA/16kW	
INPUT											
Nominal voltage	220/230Vac										
Operating voltage range	165 ~ 275Vac										
Operating frequency range	50/60Hz (± 5%)										
Power factor	≥0.97 *										
OUTPUT											
Output voltage	220Vac (± 0.5%)/230Vac (± 0.5%)										
Output frequency	50/60Hz (± 0.5%)										
Crest factor	3:1 (Max)										
Efficiency	82%			84%			85%				
Harmonic distortion (THDv)	≤2% (Linear load)										
BATTERY											
Battery voltage	48Vdc or 192Vdc				192Vdc						
SYSTEM FEATURES											
Transfer time	0 ms (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°C										
Storage temperature	-25 ~ 55°C										
Humidity range	0 ~ 95% (Non-condensing)										
Altitude	<1500m										
Noise level	<60dB							<65dB			
PHYSICAL											
Dimension W × D × H (mm)	230 × 580 × 720 (S)/250 × 500 × 635 (H)					250 × 500 × 635		305 × 585 × 864			
Net weight (S/H) (kg)	80/32	85/36	99/40	102/45	108/50	60	65	115	130	145	
Shipping weight (S/H) (kg)	88/40	93/44	107/48	110/53	116/58	68	73	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

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



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, provide 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 protocol)
- 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	6kVA/4.8kW	8kVA/6.4kW	10kVA/8kW	15kVA/12kW	20kVA/16kW	30kVA/24kW	40kVA/32kW
INPUT							
Operating voltage range	380/400Vac (±20%), (3Ph+N+PE)						
Operating frequency range	50/60Hz (±5%)						
Power factor	≥0.97 *						
OUTPUT							
Output voltage	220Vac (±0.5%)/230Vac (±0.5%)						
Output frequency	50/60Hz (±0.5%)						
Efficiency	86%			88%			
Harmonic distortion (THDv)	≤2% (Linear load)						
Crest factor	3:1 (Max)						
BATTERY							
Battery voltage	192Vdc					240Vdc	
SYSTEM FEATURES							
Transfer time	0 ms (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	<1500m						
Noise level	<60dB					<65dB	
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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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

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 $380V \pm 20\%$, 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

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

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 automatically cut off the output, then the load will be powered by remained UPS

User-friendly network management

- Chinese and English language selectable via LCD panel
- RS232 communication interface
- RS485 communication interface (Support MODBUS protocol)
- 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	8kVA/6.4kW	10kVA/8kW	15kVA/12kW	20kVA/16kW	30kVA/24kW	40kVA/32kW
INPUT						
Operating voltage range	380/400Vac (± 20%), (3Ph+N+PE)					
Operating frequency range	50/60Hz (± 5%)					
Power factor	≥0.97 *					
OUTPUT						
Output voltage	220Vac (± 1%)					
Output frequency	50/60Hz (± 0.5%)					
Crest factor	3:1 (Max)					
Efficiency	86%			88%		
Harmonic distortion (THDv)	≤2% (Linear load)					
BATTERY						
Battery voltage	192Vdc			240Vdc		
SYSTEM FEATURES						
Transfer time	0 ms (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°C					
Storage temperature	-25 ~ 55°C					
Humidity range	0 ~ 95% (Non-condensing)					
Altitude	<1500m					
Noise level	<60dB			<65dB		
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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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

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

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

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	10kVA/9kW	20kVA/18kW	30kVA/27kW	40kVA/36kW	60kVA/54kW	80kVA/72kW	100kVA/90kW	120kVA/108kW	160kVA/144kW

INPUT

Operating voltage range	380/400/415Vac (- 25%/ + 20%), (3Ph + PE)
Operating frequency range	50/60Hz (± 5%)
Power factor	≥ 0.97 *

OUTPUT

Output voltage	380/400/415Vac (± 1%), (3Ph+N+PE)
Output frequency	50/60Hz (± 0.05%)
Harmonic distortion (THDv)	≤ 2% (Linear load) ≤ 1% (Linear load)
Crest factor	3:1 (Max)
Efficiency	88% 89% 90% 90.5% 92% 92.5%

BYPASS

Rated voltage	380/400/415Vac, (3Ph + N + PE)
Rated frequency	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	384Vdc (360~384Vdc)
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SYSTEM FEATURES

Transfer time	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
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°C
Storage temperature	-25 ~ 55°C
Humidity range	0 ~ 95% (Non-condensing)
Altitude	< 1500m
Noise level	< 58dB < 68dB

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

* With optional filter

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Technical Specifications:

MODEL	EP200	EP300	EP400	EP500-12P	EP600-12P	EP800-12P
Capacity	200kVA/180kW	300kVA/270kW	400kVA/360kW	500kVA/450kW	600kVA/540kW	800kVA/720kW

INPUT

Operating voltage range	380/400/415Vac (-25%/+20%), (3Ph+PE)					
Operating frequency range	50/60Hz (±5%)					
Power factor	≥0.97 *					

OUTPUT

Output voltage	380 / 400 / 415Vac (±1%), (3Ph+N+PE)					
Output frequency	50 / 60Hz (±0.05%)					
Harmonic distortion (THDv)	≤1% (Linear load)					
Crest factor	3:1 (Max)					
Efficiency	92.5%	93%		93.5%	94%	

BYPASS

Rated voltage	380/400/415Vac, (3Ph+N+PE)					
Rated frequency	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	384Vdc (360~408Vdc)		480Vdc		600Vdc
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SYSTEM FEATURES

Transfer time	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, SNMP card (Optional)					
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor					

ENVIRONMENTAL

Operating temperature	0~40°C					
Storage temperature	-25~55°C					
Humidity range	0~95% (Non-condensing)					
Altitude	<1500m					
Noise level	<72dB			<75dB		

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 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 self-test: Battery is automatically tested at regular intervals
- Flexible battery configuration ranging from 360-384Vdc

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

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

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	10kVA/8kW	20kVA/16kW	30kVA/24kW	40kVA/32kW	60kVA/48kW	80kVA/64kW	100kVA/80kW	120kVA/96kW	160kVA/128kW	
INPUT										
Operating voltage range	380/400/415Vac (-25%/+20%), (3Ph+PE)									
Operating frequency range	50/60Hz (±5%)									
Power factor	≥0.97 *									
OUTPUT										
Output voltage	380/400/415Vac (±1%), (3Ph+N+PE)									
Output frequency	50/60Hz (±0.05%)									
Harmonic distortion (THDv)	≤2% (Linear load)									
Crest factor	3:1 (Max)									
Efficiency	88%	89%		90%		90.5%	92%		92.5%	
BYPASS										
Rated voltage	380/400/415Vac, (3Ph+N+PE)									
Rated frequency	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	384Vdc (360~384Vdc)									
SYSTEM FEATURES										
Transfer time	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	0~40°C									
Storage temperature	-25~55°C									
Humidity range	0~95% (Non-condensing)									
Altitude	<1500m									
Noise level	<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

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

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Add: CATL-KSTAR, XiaPu Economic Development Zone, FuJian, P.R. China

Add: Kstar Industrial Park, Yifeng County Industrial Park, Yichun, Jiangxi, P.R. China

Add: Kstar (Vietnam) Co., Ltd, in Anyang County, Haiphong City, Vietnam