



佛山市柏克新能科技股份有限公司
FOSHAN BAYKEE NEW ENERGY TECHNOLOGY INCORPORATED COMPANY

MP3100 Series Online UPS (6kVA-60kVA)

--- Three phase in Single phase out Intelligent & Digital Middle to Large Capacity UPS



Brief Introduction

MP3100 series on-line intelligent digital UPS agglomerates the essence of Baykee techniques and entirely break through the bottleneck technology in traditional simulation circuit age. It is to adopt the digital control technology, of which the core is high-speed MCU and programmable logic device (CPLD). It brings in the sixth generation low-exhaust and big-power IGBT module and static switch as power devices. It is really the highlights product which was guided by these most advanced technologies all over the world.

Main Feature

Adopt High-precision SMD technology to ensure higher precision machine.



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- MP3100 series change the traditional plug-in circuit procession technique and fully adopt the high-precision SMD technology. Now that It already can save space and also totally eliminate the defect of the traditional UPS circuit . And it improves the safety operation of integrated circuits while increase product's reliability and operational accuracy.
- Adopt 4-layer printed circuit board design and highly precision SMD components. It completely removes the disturbance to other chips material caused by a variety of high-frequency signals of the CMOS chip itself , thereby each chip module can working undisturbed and improve the anti- interference performance significantly.
- MP3100 series fully adopt the SMD technology. It is thermostability to have the advantages of high accuracy and excellent filtering performance, machine performance more stable, more substance and durable feature. the rate of usage are increased 80% more.

Adopt digital control technology, fully intelligent digitization.

- Stable operation of advanced digital circuit system

MP3100 series replace the traditional simulate circuit to advanced digital circuit. High-speed microprocessor and CPLD in order to make perfect operation & management more which toward to the circuit control ,parameters setting and operation, and the self-test and self-detective function become more stronger. Full sampling techniques are not only beneficial to all the independent circuit connections on the boards but also to the self-test and failure analysis . And it is converted into sine wave voltage which are extremity purity and steadily to ensure stable system stable operation.



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- Intelligent battery management (serviceable worry-saving)

MP3100 series UPS import advanced intelligent Battery management system, it can automatically adjust battery charging parameter according to the user's battery configuration, and it based on the power supply environment to carry on float charging conversion, temperature compensation charge and discharge management into Battery. Moreover, MP11 series UPS detect to manage the battery operation status through monitoring interface, which to insure the battery operated highly effectiveness. Intelligent battery management system is not only to reduce the administrator's burden, but also to extend the battery usage rate more than 55%.

- Intelligent detection system full protect whole operation status

The system's MCU uninterruptedly detected all power status, circuit breaker status, fuse status and all other circuits working status on-line. When UPS appear failure, the detection system is immediately alarming to inform the administrator, and synchronous to start UPS overall protect function.

- Intelligent communication tool remote monitoring

RS232 and RS485 interface realizes multi-communication and long distance monitor.

With optional SNMP card 100% carries out long distance supervision and network management.

With optional dry contact connection interface adopted no source point, efficiently carries out the supervision and management of UPS status.

- Highly reliability with the sixth generation IGBT and high speed static switch



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IGBT has favorable high-speed switching, high voltage and current working characteristics. Adopt voltage type of driver with a very small control power. The sixth IGBT has a lower saturation voltage to make inverter more efficient, low temperature rise, more reliable.

Adopt pure online double conversion designed and high-speed static switch technology to make the function more stable

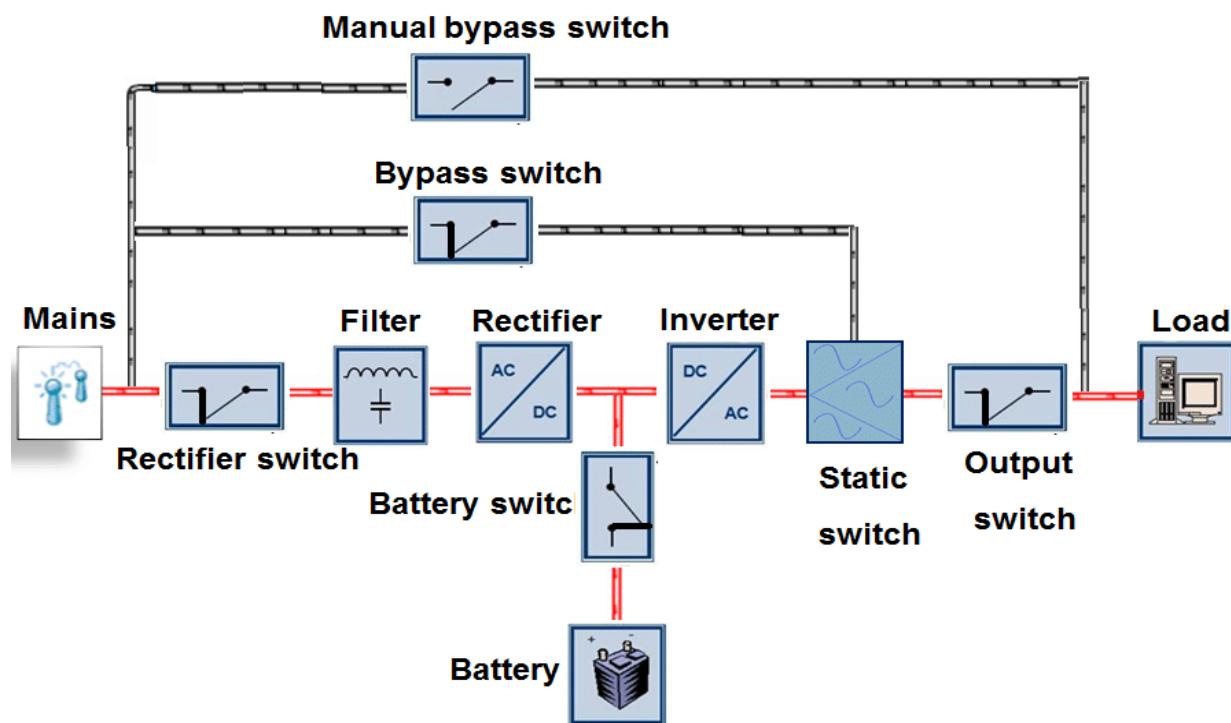
Barrier free man-machine conversation is supported by the information processing technology of super clearer interface.

- The humanization great LCD screen shows the clearly display of flowchart operation ,smart icon status, tabular format type of each component. Database, events records and optional Chinese and English language which are operating on the menu.
- Intuitive LED status indicators: clearly show the UPS working flow shop state.

Other favorable features:

- Excellent load feature: It is completely satisfy to load from 0-100% load variation without switch to bypass, which to protect the output more stable and reliable.
- Perfect protection: With the input/output over voltage and under voltage protection, input surge protection, phase sequence protection, battery overcharge and over discharge protection, output overloading short circuit protection, high temperature protection, and any other system protection with alarming function.
- The dynamic characteristics of high-powered: Adopt immediate control mode and effective value kind of feedback control, realized the high dynamic adjustment, reduce the output voltage degree of distortion.

- Optional input harmonic filter or 12 pulse rectifier: Effectively suppress harmonic pollution, to improve the UPS input power factor, and to reduce input harmonic current.
- Personalized settings: It can be setting the UPS working status on the panel according to the user demand side management. User can optional switch to UPS working mode, ECO energy conservation working mode, and EPS working mode.



Technical Parameters



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| | | |
|-------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Frequency | |
| | Input Harmonic Current | 6pulse Rectifier<30%, 12pulse Rectifier+Filter<5% |
| | Output Ripple | <2% |
| | Soft Start | 0~100% 5sec |
| Charge | Charge Mode | Constant current, then constant voltage, charge with temperature compensation, automatic switch Between Equalized charge and Float charge, programmable timing battery charge-discharge automatic maintenance |
| | Float charging voltage | 405VDC |
| | Equalized charging voltage | 432VDC |
| | Temperature compensation Voltage | -3mV/°C/cell |
| | Charge Current | 0.1C (Automatic adjust according to battery capacity) Example: 100Ah battery, The charge current is setted 10A, or according the charge time customer need |
| Battery | Battery Type | Maintenance Free Lead-acid Battery OR Lithium Battery |
| | Battery Capacity | 7~999AH settable (Battery capacity vary according to back-up time) |
| | Battery Number | 30units 12V or 180units 2V batteries (Nominal Voltage 360VDC) |
| Inverter (Output) | Phase | Single phase L+N+G |
| | Output Power Factor | 0.8 |
| | Nominal Voltage | 220VAC, 230VAC, 240VAC OR 100VAC, 110VAC, 120VAC |
| | Output Voltage Stability | ±1 % (Stable load), ±5% (fluctuant load) |
| | Output Frequency Stability | 50Hz 60Hz<±0.5% (Asynchronous) |
| | Crest Factor | > 3:1 |
| | Output Waveform Distortion Degree | Pure Sine Wave, Linear Load < 3%, Non-Linear Load<5% |
| | Dynamic Characteristics | Instant voltage<±5%(from 0 to100%), Instant recover time<10ms |
| | Unbalance | < ± 5% |



| | | | | | | | | | |
|---------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|-------|--------------|-------|
| | Load Voltage | | | | | | | | |
| | Overload Protection | 115% normal work, 125% 10 min, 150% 1min, 200% 1S | | | | | | | |
| | Efficiency | >93% (full load) | | | | | | | |
| Bypass | Phase | Single Phase L+N | | | | | | | |
| | Nominal Voltage | 220VAC, 230VAC, 240VAC OR 100VAC, 110VAC, 120VAC | | | | | | | |
| | Transfer Time | 0ms(Adopt static switch) | | | | | | | |
| Protection Function | Input Protection | Input voltage, frequency over limited protection, Phase fault, Phase lack | | | | | | | |
| | Output Protection | Over current, short circuit, Over voltage, Low voltage | | | | | | | |
| | Battery Protection | Over charge, over-discharge protection | | | | | | | |
| | Temperature Protection | Environment over temperature protection, inverter over temperature protection | | | | | | | |
| | Hardware Fault Protection | Assistant power abnormal, breaker cut off, breaker overload, power devices over current/over voltage etc protection | | | | | | | |
| Systems Parameters | Working Environment | Temp: 0~40°C, relative humidity: 30%~90%, Altitude<2000m (1% decrease against 100 meters' rise. Altitude 4000m MAX) | | | | | | | |
| | Cooling Down Method | COMPULSIVE VENTILATION (with temperature control) | | | | | | | |
| | Communication Interface | RS232/ RS485, optional dry contact, SNMP card (for internet) | | | | | | | |
| | Redundancy Function | Tandem hot backup or parallel connection | | | | | | | |
| | Anti-surge Capacity | 10/700μS, 5KV, 8/20μS, 20KA | | | | | | | |
| | Protection Level | IP21 | | | | | | | |
| | Safety Performance | Vin-n Vout-n 3000Vac, creepage<3.5mA , insulating resistance>2MΩ(500VDC) | | | | | | | |
| | Noise (dB) | 45~50 | | 50~55 | | 55~58 | | 55~60 | |
| | Dimension (W×D×H)mm | 450*600*1200 | | | | | | 600*720*1520 | |
| Weight(Kg) | | 65Kg | 168Kg | 183Kg | 210Kg | 246Kg | 338Kg | 380Kg | 420Kg |

The above size & weight are for reference only, the actual size & weight depend on actual goods.