

Industrial online UPS



an ATLANTIC POWER GROUP company
Mexico DF - Sao Paulo - Madrid - Istanbul - Kuwait - Hong Kong - Melbourne



ISO 9001:2008 - ISO 14001:2004 - OHSAS 18001:07
Certificate No. 09-QEO-01427-TIC

SAFE UPS (10KVA-160KVA)

Power Availability



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Reliability, Availability, Scalability, Redundancy,

User-friendliness and Maintainability,

whichever value you need,

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YOUR POWER QUALITY PARTNER

Our system is composed of power special-purpose UPS, DBW bypass regulator cabinet, and PDU series feeder cabinet. Which are designed with online double conversion, zero conversion function. When the utility power is normal, single-phase 220V(or three-phase 380V) after isolation, rectification and filtering through the inverter to provide a stable power supply to the load; if the input AC power is abnormal or power failure, the backup power system by the DC screen provide power supply through non-return diode inverter. When the DC screen occurs voltage shortage or power break, the static switch transfer to bypass for power supply; When the electricity is restored, the inverter automatically switches to utility power and provide power supply under inverter mode. If the inverter overload or fault and transfer power supply under bypass mode, also give a warning signal at the same time.

2

Major Applications

- Information Technology
 - Data Centers
 - Servers (LAN, WAN, MAN, ERP, e-mail, web and others)
 - Networking
- Telecommunication
 - Mobile (2G, 2.5G, 3G)
 - Paging
 - Fixed (including WLL)
- Industrial Automation
 - Process (including instrumentation)
 - Motion (digital drives & robotics) and motor loads
- Transport Automation
 - Airport automation and flight booking
 - Others including railways & road transport automation & ticket booking
- Banking, Insurance and Financial Services
- Software Development Houses / Software Technology Parks (STP)
- Building Automation
 - Access Control
 - Security System
 - Fire Alarm System
 - Emergency Lighting
 - Other Critical Applications
- Medical Diagnostics
 - Magneto Resonant Imaging
 - CT Scanning
 - CathLab
- Satellite
 - Uplinking
 - Earth Stations





Features

- Adopt full digital control technology.
- Intelligent detection and monitoring function.
- Digital control and static switch zero switching.
- Input/output full isolation
- DC UPS isolated with utility power completely.
- Cubicle design with power standard.
- Multifunctional protection for overvoltage, low voltage,
- Overcurrent, short circuit and so on.
- Large-screen LCD monitor and English operation interface.
- Ultralong 256 event records, user-friendly analysis and management to the situation of power supply.
- Static bypass has a strong anti-overload capacity.

Control system

Adopt microprocessor bus control technology and ensure the real-time control of rectifier, inverter, static switch as well as coordination of each power part, characterized by increased control of aging, higher reliability, enhance the efficiency of complete UPS system and the output technical parameters are better than that of the general capacity of equipment.

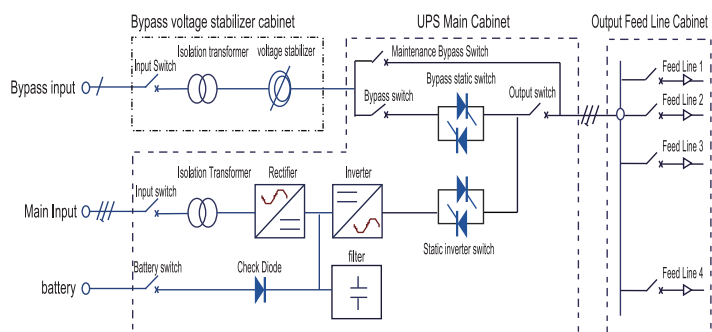
Rectifier system

6 pulse or 12 pulse fully controlled bridge (6 or 12 SCR) composed of rectifier, its function is input AC 380V rectified for DC 405V or so. Control features for the "slope" start, that is to say the output voltage of rectifier within 10 seconds from the 0V to 405V and no impact on the power grid.

Static switch

Not sync automatically switch:

- When the bypass of UPS and inverter are not synchronized, UPS can automatically implement not sync switch, such as city electricity surge pulse width <5ms can ensure no power cutoff.
- When the bypass exceed limit, UPS will detect the bypass every 20ms, as long as the phase angle difference of bypass and inverter come back to the normal range, not synchronized bypass switch can be realized.



Principle Diagram

Inverter

6 IGBT high power tubes of SPWM (sinusoidal pulse width modulation) composed of all Control bridge. It's function is to transform DC voltage for standard sinusoidal AC voltage by the special (Δ/Y) zero phase shift zigzag type isolation transformer and become AC220V as load required; In addition, the transformer can eliminate from such as computer(non-linear load) reflect three times harmonic current capacity. Control feature adopt a "slow-down gate voltage" protection technology and greatly reduce the disturbance shutoff of inverter (inverter and static switch change each other), and increase the over-load capacity of complete UPS system, short circuit and anti-overload are better than general UPS, especially it's anti-short-circuit capacity is unmatched by similar devices.

Inverter of UPS have a strong overload capacity

110% load—60 minutes

125% load—10 minutes

150% load—1 minute

200% single phase load—30 seconds

Inverter has a strong capacity of anti-output short circuit current limiting and anti-step load impact.

Advantages

290% rated current—5 seconds, even if the user inadvertently causes the output short circuit or severe overload, the output current is still limited to a suitable range, rather than increasing without limit, thus make sure UPS has a long term and reliable running base.

Monitoring

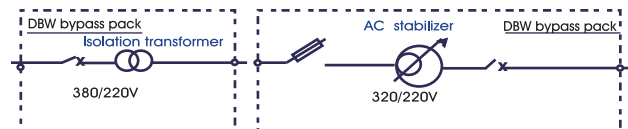
Via RS232/RS485, passive contact and power transmitter signal to transfer working status of UPS and real-time data to the DCS system, finally realize intelligent monitoring.

Options

- SNMP Card
- AS400 Card
- Signal Transmitter
- Bypass Isolation and Voltage Regulation
- Increase feeder circuit (standard for 8 loops)
- 12 Pulse Rectifier
- The appearance of special models (Standard dimension:800x600x2260mm)

Optional bypass cabinet

Isolation transformer and Bypass voltage regulator



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SAFE UPS (10KVA-60KVA)

Power Availability

Specification

Model Power(kVA)	SAFE 10-60KVA 3ph in/ 1 ph output					
	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA
Capacity	8KW	12KW	16KW	24KW	32KW	48KW
Input						
Rated voltage	380/400 Vac three-phase					
Voltage range	± 20%					
Frequency range	50/60HZ ±5%					
Power factor	≥ 0.8					
Current harmonic distortion	<5% with harmonic filter					
Soft Start	0-100% in10"					
Bypass Input						
Rated voltage	230Vac single-phase					
Permitted voltage range	±15%(selectable from ±10% to ± 25% from front panel)					
Rated frequency	50/60Hz					
Permitted frequency range	± 2%(selectable from ±1% to ± 5% from front panel)					
Standard features	BackFeed portection; split bypass line					
Batteries						
Type	Maintenance-free lead-acid VRLA AGM / GEL; NiCd					
Maximum recharge current(A)	0.2 X C10					
AC ripple voltage	<1%					
Inverter output						
Rated power(kVA)	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA
Active power(kW)	8KW	12KW	16KW	24KW	32KW	48KW
Number of phases	1					
Rated voltage(V)	230Vac single-phase					
Regulation of the output voltage	220+244Vac phase/neutral(from control panel)					
Crest factor(Ipeak/Irms)	3:1					
Static stability	±1%					
Dynamic stability	±5%					
Frequency	50/60Hz configurable					
Overload	110% 125% 150% of the rated current for 5h/10'/1'					
Frequency stability	±0.05% on mains failure					
System	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA
Remote signaling	Volt free contacts					
Remote controls	EPO and Bypass					
Communication	RS232 + remote contacts					
Operation temperature	0°C / + 40°C					
Relative humidity	<95% non condensing					
Colour	Light grey (RAL 7035)					
Noise	54dBA at 1m	60dBA at 1m		65dBA at 1m		
Protection degree	IP20					
Efficiency Smart Mode	up to 98%					
Compliance	Safety:EN 62040-1-1(Directive 2006/95/EC); EMC:6200-2(Directive 2004/108/EC)					
Weight (KG) N.W	200	220	230	290	340	440
Dimensions : (Wx D x H)mm	600X800X1900					800X800X1900
Internal batteries	Yes	Yes	Yes	No	No	No

specifications are subject to change without further notice.

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SAFE UPS (10KVA-160KVA)

Power Availability

Specification

Model	SAFE 10-160KVA 3ph in/ 3 ph output									
	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	160KVA
Power(kVA)	8KW	12KW	16KW	24KW	32KW	48KW	64KW	80KW	96KW	128KW
Capacity	8KW	12KW	16KW	24KW	32KW	48KW	64KW	80KW	96KW	128KW
Input										
Rated voltage	380/400 Vac three-phase									
Voltage range	± 20%									
Frequency range	50/60HZ±5%									
Power factor	≥0.8									
Current harmonic distortion	<5% with harmonic filter									
Soft Start	0-100% in10"									
Bypass Input										
Rated voltage	400Vac three-phase									
Permitted voltage range	±15%(selectable from ±10% to ± 25% from front panel)									
Rated frequency	50/60Hz									
Permitted frequency range	± 2%(selectable from ±1% to ± 5% from front panel)									
Standard features	BackFeed portection; split bypass line									
Batteries										
Type	Maintenance-free lead-acid VRLA AGM / GEL; NiCd									
Maximum recharge current(A)	0.2 X C10									
AC ripple voltage	<1%									
Inverter output										
Rated power(kVA)	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	160KVA
Active power(kW)	8KW	12KW	16KW	24KW	32KW	48KW	64KW	80KW	96KW	128KW
Number of phases	3+N									
Rated voltage(V)	400Vac									
Regulation of the output voltage	348+424Vac phase/neutral(from control panel)									
Crest factor(Ipeak/Irms)	3:1									
Static stability	±1%									
Dynamic stability	±5%									
Frequency	50/60Hz configurable									
Overload	110% 125% 150% of the rated current for 5h/10'/1'									
Frequency stability	±0.05% on mains failure; ± 2%(selectable from ± 1% to ± 5%) with mains supply present									
System	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	160KVA
Remote signaling	Volt free contacts									
Remote controls	EPO and Bypass									
Communication	RS232 + remote contacts									
Operation temperature	0°C / + 40°C									
Relative humidity	<95% non condensing									
Colour	Light grey (RAL 7035)									
Noise	54~62dBA at 1m					54~65dBA at 1m				
Protection degree	IP20									
Efficiency Smart Mode	up to 98%									
Compliance	Safety:EN 62040-1-1(Directive 2006/95/EC); EMC:6200-2(Directive 2004/108/EC)									
Weight☒☒KG☒N.W	200	220	230	290	340	440	520	770	855	1300
Dimensions ☒(Wx D x H)mm	800X800X1900					1200X800X1900				1400X800X1900
Internal batteries	Yes	Yes	Yes	Yes	No	No	No	No	No	No

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