

PLA

THREE-PHASE 10-40KVA

UNINTERRUPTIBLE POWER SUPPLIES ON LINE DOUBLE CONVERSION TECHNICAL SPECIFICATION



TECHNICAL FEATURES

PLA is a double-conversion online system, with high efficiency and three-phase input/output voltage. The series is high performance and high efficiency with PF 0.9.

PLA uses modular technology and operates in N+x redundant mode.

PLA can be used for any type of load and application: IT network, automatic machines, data centers, hospital equipment, industry, railway, etc.

KEY FEATURES

- On-line topology, double conversion
- Output transfer time is 0ms
- PFC Technology
- Full Digital Control (DSP)
- Output Power Factor: 1.0
- Input Current Harmonic: <3%
- Supports Economy Mode of Operation (ECO)
- Battery pack optimized for back-up time
- Wide input voltage range: 208~478Vac
- Wide Input Frequency Range: 40~70Hz
- Cold start
- Communication port: USB, RS232, RS485, parallel port, dry contact
- Options: SNMP board / relay board and MODBUS
- Dual LCD/LED display
- Intelligent battery charge management
- EPO function
- Common Battery Pack
- The output can meet 100% unbalanced load
- Parallel operation for modularity and scalability
- Tropicalization (option)

MODULARIZED POWER TECHNOLOGY

The modularized power technology designed for the PLA series has been studied using the concept of "parallel", integrating it into the hardware and software part of the UPS.

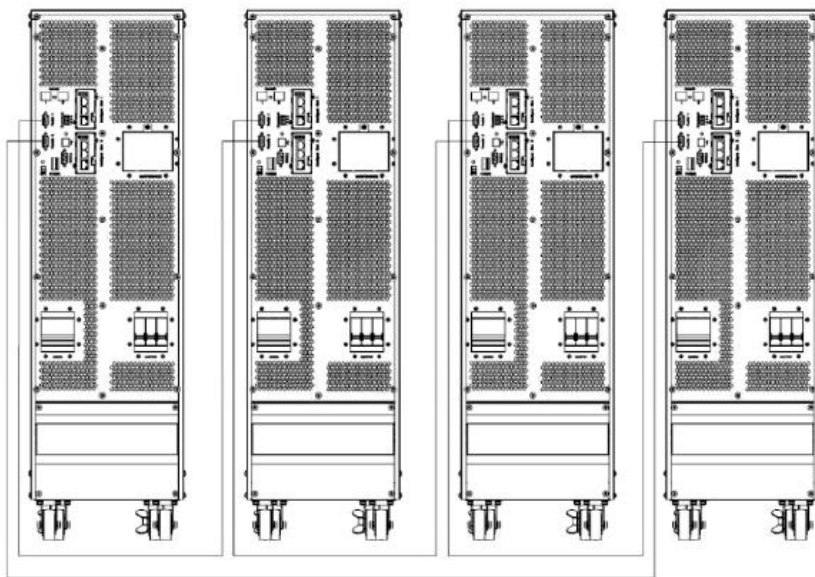
In fact, the PLA series is designed to intelligently detect an additional UPS and set itself autonomously with it. There is no need to insert parallel cards or set up special communications via software, the UPS uses a logic and through an auto self test it reconfigures the output power.

The parallel control cables supplied with the UPS are shielded and double-insulated, they must be interconnected in a ring configuration between UPS groups, as shown in the figure below.

The ring configuration ensures control with high reliability.

A group of parallel UPS has the functionality of a single large UPS but with the advantage of presenting a reliable major. In order to ensure that all UPSs are used in the same way and comply with wiring rules, it is necessary to Comply with only a few indications:

- 1) All UPSs must have the same power and be connected to the same bypass power line.
- 2) The outputs of all UPSs must be connected in parallel to the same point on the distribution board.
- 3) Electrical cables comprising bypass input cables and UPS output cables must be of the same length and specifications. This makes it easier to distribute the load when operating in bypass mode.



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MODEL			PLA10	PLA15	PLA20	PLA30	PLA40	
Input	Power		10KVA 9KW	15KVA 13.5KW	20KVA 18KW	30KVA 27KW	40KVA 36KW	
	Phases		3 Steps 4 Cables and Grounding					
	Rated voltage		380/400/415Vac					
	Voltage Range		208~478Vac					
	Frequency Range		45-55Hz to 50Hz / 56-66Hz to 60Hz (auto detection)					
	Power factor		≥0.99					
	THDi Current		≤2%(100% non-linear load)					
	Bypass voltage range		Max. voltage: 220Vac:+25% (optional +5%,+10%,+15%) 230Vac:+20% (optional +10%,+15%) 240Vac:+15% (optional +10%) Min. Voltage: -45% (optional -20%、-30%) Frequency Protection Range: ±10%					
	Generator Set Input		Supported					
Output	Phases		3 Steps 4 Cables and Grounding					
	Rated voltage		380/400/415Vac					
	Power factor		0.9					
	Voltage regulation		±1%					
	Frequency	With network	±1%、±2%、±4%、±5%、±10% of rated frequency (optional)					
		In battery mode	(50/60±0.1%) Hz					
	Crest factor		3:1					
	THD		≤1% with linear load ≤3% with nonlinear load					
Efficiency (in normal mode)			≥96.5%	≥97.5%				
Battery	Voltage		UPS standard: ±120Vdc (10+10) 12V 7/9AH Long autonomy UPS ±96V/±108V/±120Vdc (16/18/20 pcs. Optional)					UPS standard: ±240Vdc (20+20) Long Range UPS: ±192/±204/±216/±228/±240Vdc (32/34/36/38/40 pcs optional)
	Charging Current(A)		The charging current is automatically set according to the capacity, quantity and dynamics of the batteries inserted UPS standard (20pcs): 1,35A UPS standard (2X20pcs): 2,7A UPS standard (3X20pcs): 4,5A Long Range UPS: Max 10A					
	Battery Test		Set by Default to run the test every 30 days					
Transfer Time			Mains to battery: 0ms Network to Bypass: 0ms					

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Protection	Overload	Normal Mode	Load≤110%: duration 60min, ≤125%: duration 10min, ≤150%: duration 1min ≥150% immediately switches to bypass				
		Battery Mode	Load≤110%: 10min duration, ≤125%: 1min duration, 150%: 10s duration ≥150% immediately turns off the UPS				
		Bypass mode	20A Switch	32A Switch	40A Switch	63A Switch	80A Switch
	Short Circuit		Involves the entire UPS				
	Overheating		Normal Mode: Switch to Bypass, Battery mode: Immediately shuts down the UPS				
	Low battery		UPS Alarm and Shutdown				
	Self-diagnosis		When UPS is switched on and via software command				
	EPO (optional)		Immediately turns off the UPS				
	Battery		Advanced battery management				
	Noise suppression		Conform to there EN62040-2				
Alarms	Sound and Visual		Mains failure, low battery, overcharging, UPS failure				
Display	LED and LCD status		Line Mode, Bypass Mode, Low Battery, Low Battery, Overcharge, and UPS Fault				
	Displayed on the LCD screen		Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage and Internal Temperatures etc.				
Communication Interface			USB, RS485, Parallel (optional), EPO, Dry Contacts, Smart Slot, SNMP Card (optional), Relay Board (optional)				
Environment	Operating Temperature		0°C~40°C				
	Storage Temperature		-25°C~55°C				
	Humidity		0~95% non-condensing				
	Altitude		< 1500m. When >1500m the rated power is reduced				
	Noise		< 55dB				< 58dB
More	Degree of protection		IP20				
	Group Dimensions (P×L×H)		828x250x868				
	Weight (kg) without batteries		42	45	45	71	72
	Units		1				
Complies with safety regulations			CE,EN/IEC 62040-3,EN/IEC 62040-1-1, EN/IEC60950-1, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-6, IEC61000-4-8				
Frequency Converter Function			YES (see PLA-FC range)				

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