

PLA

THREE PHASE 10-200KVA

UNINTERRUPTIBLE POWER SUPPLIES - UPS TECHNICAL SPECIFICATION

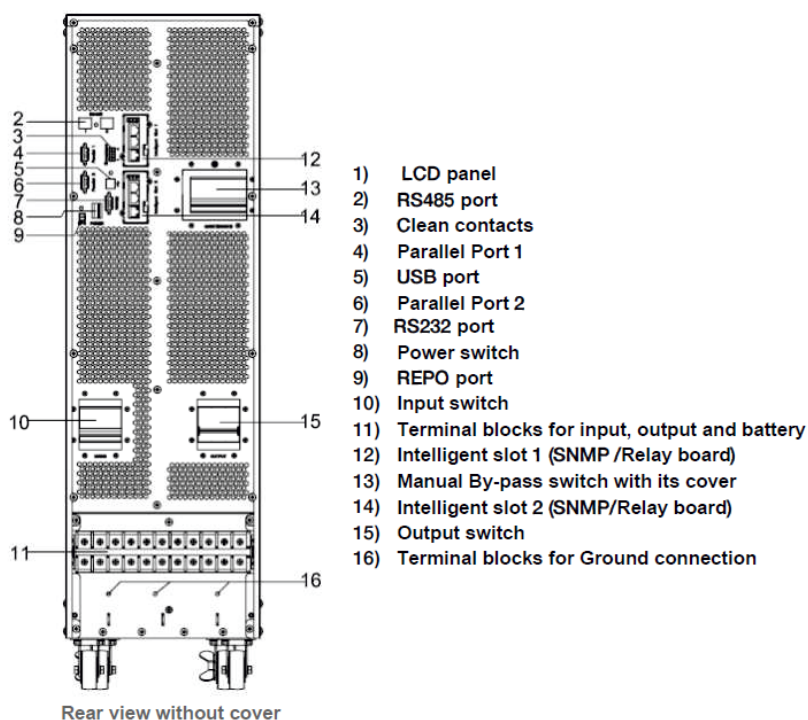
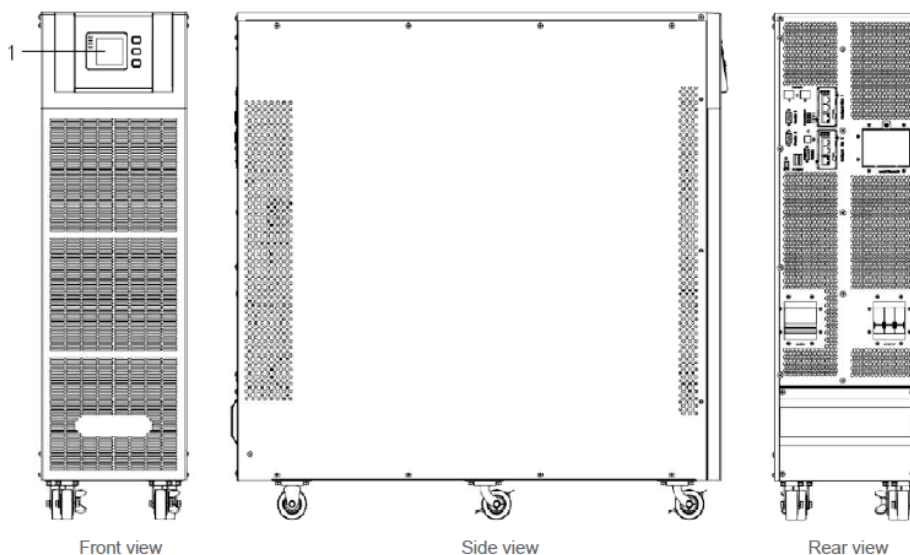


PLA is a true on-line UPS, double conversion technology with high efficiency. Input and Output voltages are three-phase. Rating power available from 10kVA to 200kVA. High performance and high efficiency with PF 0,9. PLA uses power modular technology and it works in redundancy mode N+x. It is a flexible system, in fact is possible to add or remove power cabinets depending by the amount of load to supply. In this way it is possible to optimize the financial investments by escalating the configuration according to the real needs. PLA can be used for any kind of load: IT, AUTOMATIC MACHINE, DATA CENTER, HOSPITAL, INDUSTRY, etc. PLA can solve every kind of problems, such as blackouts, spikes, voltage disturbances, frequency disturbances, harmonic distortion (THD <2%) current noise, brownouts, surges, and so on. PLA series uses a Digital Signal Processor (DSP) control to increase the reliability, the efficiency, and for auto protection and auto diagnosis. PLA series keep input current balanced. No unbalance problems may occur during the operation.

MAIN FEATURES

- True On-line UPS input three-phase + N, output three-phase + N
- Switching time 0 ms
- Power factor 0,9 – (optional 0,8)
- LCD display
- Modular power from 10kVA to 200kVA
- DSP (Digital Signal Processor)
- Input Low distortion < 2%
- ECO mode function

Optional: SNMP, MODBUS, RELAY. Standard: USB port, RS485, EPO contact



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MODULAR POWER TECHNOLOGY

Modular power technology used for PLA series is an easy "Parallel concept".

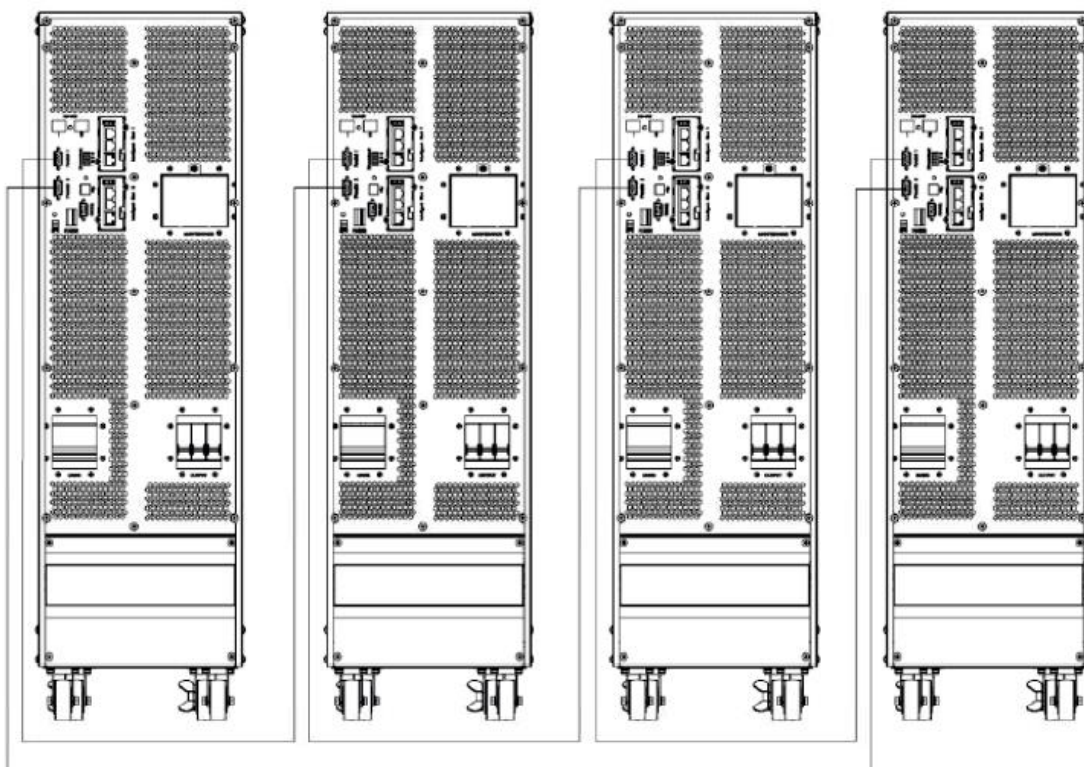
PLA series has an intelligent sensor which automatically detects other UPSs with same power.

No settings via software, no parallel boards needed, UPS it is always ready and with a self test reset and adjust its output power.

Parallel control cables are shielded with double isolation to avoid noise interference.

The cables are connected in ring mode, as shown in the picture below.

Ring connection is very reliable.



The parallel configuration guarantees a higher reliability than a single "full power" UPS. For making a correct configuration it is important to meet the items written below:

- 1) Every UPS must have the same power and connected to the same by-pass line .
- 2) The electric cables (input, output, by-pass) must have the same length and same characteristics

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MODEL			PLA10	PLA15	PLA20	PLA30	PLA40	PLA60
Input	Power		10KVA 9KW	15KVA 13.5KW	20KVA 18KW	30KVA 27KW	40KVA 36KW	60KVA 54KW
	No. of phases		3 phase 4 wires + PE					
	Rated voltage		380/400/415Vac					
	Voltage range		208~478Vac					
	Frequency range		45-55Hz a 50Hz / 56-66Hz to 60Hz (auto sensing)					
	Power factor		≥0.99					
	THDi		≤2%(100% non linear load)					
	By-pass 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 input		Supported					
Output	No. of phases		3 phase 4 wires + PE					
	Rated voltage		380/400/415Vac					
	Power factor		1					
	Voltage accuracy		±1%					
	Frequency	Line	±1%、±2%、±4%、±5%、±10% rated frequency (optional)					
		Battery	(50/60±0.1%)Hz					
	Crest Factor		3:1					
THD		≤1% linear load - ≤3% non linear load						
Efficiency			≥96,5%	97,5%				
Battery	Voltage		UPS standard +120Vdc (10+10) Long autonomy ±96/±108/±120Vdc (16/18/20pcs optional)				UPS standard +240Vdc (20+20) Long autonomy ±192/±204/±216/±228/±240Vdc (32/34/36/38/40pcs optional)	
	Charging current		Charging current set to the number of batteries UPS standard (20pcs): 1.35 A UPS standard (2x20pcs): 2.7 A UPS standard (3x20pcs): 4.5 A UPS long autonomy: 15 A max					
	Battery test		Default test period 30 days					
Transfer time			From network to batteries: 0ms From network to bypass: 0ms					

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POWER			10KVA 9KW	15KVA 13.5KW	20KVA 18KW	30KVA 27KW	40KVA 36KW	60KVA 54KW
Protection	Overload	AC Mode	Load ≤ 110%: last 60min, ≤ 125%: last 10min, ≤ 150%: last 1min, ≥ 150% change to bypass immediately					
		Battery Mode	Load ≤ 110%: last 10min, ≤ 125%: last 1min, ≤ 150%: last 10s, ≥ 150% shut down UPS immediately					
		Bypass Mode	Breaker 20A	Breaker 32A	Breaker 40A	Breaker 63A	Breaker 80A	Breaker 2x63A
	Short Circuit		Involves the whole UPS					
	Overheat		Line Mode: Switch to Bypass, Backup Mode: Shut down UPS immediately					
	Battery Low		Alarm and switch off UPS					
	Self-diagnostics		Upon Power On and Software Control					
	EPO (optional)		Shut down UPS immediately					
	Battery		Advanced Battery Management					
	Noise Suppression		Complies with EN62040-2					
Alarms	Audible & Visual		Line Failure, Battery Low, Overload, System Fault					
Display	Status LED & LCD		Line Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault					
	Reading on the LCD		Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature etc.					
Communication Interface			USB, RS485, Parallel (optional), Coupler dry contact, Intelligent slot, SNMP card (optional), Relay card (optional)					
Environment	Operating Temperature		0°C~40°C					
	Storage Temperature		-25°C~55°C					
	Humidity		0~95% non condensing					
	Altitude		< 1500m When >1500m lower the rated power for use					
	Noise		< 55dB			< 58dB		< 55dB
Other	Dimensions (D×W×H)		828x250x868					2x 828x250x868
	Weight (Kg) (without batteries)		42	45	45	71	73	2 x 71
	N° of unit		1					2
Safety Conformance			IEC/EN 62040-1, IEC/EN 62040-2, IEC/EN 62040-3, EN60950-1, IEC/EN 50171					
Frequency Converter function			Yes					

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MODEL		PLA 80	PLA 100	PLA 120	PLA 160
Input	Capacity	80KVA 72KW	100KVA 90KW	120KVA 108KW	160KVA 144KW
	Phase	3 Phase 4 Wires and Ground			
	Rated Voltage	380/400/415Vac			
	Voltage Range	208~478Vac			
	Frequency Range	45-55Hz a 50Hz / 56-66Hz a 60Hz (auto sensing)			
	Power Factor	≥0.99			
	Current THDi	≤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 Input	Supported			
Output	Phase	3 Phase 4 Wires and Ground			
	Rated Voltage	380/400/415Vac			
	Power Factor	0.9			
	Voltage Regulation	±1%			
	Frequency	Utility Mode	±1%、±2%、±4%、±5%、±10% of the rated frequency (optional)		
		Battery Mode	(50/60±0.1%) Hz		
	Crest Factor	3:1			
	THD	≤1% with linear load ≤3% with non linear load			
Efficiency (in normal mode)		≥97,5%			
Battery	Voltage	Standard UPS: ±240Vdc (20+20) 12V 7/9AH Long run backup UPS: ±192/±204/±216/±228/±240 Vdc (32/34/36/38/40 pz optional)	Standard UPS: ±120Vdc (10+10) 12V 7/9AH Long run backup UPS ±96V/±108V/±120Vdc (16/18/20 pz. optional)	Standard UPS: ±240Vdc (20+20) 12V 7/9AH Long run backup UPS: ±192/±204/±216/±228/±240Vdc (32/34/36/38/40pz optional)	
	Charge Current (A)	Charge current is automatically set in according to the capacity and the quantity of the batteries Standard UPS (20pcs): 1,35A Standard UPS (2X20pcs): 2,7A Standard UPS (3X20pcs): 4,5A Long run backup UPS: max 10A			
	Battery Test	Yes			
Transfer Time		Utility to Battery: 0ms Utility to bypass: 0ms			

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Protection	Overload	AC Mode	Load ≤ 110%: last 60min, ≤ 125%: last 10min, ≤ 150%: last 1min, ≥ 150% change to bypass immediately			
		Battery Mode	Load ≤ 110%: last 10min, ≤ 125%: last 1min, ≤ 150%: last 10s, ≥ 150% shut down UPS immediately			
		Bypass Mode	Breaker 2x80A	Breaker 3x63A	Breaker 3x80A	Breaker 4x80A
	Short Circuit		Involves the whole UPS			
	Overheat		Line Mode: Switch to Bypass, Backup Mode: Shut down UPS immediately			
	Battery Low		Alarm and switch off UPS			
	Self-diagnostics		Upon Power On and Software Control			
	EPO (optional)		Shut down UPS immediately			
	Battery		Advanced Battery Management			
	Noise Suppression		Complies with EN62040-2			
Alarms	Audible & Visual		Line Failure, Battery Low, Overload, System Fault			
Display	Status LED & LCD		Line Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault			
	Reading on the LCD		Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature etc.			
Communication Interface			USB, RS485, Parallel (optional), Coupler dry contact, Intelligent slot, SNMP card (optional), Relay card (optional)			
Environment	Operating Temperature		0°C~40°C			
	Storage Temperature		-25°C~55°C			
	Humidity		0~95% non condensing			
	Altitude		< 1500m When >1500m lower the rated power for use			
	Noise		< 58dB	< 55dB	< 58dB	
Other	Dimensions (D×W×H)		2x 828x250x868	3x 828x250x868		4x 828x250x868
	Weight (Kg) (without batteries)		2 x 73	3 x 71	3 x 73	4 x 73
	N° of unit		2	3		4
Safety Conformance			IEC/EN 62040-1, IEC/EN 62040-2, IEC/EN 62040-3, EN60950-1, IEC/EN 50171			
Frequency Converter function			Yes			

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