

PLA3

THREE-PHASE 60-600KVA

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. 60kVA models are now supplied with PF=1.0. 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.

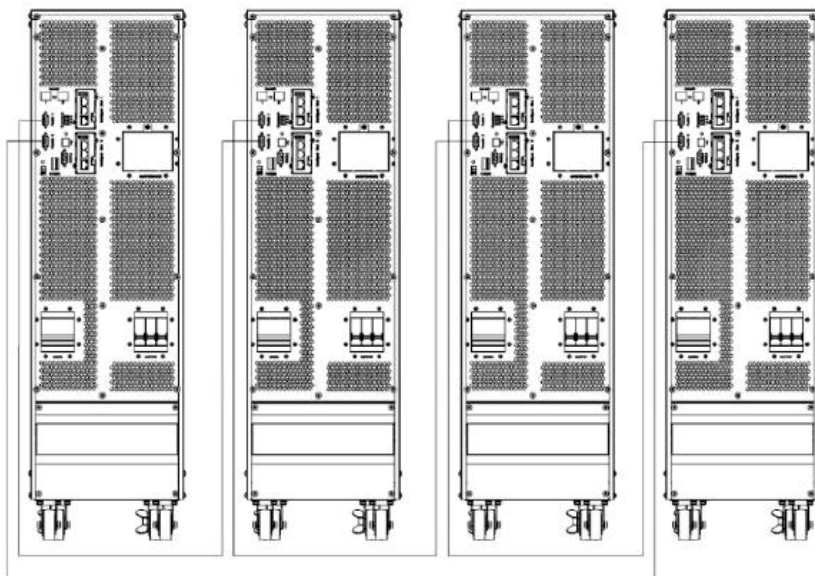
In fact, the PLA series is designed to intelligently detect an additional UPS and set itself autonomously with it. There is no need to insert parallel cards or set up special communications via software, the UPS uses a logic and through an auto self test it reconfigures the output power.

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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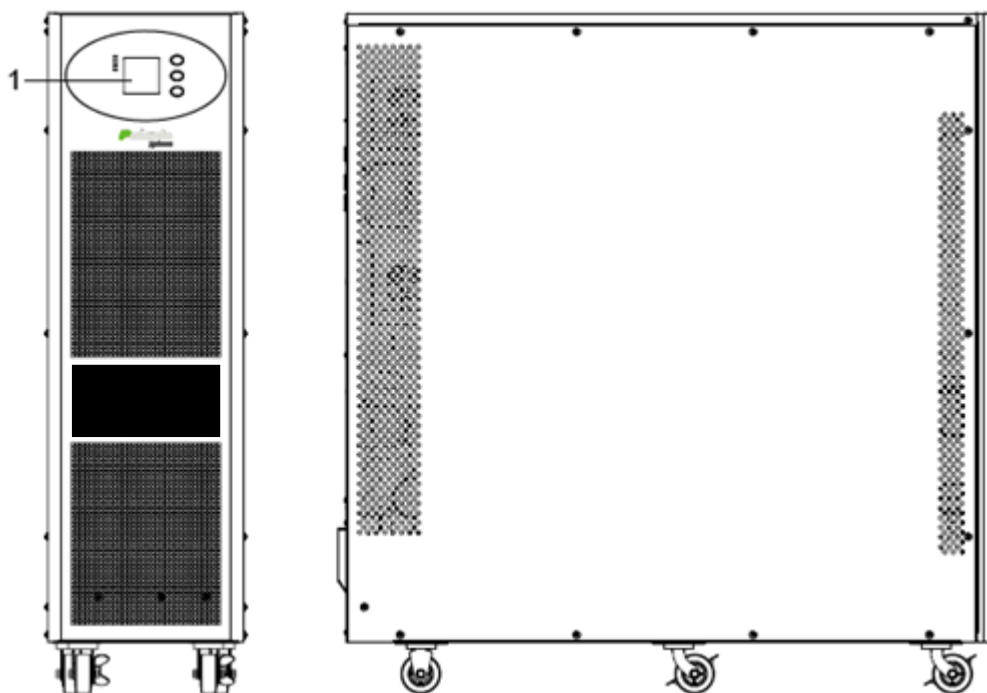
MODEL			PLA3060	PLA3080	PLA3100
Technology			On-line Double Conversion		
Input	Power (kVA/kW) *		60/60	80/80	100/100
	Phases		3 Phase + Neutral + Grounding		
	Rated voltage		380/400/415Vac		
	Voltage Range		138~485Vac		
	Frequency Range		40Hz - 70Hz		
	Power factor		≥0.99		
	THDi Current		≤3%		
	Bypass voltage range		Max. voltage: 220Vac:+25% (optional +10%,+15%,+20%) 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 Phase + Neutral + Grounding		
	Rated voltage		380/400/415Vac		
	Power factor		1.0		
	Voltage regulation		±1%		
	Frequency	With mesh	Synchronized with the input, when the input frequency is > ±10% (±1%, ±2%, ±4%, ±5% - optional)		
		In battery mode	50/60*(1±0.02%) Hz		
	Crest factor		3:1		
	THD		≤2% with linear load ≤4% with nonlinear load		
Efficiency (in normal mode)			95,5%		
Battery	Voltage		±180V/±192V/±204V/±216V/±228V/±240/±252/±264/±276/±288/±300V dc (30/32/34/36/38/40/42/44/46/48/50pcs optionale) 360Vdc~600Vdc (30~50 pcs) 36 pcs standard, 36~50pcs PF output 1; 32~34pcs PF output 0.9; 30pcs PF output 0.8)		
	Charging Current(A)		The charging current is automatically set according to the capacity, quantity and dynamics of the batteries inserted Max 30A		
			Max 20A	Max 40A	
	Battery Tests			Set by Default to run the test every 30 days	
Transfer Time			Mains to battery: 0ms Network to Bypass: 0ms		

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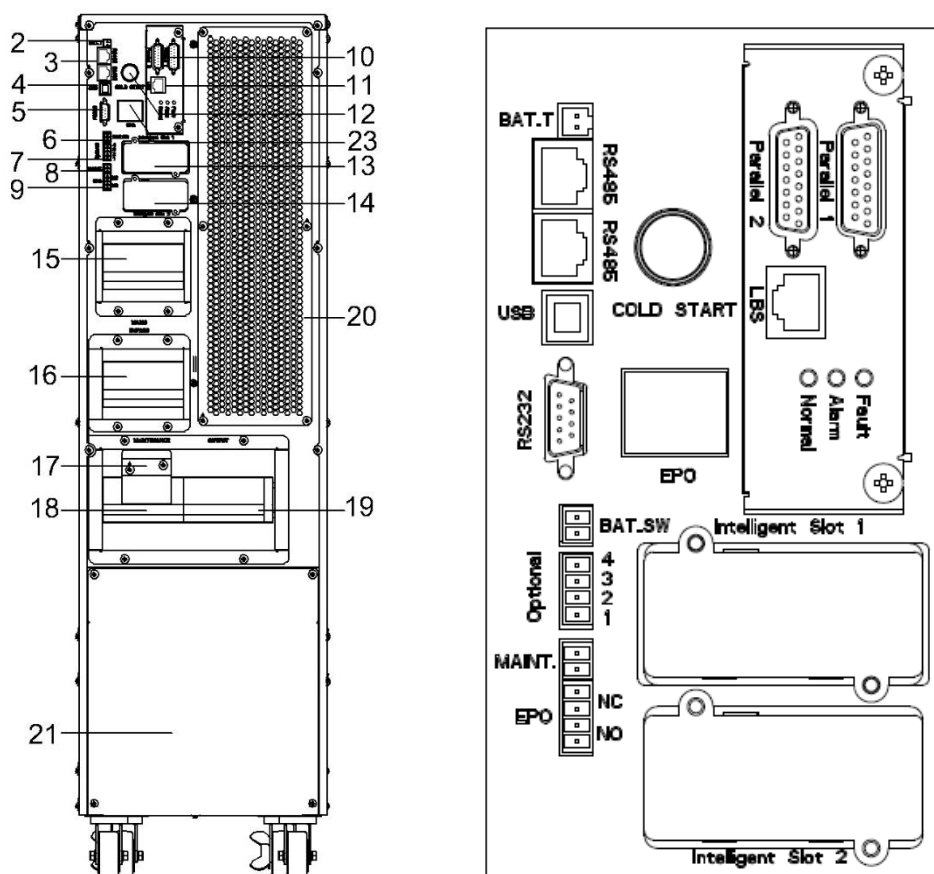
MODEL		PLA360	PLA380	PLA3100
Protection	Overload	Load ≤ 110%: Duration 60min, ≤ 125%: Duration 10min, ≤ 150%: Duration 1min, > 150% immediately switches to bypass		
Alarms	Sound and Visual	Mains failure, low battery, overcharging, UPS failure		
Display	LED and LCD status	Line Mode, Bypass Mode, Low Battery, 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 Temperature		
Communication Interface		USB, RS232, RS485, REPO, Parallel (optional), opto-isolated contacts, LBS port, Backfeed port, Smart Slot, SNMP Card (optional), Relay Card (optional)		
Environment	Operating Temperature	0°C ~ 40°C		
	Storage Temperature	-25°C ~ 55°C (without batteries)		
	Humidity	0 ~ 95% non-condensing		
	Altitude	< 1500m when > 1500m reduces the rated power		
	Noise	< 60dB	< 62dB	< 63dB
More	UPS Dimensions (P×L×H) cm	828x250x868	850x442x1200	
	UPS Weight (Kg) without batteries	83	154	161
	Installation Type	Vertical		
	Media Type	Wheels		
Complies with safety regulations		IEC/EN62040-1, IEC/EN62040-2, IEC/EN62040-3, IEC/EN60950-1		
Frequency Converter Function		YES (request technical data sheet dedicated to the PLA3-FC version)		

*** Intermediate ratings and up to max 600kVA can be obtained by connecting a maximum of 6 UPS of the same size in parallel.**

PLA3 60KVA:



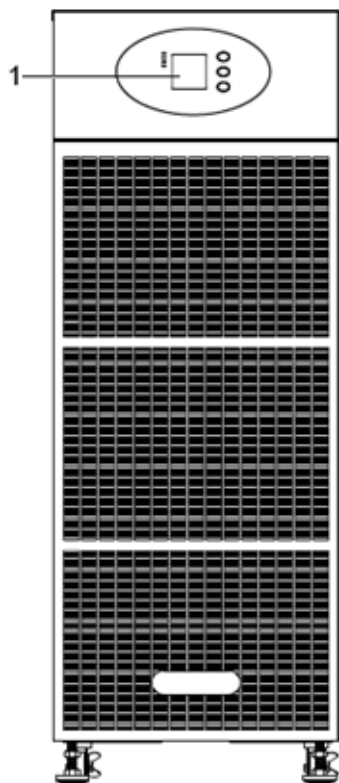
Front View Side View



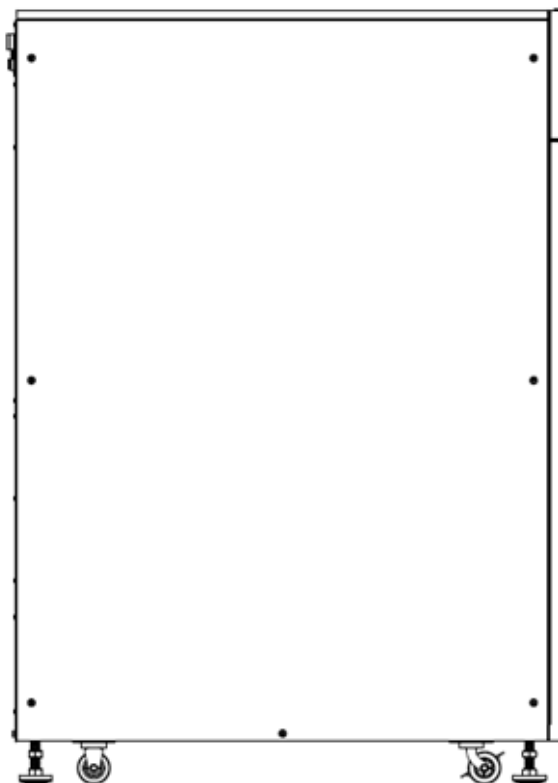
Rear view

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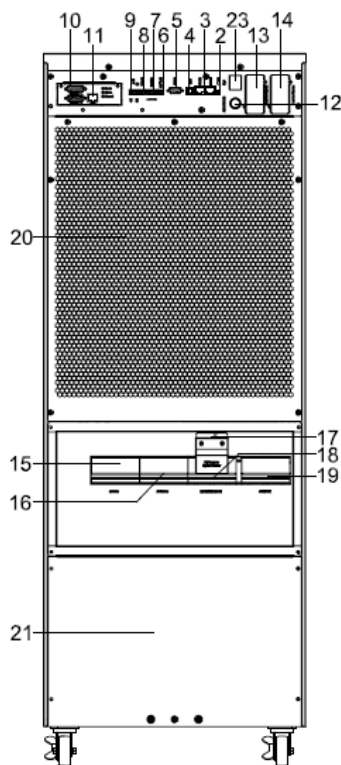
PLA3 80-100KVA:



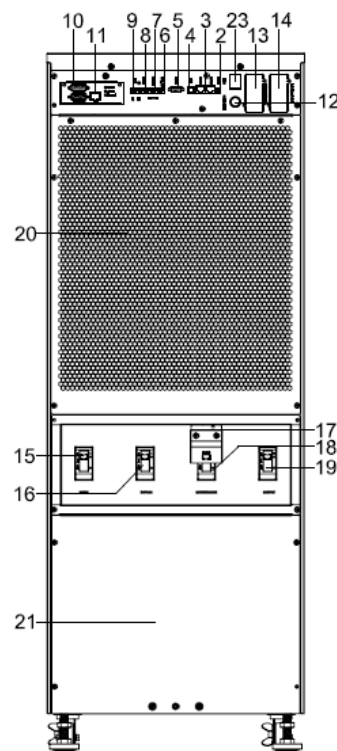
Front view



Side view

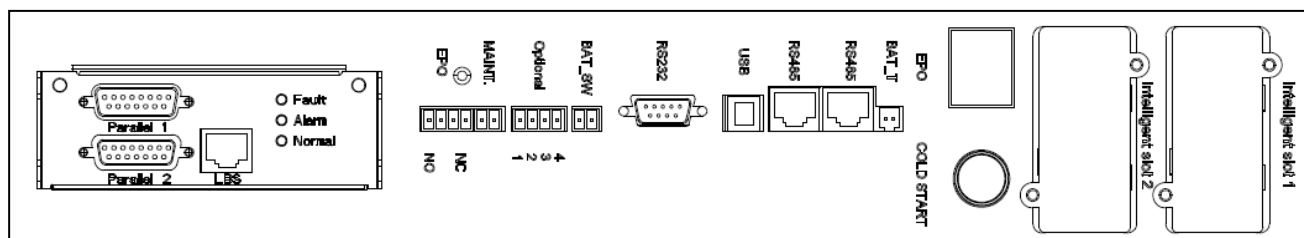


**Rear view
80KVA**



**Rear view
100KVA**

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Control Panel

(1) LCD Panel	(2) Temperature sensor port (for NTC)
(3) RS485 port (for temperature sensor RS485)	(4) USB port
(5) RS232 port	(6) BAT_SW
(7) Optional Port (Port for Backfeed protection or for battery switch driver to prevent battery over-discharge after UPS shutdown)	(8) MAINTAIN-AUXSWS
(9) REPO Holder	(10) Parallel Ports
(11) LBS port	(12) Cold start
(13) Intelligent Slot 1 (SNMP / Scheda Relay)	(14) Intelligent Slot 2 (SNMP / Scheda Relay)
(15) Input Switch	(16) Bypass Switch
(17) Maintenance Switch Cover	(18) Maintenance Switch
(19) Output Switch	(20) UPS Maintenance Cover
(21) Terminal block cover	(22)
(23) EPO	

Battery Cabinet	Dimensions (D×W×H) mm		502x250x616 (max 40 battery) 828x250x868 (max 80 battery)	
	Weight (kg)	Max 40 Batt.	N/Batt:	31
		Max 80 Batt.	20 (battery):	81
			40 (battery):	131
			N/Batt:	56
			20 (battery):	106
			40 (battery):	156
			60 (battery):	206
			80 (battery):	256

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