

Powernest PNA-3/5/10-02 Smart 1P/3P all in one ESS



Safety

- CATL LFP Battery , stable and safe
- Module, pack, system, triple protection
- IP65, outdoor installation, away from living room



Simple

- Modular design, single person can carry and install it
- Plug and play, 30 min quick installation
- Space saving, 0.15 sq. m foot print



Efficiency

- Supporting 200% Oversized PV Power
- On&Off Grid Parallel System



Adaptable

- Adjustable Power in Each Phase
- Support Diesel Generator Control(DI/DO)



Interconnection

- Global cloud platform & Mobile APP anytime and anywhere
- Open API, support power internet applications

Powernest PNA-3/5/10-02 Specification

Smart 1P/3P all in one ESS

Technical Specification	PNA-3-02 (1P)	PNA-5-02 (1P)	PNA-10-02 (3P)
Input (Battery)			
Battery chemistry	LiFePO4		
Cycle Life(25±2°C,0.5C/0.5C,80%DOD)	≥6500		
Nominal voltage	48 V		
Capacity	100 Ah ~ 400 Ah	100 Ah ~ 400 Ah	200 / 400 / 600 / 800 Ah
Max. continuous charging/discharge current	0.5 C/1 C		
Working temperature	Charge: 0°C ~ + 55°C (32°F ~ 131°F) Discharge: -20°C ~ + 55°C (-4°F ~ 131°F)		
Input (PV)			
Max. PV power	6000 W	6000 W	20 kW
Max. DC input voltage ¹	580 V	580 V	1100 V
MPPT voltage range ²	80 V ~ 560 V	80 V ~ 560 V	140V~1000V
Start voltage	150 V	150 V	200V
Nominal input voltage	400 V	400 V	720V
Max. MPPT input current	15 A	15 A	15 A
Number of MPPT	2	2	2
Output (AC)			
Nominal apparent power	3680 W	5000 W	10 kW
Max. output current	16 A	22 A	14.5 A
Nominal output voltage	230 Vac	230 Vac	400 Vac
Output voltage range	184 Vac ~ 265 Vac	184 Vac ~ 265 Vac	342 Vac ~ 418 Vac
Output voltage frequency	50 Hz / 60 Hz ± 5 Hz		
Power factor	0.8 leading ... 0.8 lagging		
Input (AC)			
Nominal Input apparent power	3680 W	5000 W	9.2 kW
AC start voltage	230 Vac	230 Vac	400 Vac
Voltage frequency	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz
Max. input current	32 A	32 A	14.5 A
Power factor	0.8 leading ... 0.8 lagging		
Efficiency			
Max. efficiency	97.6%		
European efficiency	97%		
Monitoring & Control Platform			
Human-Machine interaction	APP / LCD		
Firmware update mode	FOTA / local update		
Operation and maintenance model	Remote O&M / Local O&M		
General parameters			
Working temperature	-20°C ~ +55 °C (-4°F ~ 131°F)		
Operating humidity	0 %RH ~ 100 %RH		
Max. operating altitude	2000 m (6561 ft.)		
Cooling mode	Natural Convection		
BMS communication mode	RS485 / CAN2.0		
Weight ³	86 kg (189.6 lb)	86 kg (189.6 lb)	140 kg (308.6 lb)
Dimension (W x H x D)	540 x 1080 x 240 mm 21.3 x 42.5 x 9.4 in	540 x 1080 x 240 mm 21.3 x 42.5 x 9.4 in	540 x 1960 x 240 mm 21.3 x 77.2 x 9.4 in
Self-consumption of electricity at night	≤4 W		
IP rating of enclosure	IP65		
Installation method	floor		
Certification			
Certification & Standard	IEC/EN 62109-1&2, IEC/EN61000-6-1, IEC/EN61000-6-2, EN61000-6-3, IEC/EN61000-6-4, IEC/EN61000-3-11,		
	EN61000-3-12, IEC60529, IEC 60068, IEC61683, IEC62116, IEC61727, EN50549-1,		
	AS 4777.2, NRS 097, VDE-AR-N-4105, CEI0-21, G98, G99, C10/C11		
	Pack: IEC/EN 62619, UN38.3 Cell: IEC/EN 62619, UN38.3, UL1973		

*1 The maximum input voltage is the upper DC voltage limit of the inverter. Any higher input DC voltage may damage the inverter.

*2 Any DC input voltage outside the operating voltage range of the inverter may cause the inverter to operate abnormally.

*3 The weight of the battery module is subject to the actual product, with a tolerance of ±3%.