KACO new energy.



blueplanet hybrid
6.0 NH3-12.0 NH3

HYBRID INVERTERS FOR RESIDENTIAL AND SMALL COMMERCIAL BATTERY STORAGE AND SOLAR PV SYSTEMS

Solar+storage. Quick+easy.

- Easy-to-connect battery and smart meter interfaces
- Smart meter and current transformer included in delivery
- Compatible with high-voltage batteries
- Full rated output in battery mode
- Open home energy management system available for sector coupling
- User-friendly App for set-up, commissioning and real-time monitoring
- Remote monitoring and secure data transmission with new blueplanet smartcloud
- Superior oversizing capabilities and shade management for higher yields
- Ready for bifacial and high-power PV modules
- 3 MPPTs for flexible PV system design
- Emergency power and black start capability

EUPD RESEARCH TOP BRAND PV INVERTERS GERMANY 2024

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Technical Data.

PV Input (DC)	hybrid 6.0 NH3 M2	hybrid 8.0 NH3 M3	hybrid 10.0 NH3 M3	hybrid 12.0 NH3 M3
Max. recommended PV generator power	9 000 Wp	12 000 Wp	15 000 Wp	18 000 Wp
Number of independent MPP inputs / strings per MPP input	2 / 1	3 / 1	3 / 1	3 / 1
Max. DC voltage	1100 V DC			
MPP range / Start-up voltage	150–950 V / 200 V	200–950 V / 200 V	200–950 V / 200 V	200–950 V / 200 V
MPP range @ rated power / nominal voltage	290–850 V	250–850 V / 630 DC	320–850 V / 630 DC	380–850 V / 630 DC
Max. input current per MPP tracker	20 A	16 A	16 A	16 A
Max. short-circuit current (Isc)	30 A	24 A	24 A	24 A
Battery Connection (DC)				
Voltage range	120 V DC – 600 V DC			
Max. charging current / max. discharging current	30 A			
Max. charging power / max. discharging power	6 000 W	8 000 W	10 000 W	12 000 W
Battery type	Lithium-ion (LiFePO4)			
Compatible batteries	BYD HVS, BYD HVM, PYLONTECH Force H1/H2/H3, AXITEC Li SV1/Li SV2, Dyness Tower Pro			
Grid Feed-in (AC)				
Max. AC power	6 000 VA	8 000 VA	10 000 VA	12 000 VA
Number of feed-in phases	3			
Max. AC current	9.6 A	12.8 A	16.0 A	19,2 A
Nominal grid voltage	220 V / 380 V 230 V / 400 V 240 V / 415 V			
Nominal grid frequency / frequency range	50 Hz or 60 Hz / 45 – 65 Hz			
AC voltage range	270 – 480 V AC			
Power factor range	0.8 c – 0.8 i			
Max. grid input current	32 A			
Max. grid input power	22 000 VA			
Harmonics THD	< 3 %			
EPS Output (**E**mergency **P**ower **S**upply)				
Nominal EPS voltage	220 V / 380 V (3 / N / PE) 230 V / 400 V (3 / N / PE) 240 V / 415 V (3 / N / PE)			
Nominal EPS frequency	50 Hz / 60 Hz			
Max. EPS output power (continuous off-grid)	6 000 VA	8 000 VA	10 000 VA	12 000 VA
Peak EPS output power (off-grid)	2 times of rated power, max. 10 sec.			
Max. EPS output power (continuous on-grid)	22 000 VA			
Rated current @ 400 V	8.7 A	11.6 A	14.5 A	17.4 A
Max. switch time	< 10 ms			
Harmonics THD (off-grid)	2 %			
Efficiency				
Max. efficiency	97.81 %	97.97 %	98.11 %	98.19 %
European efficiency	95.47 %	95.91 %	96.46 %	96.55 %
Max. battery to load efficiency	97.48 %	97.79 %	97.88 %	97.85 %
General Data				
H x W x D	545 x 530 x 230 mm			
Weight	26.5 kg	28.5 kg	28.5 kg	28.5 kg
Ambient temperature	-25 °C – +60 °C			
Noise emission	30 dB(A)			
Cooling	Natural convection			
Standby consumption	< 10 W			
Protection rating (IEC 60529)	IP66			
Climatic category (acc. to IEC 60721-3-4)	4K4H			
Humidity range [%]	100 % (non-condensing)			
Max. operating altitude	3000 m			
Battery connection	MC4			
Connector type	PhoenixContact Sunclix			
AC connection and EPS connection	5-pole AC plug			
AC connection max. conductor cross-section	6 mm²			
Features				
DC surge protection (Type II, acc. to EN/IEC 61643-11) / AC surge protection Type II	● ●			
Insulation resistor detection	●			
PV input reverse polarity protection	●			
Battery input reverse polarity protection	●			
Over-temperature protection	●			
Residual current monitoring unit	●			
AC short-circuit protection	●			
Anti-islanding protection	●			
User interface	LED & App			
Communication with BMS	CAN			
Communication with meter	Sunspec Modbus RTU			
Communication with portal	WLAN / LAN			
Digital input (dry contact) / number of inputs	● /4			
Digital output (dry contact) / number of outputs	● /2			
Integrated power control / zero export control	●			
Operating Modes				
Grid parallel self-consumption	●			
Grid parallel integration of AC coupled power source	●			
Grid parallel emergency power supply mode	●			
Off-Grid island mode	●			
Certifications				
Safety & EMC	EN 62109-1; EN 62109-2; EN 6100-6-2; EN 62920; EN 55011; EN 61000-6-3; EN 62920; EN 61000-3-11; EN 61000-3-12			
Grid connection rule	overview see homepage / download area			

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The text and figures reflect the current technical state at the time of printing. Subject to technical changes. Errors and omissions excepted.
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