KACO new energy.

blueplanet hybrid 10.0 TL3

Hybrid inverter for residential and small commercial battery storage and solar PV systems.



Storing the sun the easy way.

10 kW inverter output, also in battery operation

3-phase mains parallel operation, off-grid capable

3rd place in energy storage inspection 2021

2 MPP trackers for flexible integration of solar PV systems

98% efficiency, outstanding partial load behaviour

Integrated battery management and monitoring

Adapter plate and low weight for easy installation

EUPD RESEARCH TOP BRAND PV INVERTERS EUROPE 2021

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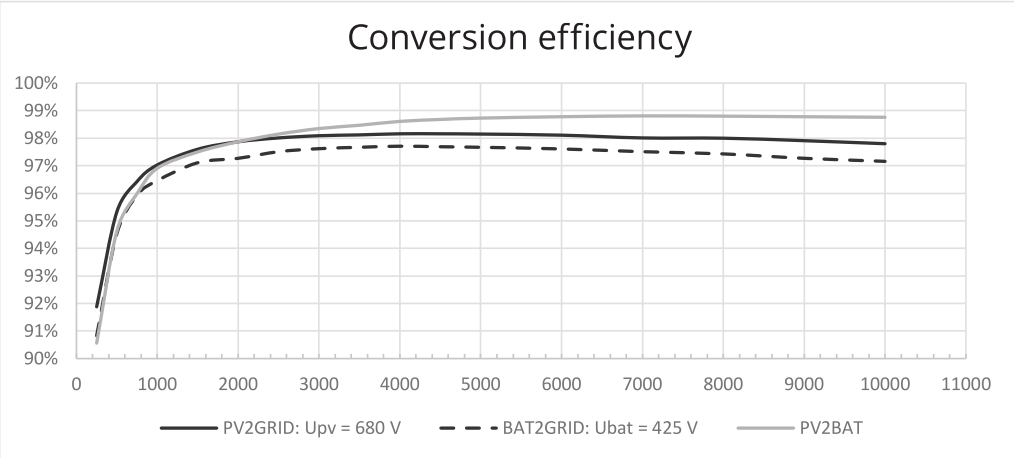
Technical Data

PV Input (DC)	hybrid 10.0 TL3
Max. recommended PV generator power	15000 W
Number of inputs / MPP Tracker	2
Nom. / max. DC voltage	680 V DC / 900 V DC
Start-up voltage	240 V DC
MPP range@rated power	420 V DC – 740 V DC
Operating range	200 V DC – 850 V DC
Max. input current per MPP Tracker	12 A
Max. short-circuit current $I_{sc\ max}$	15 A per input channel
Overload behaviour	shift of working point
Efficiency	
PV (DC) to grid (AC) [max.]	>98.1 %
PV (DC) to grid (AC) [EU]	>97.8 %
PV (DC) to battery (DC) [max.]	>98.8 %
Battery (DC) to grid (AC) [max.]	>97.7 %
Night-time consumption (off)	<0.1 W
Idle state consumption	<20 W
Battery Mode Input (DC)	
Nom. DC voltage	425 V DC
Max. charge / discharge current	25 A
Battery voltage min. - max.	96 V DC - 450 V DC
Galvanic isolation	nein
Safeguarding	safety-fuse, cut-off relay
Battery Mode AC-Connection	
Nom. charging power	9990 W
Nom. discharging power	9990 W
Voltage shape in off-grid mode	true sinus
Number of current phases	3
Grid Feed-In (AC)	
Nom. power AC	9 990 W
Max. power AC	11 000 VA
Number of phases	3
Typ. power per phase to grid	3 330 W
Max. AC current per phase	16.1 A RMS
Feed-in	sym. / asym.
Nom. AC voltage	210 – 264 V AC
AC voltage range	184 – 264 V AC
Grid frequency range	47.5 Hz – 51.5 Hz
Power factor	0.9c – 0.9i
Topology	transformerless
Load compensation	200 ms
Initial short-circuit alternating current (acc. to IEC 62109-2)	16.4 A
Max. power AC in off-grid mode (optional)	max. 4 000 W per phase and max. 10 000 W phase sum
Inrush current (acc. to IEC 62109-2)	1.7 A
General Data	
Dimension (WxHxD)	610 x 552 x 200 mm
Weight	37 kg
Display	LCD
DC disconnecting switch	integrated
RC Protective Device	integrated (type B)
Protective relais	integrated (VDE AR-N 4105)
Battery breaker	integrated
Operating temperature range	+5 to +40°C
Installation altitude*	0 – 2000 m
Installation humidity	20 - 90% RH (non-condensing)
Protection (in off-grid mode)	PE, RCD Type B **
Noise emission	<35 dB(A)
Over temperature behaviour	power reduction
Degree of protection (IEC 60529)	IP20
Case material	aluminium
PWM frequency	20 kHz
On-grid operation	grid-commutated
Energy source for battery charging	PV, grid
Pollution degree	PD2

General Data			
Protection class (IEC 62109-1)	I		
DC Overvoltage category (IEC 60664-1)	II		
AC Overvoltage category (IEC 60664-1)	III		
WEEE-Reg.-Nr.	DE57110363		
Certificates	VDE 0126, VDE AR-N 4105		
Warranty	5 years		
Connections			
DC connection for battery with automatic cut-off poin	PhoenixContact Sunclix		
DC connection for PV	PhoenixContact Sunclix		
AC connection	5-Pole PhoenixContact - Art. 1409205		
AC connection max. wire cross section	4 mm²		
Communication ports	2 x RJ45 (RS485), 1 x RJ45 (Ethernet) external		
Supported Devices			
Energy storage***	BYD Battery-Box HVS 5.1-10.2**and HVM 8.3-22.1**, Energy Depot DOMUS 2.5		
Meter	blueplanet hy-switch		
Energy Conversion Modes			
PV (DC) to grid (AC)	PV (DC) to battery (DC)	PV (DC) to grid (AC)	PV (DC) to battery (DC)
yes	yes	yes (with external EMS)	yes

*** For release list see manual.

** Only compatible with firmware < BMS 3.27



* Power reduction of 2 % per 100 m above 1000 m altitude.
** If two or more inverters are installed in the same grid or emergency power/off-grid operation is in use, a separate residual current device (RCD type B) is compulsory.

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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.
This current version replaces all older versions. Download the most current version at: www.kaco-newenergy.com

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