

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



Technical Data

PV Input (DC)		hybrid 10.0 TL3
Max. recommended PV generator power		15 000 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 relays		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 mm ²
Communication ports	2 x RJ45 (RS485), 1 x RJ45 (Ethernet) external

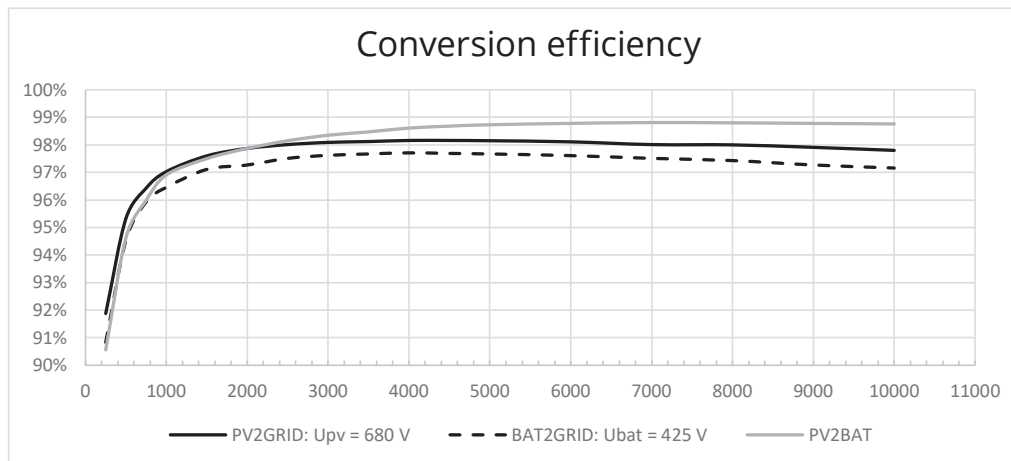
Supported Devices

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.



* 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.

