

# 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

<b>PV Input (DC)</b>		<b>hybrid 10.0 TL3</b>
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
<b>Efficiency</b>		
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
<b>Battery Mode Input (DC)</b>		
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
<b>Battery Mode AC-Connection</b>		
Nom. charging power		9990 W
Nom. discharging power		9990 W
Voltage shape in off-grid mode		true sinus
Number of current phases		3
<b>Grid Feed-In (AC)</b>		
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
<b>General Data</b>		
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 mm <sup>2</sup>
Communication ports	2 x RJ45 (RS485), 1 x RJ45 (Ethernet) external

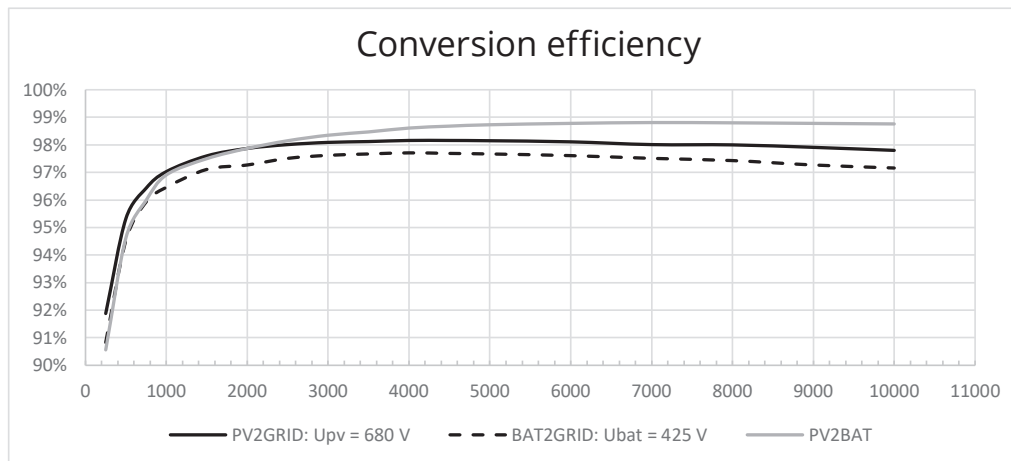
### Supported Devices

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.

