

# **blueplanet 3.0 – 10.0 TL3**

**Transformerless, three-phase string inverters.**



## **The inverters for the private energy revolution.**

**Rapid amortization of residential and small commercial PV arrays**

**High flexibility for unconventional system designs**

**Simple installation and commissioning, also outdoors**

**Data logger with web server for continuous system monitoring**

**Optimised for the targeted self-consumption of solar power**

## Technical Data

DC input data	3.0 TL3	4.0 TL3	5.0 TL3
Max. recommended PV generator power	3 600 W	4 800 W	6 000 W
MPP range	200 – 800 V	200 – 800 V	240 – 800 V
Operating range	200 – 950 V	200 – 950 V	200 – 950 V
Rated DC voltage / start voltage	653 V / 250 V	653 V / 250 V	653 V / 250 V
Max. no-load voltage	1 000 V	1 000 V	1 000 V
Max. input current	2 x 11 A	2 x 11 A	2 x 11 A
Max. short circuit current I <sub>sc max</sub>	2 x 16 A	2 x 16 A	2 x 16 A
Number of MPP tracker	2	2	2
Connection per tracker	1	1	1
Max. input power per tracker	3 200 W	4 200 W	5 200 W
AC output data			
Rated output	3 000 VA	4 000 VA	5 000 VA
Max. power	3 000 VA	4 000 VA	5 000 VA
Line voltage	240V/415V(3/N/PE) 230V/400V(3/N/PE) 220V/380V(3/N/PE)	240V/415V(3/N/PE) 230V/400V(3/N/PE) 220V/380V(3/N/PE)	240V/415V(3/N/PE) 230V/400V(3/N/PE) 220V/380V(3/N/PE)
Voltage range (Ph-Ph)	305 – 480 V	305 – 480 V	305 – 480 V
Rated frequency (range)	50 Hz / 60 Hz (45 – 65 Hz)	50 Hz / 60 Hz (45 – 65 Hz)	50 Hz / 60 Hz (45 – 65 Hz)
Rated current	3 x 4.20 A@415V 3 x 4.35 A@400V 3 x 4.60 A@380V	3 x 5.60 A@415V 3 x 5.80 A@400V 3 x 6.10 A@380V	3 x 7.00 A@415V 3 x 7.25 A@400V 3 x 7.60 A@380V
Max. current	3 x 4.8 A	3 x 6.4 A	3 x 8.0 A
Reactive power / cos phi	0 – 95 % S <sub>nom</sub> / 0.30 ind. – 0.30 cap.	0 – 95 % S <sub>nom</sub> / 0.30 ind. – 0.30 cap.	0 – 95 % S <sub>nom</sub> / 0.30 ind. – 0.30 cap.
Max. total harmonic distortion (THD)	0.36 %	0.32 %	0.31 %
Number of grid phases	3	3	3
General data			
Max. efficiency	98.1 %	98.2 %	98.3 %
Europ. efficiency	96.6 %	97.1 %	97.4 %
Standby consumption	3 W	3 W	3 W
Circuitry topology	transformerless	transformerless	transformerless
Mechanical data			
Display	graphical display + LEDs	graphical display + LEDs	graphical display + LEDs
Control units	4-way navigation + 2 buttons	4-way navigation + 2 buttons	4-way navigation + 2 buttons
Interfaces	Ethernet, USB, RS485, optional: 4-DI	Ethernet, USB, RS485, optional: 4-DI	Ethernet, USB, RS485, optional: 4-DI
Faultsignalling relay	potential-free NOC max. 30 V / 1 A	potential-free NOC max. 30 V / 1 A	potential-free NOC max. 30 V / 1 A
DC connection	DC plugs (SUNCLIX)	DC plugs (SUNCLIX)	DC plugs (SUNCLIX)
AC connection	AC plug	AC plug	AC plug
Ambient temperature	-25 °C – +60 °C <sup>1)</sup>	-25 °C – +60 °C <sup>1)</sup>	-25 °C – +60 °C <sup>1)</sup>
Humidity	0 – 100 %	0 – 100 %	0 – 100 %
Max. installation elevation (above MSL)	2 000 m	2 000 m	2 000 m
Min. distance from coast	2 000 m	2 000 m	2 000 m
Cooling	temperature controlled fan	temperature controlled fan	temperature controlled fan
Protection class	IP65	IP65	IP65
Noise emission	< 53 db (A)	< 53 db (A)	< 53 db (A)
H x W x D	522 x 363 x 246 mm	522 x 363 x 246 mm	522 x 363 x 246 mm
Weight	30 kg	30 kg	30 kg
Certifications			
Safety	EN 62109-1 / -2, EN 61000-6-2 / -3, EN 61000-3-2 / -3		
Grid connection rule	overview see homepage / download area		

6.5 TL3	7.5 TL3	8.6 TL3	9.0 TL3	10.0 TL3
7 800 W	9 000 W	10 300 W	10 800 W	12 000 W
310 – 800 V	350 – 800 V	403 – 800 V	420 – 800 V	470 – 800 V
200 – 950 V	200 – 950 V	200 – 950 V	200 – 950 V	200 – 950 V
653 V / 250 V	653 V / 250 V	653 V / 250 V	653 V / 250 V	653 V / 250 V
1 000 V	1 000 V	1 000 V	1 000 V	1 000 V
2 x 11 A	2 x 11 A	2 x 11 A	2 x 11 A	2 x 11 A
2 x 16 A	2 x 16 A	2 x 16 A	2 x 16 A	2 x 16 A
2	2	2	2	2
1	1	1	1	1
6 700 W	7 700 W	8 800 W	8 800 W	8 800 W
6 500 VA	7 500 VA	8 600 VA	9 000 VA	10 000 VA
6 500 VA	7 500 VA	8 600 VA	9 000 VA	10 000 VA
240V/415V(3/N/PE)	240V/415V(3/N/PE)	240V/415V(3/N/PE)	240V/415V(3/N/PE)	240V/415V(3/N/PE)
230V/400V(3/N/PE)	230V/400V(3/N/PE)	230V/400V(3/N/PE)	230V/400V(3/N/PE)	230V/400V(3/N/PE)
220V/380V(3/N/PE)	220V/380V(3/N/PE)	220V/380V(3/N/PE)	220V/380V(3/N/PE)	220V/380V(3/N/PE)
305 – 480 V	305 – 480 V	305 – 480 V	305 – 480 V	305 – 480 V
50 Hz / 60 Hz (45 – 65 Hz)	50 Hz / 60 Hz (45 – 65 Hz)	50 Hz / 60 Hz (45 – 65 Hz)	50 Hz / 60 Hz (45 – 65 Hz)	50 Hz / 60 Hz (45 – 65 Hz)
3 x 9.10 A @ 415 V	3 x 10.50 A @ 415 V	3 x 12.00 A @ 415 V	3 x 12.60 A @ 415 V	3 x 14.95 A @ 415 V
3 x 9.50 A @ 400 V	3 x 10.90 A @ 400 V	3 x 12.50 A @ 400 V	3 x 13.00 A @ 400 V	3 x 14.50 A @ 400 V
3 x 9.90 A @ 380 V	3 x 11.40 A @ 380 V	3 x 13.10 A @ 380 V	3 x 13.70 A @ 380 V	3 x 15.20 A @ 380 V
3 x 10.5 A	3 x 12.0 A	3 x 13.2 A	3 x 14.0 A	3 x 15.5 A
0 – 95 % Snom / 0.30 ind. – 0.30 cap.	0 – 95 % Snom / 0.30 ind. – 0.30 cap.	0 – 95 % Snom / 0.30 ind. – 0.30 cap.	0 – 95 % Snom / 0.30 ind. – 0.30 cap.	0 – 95 % Snom / 0.30 ind. – 0.30 cap.
0.29 %	0.3 %	0.3 %	0.3 %	0.27 %
3	3	3	3	3
98.3 %	98.3 %	98.3 %	98.3 %	98.5 %
97.6 %	97.7 %	97.9 %	97.9 %	98.3 %
3 W	3 W	3 W	3 W	3 W
transformerless	transformerless	transformerless	transformerless	transformerless
graphical display + LEDs	graphical display + LEDs	graphical display + LEDs	graphical display + LEDs	graphical display + LEDs
4-way navigation + 2 buttons	4-way navigation + 2 buttons	4-way navigation + 2 buttons	4-way navigation + 2 buttons	4-way navigation + 2 buttons
Ethernet, USB, RS485, optional: 4-DI	Ethernet, USB, RS485, optional: 4-DI	Ethernet, USB, RS485, optional: 4-DI	Ethernet, USB, RS485, optional: 4-DI	Ethernet, USB, RS485, optional: 4-DI
potential-free NOC max. 30 V / 1 A	potential-free NOC max. 30 V / 1 A	potential-free NOC max. 30 V / 1 A	potential-free NOC max. 30 V / 1 A	potential-free NOC max. 30 V / 1 A
DC plugs (SUNCLIX)	DC plugs (SUNCLIX)	DC plugs (SUNCLIX)	DC plugs (SUNCLIX)	DC plugs (SUNCLIX)
AC plug	AC plug	AC plug	AC plug	AC plug
-25 °C – +60 °C <sup>1)</sup>	-25 °C – +60 °C <sup>1)</sup>	-25 °C – +60 °C <sup>1)</sup>	-25 °C – +60 °C <sup>1)</sup>	-25 °C – +60 °C <sup>1)</sup>
0 – 100 %	0 – 100 %	0 – 100 %	0 – 100 %	0 – 100 %
2 000 m	2 000 m	2 000 m	2 000 m	2 000 m
2 000 m	2 000 m	2 000 m	2 000 m	2 000 m
temperature controlled fan	temperature controlled fan	temperature controlled fan	temperature controlled fan	temperature controlled fan
IP65	IP65	IP65	IP65	IP65
< 53 db (A)	< 53 db (A)	< 53 db (A)	< 53 db (A)	< 53 db (A)
522 x 363 x 246 mm	522 x 363 x 246 mm	522 x 363 x 246 mm	522 x 363 x 246 mm	522 x 363 x 246 mm
30 kg	30 kg	30 kg	30 kg	30 kg

EN 62109-1 / -2, EN 61000-6-2 / -3, EN 61000-3-2 / -3

overview see homepage / download

<sup>1)</sup> Power derating at high ambient temperatures



KACO new energy GmbH | Carl-Zeiss-Str. 1 | 74172 Neckarsulm | Germany