

blueplanet 87.0 – 150 TL3

Transformerless, three-phase string inverters.



The trendsetters among inverters.

Optimized for solar power plants
with 1000 and 1500 volt modules

Extensive grid management
functions

Special properties for extreme
climatic conditions

Farsighted technical features for
future requirements

Lean commissioning and
maintenance via remote services

Technical Data

DC input data	87.0 TL3	92.0 TL3
Max. recommended PV generator power	130 500 W	138 000 W
MPP range	563 – 1 300 V	591 – 1 300 V ¹⁾
Operating range	563 – 1 450 V	591 – 1 450 V ¹⁾
Rated DC voltage / start voltage	600 V / 645 V	620 V / 675 V ¹⁾
Max. no-load voltage	1 500 V	1 500 V
Max. input current	160 A	160 A
Max. short circuit current $I_{sc,max}$	300 A	300 A
Number of MPP tracker	1	1
Connection per tracker	1 - 2	1 - 2
AC output data		
Rated output	87 000 VA	92 000 VA
Max. power	87 000 VA	92 000 VA
Line voltage	380 V (3P+PE)	400 V (3P+PE)
Voltage range (Ph-Ph)	300 – 580 V	300 – 580 V
Rated frequency (range)	50 Hz / 60 Hz (45 – 65 Hz)	50 Hz / 60 Hz (45 – 65 Hz)
Rated current	3 x 132.3 A	3 x 132.3 A
Max. current	3 x 132.3 A	3 x 132.3 A
Reactive power / cos phi		0 – 100 % Snom / 0,30 ind. – 0,30 cap.
Max. total harmonic distortion (THD)	≤ 3 %	≤ 3 %
Number of grid phases	3	3
General data		
Max. efficiency	99.0 %	98.8 %
Europ. efficiency	98.6 %	98.5 %
CEC efficiency	98.6 %	98.4 %
Standby consumption	5 W	5 W
Circuitry topology	transformerless	transformerless
Mechanical data		
Display	LEDs	LEDs
Control units	webserver, supports mobile devices	webserver, supports mobile devices
Interfaces	Ethernet (Modbus TCP, Sunspec) RS485 (KACO-protocol) USB, optional: 4-DI, WIFI	Ethernet (Modbus TCP, Sunspec) RS485 (KACO-protocol) USB, optional: 4-DI, WIFI
Fault signalling relay	potential-free NOC max. 30 V / 1 A	potential-free NOC max. 30 V / 1 A
DC connection	cable lug, max. 240 mm ² (0.372 in ²) Cu or Al	
AC connection	cable lug, max. 240 mm ² (0.372 in ²) Cu or Al	
Ambient temperature	-25 °C – +60 °C ¹⁾	-25 °C – +60 °C ¹⁾
Humidity	0 – 100 %	0 – 100 %
Max. installation elevation (above MSL)	3 000 m	3 000 m
Min. distance from coast	500 m	500 m
Cooling	temperature controlled fan	temperature controlled fan
Protection class	IP66 / NEMA 4X	IP66 / NEMA 4X
Noise emission	59.2 db (A)	59.2 db (A)
H x W x D	719 x 699 x 460 mm	719 x 699 x 460 mm
Weight	78.2 kg	78.2 kg
Certifications		
Safety	IEC 62109-1/-2, EN 61000-6-1/-2/4, EN 61000-3-11/-12	
Grid connection rule	overview see homepage / download area	

¹⁾ Power derating at high ambient temperatures

110 TL3	125 TL3	137 TL3	150 TL3
165 000 W	187 500 W	205 500 W	225 000 W
705 – 1 300 V	875 – 1 300 V	875 – 1 300 V	960 – 1 300 V
705 – 1 450 V	875 – 1 450 V	875 – 1 450 V	960 – 1 450 V
730 V / 805 V	900 V / 1 000 V	900 V / 1 000 V	900 V / 1 000 V
1 500 V	1 500 V	1 500 V	1 500 V
160 A	160 A	160 A	160 A
300 A	300 A	300 A	300 A
1	1	1	1
1 - 2	1 - 2	1 - 2	1 - 2
110 000 VA	125 000 VA	137 000 VA	150 000 VA
110 000 VA	137 500 VA	137 500 VA	150 000 VA
480 V (3P+PE)	600 V (3P+PE)	600 V (3P+PE)	660 V (3P+PE)
300 – 580 V	480 – 760 V	480 – 760 V	480 – 760 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)
3 x 132.3 A	3 x 120.3 A	3 x 132.3 A	3 x 131.2 A
3 x 132.3 A	3 x 132.3 A	3 x 132.3 A	3 x 132.3 A
0 – 100 % Snom / 0.3 ind. – 0.30 cap.			
≤ 3 %	≤ 3 %	≤ 3 %	≤ 3 %
3	3	3	3
99.1 %	99.2 %	99.2 %	99.2 %
98.8 %	99.0 %	99.0 %	99.0 %
98.8 %	98.9 %	98.9 %	98.9 %
5 W	6 W	7 W	6 W
transformerless	transformerless	transformerless	transformerless
LEDs	LEDs	LEDs	LEDs
webserver, supports mobile devices	webserver, supports mobile devices	webserver, supports mobile devices	webserver, supports mobile devices
Ethernet (Modbus TCP, Sunspec)	Ethernet (Modbus TCP, Sunspec)	Ethernet (Modbus TCP, Sunspec)	Ethernet (Modbus TCP, Sunspec)
RS485 (KACO-protocol)	RS485 (KACO-protocol)	RS485 (KACO-protocol)	RS485 (KACO-protocol)
USB, optional: 4-DI, WIFI	USB, optional: 4-DI, WIFI	USB, optional: 4-DI, WIFI	USB, optional: 4-DI, WIFI
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
cable lug, max. 240 mm ² (0.372 in ²) Cu or Al			
cable lug, max. 240 mm ² (0.372 in ²) Cu or Al			
-25 °C – +60 °C ¹⁾	-25 °C – +60 °C ¹⁾	-25 °C – +60 °C ¹⁾	-25 °C – +60 °C ¹⁾
0 – 100 %	0 – 100 %	0 – 100 %	0 – 100 %
3 000 m	3 000 m	3 000 m	3 000 m
500 m	500 m	500 m	500 m
temperature controlled fan	temperature controlled fan	temperature controlled fan	temperature controlled fan
IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X	IP66 / NEMA 4X
59.2 db (A)	59.2 db (A)	59.2 db (A)	59.2 db (A)
719 x 699 x 460 mm	719 x 699 x 460 mm	719 x 699 x 460 mm	719 x 699 x 460 mm
78.2 kg	78.2 kg	78.2 kg	78.2 kg

UL62109-1, UL1741, CSA-C22.2 No. 62109-1,
CSA-C22.2 No. 62109-2, CSA-C22.2 No. 107.1
IEC 62109-1/-2, EN 61000-6-1/-2/-4, EN 61000-3-11/-12

overview see homepage / download area

¹⁾ Power derating at high ambient temperatures

Versions	S	XL
Number of DC inputs	1 - 2	1 - 2
DC switch	-	✓
DC SPD	Type 1 + 2	Type 1 + 2
AC SPD	○	○
RS485 interface SPD	○	○
Ethernet interface SPD	○	○
PID Set	○	○

standard = ✓ upgradeable = ○

