

blueplanet 50.0 TL3

Transformerless, three-phase string inverter.



The inverter you can count on.

Compact wall-mounted unit for decentralised megawatt projects

Tailored for economical use in solar parks

Special properties for extreme climatic conditions

Farsighted technical features for future requirements

Installation-friendly connection area, user-friendly operation

Integrated section switches for cost-effective grid and plant protection with Powador-protect

Technical Data

DC input data		50.0 TL3
Max. recommended PV generator power		70 000 W
MPP range		580 ¹⁾ – 900 V
Operating range		580 ¹⁾ – 1 050 V
Rated DC voltage / start voltage		600 V / 670 V
Max. no-load voltage		1 100 V
Max. input current		90 A
Max. short circuit current $I_{sc\ max}$		190 A
Number of MPP tracker		1
Connection per tracker		S / B / M: 1; XL: 10
AC output data		
Rated output		50 000 VA
Max. power		52 000 VA
Line voltage		240 V / 415 V (3 / N / PE; 3 / PEN) 230 V / 400 V (3 / N / PE; 3 / PEN) 220 V / 380 V (3 / N / PE; 3 / PEN)
Voltage range (Ph-Ph)		305 – 480 V
Rated frequency (range)		50 Hz / 60 Hz (42 – 68 Hz)
Rated current		3 x 69.6 A @ 415 V 3 x 72.2 A @ 400 V 3 x 76.0 A @ 380 V
Max. current		3 x 76.5 A
Reactive power / cos phi		0 - 100 % S_{nom} / 0.30 ind. – 0.30 cap.
Max. total harmonic distortion (THD)		1.6 %
Number of grid phases		3
General data		
Max. efficiency		98.5 %
Europ. efficiency		98.1 %
CEC efficiency		98.0 %
Standby consumption		2.5 W
Circuitry topology		transformerless
Mechanical data		
Display		graphical display + LEDs
Control units		4-way navigation + 2 buttons
Interfaces		Ethernet, USB, RS485, optional: 4-DI
Fault signalling relay		potential-free NOC max. 30 V / 1 A
DC connection		S / B / M: max.120 mm ² cable plug, Cu / Al XL: DC plugs (SUNCLIX)
AC connection		screw terminals, max. 95 mm ² , Cu / Al
Ambient temperature		-20 °C – +60 °C ²⁾
Humidity		0 – 100 %
Max. installation elevation (above MSL)		3 000 m
Min. distance from coast		2 000 m / 500 m (OD+ version)
Cooling		temperature controlled fan
Protection class		IP65
Noise emission		< 61 db (A)
H x W x D		760 x 500 x 425 mm
Weight		70 kg (S), 71 kg (B / M), 73 kg (XL)
Certifications		
Safety		IEC 62109-1/-2, EN 61000-6-1/-2/-3, EN 61000-3-11/-12
Grid connection rule		overview see homepage / download area

¹⁾ 560 V @ 220 V / 380 V; 610 V @ 240 V / 415 V

²⁾ Power derating at high ambient temperatures

Versions	S	B	M	XL	XL F
Number of DC inputs	1	1	1	10	10
DC switch	-	✓	✓	✓	✓
String protection PV+	-	-	-	✓	✓
String protection PV -	-	-	-	○	○
DC surge protection	-	-	○	Type 1 + 2	Type 1 + 2
AC surge protection	-	-	○	○	○
OD+	★	★	★	★	★

standard = ✓ upgradeable = ○ optional = ★

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