



## Data sheet

### Powador

6.0 TL3

7.8 TL3

9.0 TL3

10.0 TL3

# Small power stations for the energy turnaround.

## Transformerless three-phase inverters Powador 6.0 TL3 to 10.0 TL3.

With the new transformerless Powador 6.0 TL3 to 10.0 TL3 3-phase inverters, now even small roof systems can be realised with the most flexible line of 3-phase units on the market. With AC rated power of 5 kVA, 6,5 kVA, 7,5 kVA and 9 kVA they cover the range from the unbalanced load limit up to 10 kW.

They operate using two separate MPP trackers that can handle both symmetrical and asymmetrical loads to allow for optimum adjustment. Each tracker is able to process all of the AC output. This allows for all typical requirements of complex designs to be fulfilled; on the one hand, for example, full configuration of an east/west-facing roof (symmetrical load) or, on the other hand, the regular configuration of a south-facing roof without having to dispense with the solar yield of a dormer (asymmetrical load). The MPP trackers can also be connected in parallel: installation costs less (you do not need an additional external disconnect) when strings need to be com-

bined before the inverter. Two strings can be connected per MPP controller, i.e. 4 strings for each unit.

The rated input voltage range is particularly broad. From 250 V the units switch to the mains and during operation they still feed in at 200 V. This means that solar yields are optimum for comparatively small areas such as dormers or carports but they also operate for more of the day. The peak efficiency is 98 % and the European efficiency is also above average. The compact design weighing 40 kg combined with the DC connection via solar connectors makes installation very easy and economical. Protection class IP65 ensures the greatest possible flexibility when selecting the installation location.

It is easy to achieve perfect communication with these units. They are fitted with an integrated data logger with web server, a graphical display for showing operating data and a USB port for

installing firmware updates. The current software can be downloaded free of charge from the download area of [www.kaconewenergy.com/en/service](http://www.kaconewenergy.com/en/service). The yield data can be called from the web server or via USB for evaluation. The integrated data logger can also be connected directly to the Powador web internet portal for professional evaluation and visualisation of the inverter data.

A number of country-specific default settings are programmed into the inverters. These are easy to select during on-site installation. The interface language can be selected separately. The inverters support the functions of the Powador-protect for grid and plant protection and also power management.

# Technical data

Powador 6.0 TL3 | 7.8 TL3 | 9.0 TL3 | 10.0 TL3

Electrical data	6.0 TL3	7.8 TL3
<b>Input variables</b>		
Max. recommended PV generator power	6 000 W	7 800 W
MPP range	200 V ... 800 V <sup>1)</sup>	200 V ... 800 V <sup>2)</sup>
Starting voltage	250 V	250 V
No-load voltage	1 000 V	1 000 V
Max. input current	2 x 11.0 A	2 x 11.0 A
Number of MPP trackers	2	2
Max. power/tracker	5.2 kW	6.7 kW
Number of strings	2 x 2	2 x 2
<b>Output variables</b>		
Rated output	5 000 VA	6 500 VA
Supply voltage	acc. to local requirements	acc. to local requirements
Rated current	3 x 7.25 A	3 x 9.25 A
Rated frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
cos phi	0.80 inductive ... 0.80 capacitive	0.80 inductive ... 0.80 capacitive
Number of grid phases	3	3
<b>General electrical data</b>		
Max. efficiency	98.0%	98.0%
Europ. efficiency	>97.0%	>97.0%
Night consumption	≈ 1.5 W	≈ 1.5 W
Switching plan	transformerless	transformerless
Grid monitoring	acc. to local requirements	acc. to local requirements
<b>Mechanical data</b>		
Display	graphical display + LEDs	graphical display + LEDs
Control units	4-way navigation + 2 buttons	4-way navigation + 2 buttons
Interfaces	Ethernet, USB, RS485, S0 output	Ethernet, USB, RS485, S0 output
Fault signalling relay	potential-free NOC max. 230 V / 1 A	potential-free NOC max. 230 V / 1 A
Connections	DC: solar connector, AC: cable connection M40 and terminal (max. cross-section: 16 mm <sup>2</sup> flexible, 10 mm <sup>2</sup> rigid)	DC: solar connector, AC: cable connection M40 and terminal (max. cross-section: 16 mm <sup>2</sup> flexible, 10 mm <sup>2</sup> rigid)
Ambient temperature	-25 °C ... +60 °C <sup>5)</sup>	-25 °C ... +60 °C <sup>5)</sup>
Cooling	temperature-dependent fan	temperature-dependent fan
Protection class	IP65	IP65
Noise emission	< 45 dB (A) (noiseless when operated without fan)	< 45 dB (A) (noiseless when operated without fan)
DC switch	integrated	integrated
Casing	aluminium casting	aluminium casting
H x W x D	690 x 420 x 200 mm	690 x 420 x 200 mm
Weight	40 kg	40 kg

<sup>1)</sup> The possible input power is reduced at voltages lower than 240 V. The input current is limited to 11.0 A per input.

<sup>2)</sup> The possible input power is reduced at voltages lower than 310 V. The input current is limited to 11.0 A per input.

<sup>3)</sup> The possible input power is reduced at voltages lower than 350 V. The input current is limited to 11.0 A per input.

<sup>4)</sup> The possible input power is reduced at voltages lower than 420 V. The input current is limited to 11.0 A per input.

<sup>5)</sup> Power derating at high ambient temperatures.

Conforms to the country-specific standards and regulations according to the country version that has been set.

Electrical data	9.0 TL3	10.0 TL3
<b>Input variables</b>		
Max. recommended PV generator power	9 000 W	10 000 W
MPP range	200 V ... 800 V <sup>3)</sup>	200 V ... 800 V <sup>4)</sup>
Starting voltage	250 V	250 V
No-load voltage	1 000 V	1 000 V
Max. input current	2 x 11.0 A	2 x 11.0 A
Number of MPP trackers	2	2
Max. power/tracker	7.7 kW	9.2 kW
Number of strings	2 x 2	2 x 2
<b>Output variables</b>		
Rated output	7 500 VA	9 000 VA
Supply voltage	acc. to local requirements	acc. to local requirements
Rated current	3 x 10.9 A	3 x 13.0 A
Rated frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
cos phi	0.80 inductive ... 0.80 capacitive	0.80 inductive ... 0.80 capacitive
Number of grid phases	3	3
<b>General electrical data</b>		
Max. efficiency	98.0%	98.0%
Europ. efficiency	97.2%	97.4%
Night consumption	< 1.5 W	1.5 W
Switching plan	transformerless	transformerless
Grid monitoring	acc. to local requirements	acc. to local requirements
<b>Mechanical data</b>		
Display	graphical display + LEDs	graphical display + LEDs
Control units	4-way navigation + 2 buttons	4-way navigation + 2 buttons
Interfaces	Ethernet, USB, RS485, S0 output	Ethernet, USB, RS485, S0 output
Fault signalling relay	potential-free NOC max. 230 V / 1 A	potential-free NOC max. 230 V / 1 A
Connections	DC: solar connector, AC: cable connection M40 and terminal (max. cross-section: 16 mm <sup>2</sup> flexible, 10 mm <sup>2</sup> rigid)	DC: solar connector, AC: cable connection M40 and terminal (max. cross-section: 16 mm <sup>2</sup> flexible, 10 mm <sup>2</sup> rigid)
Ambient temperature	-25 °C ... +60 °C <sup>5)</sup>	-25 °C ... +60 °C <sup>5)</sup>
Cooling	temperature-dependent fan	temperature-dependent fan
Protection class	IP65	IP65
Noise emission	< 45 dB (A) (noiseless when operated without fan)	< 52 dB (A) (noiseless when operated without fan)
DC switch	integrated	integrated
Casing	aluminium casting	aluminium casting
H x W x D	690 x 420 x 200 mm	690 x 420 x 200 mm
Weight	40 kg	40 kg

<sup>1)</sup> The possible input power is reduced at voltages lower than 240 V. The input current is limited to 11.0 A per input.

<sup>2)</sup> The possible input power is reduced at voltages lower than 310 V. The input current is limited to 11.0 A per input.

<sup>3)</sup> The possible input power is reduced at voltages lower than 350 V. The input current is limited to 11.0 A per input.

<sup>4)</sup> The possible input power is reduced at voltages lower than 420 V. The input current is limited to 11.0 A per input.

<sup>5)</sup> Power derating at high ambient temperatures.

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Powador  
6.0 TL3 | 7.8 TL3  
9.0 TL3 | 10.0 TL3

98.0 % efficiency

Two MPP trackers, symmetrical  
and asymmetrical loading possible

Multilingual menu

Graphical display

Integrated web server

USB connection for updates

Your retailer

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