KACO new energy.

Data sheet

Powador
3200 | 4200 | 4400
5300 | 5500 | 6600

Less is More: No Transformer, lots of Power.

The Powador 3200 – 6600 transformerless string inverters.

Our Powador 3200 to 6600* transformerless single-phase inverters are now equipped with digital controllers so that they can be used internationally. The appropriate country settings can easily be selected on-site; the country-specific settings are stored in the software, so the inverters can be quickly installed in any country. Users can also choose a menu language regardless of the selected country setting. The units also comply with the German Low Voltage Directive (starting with software version 1.10 and a manufacturing date from May 7, 2012 onwards). We have changed the product names in line with this improvement. The maximum PV generator power for which the particular unit is optimised can now be read from the designation. All units operate with a full bridge without a step-up converter. Four IGBT power switches reproduce the sine-shaped voltage curve of the public power grid employing pulse width modulation. These are true single-stage, self-commutated units. However, the input voltage must be greater than the peak line voltage for them to be used.

The units are equipped with a wide MPP range of 350 V to 600 V. The open circuit voltage is 800 V, which simplifies the work of installers when laying out systems. The same is true for the integrated DC disconnect. Screw terminals make connecting to the grid easy. The units contain a single- or three-phase monitoring system conforming to VDE0126-1-1, including an AC/DC-sensitive residual current protector. The units can thus be connected to the grid without any additional measures, even in installations with several inverters.

In addition, the units operate using purely passive noiseless convection cooling. The heat that is lost is, to a great degree, dissipated via the heat sink on the rear of the unit. The rest of the heat is radiated from the surface of the aluminium housing. No fans, no problems, just long service life.

* Successors to Powador 2500xi – 5000xi inverters

Technical data

Powador 3200 | 4200 | 4400 | 5300 | 5500 | 6600

Electrical data	3200	4200	4400	5300	5500	6600
Input variables						
Max. recommended PV generator power	3200 W	4200 W	4400 W	5300 W	5500 W	6600 W
MPP range	350 V … 600 V	350 V … 600 V	350 V … 600 V	350 V … 600 V	350 V … 600 V	350 V … 600 V
No-load voltage	800 V	800 V	800 V	800 V	800 V	800 V
Max. input current	8.6 A	11.5 A	12.0 A	14.5 A	15.2 A	18.0 A
Number of strings	3	3	3	3	3	3
Number of MPP trackers	1	1	1	1	1	1
Inverse polarity protection	short-circuit diode	short-circuit diode	short-circuit diode	short-circuit diode	short-circuit diode	short-circuit diode
Output variables						
Rated output	2600 VA	3450 VA	3600 VA	4400 VA	4600 VA	5500 VA
Max. output	2850 VA	3800 VA	4000 VA	4800 VA	5060 VA	6000 VA
Supply voltage	acc. to local requirements	acc. to local requirements	acc. to local requirements	acc. to local requirements	acc. to local requirements	acc. to local requirements
Rated current	11.3 A	15.0 A	15.6 A	19.1 A	20.0 A	23.9 A
Rated frequency	50 Hz/60 Hz	50 Hz/60 Hz	50 Hz/60 Hz	50 Hz/60 Hz	50 Hz/60 Hz	50 Hz/60 Hz
cos phi	0.80 inductive ... 0.80 capacitive	0.80 inductive ... 0.80 capacitive	0.80 inductive ... 0.80 capacitive	0.80 inductive ... 0.80 capacitive	0.80 inductive ... 0.80 capacitive	0.80 inductive ... 0.80 capacitive
Number of grid phases	1	1	1	1	1	1
General electrical data						
Max. efficiency	96.6 %	96.6 %	96.5 %	96.4 %	96.3 %	96.3 %
European efficiency	95.8 %	95.8 %	95.9 %	95.8 %	95.7 %	95.8 %
Night consumption	0 W	0 W	0 W	0 W	0 W	0 W
Switching plan	self-commutated, transformerless	self-commutated, transformerless	self-commutated, transformerless	self-commutated, transformerless	self-commutated, transformerless	self-commutated, transformerless
Grid monitoring	acc. to local requirements	acc. to local requirements	acc. to local requirements	acc. to local requirements	acc. to local requirements	acc. to local requirements
Mechanical data						
Display	LCD 2 x 16 characters	LCD 2 x 16 characters	LCD 2 x 16 characters	LCD 2 x 16 characters	LCD 2 x 16 characters	LCD 2 x 16 characters
Control units	2 buttons for display control	2 buttons for display control	2 buttons for display control	2 buttons for display control	2 buttons for display control	2 buttons for display control
Interfaces	RS232/RS485, S0	RS232/RS485, S0	RS232/RS485, S0	RS232/RS485, S0	RS232/RS485, S0	RS232/RS485, S0
Fault signalling relay	potential-free NOC max. 250 V / 1 A	potential-free NOC max. 250 V / 1 A	potential-free NOC max. 250 V / 1 A	potential-free NOC max. 250 V / 1 A	potential-free NOC max. 250 V / 1 A	potential-free NOC max. 250 V / 1 A
Connections	PCB terminals within the device (max. cross section: 10mm²) cable supply via cable connections (DC connection M16, AC-connection M32)	PCB terminals within the device (max. cross section: 10mm²) cable supply via cable connections (DC connection M16, AC-connection M32)	PCB terminals within the device (max. cross section: 10mm²) cable supply via cable connections (DC connection M16, AC-connection M32)	PCB terminals within the device (max. cross section: 10mm²) cable supply via cable connections (DC connection M16, AC-connection M32)	PCB terminals within the device (max. cross section: 10mm²) cable supply via cable connections (DC connection M16, AC-connection M32)	PCB terminals within the device (max. cross section: 10mm²) cable supply via cable connections (DC connection M16, AC-connection M32)
Ambient temperature	-20 °C … +60 °C*	-20 °C … +60 °C*	-20 °C … +60 °C*	-20 °C … +60 °C*	-20 °C ... +60 °C*	-20 °C ... +60 °C*
Temperature monitoring heat sink	> 75 °C temperature-dependent impedance matching / > 85 °C cut-out	> 75 °C temperature-dependent impedance matching / > 85 °C cut-out	> 75 °C temperature-dependent impedance matching / > 85 °C cut-out	> 75 °C temperature-dependent impedance matching / > 85 °C cut-out	> 75 °C temperature-dependent impedance matching / > 85 °C cut-out	> 75 °C temperature-dependent impedance matching / > 85 °C cut-out
Cooling	free convection / no fan	free convection / no fan	free convection / no fan	free convection / no fan	free convection / no fan	free convection / no fan
Protection class	IP54	IP54	IP54	IP54	IP54	IP54
Noise emission	< 35 dB (A) (noiseless)	< 35 dB (A) (noiseless)	< 35 dB (A) (noiseless)	< 35 dB (A) (noiseless)	< 35 dB (A) (noiseless)	< 35 dB (A) (noiseless)
DC switch	integrated	integrated	integrated	integrated	integrated	integrated
Casing	aluminium	aluminium	aluminium	aluminium	aluminium	aluminium
H x W x D	500 x 340 x 200 mm	550 x 340 x 200 mm	550 x 340 x 220 mm	550 x 340 x 220 mm	600 x 340 x 220 mm	600 x 340 x 220 mm
Weight	19 kg	21 kg	21 kg	26 kg	28 kg	30 kg

*Power derating at high ambient temperatures

*Power derating at high ambient temperatures

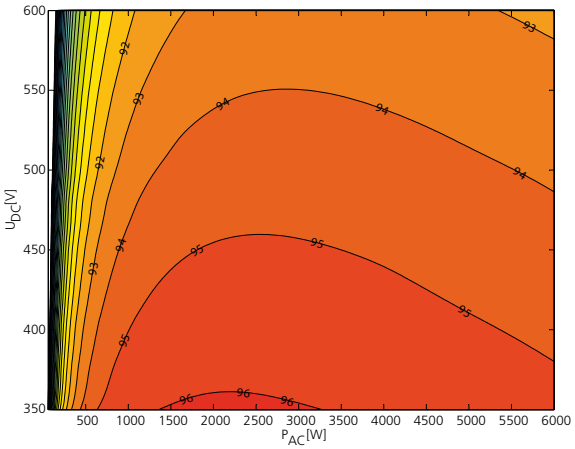
Powador
3200 | 4200 | 4400
5500 | 5300 | 6600

- Capable of reactive power, conforms to the German Low Voltage Directive
- Integrated potential-free fault signal
- Silent, maintenance-free convection cooling
- 5-years factory warranty plus 2-years when the unit is registered
- Preconfigured international country settings
- Menu language can be chosen as required
- Asymmetry monitoring via special KACO Sym-Bus

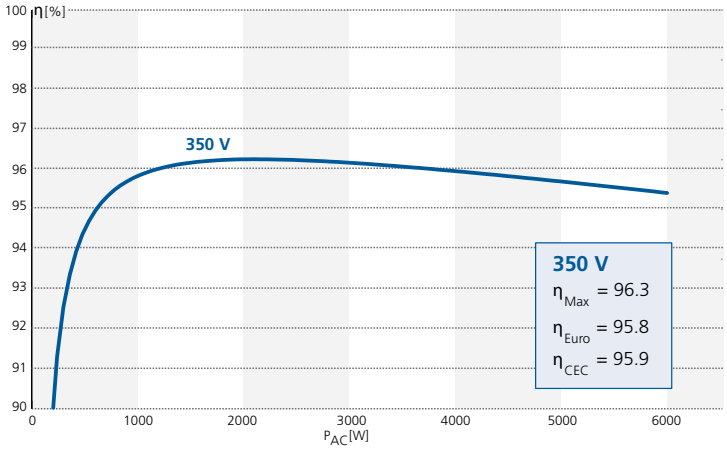
www.kaco-newenergy.de

Graphical Display of efficiency

3D efficiency diagram for Powador 6600



Efficiency characteristic curve for Powador 6600



Your retailer

EN 5000073-08-1201029