KACO new energy.

Data sheet
Powador
7700 | 7900
8600 | 9600

Champions of the middleweights.

The transformerless string inverters Powador 7700 – 9600.

All Powador 7700 to 9600* units are 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 and easily installed anywhere in the world. The menu language can be selected independently from the country-specific settings. The units are also equipped to comply with the pending German Low Voltage Directive.

All three units include transformerless topology without a step-up converter. DC disconnects and string fuses are already integrated. This provides maximum safety and reliability for the system operator and makes the installer's job easier.

These inverters are designed as a trio, with each unit feeding into one of the three phases. This allows each unit to optimally utilise the voltage range of a photovoltaic system that has been divided into three sub-generators. The integrated Sym-Bus ensures that any potential asymmetry does not exceed the maximum permitted limit of 4.6 kW, even when there is a fault in a unit. They represent an alternative to central inverters (depending on the system design). Since all of our transformerless string inverters can also be combined with one another as required, they allow you almost unlimited freedom in planning, from 2 kW up to the megawatt class.

* Successors to Powador 6400 xi – 8000 xi inverters

Technical data

Powador 7700 | 7900 | 8600 | 9600

Electrical data	7700	7900
Input variables		
PV max. generator output	7700 W	7900 W
MPP range	350 V … 600 V	350 V … 600 V
No-load voltage	800 V	800 V
Max. input current	19.0 A	19.7 A
Number of strings	4	4
Number of MPP trackers	1	1
String fuses	4 x 10 A	4 x 10 A
Inverse polarity protection	short-circuit diode	short-circuit diode
Output variables		
Rated output	6400 W	6650 W
Supply voltage	acc. to local requirements	acc. to local requirements
Rated current	27.8 A	28.9 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	1	1
General electrical data		
Max. efficiency	96.6 %	96.7 %
European efficiency	96.2 %	96.2 %
Night consumption	0 W	0 W
Switching plan	self-commutated, transformerless	self-commutated, transformerless
Grid monitoring	acc. to local requirements	acc. to local requirements
Mechanical data		
Display	LCD 2 x 16 characters	LCD 2 x 16 characters
Control units	2 buttons for display control	2 buttons for display control
Interfaces	RS485, S0, Sym-Bus	RS485, S0, Sym-Bus
Fault signalling relay	potential-free NOC max. 250 V / 1 A	potential-free NOC max. 250 V / 1 A
Connections	AC connection: PCB terminals within device (max. cross section: 10 mm²), cable supply via cable connection (M32). DC connection: 4 strings via PCB terminals (max. cross section: 6 mm²), cable supply via cable connections (M16). Optional DC connection: 1 x Plus, 1 x Minus without string fuses via PCB terminals (max. cross section: 10 mm²).	AC connection: PCB terminals within device (max. cross section: 10 mm²), cable supply via cable connection (M32). DC connection: 4 strings via PCB terminals (max. cross section: 6 mm²), cable supply via cable connections (M16). Optional DC connection: 1 x Plus, 1 x Minus without string fuses via PCB terminals (max. cross section: 10 mm²).
Ambient temperature	-20 °C … +60 °C**	-20 °C … +60 °C**
Temperature monitoring power stage	temperature-dependent impedance matching with emergency cut-out when device errors occur	temperature-dependent impedance matching with emergency cut-out when device errors occur
Cooling	free convection / no fan	free convection / no fan
Protection class	IP54	IP54
Noise emission	< 35 dB (A) (noiseless)	< 35 dB (A) (noiseless)
DC switch	integrated	integrated
Casing	aluminium	aluminium
H x W x D	810 x 340 x 220 mm	810 x 340 x 220 mm
Weight	38 kg	38 kg

* with the passing of the German Low Voltage Directive in Q3/2011 / **Derating at higher temperatures

Electrical data	8600	9600
Input variables		
PV max. generator output	8600 W	9600 W
MPP range	350 V … 600 V	350 V ... 600 V
No-load voltage	800 V	800 V
Max. input current	21.4 A	24.0 A
Number of strings	4	4
Number of MPP trackers	1	1
String fuses	4 x 10 A	4 x 10 A
Inverse polarity protection	short-circuit diode	short-circuit diode
Output variables		
Rated output	7200 W	8000 W
Supply voltage	acc. to local requirements	acc. to local requirements
Rated current	31.3 A	35.0 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	1	1
General electrical data		
Max. efficiency	96.6 %	96.6 %
European efficiency	96.2 %	96.2 %
Night consumption	0 W	0 W
Switching plan	self-commutated, transformerless	self-commutated, transformerless
Grid monitoring	acc. to local requirements	acc. to local requirements
Mechanical data		
Display	LCD 2 x 16 characters	LCD 2 x 16 characters
Control units	2 buttons for display control	2 buttons for display control
Interfaces	RS485, S0, Sym-Bus	RS485, S0, Sym-Bus
Fault signalling relay	potential-free NOC max. 250 V / 1 A	potential-free NOC max. 250 V / 1 A
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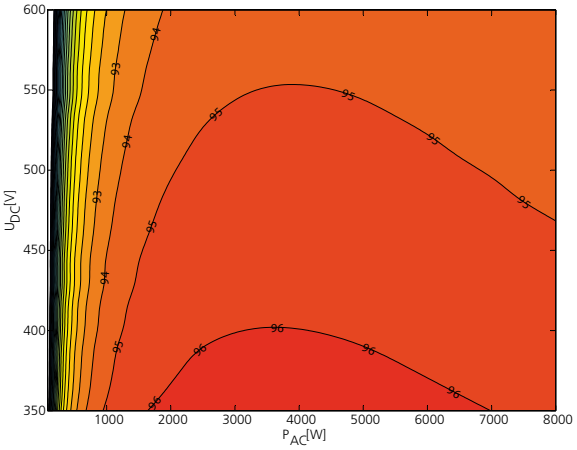
Powador 7700
7900 | 8600 | 9600

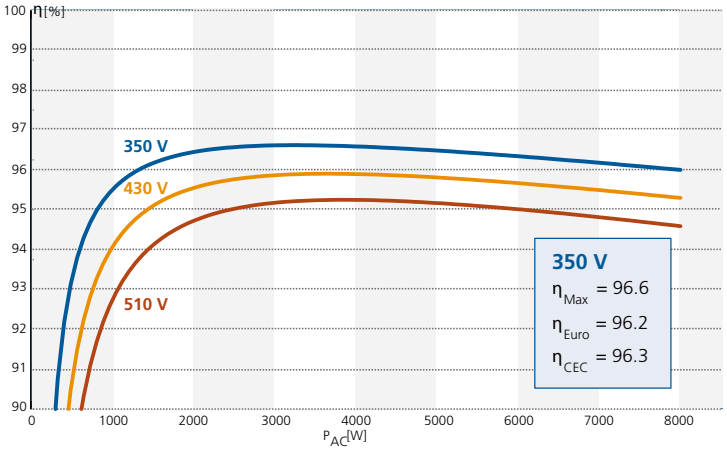
- Integrated string fuses for up to 4 strings
- Additional asymmetry monitoring via special KACO Sym-Bus
- Single- or three-phase monitoring in accordance with VDE 0126-1-1:2006-02
- 5-years factory warranty plus 2-years when the unit is registered
- Preconfigured international country settings
- Menu language can be chosen as required
- Capable of reactive power

Graphical display of efficiency

3D efficiency diagram for Powador 9600



Efficiency characteristic curves for Powador 9600



Your retailer

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EN 5000075-01-110530