



K A C O 
new energy.

Powador

7700 | 7900

8600 | 9600

supreme

Top performance among the middleweights.

The transformerless string inverters Powador 7700 supreme – 9600 supreme.

With the standard setting, the Powador 7700 – 9600 supreme inverters* operate at a clock frequency of 17 kHz. Those who want to get even more out of these units can operate them in Power Boost mode, at a clock frequency of 9 kHz. That reduces the already-low switching losses of the power semiconductor even further and makes the degree of efficiency even higher. This operating mode is recommended for locations where the resulting operating noise is not a particular issue. All units are equipped with digital controllers so that they can be used internationally. The appropriate country settings can easily be selected on-site in the country's language; the country-specific settings are stored in the software, so the inverters can be quickly 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 Low Voltage Directive. All units in this power class 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). All inverters in the supreme series can be combined with one another as needed.

Thus, these units allow you almost unlimited freedom in planning, from medium-sized systems up to the megawatt class.

* Successors to Powador 6400 supreme – 8000 supreme inverters

Technical data

Powador 7700 supreme | 7900 supreme | 8600 supreme | 9600 supreme

Electrical data	7700 supreme	7900 supreme
Input variables		
PV max. generator output	7700 W	7900 W
MPP range	350 V ... 510 V	350 V ... 510 V
No-load voltage	600 V*	600 V*
Max. input current	19.0 A	19.7 A
Number of strings	4	4
Number of MPP controllers	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	97,0 % (97,3 % @ 9 kHz)	96,9 % (97,3 % @ 9 kHz)
European efficiency	96,5 % (96,7 % @ 9 kHz)	96,5 % (96,7 % @ 9 kHz)
Night consumption	0 W	0 W
Switching plan	self-commutated, transformerless	self-commutated, transformerless
Network monitoring	acc. to local requirements	acc. to local requirements
Mechanical data		
Displays	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 mm ²), cable supply via cable connection (M32). DC-connection: 4 strings via PCB terminals (max. cross section: 6 mm ²), 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 mm ²)	AC-connection: PCB terminals within device (max. cross section: 10 mm ²), cable supply via cable connection (M32). DC-connection: 4 strings via PCB terminals (max. cross section: 6 mm ²), 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 mm ²)
Ambient temperature	-20 °C ... +60 °C**	-20 °C ... +60 °C**
Temperature monitoring	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) @ 17 kHz	< 35 dB (A) (noiseless) @ 17 kHz
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

* To protect the hardware, the unit starts up at < 550 V / ** Power derating at high ambient temperatures

Electrical data	8600 supreme	9600 supreme
Input variables		
PV max. generator output	8600 W	9600 W
MPP range	350 V ... 510 V	350 V ... 510 V
No-load voltage	600 V*	600 V*
Max. input current	21.4 A	24.0 A
Number of strings	4	4
Number of MPP controllers	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	97,1 % (97,4 % @ 9 kHz)	97,2 % (97,5 % @ 9 kHz)
European efficiency	96,7 % (97,0 % @ 9 kHz)	96,8 % (97,0 % @ 9 kHz)
Night consumption	0 W	0 W
Switching plan	self-commutated, transformerless	self-commutated, transformerless
Network monitoring	acc. to local requirements	acc. to local requirements
Mechanical data		
Displays	LCD 2 x 16 characters	LCD 2 x 16 characters
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Highlights

- Integrated string fuses for up to 4 strings
- Additional asymmetry monitoring via special KACO Sym-Bus
- Integrated DC switch
- Single- or three-phase monitoring in accordance with VDE 0126-1-1:2006-02
- Protection class IP54
- Easy installation with mounting plate and housing doors
- LCD as standard
- 5-years factory warranty plus 2 years when the unit is registered
- Preconfigured international country settings
- Menu language can be chosen as required