



K A C O 
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Powador 14.0 TR3

The Threevolution is Beginning.

Galvanically isolated Powador 14.0 TR3 to 18.0 TR3 three-phase inverters.

Are you designing a larger solar system with modules that need to be earthed? Powador 14.0 TR3 to 18.0 TR3 three-phase inverters are galvanically isolated units that provide the perfect solution for safely connecting your system to the grid. Since they are true three-phase units, they provide high-quality, sinusoidal alternating current with a 120-degree phase shift – a dream come true for all grid operators.

Three strings can be connected for each DC/DC actuator, which means that the units can process the solar power from nine strings. They operate with three separate MPP trackers to allow for optimum adjustment. The peak efficiency is 96.2%. Cooling is provided by demand-driven fans that are aimed directly at the temperature-sensitive components.

It is easy to achieve perfect communication with the three units. In addition to the normal RS485 interface, which enables you to query yield data with the Powador-proLOG, they offer innovations that provide a lot of convenience: an integrated web server for uninterrupted monitoring via Ethernet, a USB connection for installing software updates and downloading all log data, as well as a graphic display to view operating data.

A number of country-specific default settings are programmed into the inverters. These are easy to select during on-site installation. The units also meet all of the requirements of Germany's new Medium Voltage Directive ("Mittelspannungsrichtlinie").

Available for delivery as of fall 2010.

Highlights

- Three-phase inverter
- Optimised for thin-film modules
- Three MPP trackers
- Degree of efficiency: 96.2%
- Multilingual menu
- Graphical display
- Integrated web server
- USB connection for updates and downloads



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Electrical data		14.0 TR3
Input variables		
PV max. generator output		14 000 W
MPP range		200 V ... 510 V
No-load voltage		600 V*
Max. input current		3 x 26 A
Number of strings		9
Number of MPP controllers		3
Output variables		
Rated output		12 000 VA
Supply voltage		acc. to local requirements
Rated current		3 x 17.4 A
Rated frequency		50 Hz / 60 Hz
cos phi		0.80 inductive ... 0.80 capacitive
Number of grid phases		3
General electrical data		
Max. efficiency		96.2 %
European efficiency		95.6 %
Night consumption		1.9 W
Switching plan		self-commutated, galvanically isolated, HF transformer
Network monitoring		acc. to local requirements
General electrical data		
Display		graphical display + LEDs
Control units		4-way navigation + 2 buttons
Interfaces		Ethernet, USB, RS485, S0 output
Fault signalling relay		potential-free NOC max. 230 V / 1 A
Connections		screw terminals within the device (max. cross section: 16 mm ² flexible) cable supply via cable connections (DC-connection M16, AC-connection M40)
Ambient temperature		-25 °C ... +60 °C**
Cooling		fan
Protection class		IP54
Noise emission		< 45 dB (A) (noiseless when operated without fan)
DC-switch		integrated
Casing		aluminium casting
H x W x D		948 x 510 x 269 mm
Weight		approx. 80 kg

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The text and figures reflect the current technical state at the time of printing. Subject to technical changes. Errors and omissions excepted.

* To protect the hardware, the inverter starts up only at < 550 V ** Power derating at high ambient temperatures. Applicable standards and regulations are taken into account for each country version that is set.