KACO new energy.

Powador
14.0 TR3
16.0 TR3
18.0 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 a120-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: September 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

Technical Data

Powador 14.0 TR3 | 16.0 TR3 | 18.0 TR3

Electrical data	14.0 TR3	16.0 TR3
Input variables		
PV max. generator output	14000 W	16000 W
MPP range	200 V … 510 V	200 V … 510 V
No-load voltage	600 V*	600 V*
Max. input current	3 x 26 A	3 x 26 A
Number of strings	9	9
Number of MPP controllers	3	3
Output variables		
Rated output	12000 VA	13500 VA
Supply voltage	acc. to local requirements	acc. to local requirements
Rated current	3 x 17.4 A	3 x 19.5 A
Rated frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
cos phi	0.80 inductive ... 0.80 capacitive	
Number of grid phases	3	3
General electrical data		
Max. efficiency	96.2 %	96.2 %
European efficiency	95.6 %	95.6 %
Night consumption	1.9 W	1.9 W
Switching plan	self-commutated, galvanically isolated, HF transformer	
Network monitoring	acc. to local requirements	
General electrical data		
Display	graphical display	graphical display
Control units	4-way navigation + 2 buttons	4-way navigation + 2 buttons
Interfaces	Ethernet, USB, RS485, S0	
Fault signalling relay	potential-free NOC max. 230 V / 1 A	
Connections	screw terminals within the device (max. cross section: 16 mm² flexible) cable supply via cable connections (DC-connection M16, AC-connection M40)	
Ambient temperature	-25 °C … +60 °C**	-25 °C … +60 °C**
Cooling	fan	fan
Protection class	IP65	IP65
Noise emission	< 45 dB (A) (noiseless when operated without fan)	
DC-switch	integrated	integrated
Casing	aluminium casting	aluminium casting
H x W x D	948 x 510 x 269 mm	948 x 510 x 269 mm
Weight	approx. 80 kg	approx. 80 kg

Electrical data	18.0 TR3
Input variables	
PV max. generator output	18000 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	15000 VA
Supply voltage	acc. to local requirements
Rated current	3 x 21.7 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
Control units	4-way navigation + 2 buttons
Interfaces	Ethernet, USB, RS485, S0
Fault signalling relay	potential-free NOC max. 230 V / 1 A
Connections	screw terminals within the device (max. cross section: 16 mm² flexible) cable supply via cable connections (DC-connection M16, AC-connection M40)
Ambient temperature	-25 °C … +60 °C**
Cooling	fan
Protection class	IP65
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

* 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.

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Your retailer

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