KACO new energy.

Data sheet

Powador
36.0 TL3 M1
39.0 TL3 M1

Efficient. Flexible. Future-Proof.

The transformerless, three-phase inverters Powador 36.0 and 39.0 TL3 M1 for use with string collectors.

The Powador 36.0 and 39.0 TL3 M1 are particularly suitable for the decentralised installation of photovoltaic systems for commercial and industrial applications, such as hangars and factory roofs. These units give you extreme flexibility in designing your PV system when used in combination with string collectors.

The input voltage range is particularly broad and the inverters switch to the grid from 250 V onwards. Maximum efficiency amounts to approx. 98% and the 97.8% European efficiency is also quite remarkable. Even in the lower performance ranges, the appliances achieve very high partial load efficiency: At just 5% rated power they operate at 95% efficiency.

It is easy to achieve perfect communication with these units too. They are fitted with an integrated data logger with web server, a graphical display for showing operating data and a USB port for installing firmware updates. The current software can be downloaded free of charge from the download area of our homepage. The yield data can be called up using a USB stick, as well as via the web server for evaluation. The integrated data logger can also be connected directly to an internet portal for professional evaluation and visualisation of the inverter data. A number of country-specific default settings are already programmed into the inverters and these can easily be selected during on-site installation. The interface language can be selected independently of these.

The inverters fulfil all guidelines and fully support the Powador-protect functions for the purposes of protecting the grid and the array, as well as carrying out performance management.

The optimised DC connection area with serially-integrated type 2 surge protection opens up a number of cost advantages.

Technical data

Powador 36.0 TL3 M1 | 39.0 TL3 M1

Electrical data	36.0 TL3 M1	39.0 TL3 M1
DC input		
MPP range@Pnom	310 V ... 800 V	340 V ... 800 V
Operating range	200 V - 950 V	200 V - 950 V
Min. DC voltage/start voltage	200 V / 250 V	200 V / 250 V
No-load voltage	1 000 V	1 000 V
Max. input current	102 A	102 A
Number of MPP trackers	1	1
Number of strings	1	1
AC output		
Rated output (@230 V)	30 000 VA	33 300 VA
Line voltage	400 V / 230 V (3 / N / PE)	400 V / 230 V (3 / N / PE)
Rated current	3 x 43.5 A	3 x 48.3 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	3	3
General electrical data		
Max. efficiency	98.0 %	98.0 %
European efficiency	97.8 %	97.8 %
Night consumption	1.5 W	1.5 W
Topology	transformerless	transformerless
Surge protection	DC: type 2 / AC: type 3	DC: type 2 / AC: type 3
Mechanical data		
Display	graphical display + LEDs	graphical display + LEDs
Control units	4-way navigation + 2 buttons	4-way navigation + 2 buttons
Interfaces	Ethernet, USB, RS485, S0 output, digital input "inverter off"	Ethernet, USB, RS485, S0 output, digital input "inverter off"
Fault signalling relay	potential-free NOC max. 230 V / 1 A	potential-free NOC max. 230 V / 1 A
Connections	AC connection via screw terminals, bushing 1 x M50, max. cross section: 50 mm² (flexible); DC connects via the DC switch directly, bushing 2 x M40, max. cross section: 70 mm²	
Ambient temperature	-20 °C … +60 °C [1)]	-20 °C … +60 °C [1)]
Cooling	speed controlled fan, max. 600 m³ / h	speed controlled fan, max. 600 m³ / h
Protection class	IP54	IP54
Noise emission	58 dB(A) (only fan noise)	58 dB(A) (only fan noise)
DC switch	integrated	integrated
H x W x D	1 360 x 840 x 355 mm	1 360 x 840 x 355 mm
Weight	151 kg	151 kg
Certifications		
Saftey	IEC 62109-1/-2, EN 61000-6-1/-2/-3, EN 61000-3-12/-11	
Grid compliance	VDE 0126, VDE-AR-N 4105, BDEW, G59/3, ... for more see homepage/download area	

Conforms to the country-specific standards and regulations according to the country version that has been set.
[1)] Power derating at high ambient temperatures.

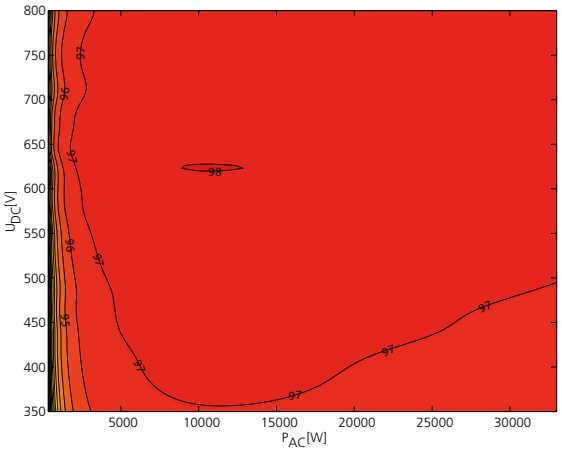
Powador
36.0 TL3 M1 | 39.0 TL3 M1

- 98.0 % efficiency
- DC-side surge protection type 2 serially integrated
- Multilingual menu
- Wide input voltage range for flexible system design
- Integrated web server
- USB connection for updates
- Direct replacement for inverters from other manufacturers

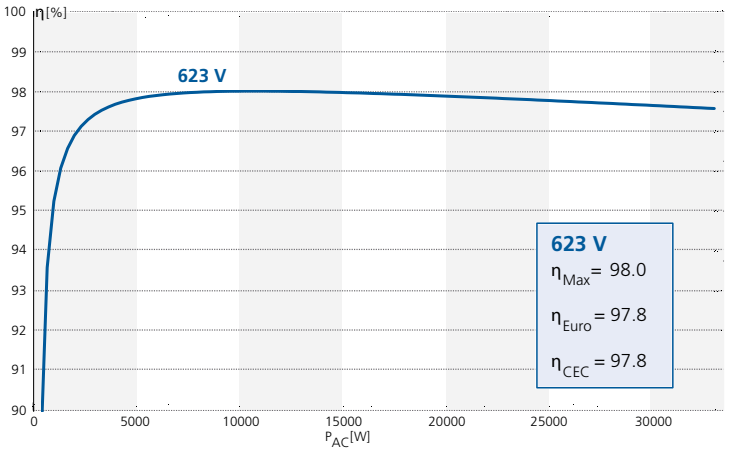
www.kaco-newenergy.com

Graphical Display of efficiency

3D efficiency diagram for Powador 39.0 TL3



Efficiency characteristic curve for Powador 39.0 TL3



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