

POWER SOLUTIONS

AC 3000 CAN

Modular switch-mode rectifier designed for industrial applications

Output rating from a single rectifier: 100 A (at 24 VDC)

The AC 3000 from AEG Power Solutions is an AC/DC-Converter which converts a range from 230 VAC to 24 VDC with an output current of 100 A.

Low volume thanks to a high switching frequency

The equipment is powered by AC voltage. Transistors produce an alternating voltage with a frequency of 75 kHz. With the assistance of transformers, potential separation and the voltage adjustment are on the secondary side. The high frequency AC voltage is then rectified by means of rapid acting diodes. An output filter is installed to reduce the voltage ripple. The output voltage and current are controlled by pulse-width modulation of the transistor switch on the primary side.

Typical applications

All industrial applications such as 24 VDC battery charger or for supply of all types of DC consumers including constant voltage and current sources. Provides secured DC power in combination with a parallel battery, for supply of all types of DC consumers including constant voltage and current sources.

FEATURES

- Compact lightweight design
- High power density
- High efficiency
- Low voltage ripple
- Low inrush current
- Resistant to sustained short circuit, double current as short circuit for one second
- Communication capable (CAN-Bus)
- Single mode or parallel mode also without CAN-Bus
- CE-compliant

BENEFITS

- Compact Design: 19" rack with 4U in height and a mounting depth of only 270 mm. The converter can be set up in the smallest space thanks to parallel connections built on the n+1 principle.
- Easy Operation: The switch mode power supply is a prewired unit. The connections can be easily accessed from the front panel. Programming is simple as controls and indicators are embedded in the front panel.
- Communication: The unit offers full functionality in stand-alone mode but can additionally be controlled and monitored via the digital CAN-Bus which is resistant to interference.

Specifications

ТҮРЕ	24 V 100 A
Part number	E 230 G 24/100 BWrug-Cpü
E-number	37 205 103
INPUT	
Nominal input voltage	230 VAC ±15%
Frequency	47-63Hz
Current consumption	13.4 AAC
Inrush current	≤ rated input voltage
Required mains fuse	gL 16 A
OUTPUT	
Output voltage Setting range	26.76 VDC ±1% (2.23 V/cell) 20 - 30 VDC
Output current Setting range	100 ADC ±2% 5-100 ADC
Voltage ripple	50 mV pp
Efficiency, total	88% with 30 V/100 A; 91% with 30 V/40 A (part load)
Power factor	0.99
Dynamic response	≤5% for sudden changes in load between 10%-90%-10% rated output current
Short-circuit response	Resistant to sustained short circuit, 1x rated output current
Parallel operation	31 units when connected to CAN-BUS, load distribution approx. 5 %
Characteristic line	IU characteristic to DIN 41772/DIN 41773
MONITORING AND INDICATION	
Mains-side monitoring	Over/under-voltage with switch-off, self acknowledging
Output-side monitoring systems	Excess temperature with automatic power reduction
LED display	DC under-voltage without shut-off, auto-acknowledgement; DC over-voltage with shut-off and locking
Indicators	Mains power available, operating and fault message via LED; UA and IA via LCD indicator
External functions	Group fault message via floating relay contact; ON/OFF via external floating contact; external sensor cables output voltage UA; temperature-dependent voltage control with optionally available active sensor; selection of 2 nd / 3 rd / 4 th U characteristic line; ex. set-point specification 0 to 4 VDC for UA and IA with LCD indicator; ex. set-point specification via CAN interface
MECHANICAL	
Design	19" plug-in module for installation in subframe to DIN 41494
Ingress protection	IP 20
Mechanical strength and vibration resistance	To EN 50178 section 9.4.3.2
Equipment color	RAL 7035 (front panel)
Dimensions W x H x D (mm)	483 x 177 x 270; (19" x 4 HU)
Weight	17.7 kg
DC output	Thread bolt M8
Conductor	Thread bolt M6
Mains connection	Angle plug type GDM 2010, supplied with unit
Signal interface	Plug type MCVW 1.5 / 14–ST–3.81, supplied with unit
ENVIRONMENTAL	
Type of cooling	Natural air cooling
Operating temperature range	0 °C to 45 °C, 0 °C to 40 °C when installed in cabinet
Storage temperature range	-20 °C to 70 °C
Environment conditions	EN 60721 part 3-3 class 3K3/3Z1/3B1/3C2/3S2/3M2
Installation height	Max. 1000 m above sea level, at nominal load
STANDARDS	
Interference emission	To EN 61000-6-4
Interference resistance	To EN 61000-6-2
Low voltage function with safe disconnection	To EN 60590-1
Approvals	CE
Certification	ISO 9001

AEG Power Solutions

Approach your local AEG Power Solutions representative for further support. Contact details can be found on: www.aegps.com

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