

# DC 3000 CAN

## MODULAR SWITCH-MODE CONVERTER FOR INDUSTRIAL APPLICATIONS

Output current of a single power supply:  
100 A (for 24 V DC)



### Applications

The DC 3000 from AEG Power Solutions converts 220 V to 110 V DC and is designed for a variety of applications. Applications include: 24 V DC power for supplying the control-technology systems in nuclear and non-nuclear power stations, the chemical industries and electricity sub-stations. The switch-mode power supply units are usually fed by the secure 110 V or 220 V DC supply (high operating reliability).

### Compact Design

Due to its compact design as a 19" rack with 4U in height and a mounting depth of only 270 mm, it can be set up in the smallest space due to parallel connections built on the n+1 principle.

### Communication

The unit offers full functionality in stand-alone mode but can additionally be controlled and monitored via the digital CAN-BUS which is immune to interference.

### Easy Operation

The switch mode power supply is a pre-wired unit. The connections can be easily accessed from the front panel. Programming is simple thanks to the controls and indicators which are installed on the front panel.

### Low volume due to a high switching frequency

The equipment is powered by DC 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.

### Key Features

- » Compact design which is lightweight
- » 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

# DC 3000 CAN

SPECIFICATIONS

TYPE DC 3000 CAN	110 V/24 A/100 A	220 V/24 V/100 A
Part Number	G110 G24/100 Wrug-Cpü	G220 G24/100 Wrug-Cpü
E-Number	3 000 000 061	3 000 000 117
<b>INPUT</b>		
Nominal Input Voltage	110 V DC + 35 % - 15 %	220 V DC + 35 % - 15 %
Inrush current	≤ Rated input voltage	
Required mains fuse	gL 40 A	gL 25 A
<b>OUTPUT</b>		
Current consumption	26 A DC	13 A DC
Output voltage (U1)	26.0 V DC ± 1 %	
Output voltage (U2)	25.5 V DC ± 1 %	
Output voltage (U3)	24.0 V DC ± 1 %	
Output voltage (U4)	28.0 V DC ± 1 %	
Setting range (U1 - U4)	1 - 28 V DC	
Output current (I1 - I4)	100 A DC ± 2 %	
Setting range (I1 - I4)	5 - 100 A DC	
Efficiency	90 % with 26 V/100 A	
Voltage ripple	≤ 50 mV pp	
Interference voltage to CCITT	≤ 1.8 mV	
Dynamic response	≤ 5 % for sudden changes in load between 10 % - 90 % - 10 % rated output current (Compensation time t < 5 ms)	
Short-circuit response	resistant to sustained short circuit, 2 x rated output current for a second, thereafter rated current	
Parallel operation	Load distribution approx. 10 %, when connected to CAN-Bus, Load distribution approx. 5 %	
Characteristic line	IU Characteristic to DIN 41772 / DIN 41773	
<b>MONITORING AND INDICATION</b>		
Mains-side monitoring	Under-voltage with switch-off, self-acknowledging	
Response values	ON/OFF 93/85 V DC	ON/OFF 185/175 V DC
	Over-voltage with shut-off, self-acknowledging	
Response values	ON/OFF 150/160 V DC	ON/OFF 290/300 V DC
Output-side monitoring	Overheating with switch-off	
With indication of LED	under-voltage with switch-off and self-retaining, voltage value 22.8 V DC over-voltage with shut-off and locking, Response value 29.0 V DC	
Indicators Mains	power available, operating and fault message via LED; UA and IA via LCD display	
External Functions	Group fault message via floating relay contact; ON/OFF via external floating contact; external sensor cables output voltage UA; selection of 2. / 3. / 4. U characteristic line; external set-point specification 0 - 4 V DC for UA and IA with LCD display; external set-point specification via CAN interface	
<b>MECHANICAL</b>		
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	colour RAL 7035 (front panel)	
Dimensions W x H x D (mm)	483 x 177 x 270 (19" x 4 HE)	
Gewicht	approx. 15 kg	
Mains connection	Phoenix terminal HDFKV 10-VP	
DC output	Thread bolt M8	
Conductor	Thread bolt M6	
Signal interface	plug type MCVW 1.5 / 14 - ST- 3.81; supplied with unit	
<b>ENVIRONMENTAL</b>		
Type of cooling	Natural air cooling	
Operating temperature	range 0 °C to 45 °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. 1,000 m above sea level, at nominal load	
<b>STANDARDS</b>		
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	

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