

# Power Safety

## AC 1000 CAN

Modular switch-mode rectifier  
designed for industrial applications



Output Rating from a single rectifier:  
25 A (at 24 Vdc)  
15 A (12 A) (at 48 Vdc (at 60 Vdc))  
7.5 A (at 110 Vdc)  
3.75 A (at 220 Vdc)



PERFECT IN FORM AND FUNCTION

**AEG**

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### Applications

For all industrial applications. Provides secured DC power in combination with a parallel battery, for supply of all types of DC consumers including constant voltage and current sources such as Central Control Rooms in Nuclear and Non-Nuclear Power Plants as well as on-board power supplies for rail vehicles and ships.

### 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. This can be achieved by using our PSC 100 control unit (option). Together with this controller complex DC systems can be built up on a low cost basis. In addition to the SMR power cabling only simple BUS wiring between the SMR's and the PSC 100 is required to complete the DC system.

### Easy operation

The connections can easily accessed from the front panel.

### Key features

- Compact 19" design
- n+1 parallel redundant systems can be provided due to the compact design as a 19" plug-in module with 2 height units
- Low inrush current
- Resistant to sustained short circuit
- Automatic current de-rating at input voltages from 172 Vac to 90 Vac
- Configurable version 48 Vdc/60 Vdc
- Communication capable (CAN-BUS)
- Operation with PSC 100 control unit:
  - Active current sharing
  - 4 charge characteristics
  - Temperature compensated battery charging
- Advanced microprocessor technology

TYPE AC 1000 CAN	24 V/25 A E230 G 24/25 BWrg-Cpü	48 V/15 A (60 V/12 A) E230 G 48(60)/15(12) BWrg-Cpü*	110 V/7.5 A E230 G 110/7.5 BWrg-Cpü	220 V/3.75 A E230 G 220/3.75 BWrg-Cpü
Part number	3 000 000 612	3 000 000 613	3 000 000 614	3 000 000 615
<b>INPUT</b>				
Nominal input voltage	230 Vac – 25 %, + 15 %, < 172 Vac to > 90 Vac with de-rating			
Frequency	47–63 Hz			
Current consumption	3.6 Aac	4.3 Aac	4.8 Aac	4.8 Aac
Inrush current	≤ Nominal input current			
Required mains fuses	gL 10 A or circuit breaker C-characteristic			
<b>OUTPUT</b>				
Output voltage	26.8 Vdc ± 1 %	53.5 Vdc ± 1 %	122.6 Vdc ± 1 %	245.3 Vdc ± 1 %
Setting range	20 ... 35.6 Vdc	40 ... 70.3 Vdc	92 ... 152.8 Vdc	184 ... 304 Vdc
Output current	25 Adc ± 2 %	15 Adc ± 2 %	7.5 Adc ± 2 %	3.75 Adc ± 2 %
Setting range	1.25 ... 25 Adc	0.75 ... 15 Adc	0.4 ... 7.5 Adc	0.2 ... 3.75 Adc
Voltage ripple	< 54 mVpp	< 108 mVpp	≤ 250 mVpp	≤ 500 mVpp
	< 2 mV in acc. to CCITT			
Number of battery cells				
lead acid	11 ... 13	23 ... 25	52 ... 56	104 ... 112
(nickel cadmium on request)	19 ... 20	38 ... 42	86 ... 90	172 ... 180
Power factor	0.99			
Efficiency	87 %	88 %	89 %	90 %
Dynamic behaviour	≤ 5 % for sudden changes in load between 10 % - 90 % - 10 % of rated output current (correction rate t < 1 ms)			
Short circuit response	Resistant to sustained short circuit			
Parallel operation/Load sharing	Max. 31 units, load sharing approx. 5 %			
Characteristic line	IU-characteristic to DIN 41772/DIN 41773			
<b>MONITORING AND INDICATION</b>				
Mains monitoring	Under-voltage/over-voltage with switch off, self-acknowledging			
Response value/Setting range	OFF/ON ≤ 85/≥ 90 Vac/OFF ≤ 85 V to ≤ 225 Vac OFF/ON ≤ 270/≥ 265 Vac/OFF ≤ 241.4 V to ≤ 270 Vac			
Output monitoring	Heat sink temp. with current de-rating and switch-off			
DC under voltage				
OFF/ON	24/25 Vdc	48/50 Vdc	110/115 Vdc	220/230 Vdc
Setting range	20 ... 28 Vdc	40 ... 56 Vdc	90 ... 126 Vdc	180 ... 252 Vdc
DC over voltage				
OFF/ON	28/27.2 Vdc	56/54.4 Vdc	130/125 Vdc	260/250 Vdc
Setting range	25 ... 36 Vdc	50 ... 72 Vdc	115 ... 155 Vdc	230 ... 310 Vdc
Monitoring and indication	Charge: LED green; Failure: LED red; Uout>: LED red; Uout<: LED red; t : LED red; potential free change over contact with delay (10 sec.)			
<b>MECHANICAL</b>				
Design	19"-plug-in module for installation in sub-frame 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 88 x 220 (19" x 2 HU)			
Weight (kg)	approx. 8 kg			
Mains connection X1/DC-Output X2	Screw clamp 0.5-10 mm <sup>2</sup> (fixed), 0.5-6 mm <sup>2</sup> (flexible) AWG 20-7			
Signal interface X11	CombiCon type MSTB 2,5/3-STF-5.08 3-pole 0.5-2.5 mm <sup>2</sup> AWG 22-12			
Earth bolt terminal	Threaded bolt M4			
CAN-BUS interface X12	16-pole clip connector			
RS232 service interface X13	9-pole Sub-D socket			

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Part number	3 000 000 612	3 000 000 613	3 000 000 614	3 000 000 615
<b>ENVIRONMENTAL</b>				
Type of cooling	Natural air cooling			
Operating temperature	0 °C to 45 °C (measured below the module)			
Storage temperature	-20 °C to +70 °C			
Environmental conditions	EN 60721 part 3-3 class 3K3/3Z1/3B1/3C2/3S2/3M2			
Installation height	Up to 1000 m above sea level at nominal load			
<b>STANDARDS</b>				
Interference emission	EN 61000-6-4			
Interference immunity	EN 61000-6-2			
Low voltage function with safe disconnection	EN 50178 EN 60950-1			
Safe electrical disconnection	EN 50178 EN 60950-1			
Approvals	CE			
Certification	ISO9001			

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