AEG

POWER
SOLUTIONS

AC2000 N1
DC2000 N1
AC3000 N1
DC3000 N1

High-reliability analog controlled and natural-cooled 2 or 3 kW converter for various applications

The Switch Mode Power Supply (SMPS) rectifier AC2000 N1 and AC3000 N1 and converters DC2000 N1 and DC3000 N1 are robust 19" modules for the reliable power supply of various industrial applications. The natural cooled module provides 2100W or 3200 W output power.

They are full analog controlled, there is no need of software certification. This is an increasingly important point, especially with regard to cybersecurity.

The high MTBF is achieved by advanced protection of input, output, temperature and current. The secure DC power in combination with a parallel battery supplies all types of DC loads including constant voltage and current sources.

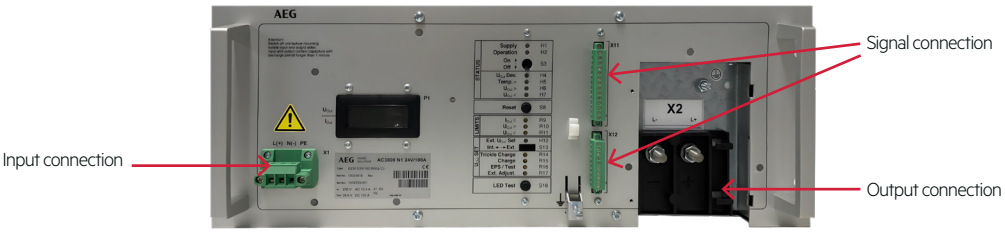
Typical applications
- Power generation
- Nuclear power plant
- Oil & Gas
- Petrochemical and chemical
- Transportation and signalling
- Other industrial applications

FEATURES

- Natural cooled
- Full analog controlled
- Low mounting-depth (only 206 mm)
- Robust design
- Switchable output voltage via external contact between float charge / boost charge / manual charge / EPS (Genset)), all adjustable via potentiometer
- Automatic stop at high and low mains voltage with automatic re-start
- Self-protection against high temperature conditions via automatic switch-off and automatic restart
- In the event of a short circuit, the module supplies the equivalent of the double rated current for 1.0 second
- Double row LCD display for output voltage and output current
- Complies with KTA, RCC-E, IEEE standards
- Optional: an additional controller PSC100 N1 is available to create an intelligent system e.g. with the possibility of communication via Modbus TCP / RTU

BENEFITS

- Fits into 400 mm depth cabinet
- Thanks to the SIC technology used, the modules have a very high efficiency of 94%. This reduces operating costs.
- Full compatible to previous AC2000 and DC2000 module (for replacement)
- Adapted to charge many types of batteries including vented lead acid, valve regulated lead-acid (VRLA) or nickel-cadmium batteries (NiCd)
- The module can also be used as a direct power supply without batteries



Easy accessibility via front connection technology

Specifications

MODULE TYPE		AC2000 N1 24V/65A	AC3000 N1 24V/100A	DC2000 N1 26V/65A	DC3000 N1 26V/100A
Output rating from a single rectifier / converter		24/65A	24/100A	24/65A	24/100A
Part number		10005614	10005616	10005613	10005615
INPUT					
Input voltage		230 V AC ±15%		220 V DC -15% +30%	
Input frequency		47 to 63 Hz		DC	
Input current (@ nominal load)		8 A AC	13 A AC	8 A DC	13 A DC
Inrush current		1.0 nominal peak current			
THDI @ nominal load		EN 61000-3-2 Class A compliant		---	
Power factor		≥ 0.99		---	
OUTPUT					
Output voltage nominal (default)		26.8 V DC		26.0 V DC	
Setting range		18 to 35 V DC			
Short circuit behaviour		1 x nominal output current, optional 2 x nominal output current for ≥ 1 sec (permanently short circuit proof)		2 x nominal output current for ≥ 1 sec, afterwards 1 x, (permanently short circuit proof)	
Output current		65 A	100 A	65 A	100 A
Setting range (adjustable current limit)		10 to 65 A	10 to 100 A	10 to 65 A	10 to 100 A
Maximum output power		2.1 kW (65A @ 32 V DC)	3.2 kW (100A @ 32 V DC)	2.1 kW (65A @ 32 V DC)	3.2 kW (100A @ 32 V DC)
Efficiency		94%			
Parallel operation		Number unlimited, current sharing approx. 10 % of the nominal system current			
Characteristic line		CVCC curve in acc. to DIN 41772			
Galvanic Isolation		Input/Output = 2.83 kV DC / Input to Ground = 2.83 kV DC Output-Control/Ground – 0.71 kV DC			
PROTECTION					
Input fuses		Internal HRC fuse			
Soft start		Yes			
Over Voltage Protection default value		32 V DC		29 V DC	
MONITORING AND INDICATION					
Mains-side monitoring systems		Under-voltage/over-voltage with switch-off, self-acknowledging			
Output-side monitoring systems		Over voltage with switch-off, under voltage without switch-off for rectifier AC2000 N1 / AC3000 N1, with switch off for converter DC2000 N1 / DC3000 N1			
Display		Double row LCD display			
Alarms		Central fault alarm			
Indicators		LED's for: Supply, Operation, Over temperature, DC overvoltage, DC undervoltage, Ext. UOut set			
MECHANICAL					
Design		19" module 4U for installation in 19" rack			
Degree of protection		IP 20 in acc. to EN60529			
Mechanical strength and vibration resistance		EN 60068-2-6			
Equipment colour		Anodized aluminium (front plate)			
Dimensions W x H x D (mm)		483 x 177 x 206 mm (19" x 4HU)			
Weight (in kg)		Approx. 11 kg			
Acoustic noise @ 1m		≤ 30 dB(A) – full load			
ENVIRONMENTAL					
Type of cooling		Natural cooling			
Environmental conditions	For Operation For Transport For Storage	EN 60721 part 3-3, class 3K22 / 3Z1 / 3B2 / 3C2 / 3S6 / 3M11, condensation not permitted EN 60721 part 3-2, class 2K12 / 2B2 / 2C2 / 2S5 / 2M4, protected in suitable packaging, -25 °C bis 70 °C EN 60721 part 3-1, class 1K21 / 1B2 / 1C2 / 1S12 / 1M11, condensation not permitted, -25 °C bis 55 °C			
Operating temperature (condensation not permitted)		0 – 55 °C	0 – 45 °C	0 – 55 °C	0 – 45 °C
Installation height		Up to 1000 m above sea level at nominal load, up to 2000 m with de-rating			
MTBF		≥ 223.000 h acc. to MIL-HDBK-217			
STANDARDS					
Safety		EN 62477-1:2012 + A11:2014 + A1:2017+A12:2021			
Interference resistance		EN 61000-6-2			
Interference emission		EN 61000-6-3			
Environment		ROHS - WEEE			
Approvals & certification		CE & UKCA			
Design		KTA 3703:2012-11 / RCC-E:2012 / CSA C22.2			

AEG Power Solutions

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