

SMPS SERIES PM2000

High reliability 2 KW rectifier
for industrial applications



The Switch Mode Power Supply (SMPS) series PM2000 product family from AEG Power Solutions has a 2000 W output power at 24, 48, 110/120 and 220 VDC. High reliability due to advanced protection (input, output, temperature, current, power) and a high MTBF. The rectifier provides secured DC power in combination with a parallel battery, to supply of all types of DC consumer loads including constant voltage and current sources.

Typical applications

For all industrial applications

- Power generation
- Oil & Gas
- Petrochemical and Chemical
- Transportation and Signaling

FEATURES

- Compact design
- Sinusoidal input current and low harmonics to reduce installation and operating costs
- Low voltage ripple to prolong battery life
- Robust due to its very wide operating input voltage (80 to 280 VAC)
- Automatic stop at high and low mains voltage with automatic re-start
- Self-protection against high temperature conditions via automatic output power de-rating
- Fan speed control and monitoring – low noise, extended fan life time
- ROHS compliant

BENEFITS

- Adapted to charge many types of batteries including: vented lead acid, valve regulated lead-acid (VRLA) or nickel-cadmium batteries (NiCd)
- The system can also be used as a **direct power supply without batteries**
- The rectifier can be used in Protect MIP Systems
- **Easy to operate:** compact, light, hot-pluggable, clear indications by LED, adjustment free, ready to use
- **Reduced operating costs** thanks to the high efficiency

Specifications

Output rating from single rectifier	24 V / 50 A	48 V / 40 A	120 V / 15 A	220 V / 9 A
Part Number	8000023119	8000023120	8000023121	8000029283
AC INPUT				
Input voltage	230 VAC \pm 20% (+20%-60% functional)			
Input frequency	50 Hz or 60 Hz \pm 5%			
Current consumption	7.5 A	10 A	10 A	10 A
Inrush current	1.5 nominal peak current			
Power factor	0.99 (typical @ 230 VAC)			
DC OUTPUT				
Output voltage	24 VDC	48 VDC	110/120 VDC	220 VDC
Setting range	16.5 – 33 VDC	33 – 66 VDC	83 – 166 VDC	151 – 302 VDC
Output current	50 A	40 A	15 A	9 A
Voltage ripple	< 200 mV peak to peak (30 MHz Bandwidth)			
Efficiency	88%	90%	91%	91%
MONITORING AND INDICATION				
Line and load regulation	< 1%			
Dynamic response	\leq 5% for 10% – 90%, recovery to normal regulation limits < 5 ms			
Short circuit response	Permanently short circuit proof, 1 x rated output current			
Parallel operation	Number unlimited, load sharing approx. 5%			
Characteristic line	Constant current/constant voltage (I/U as per IEC 478 1) during float charge			
Mains-side monitoring	Under-voltage/over-voltage with switch-off, self-acknowledging			
Output-side monitoring	Output voltage/heat sink temperature with derating and switch-off			
Alarms	Mains fail, rectifier fail, control loop fail/rectifier in fail back operation, DC overvoltage shutdown, output voltage present, fan fail			
Indicators	Green LED: DC output present, Red LED: mains fail, rectifier output fail, rectifier fail, fan fail			
Input controls	Control voltage, remote shutdown, commissioning enables			
MECHANICAL/ENVIRONMENTAL				
Design	Horizontal or vertical 1U, plug-in module for installation in Protect MIP sub-rack 19"			
Degree of protection	IP 20			
Mechanical strength and vibration resistance	EN 60721-3-2			
Equipment color	RAL 7035 (front plate)			
Dimensions W x H x D	210 x 43.6 x 295 mm			
Weight	approx. 3.1 kg			
Connections	Hot pluggable with rear connections			
Type of cooling	Forced air cooling with electronic speed control			
Operating temperature	0 °C to 45 °C			
Storage temperature	-40 °C to 80 °C (in original packing)			
Environmental conditions	EN 60721 part 3-3 class 3K3/3Z1/3B1/3C1/3S2/3M2			
Installation height	Up to 1000 m above sea level at nominal load			
STANDARDS				
Safety	EN 60950-1			
EMC	EN 61000.6-1, 2, 3, 4, CEI IEC TS 61000-6-5 (UNE 21000-6-5)			
Environment	EN 60721-3-1, 2, 3, ROHS			

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