AEG

SVS POWER SUPPLY SYSTEMS

SWITCH-MODE AC 18000

POWERFUL FOR TELECOMMUNICATIONS WITH 48V / 300A or 60V / 250A

Applications

The communication-capable AC 18000 switch-mode power supply unit from AEG SVS is designed specifically for supplying power to telecommunications systems and as a battery charger rectifier for protected direct current supply.

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 our optionally available power supply monitoring (PSM).

Compact in 19" technology

The switch-mode power supply unit operates according to an IU characteristic curve to DIN 41772/DIN 41773. It is a pre-wired unit. The connections can be accessed from the front panel. The controls and display elements are installed on the front of the device. It boasts a compact design as a 19" slide with a height of 8 height units. Consequently, redundant systems can be set up even when there is very little space available, by connecting the units together in parallel using the n+1 principle.

Low volume thanks to high cycle frequency

The unit is powered with three-phase AC voltage. This is converted into a smoothed direct current voltage.

Transistors create an AC voltage of 80 kHz from it. Transfer devices are used for electrical isolation as well as adaptation of the voltage to the secondary side. After this, the high-frequency AC voltage is rectified using fast diodes. An output filter is installed in order to reduce the voltage ripple. The output voltage and the output current are controlled by pulse width modulation of the transistor switch on the primary side.

- Compact design and low weight
- High power-to-weight ratio
- High efficiency
- Low voltage ripple
- Temperature-dependent voltage control
- Low start current
- Resistant to sustained short circuit
- RS 232 interface
- Communication-capable (CAN bus)
- Stand-alone/parallel mode even without CAN bus
- Excellent dynamic characteristics
- CE compliant

SWITCH-MODE AC 18000

TECHNICAL DATA

TYPE	D 400 G 48 / 300 BWrug-CFPüx	D 400 G 60 / 250 BWrug-CFPüx
E-number	3 000 000 411	3 000 000 421
Rated connected voltage	3 x 400 V AC + 10 % - 15 %	3 x 400 V AC +10% – 15%
Current consumption	3 x 29 A AC	3 x 28,5 A AC
Frequency	47 to 63 Hz	47 bis 63 Hz
Output voltage	53.5 V DC ±1 %	66,9 V DC ±1%
Setting range	35 to 63.6 V DC	44 bis 79,5 V DC
Output current	300 A DC ±2 %	250 A DC ±2%
Setting range	12.5 to 300 A DC	12,5 bis 250 A DC
Battery cells Pb (NiCd on request)	23 to 24	29 bis 30
Efficiency, total (%)	90	
Voltage ripple	< 100 mV_{ss}	
Interference voltage to CCITT-A filter	< 1.8 mV	
Power factor	0.92	
Start current	≤ rated input current	
Required mains fuse	gL 3 x 35 A	
Emitted interference	To EN 50081-1 / EN 55022, class "B"	
Resistance to interference	To EN 50082-2 / IEC 801 part 2-5	
Functional extra-low voltage with safe disconnection	To VDE 0100 part 410 11.83 section 4.3.2 / EN 60950 section 2	
Characteristic line	IU characteristic curve to DIN 41772/DIN 41773	
Mains-side monitoring systems	Phase failure, auto-acknowledgement, overvoltage/undervoltage with shut-off, auto-acknowledgement	
Dynamic response	≤ 3 % with sudden load variations between 10 % – 90 % – 10 % rated output current (settling time t < 1 ms)	
Short circuit response	Resistant to sustained short circuit, 1 x rated output current	
Output-side monitoring systems with LED display	DC undervoltage without shut-off, auto-acknowledgement; DC overvoltage with shut-off and locking; overtemperature with shut-off, auto-acknowledgement	
Display of output voltage and current	Via measuring sockets	
External functions	Group fault message via floating relay contact; external ON/OFF; external setpoint specification via CAN interface; external sensor cables output voltage UA; overtemperature signal via floating relay contact; programming via RS 232 interface	
Parallel operation	Load distribution approx. 10 % with inclined characteristic curve; when connected to CAN bus (max. 26 units), load distribution approx. 1 %	
Design	19" plug-in unit for installation in subrack to DIN 41494	
Type of cooling	Forced cooling	
Protective system	IP 20	
Inlet air temperature	0 °C to 45 °C (measured below the switch-mode power supply unit)	
Storage temperature	– 30 °C to + 70 °C	
Environment conditions	IEC 721 part 3-3 class 3K3 / 3Z1 / 3B1 / 3C2 / 3S2 / 3M2	
Installation height	Up to 1000 m above sea level at nominal load	
Mechanical strength and vibration resistance	To VDE 0160 edition 5.88 point 7.2.2	
Equipment colour	Colour RAL 7032 (front panel)	
Size w x h x d (mm)	483 x 354.8 x 460 (19" x 8 HUs)	
Weight (kg)	45	
DC output	Threaded bolt M10	
Signal interface	Signal connector type MVSTBW 2,5/12-ST-5,08, included in scope of delivery	
PE connection	Threaded bolt M6	
Mains connection	Terminal strip, connection cross sectional area 4 mm^2	
Communication (CAN bus)	16-pin pin strip	
Service interface RS 232	9-pin subminiature socket strip	

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