

SM1800

Modular 1800Watt rectifier designed for Telecom and Datacom applications

Rating from a single rectifier:
62A output at 24Vdc operation
34A output at 48Vdc operation
28A output at 48/60Vdc operation (dual voltage)
25A output at 60Vdc operation

Key features

- Convection cooled unit for low maintenance;
- High reliability;
- High power density (167W/l);
- Wide operating input voltage range (180 to 285Vac, 300Vac withstand voltage);
- Wide operating temperature range -10°C to +70°C with automatic self-protection;
- Reliable operation due to its self-protection (input, output, temperature, current) and high MTBF;
- Sine wave input (PFC) and high efficiency (92%) to reduce operation costs;
- Easy to operate: compact, light, clear indications by LEDs;
- Control & alarm functions for remote management;
- Float temperature compensation and voltage control input for optimum battery charging via system controller - increases battery life;
- Boost/equalise as standard;
- 48V version available with and without internal DC output fuse;
- **CE** marked.



For use with controller:
ACM1D

For use in systems:
MTP1800C, MTP1800HP

SPECIFICATION

Input				
Nominal input supply lines	208,220,230 or 240Vac without adjustment			
Input voltage range	180-285Vac, (300Vac withstand voltage – see available configurations)			
Nominal current	8.7A at 230Vac			
Nominal frequency	50/60Hz			
Number of phases	Single phase			
Power factor	0.99			
Total harmonic distortion (THD)	Meets EN 61000-3-2			
Inrush current	Less than normal peak current			
Output				
Nominal voltage	24Vdc	48Vdc	48/60Vdc	60Vdc
Output voltage control range	26-29Vdc	52-58Vdc	55-61/60-65Vdc	65-72Vdc
Maximum power	1820W	1850W	1850W	1850W
Maximum current	62.4A	34A	28.5A	25.5A
Current sharing	±15%			
Efficiency	92%			
Line & load regulation	<0.25%			
Ripple and noise	<0.5mV rms weighted, <10mV rms unweighted < 100mV peak to peak (30MHz Bandwidth)			
Transient response	<3% for load variations from 10% to 90% or 90% to 10%, recovery to normal regulation limits in 5ms			

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Protection	
Input protection	Inrush protection, soft start, internal line fuse, surge protection devices. The rectifier shuts down for input less than 165Vac or greater than 290Vac. In both cases the rectifier will automatically re-start
Output protection	Electronic short circuit protection; output protection fuse (See available configurations)
Output overvoltage	DC overvoltage shutdown
Thermal protection	Automatic shutdown on thermal overload with automatic re-start when acceptable temperatures are re-established
Alarms & indicators	
Alarms	Input ac present, output voltage present, rectifier in current limit, DC overvoltage shutdown, boost mode
Front panel indicators	Green LED : Current output Amber LED : Input/AC present Red LED : Rectifier in current limit Green LED : Output voltage present Amber LED : Boost mode Red LED : DC overvoltage shutdown
Mechanical specification	
Dimensions	265mm (6U) H, 107mm (21TE) W, 443mm D (minimum cabinet depth: 600mm)
Weight	9.8kg
Ingress protection	IP20
Mounting	Vertical 6U, 4 rectifiers across 19" or ETSI rack
Connections	Front connected as standard, rear connection model available (see available configurations)
Environmental	
Cooling	Natural convection
Operating temperature	-10° to +70°C full power up to 50°C, apply de-rating criteria between +50°C and +70°C
Storage temperature	-40°C +80°C
Humidity	10 to 95% RH non condensing
Acoustic noise	<35dB(A)
Standards	
Safety	EN60950, IEC60950
EMC	Emission: EN 55022 Class B, EN61000-3-2/3-3, EN61000-6-3/6-4, Immunity: EN61000-6-1/6, ANSI C62.41
Telecom networks	EN300386, EN300132-2
Environment	EN300019 (Transportation, storage and operation) ROHS directive on Restriction Of use of certain Hazardous Substances WEE directive on Waste Electrical and Electronic Equipment
Acoustic noise	ETS 300753
Approvals	CE
Available Configurations	
Product reference	SM1800-60-25 - SM1800-48/60-28 Dual Voltage SM1800-50-33 Output Fused, 300V withstand voltage SM1800-50-33 300V withstand voltage SM1800-24-60 - SMc1800-50-33 Rear connected