

SM1800

Modular 1800Watt rectifier
designed for Telecom
and Datacom applications

Rating from a single rectifier:

62 A output at 24 Vdc operation

34 A output at 48 Vdc operation

28 A output at 48/60 Vdc operation (dual voltage)

25 A output at 60 Vdc operation



Key features

- Convection cooled unit for low maintenance;
- High reliability;
- High power density (167W/l);

- Wide operating input voltage range
(180 to 285 Vac, 300 Vac 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;



>> SM1800

- 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;
- 48 V version available with and without internal DC output fuse;
- CE marked.

SPECIFICATION

Modular 1800 Watt rectifier designed for Telecom and Datacom applications

INPUT

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

PROTECTION

Input protection	Inrush protection, soft start, internal line fuse, surge protection devices. The rectifier shuts down for input less than 165 Vac or greater than 290 Vac. In both cases the rectifier will automatically re-start.
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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	265 mm (6U) H, 107 mm (21TE) W, 443 mm D (minimum cabinet depth: 600mm)
Weight	9.8 kg
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	< 35 dB(A)

STANDARDS

Safety	EN60950 - IEC60950
EMC	Emission : EN 55022 Class B – EN61000-3.2/3.3 - EN61000-6.3/6.4 Immunity : EN61000-6.1/6.2 – ANSI C62.41
Networks Telecom	EN300 386 – EN300132-2
Environment	EN300 019 (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 references	SM1800-60-25 SM1800-48/60-28 Dual Voltage SM1800-50-33 Output Fused, 300V withstand voltage SM1800-50-33 300 V withstand voltage SMc1800-50-33 Rear connected SM1800-24-60
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