

SMi2800

Modular 2800Watt intelligent rectifier designed for Telecom and Datacom applications

**Rating from a single rectifier: 51A output (48Vdc operation)
92A output (24Vdc operation)**

Key features

- Exceptional remote control and monitoring capabilities thanks to its embedded microprocessor & Can-bus communication technology;
- Space saving and extremely compact due to its exceptional power density and format (477W/l, 1U high);
- Robust due to its very wide operating input voltage range (85 to 305 Vac);
- Wide operating temperature range -15°C to +70°C with full thermal management;
- Reliable operation due to advanced self-protection (input, output, temperature, current, power) and high MTBF;
- Self-protection against high temperature conditions via automatic output power de-rating;
- Fan speed control & monitoring - low noise, extended fan lifetime, easymaintenance;
- Sine wave input (PFC) and high efficiency (92%) to reduce operation costs;
- Easy to operate: compact, light, hot pluggable and "plug" & "play", fully programmable via serial communication;
- Float temperature compensation and voltage control input for optimum battery charging via system controller - increases battery life;



- CE marked.

For use with controller:
NRC30, NRC50

For use in systems:
MTP2800iC, MTP2800iHP

SPECIFICATION

Input			
Nominal input supply lines	208, 220, 230, 240 or 277Vac without adjustment		
Input voltage range	85-305VAC (with power de-rating between 85 and 180Vac)		
Nominal current	13.2A at 230Vac		
Nominal frequency	50 / 60Hz		
Number of phases	Single phase		
Power factor	0.99		
Total harmonic distortion (THD)	<5%		
Inrush current	Less than nominal input current		
Output			
Nominal voltage	24Vdc (+ve Earth)	24Vdc (-ve Earth)	48Vdc (+ve Earth)
Output voltage control range	21-30Vdc	21-30Vdc	42-60Vdc
Maximum power	2800W with constant power between 54.5V and 60Vdc for 48Vdc		
Maximum current	92A	92A	51A
Current sharing	± 5%		
Efficiency	92%		
Line & load regulation	< 0.5%		
Ripple and noise	< 2mV rms weighted, <20mV rms unweighted, <100mV peak to peak (30MHz Bandwidth)		
Transient response	3% for load variations from 10% to 90% and 90% to 10%, recovery to normal regulation limits in 5ms		

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Protection	
Input protection	Hot pluggable, inrush protection, start up delay, soft-start, fuses on phase and neutral, surge protection devices The rectifier shuts down for input less than 85VAC or greater than 325Vac. In the case of low voltage the rectifier will automatically re-start
Output protection	Hot pluggable, electronic short circuit protection, output power limit, reverse polarity protection, output protection fuse
Output overvoltage	DC overvoltage shutdown
Thermal protection	Automatic power de-rating on high temperature
Alarms & indicators	
Alarms	Mains fail, rectifier fail, fan fail, thermal shutdown, rectifier over-temperature, rectifier in current/power limit, DC overvoltage shutdown, output current above minimum value, output voltage present. All alarms reported via communication bus
Front panel indicators	Green LED 1 : Input/AC present. Green LED 2 : Output current above minimum value. Amber LED : Communication Status Red LED : Rectifier fail
Mechanical specification	
Dimensions	44mm (1U) H, 445mm (84TE) W, 300mm D (minimum cabinet depth: 400mm)
Weight	6kg
Ingress protection	IP20
Mounting	Horizontal 1U, 1 rectifiers across 19" or ETSI rack or Vertical 12U, 10 rectifiers across 19" or ETSI rack
Connections	Hot-pluggable with rear connections
Environmental	
Cooling	Forced air cooling with electronic speed control
Operating temperature	- 15°C to +70°C – full power up to +50°C, apply derating criteria between +50°C and +70°C
Storage temperature	- 40°C + 80°C
Humidity	10 to 95% RH non condensing
Acoustic noise	< 60dB(A)
Standards	
Safety	EN60950 – IEC 60950 – UL1950
EMC	Emission: EN55022 Class B – EN61000-3-2/3-3 – EN61000-6-3/6-4 Immunity: EN61000-6-1/6-2 – ANSI C62.41
Telecom networks	EN300386 – EN300132-2
Environment	EN300019 (Transportation, storage and operation) ROHS Directive on Restriction Of use of certain Hazardous Substances WEEE Directive on Waste Electrical and Electronic Equipment
Acoustic noise	ETS 300753
Approvals	CE
Available Configuration	
Product reference	SMi2800-50-50 +ve Earth - SMi2800-24-90 +ve Earth - SMi2800-24-90 –ve Earth