

SM2000

Compact switch mode rectifier,
constant power output,
with wide AC input
for world-wide Telecom applications

Rating: 41.70A at 48Vdc



Key Features:

- Parallel operation with SM1600: can be mixed with SM1600 in MPT1600C and MPS1600C systems
- Constant power output: 2000W at 48Vdc, reducing the number of modules needed in the system
- Space saving and extremely compact due to its power density and format (750W / 1,1 U high)
- Robust due to its very wide operating input voltage range (80 to 300Vac)
- Wide operating temperature range -10°C to +70°C with full thermal management
- Reliable operation due to advanced self-protection (input, output, temperature current, power) and high MTBF
- Automatic stop on 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 lifetime
- Fan monitoring with alarm signaling when failed. Easy removing for simple maintenance



>> SM2000

- Sine wave input (PFC) and high efficiency ($\geq 91\%$) to reduce installation and operating costs
- Easy to operate: compact, light, hot pluggable, clear indications by LED, adjustment free, ready to use
- Control and alarm functions for remote management
- Float temperature compensation and output voltage control input for optimum battery charging via the system digital control module - increases battery life
- CE marked, UL compliant

For use with controllers and communication interfaces:

ACM1D, ACM1000 and NCS

For use in systems:

MTP2000C, MPS2000C

MTP1600C, MPS1600C

SPECIFICATION

Compact switch mode rectifier, constant output power, with wide AC input for world-wide Telecom applications

CONNECTIONS

Nominal input voltage lines	208, 220, 230, 240Vac without adjustment
Input voltage range	187-280Vac, (output power according features below) 80-187Vac (with output power de-rating between 80 and 187Vac)
Nominal current	9.5A at 230Vac
Nominal frequency	50/60Hz
Number of phases	Single phase
Power factor	0.99
Total harmonic distortion (THD)	<5%
Inrush current	<30A peak

OUTPUT

Nominal input voltage lines	48Vdc
Output voltage range	42-58Vdc
Maximum power	At 230Vac - 10%, + 20% - 2000W up to Tamb = 45°C - 1760W up to + 55°C At 230Vac - 20% - 1780W up to + 45°C - 1560W up to + 55°C
Nominal current	36.40A at 55Vdc
Maximum current	41.70A at 48Vdc
Current sharing	$\pm 5\%$
Efficiency	91%
Line and load regulation	<1%
Ripple and noise	<2mV rms psophometric weighted, <20mV rms unweighted, <250mV peak to peak (30MHz Bandwidth)
Transient response	10% to 90% or 90% to 10%, recovery to normal regulation limits in <5ms

SPECIFICATION

PROTECTION	
Input protection	Hot pluggable, inrush current limitation, soft-start, fuse on phase and neutral, VDR surge protection devices. Automatic stop above 280Vac with automatic re-start before 265Vac Automatic stop under 80Vac with automatic re-start before 95Vac
Output protection	Hot pluggable, electronic short circuit protection, output power limit, reverse polarity protection
Output overvoltage protection	Selective DC overvoltage shutdown
Thermal protection	Automatic power de-rating on high temperature

ALARMS AND INDICATORS	
Alarms	Mains fail, rectifier fail, control loop fail / rectifier in fall back operation, DC overvoltage shutdown, output voltage present, fan fail
Front panel indicators	Green LED: DC output "OK" Red LED: mains fail, rectifier fail, fan fail

MECHANICAL SPECIFICATION	
Dimensions	43.6mm H (1 U), 210mm W, 298mm D (minimum cabinet depth: 400mm)
Weight	2.9kg
Ingress protection	IP20
Mounting	Horizontal 1U, 2 rectifiers across 19" or ETSI rack
Connections	Hot pluggable with rear connections

ENVIRONMENTAL	
Cooling	Forced air cooling with electronic speed control
Operating temperature	- 10°C to + 70°C full power up to 40°C, apply de-rating criteria between + 40°C and +70°C
Storage temperature	- 40°C to + 85°C
Humidity	Humidity 10% to 95% RH non-condensing
Acoustic noise	< 55dB(A)

STANDARDS	
Safety	EN60950-1
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	EN300 386 - EN300 132-2
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, UL

AVAILABLE CONFIGURATIONS	
Product reference	In 48Vdc version SM2000-48 Also available in version with fuse on the DC output, negative polarity



Power Systems

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