

Switch Mode Power Supply

SMPS 1000 SI



The SMPS 1000 SI is a battery charger and rectifier for stand-alone use, or for working in parallel, as part of a power rack system controlled by the AL 175NT alarm module.

Switch mode technology with soft switching and high switching frequency is used to minimise volume and weight, and to obtain fast output voltage regulation. The module accepts large variations on the input voltage and draws sinusoidal current with a soft start power-up. When working in parallel, the rectifiers provide active current sharing.

SMPS 1000 SI offers features like

- Plug in connection facilitating easy service and maintenance without load interruption
- Power factor corrected input providing reduced harmonics and minimal input power requirements
- Automatic Over Temperature de-rating for increased reliability
- Compliant with International Standards
- Constant output power and current limitation ensures fast recharge of batteries and safe operation
- Input for external shutdown



SMPS 1000 SI Rectifier Module

The SMPS 1000 SI supports the following control functions

- Remote output voltage adjust for temperature compensation, boost charging and battery testing
- Current share bus for increased reliability in parallel operation
- Remote sense for cable voltage drop compensation
- Comprehensive alarm and control facilities for remote and local monitoring



SMPS 1000 SI

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SPECIFICATION

INPUT

Voltage:	150 VAC – 275 VAC 150 – 205 VAC with 75% output power
High Voltage:	300 V for 10 min., 345 V for 400ms
Frequency:	45 to 66 Hz
Harmonics:	According to EN 61000-3-2
Maximum Current:	5.5 Amp
Power Factor:	>0.995
Total Harmonic Distortion:	< 9%, typically <7%
Protection:	8 Amp Fuse Soft start

OUTPUT

Voltage:	24 V, 48 V or 60 V
Output Power:	24V: 920 W 48V & 60V: 1000 W
Maximum Current:	24V: 36 A 48V: 21 A 60V: 18 A
Current Share:	±5% of full load current
Static Voltage Regulation:	±0.5% from 0 to full load
Dynamic Voltage Regulation:	±1.0% for 10% to 90% or 90% to 10% load variation
Hold Up Time:	> 10 ms
Ripple and Noise:	< 100 mV peak to peak, <2 mV rms psophometric

OTHER SPECIFICATIONS

Efficiency:	>91%
EMC-Emission:	EN 50081-1
EMC-Immunity:	EN 50082-2
Safety:	According to EN60950
Isolation:	3.0 KVAC – input - output 1.5 KVAC – input - earth 1.0 KVDC – output - earth
Protection:	Output power limiting Non-destructive short circuit protection High output voltage shutdown
Metering:	Front panel test points for output current measurement
Volt Free Alarm:	Common output operated un- der one of the following condi- tions: Module failure Low input voltage High output voltage shut down High temperature
Voltage Adjustment:	Output voltage adjustments via front panel potentiometer or via the alarm module AL 175 NT
LED Indicators:	Green - Module OK Yellow – Module in current limit Red – Module in alarm condition
Operating Temp.:	-10°C to + 70°C (14°F to 158°F) Power limiting may occur at ambient temperatures above +40°C (104°F)
Storage Temp.:	-25°C to +85°C (-13°F to 185°F)
Cooling:	Convection
MTBF:	433944 hours at 25°C (77°F)
Humidity:	5% to 95% RH non-condensing
Dimensions:	66.8 x 266 x 220mm WxHxD 2.63 x 10.47 x 8.66" WxHxD
Weight:	<2.8 kg (<6.2 lbs.)
Housing:	IP20

ORDERING INFORMATION

Part no.	Description	Input	Output
241113.520	SMPS 1000 SI 230/24V/36A	230 VAC	24 VDC, 36 ADC
241113.510	SMPS 1000 SI 230/48V/22A	230 VAC	48 VDC, 21 ADC
241113.530	SMPS 1000 SI 230/60V/18A	230 VAC	60 VDC, 18 ADC



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