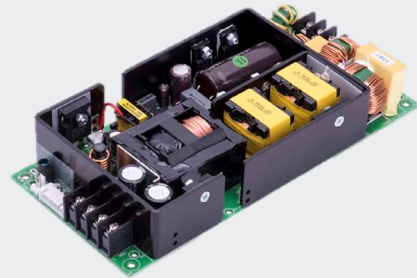


SL POWER MINT2270 SERIES

270 Watts Dual Output
Medical Grade



Advanced Energy's SL Power MINT2270 medically-approved AC-DC power supplies have dual output - 5 V and 24 V, delivering up to 270 Watts convection output power. It has universal 90 to 264 Vac input voltage range and up to 90% typical efficiency, which support AC OK, DC OK as well as Remote On/Off signals.

AT A GLANCE

Total Power

270 Watts

Input Voltage

90 to 264 VAC

of Outputs

Dual

SPECIAL FEATURES

- 270 Watts Convection
- 3.35" x 7.17" x 1.17" Dimensions
- Universal Input 90 to 264 VAC
- Up to 90% Efficiency Typical
- Natural Interleaving Technology for PFC
- LLC Technology for DC Converter
- 0°C To 70°C Operating Temperature Range
- Remote On/Off by PS_ON Signal
- DC OK, AC OK Active
- 2 Years Warranty

SAFETY

- UL/EN/IEC60601-1
- CE Mark



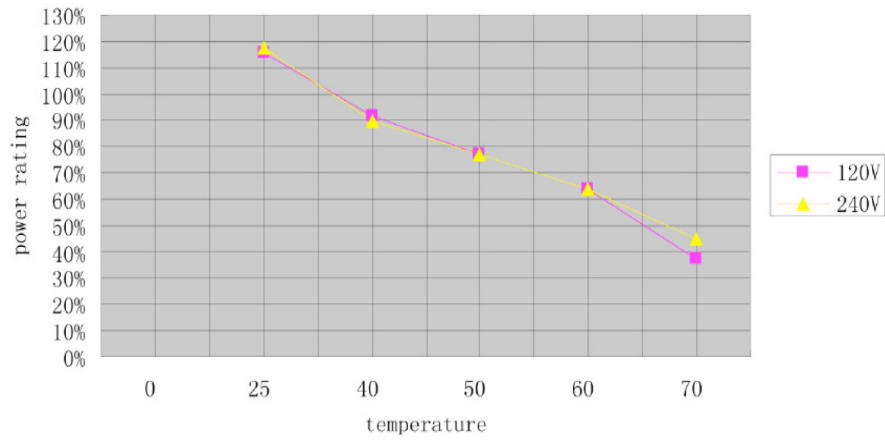
ELECTRICAL SPECIFICATIONS

Input	
Input range	90 to 264 VAC, 47 to 63 Hz, 1Ø
Input current	3.0A max at 115 VAC
Inrush current	45 A max, cold start @ 264 VAC input
Input fuses	T6.3 A, 250 VAC fuses provided on all models
Earth Leakage current	260 µA typical @ 264 VAC, 50 Hz
Efficiency (typ. @ 25°C)	90% Typical
Isolation voltage	Input/Ground: 1500 VAC Input/Output: 4000 VAC Output/Ground: 707 VDC
Power factor	Complies with EN61000-3-2
Output	
Maximum power	Max of 270 Watts for convection cooled. See "Ordering Information" section.
Output power derating	See derating chart
Ripple and noise	1% pk-pk for all models. (20 MHz bandwidth, differential mode. Measured with noise probe directly across output terminals, and load terminated with 0.1µF ceramic and 10µF low ESR capacitors)
Total regulation	See "Ordering Information" section.
Minimum load	Not required
Transient response	500 µS max response time for return to within 0.5% of final value for a 50% load step change, $\Delta i/\Delta t < 0.2 \text{ A}/\mu\text{S}$, with 5 mS high load and 5 mS low load.
Hold-up time	16 mS from loss of AC input at 120 VAC @ 270 W load
Turn on time	<2 s under all rated load conditions
Cooling	Convection (270 W Output max)
Reliability	
Warranty	2 years
MTBF	325,000 hours at 40°C operating ambient temperature
Protection	
Overvoltage protection	Latching type, see "Ordering Information" section for trip levels.
Short circuit protection	Short across the output terminals will not cause damage to the unit. Hiccup mode.
Overload protection	Hiccup mode
Overtemperature protection	Provided on all models, auto-recovery

SAFETY

EN/IEC/UL	EN/IEC/UL 60601-1, CSA 22.2, No. 60601.1
CE Mark	Yes

DERATING CURVE



EMI/EMC COMPLIANCE

Conducted emissions	EN55011 Class B, FCC Part 15, Class B
Electro static discharge immunity	EN61000-4-2, 6kV contact, 8kV air
Radiated RF fields susceptibility	EN61000-4-3, 10V/m
Electrical fast transients / bursts	EN61000-4-4, 2kV/5kHz
Surge susceptibility	EN61000-4-5, 1kV diff. mode, 2kV common mode
Conducted RF susceptibility	EN61000-4-6, 3Vrms
Rated power frequency magnetic fields test	EN61000-4-8, 3A/m
Voltage Sags & Surges	EN61000-4-11, 240VAC, 0%/0.5 cycle, 40%/5 cycles, 70%/25 cycles
Line frequency harmonics	EN61000-3-2, Class A

Notes:

Performance criteria are based on EN55024. According to the standards, performance criteria are decoded as following:

- A. Normal performance during and after the test
- B. Temporary degradation, self-recoverable
- C. Temporary degradation, operator intervention required to recover the operation
- D. Permanent damage

ENVIRONMENTAL SPECIFICATIONS

Vibration	Operating Non-Operating	0.003 g ² /Hz, 1.5 g _{rms} overall, 3 axes, 10 min./axis 0.026 g ² /Hz, 5.0 g _{rms} overall, 3 axes, 1 hr./axis
Shock	Operating Non-Operating	Half-sine, 20 g _{pk} , 10mS, 3 axes, 6 shocks total Half-sine, 40 g _{pk} , 10mS, 3 axes, 6 shocks total
Cooling		Convection
Operating temperature		0°C to +70°C (refer to derating curve)
Storage temperature		-40°C to +85°C
Altitude	Operating Non-Operating	-500 to 10,000 ft -500 to 40,000 ft
Relative humidity		5% to 95%, non-condensing
Dimensions (W x L x H)		3.35" x 7.17" x 1.17", see "Mechanical Drawing" section.
Weight		550 grams

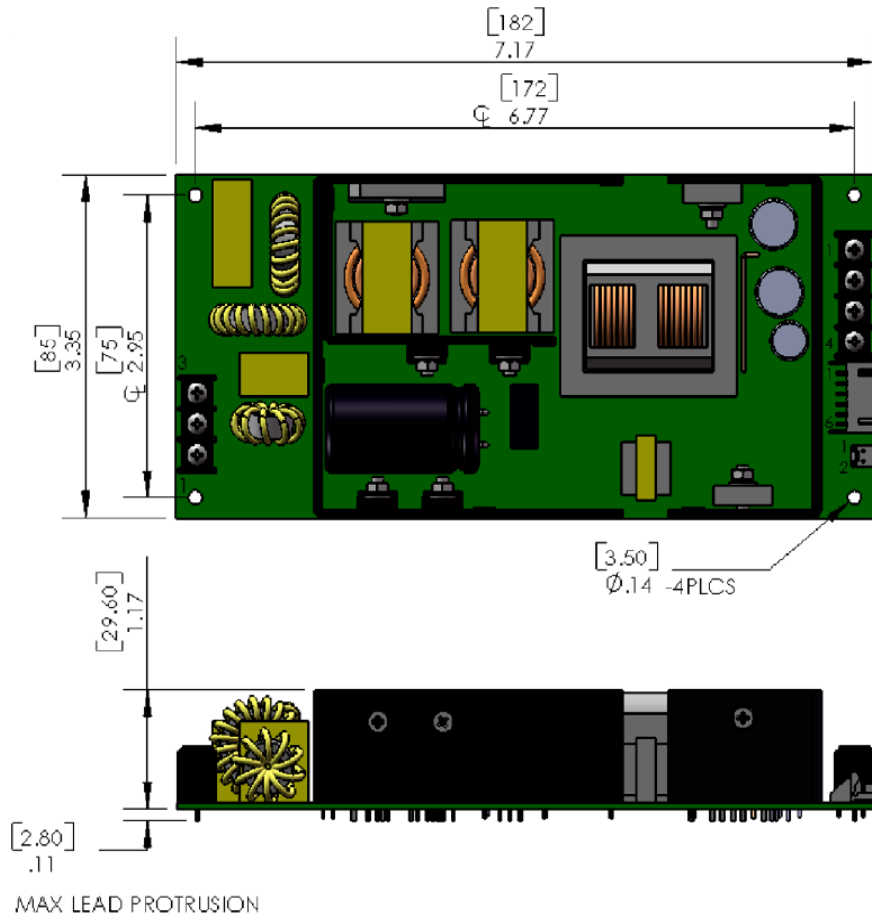
ORDERING INFORMATION TABLE 1

MINT	2	270	A	19	76	E	01
Product Family	# of Outputs	Output Power (Watts)	Model Configuration	Output Voltage Configuration	Output Connector	Input Connector	"01" = Standard Model, Remote On/Off in "Off" configuration. "02" = Standard Model, Remote On/Off in "On" configuration. "03" and higher indicates a modified model.
"M" = Medical		"270" = 270W	"A" = Class I (grounded)	"19" = 5V, 24V Output			
"I" = Internal			"B" = Class II (ungrounded)				
"NT" = New Technology			"C" = Chassis/Cover provided (Class I only)				

ORDERING INFORMATION TABLE 2

Model Number	Output No.	Output Voltage	Output Current	Total Regulation	Ripple & Noise	OCP Threshold	OVP Threshold
MINT2270A1976E0X	1	5 V	0.2 A	±5%	1%	1.5 A	7.0 V
	2	24 V	11.25 A	±2%	1%	15.5 A	30.0 V

MECHANICAL DRAWING



Notes:
 1. All dimensions in inches (mm).

PIN ASSIGNMENTS

Connector	MINT2270		Mating Connector	Mating Pin
Input connector M3 Screw terminals, 7.62mm pitch	PIN 1	GND	Wire Lugs - Barrier width = 6.62mm Molex 08-50-0105	
	PIN 2	AC Neutral		
	PIN 3	AC Line		
Output connector M3 Screw terminals, 7.62mm pitch	PIN 1	RTN	Wire Lugs - Barrier width = 6.62mm Molex 08-50-0105	
	PIN 2	RTN		
	PIN 3	+24 V		
	PIN 4	+24 V		
Signal connector Landwin 2502P0600T	PIN 1	RTN	Landwin 2500S060	2503T012P
	PIN 2	RTN		
	PIN 3	+5 V standby		
	PIN 4	DC OK		
	PIN 5	AC OK		
	PIN 6	PS ON		
Fan Output connector AMP 640456-2	PIN 1	RTN	AMP 1375820-2	1375913-3
	PIN 2	24V for Fan		

AUXILIARY SIGNALS

Power Good	Signal goes HIGH 100 mS to 250 mS after main output is in regulation, and goes LOW with 7 mS warning time before loss of main output due to loss of AC input (Output is measured above 90% nominal voltage).
Inhibit	Logic High or Open = On; Logic Low or Ground = Off.
PS Off	Logic Low or Open = On; Logic High = Off.
DC OK	During normal operation, this signal is logic HIGH. Signal will go LOW for output less than 90% of nominal.
Current Sharing	Active single wire, for up to 3 units in parallel



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE | TRUST

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