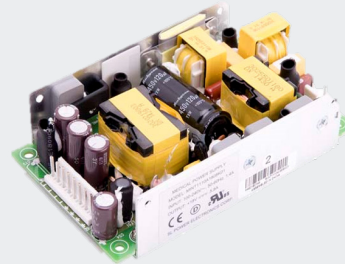




Medical

# SL POWER MINT1110 SERIES

110 Watts Single Output  
Medical Grade



Advanced Energy's SL Power MINT1110 medically-approved AC-DC power supplies are available with a nominal main output of 12 V, 15 V, 18 V, 24 V. MINT1110 power supplies provide up to 110 Watts convection. All models have output overvoltage, short circuit and overload protection and a 3 x 5 x 1.27 inch form factor.

## AT A GLANCE

### Total Power

110 Watts

### Input Voltage

90 to 264 VAC

### # of Outputs

Single

## SPECIAL FEATURES

- 110 Watts Convection
- 3" x 5" x 1.27" Form Factor
- Universal Input 90 to 264 VAC
- 2 x MOPP Isolation
- Rugged EMC Compliant Design
- 0°C To 70°C Operating Temperature Range
- 2 Years Warranty
- CE Compliant

## SAFETY

- UL/EN/IEC60601-1, 2nd. Ed.



## ELECTRICAL SPECIFICATIONS

Input	
Input range	90 to 264 VAC, 47 to 63 Hz, 1Ø
Input current	1.4A max at 115 VAC
Inrush current	40 A max., cold start @ 264 VAC input
Input fuses	F1,F2: 2.5 A, 250 VAC fuses (line & neutral lines) provided on all models
Earth Leakage current	<130 µA @ 264 VAC, 60 HzXXXX
Efficiency (typ. @ 25°C )	87% Typical
Isolation voltage	Input/Ground: 1500 VAC Input/Output: 4000 VAC Output/Ground: 500 VDC
Power Factor	Complies with EN61000-3-2
Output	
Maximum power	90 to 110 Watts for convection cooled. See "Ordering information" section.
Output power derating	Derate Output Power by 2.5% per °C above 40 °C, up to 70°C max.
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	±2% ( Maximum deviation from nominal voltage for all loading conditions)
Minimum load	Not required
Output Voltage	See "Ordering information" section.
Transient response	500 µS response time for return to within 0.5% of final value for a 50% load step change, $\Delta i/\Delta t < 0.2 \text{ A}/\mu\text{S}$ . Max.
Hold-up time	16 ms at 110W from loss of AC input at 120 VAC
Turn on time	<2 s under all rated load conditions
Cooling	Convection (110 W Output max)
Reliability	
Warranty	2 years
Protection	
Overvoltage protection	See "Ordering information" section, latching type.
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.

## SAFETY

EN/IEC/UL	EN/IEC/UL 60601-1, CSA22.2, No.601.1
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## 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	0.003 g <sup>2</sup> /Hz, 1.5 g <sub>rms</sub> overall, 3 axes, 10 min./axis
	Non-Operating	0.026 g <sup>2</sup> /Hz, 5.0 g <sub>rms</sub> overall, 3 axes, 1 hr./axis
Shock	Operating	Half-sine, 20 g <sub>pk</sub> , 10mS, 3 axes, 6 shocks total
	Non-Operating	Half-sine, 40 g <sub>pk</sub> , 10mS, 3 axes, 6 shocks total
Cooling		Convection
Operating temperature		0°C to +70°C (derate from full rated power above 40°C)
Storage temperature		-40°C to +85°C
Altitude	Operating	-500 to 10,000 ft
	Non-Operating	-500 to 40,000 ft
Relative humidity		5% to 95%, non-condensing
Dimensions (W x L x H)		3.0" x 5.0" x 1.27"
Weight		372 grams

**ORDERING INFORMATION TABLE 1**

MINT	1	110	A	12	08	K	01
Product Family	# of Outputs	Output Power (Watts)	Model Configuration	Output Voltage	Output Connector	Input Connector	"01" = Standard Model, "02" and higher indicates a modified model
"M" = Medical		"110" = 110W	"A" = Class I (grounded)	"12" = 12V Output			
"I" = Internal				"24" = 24V Output			
"NT" = New Technology							

**ORDERING INFORMATION TABLE 2**

Model Number	Output Voltage	Output Current	Total Regulation	OVP Threshold	Ripple & Noise	Setpoint Tolerance
MINT1110A1208K01	12 V	7.5 A	±2%	15.0 ± 1V	120 mV	±1%
MINT1110A1508K01	15 V	6.5 A	±2%	18.0 ± 1V	150 mV	±1%
MINT1110A1808K01	18 V	5.8 A	±2%	23.0 ± 1V	180 mV	±1%
MINT1110A2408K01	24 V	4.6 A	±2%	28.0 ± 1V	240 mV	±1%

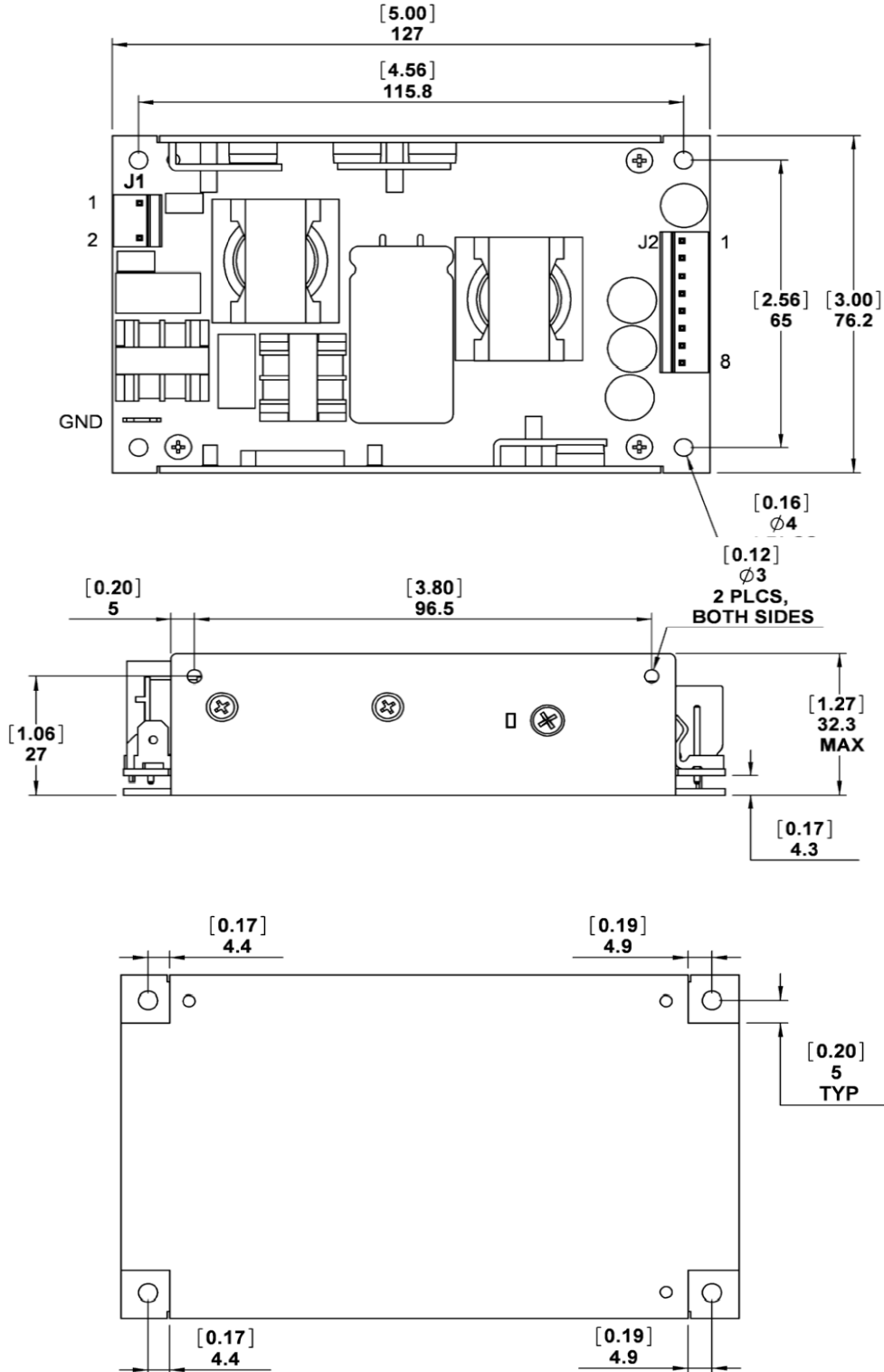
**PIN ASSIGNMENTS**

Connector	MINT1110		Mating Connector
J1 (Input connector) LANDWIN: 3361P03E3TSN02	PIN 1	AC Line	AMP MTA-156-3P
	PIN 2	AC Neutral	
J2 (Output connector) LANDWIN: 3361P08E3T	PIN 1	+Vo	AMP MTA-156-8P
	PIN 2	+Vo	
	PIN 3	+Vo	
	PIN 4	+Vo	
	PIN 5	-Vo	
	PIN 6	-Vo	
	PIN 7	-Vo	
GND Connection	-	-	0.250" FASTON TAB

**MECHANICAL DRAWING**

Notes:

1. All dimensions in inches (mm).





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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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