

# MINT1045

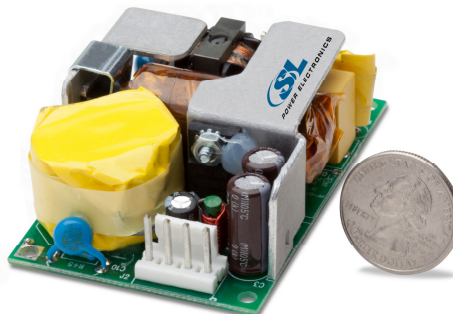
45 W Single Output Series

Medical & ITE – Universal Input Power Supply



3 Year Warranty

- 45 W Convection Cooled
- Universal Input 80--270 Vac
- Very Small Size: 2" W x 3" L x 1.0" H
- 88% Efficiency Typical
- Class I or Class II AC Input Applications
- CSA/EN/IEC/UL60601-1 3<sup>rd</sup> Edition for Medical, Type BF Capable, Ultra-low Leakage Current
- CSA/EN/IEC/UL60950-1 2<sup>nd</sup> Edition for ITE



International Safety Standard Approvals



## Specifications

All Specifications are typical at nominal input, full load at 25°C unless otherwise stated.

<b>AC Input</b>	100-240Vac +/- 10%, 47-63 Hz 1Ø rated 80-270 Vac, 47-440 Hz operational	<b>Turn On Time</b>	500 ms max at 120 Vac
<b>Input Current</b>	0.75A @ 120 Vac, 0.45 A @ 240 Vac	<b>Hold-up Time</b>	25 ms minimum at 45 W, nominal input (120Vac)
<b>Inrush Current</b>	37A max., 264 Vac	<b>Overvoltage Protection</b>	120-150%, auto-reset
<b>Input Fuses</b>	F1, F2: 1.6A, 250Vac fuses provided internally	<b>Overload Protection</b>	Hiccup Mode, 58W typical
<b>Power Factor</b>	Complies with EN61000-3-2, Class A	<b>Short Circuit Protection</b>	Hiccup Mode, 58W typical
<b>Efficiency</b>	88% typical	<b>Overtemperature Protection</b>	Self-Recovering
<b>Output Power</b>	45 W continuous. See chart for operation above 50°C	<b>Medical Safety Standards</b>	CSA/EN/IEC/UL 60601-1, 3 <sup>rd</sup> Edition Methods Of Protection: 2 MOPP for Type BF Applications
<b>Peak Output Power</b>	50 W for 1 minute, 10% duty cycle	<b>ITE Safety Standards</b>	CSA/EN/IEC/UL 60950-1, IEC 2 <sup>nd</sup> Edition See page 2 for detailed safety agency standards
<b>Ripple and Noise</b>	1% pk-pk max., 20 MHz BW, differential mode Measured with noise probe directly across output terminals	<b>Isolation</b>	Input-Output: 4500Vac, Input-Ground: 1900Vac Output-Ground: 1900Vac
<b>Output Voltage</b>	See chart	<b>Leakage Current</b>	12V-28V models: 120Vac: 30µA NC/70µA SFC 264Vac: 75µA NC/130µA SFC 48V model: 120Vac: 90µA NC/120µA SFC 264Vac: 190µA NC/220µA SFC
<b>Voltage Adjustability</b>	Not adjustable Factory set with fixed resistors for higher reliability	<b>Operating Temperature</b>	-20° to 70°C See derating chart
<b>Minimum Load</b>	Not required	<b>Output Power Derating</b>	Derate output power by 2.5% per °C above 50°C, up to 70°C max
<b>Total Regulation</b>	See chart	<b>Storage Temperature</b>	-40 to +85°C
<b>Transient Response</b>	500µs max. to 1%, 50% load step 0.2A/µs, 3.5% deviation. typical	<b>Relative Humidity</b>	5% to 95%, non-condensing
<b>Switching Frequency</b>	Fixed 65 kHz, typical	<b>MTBF</b>	300K hours per Telcordia

## Model Number Key

MINT 1 045 A 12 75 K 01

- 01 = Standard Model, 02 and higher indicates a modified model.
- "K" = Input Connector - 3 pin header
- "75" = Output Connector - 4 pin header
- Output Voltage: "12" = 12V output, "24" = 24V output, etc.
- Model Configuration: "A" = Class I Input; "B" = Class II Input (no ground)
- Output Power (Watts) - "045" = 45W
- # of Outputs
- Product Family: "M" = Medical, "I" = Internal, "NT" = New Technology

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Model Number	Volts	Output Current	Output Parameters		Initial Set-point Tolerance
			Ripple & Noise	Total Regulation	
MINT1045A1275K01	12 V	3.75	120mV	±0.5%	±2%
MINT1045A1575K01	15 V	3.00	150mV	±0.5%	±2%
MINT1045A2475K01	24 V	1.90	240mV	±0.5%	±2%
MINT1045A2875K01	28 V	1.60	280mV	±0.5%	±2%
MINT1045A4875K01	48 V	0.95	480mV	±0.5%	±2%

Consult factory for availability

**Notes:**

1. Derate output power by 2% per volt AC for input voltage <90Vac.

### Specifications (continued)

<b>Vibration</b>	Random vibration per MIL-STD-810E, Method 514.4, Cat. 1, Figure 514.4-1, 1 hr in each of three axes	<b>Shock</b>	Half-sine, 40 gpk, 10 msec duration, +/- in each of three axes, total of 6 shocks
<b>Enclosure Dimensions</b>	See outline drawing	<b>Operating Altitude</b>	-500 to 10,000 ft
<b>Weight</b>	113 grams	<b>Non-operating Altitude</b>	-500 to 40,000 ft

### EMI/EMC Compliance

<b>Conducted Emissions</b>	EN55011/22 Class B, FCC Part 15, Class B, 6db margin
<b>Radiated Emissions</b>	EN55011/22 Class A, FCC Part 15, Class A, 10db margin To meet class B for grounded input (Class I), unit should be mounted on a metal plate.
<b>Static Discharge Immunity</b>	EN61000-4-2, 6kV Contact Discharge, 8kV air discharge
<b>Radiated RF Immunity</b>	EN61000-4-3, 3V/m.
<b>EFT/Burst Immunity</b>	EN61000-4-4, 2kV/5kHz.
<b>Line Surge Immunity</b>	EN61000-4-5, 1kV differential, 2kV common-mode
<b>Conducted RF Immunity</b>	EN61000-4-6, 3Vrms
<b>Power Frequency Magnetic Field Immunity</b> Convection Cooled	EN61000-4-8, 3A/m
<b>Voltage Dip Immunity</b>	EN61000-4-11 100Vac, 95% dip/0.5 cycle (Criteria A), 60%/5cycles (Criteria A at 30% load), 30%/25 cycles (Criteria A).
<b>Line Frequency Harmonics</b>	Complies with EN61000-3-2. EN60601-2-1

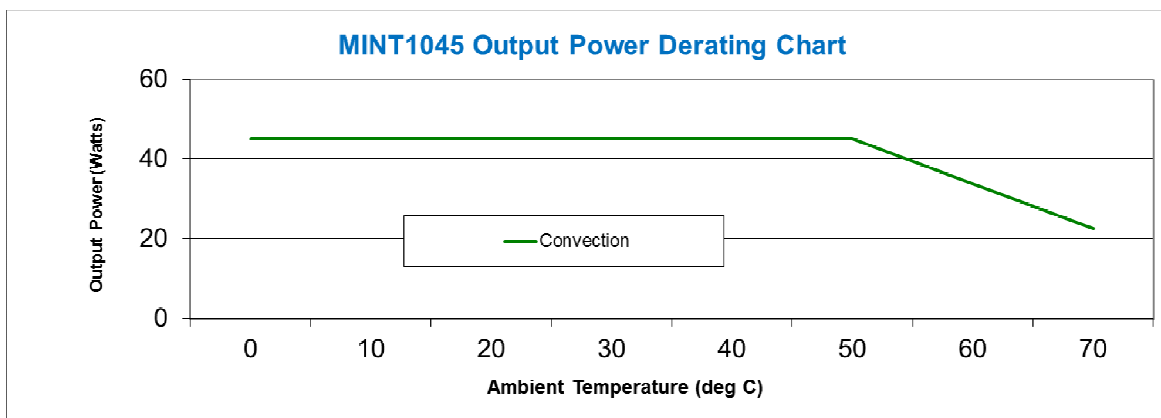
### Safety Agency Compliance

**Medical Certification to the New 3rd Edition:**

- Demko certified to EN 60601-1:2005, 3rd Ed.
- CB certified to IEC 60601-1:2005, 3rd Edition
- UL Recognized to ANSI AAMI ES60601-1:2005 & CAN/CSA C22.2, No. 60601-1-08

**ITE Certification to the New 2nd Edition:**

- Demko certified to EN60950-1:2006+ A11:2009, 2nd Ed.
- CB certified to IEC 60950-1:2005, 2nd Edition
- UL Recognized to UL 60950-1:2007, 2nd Edition & CAN/CSA C22.2, No. 60950-1-07, 2nd Edition



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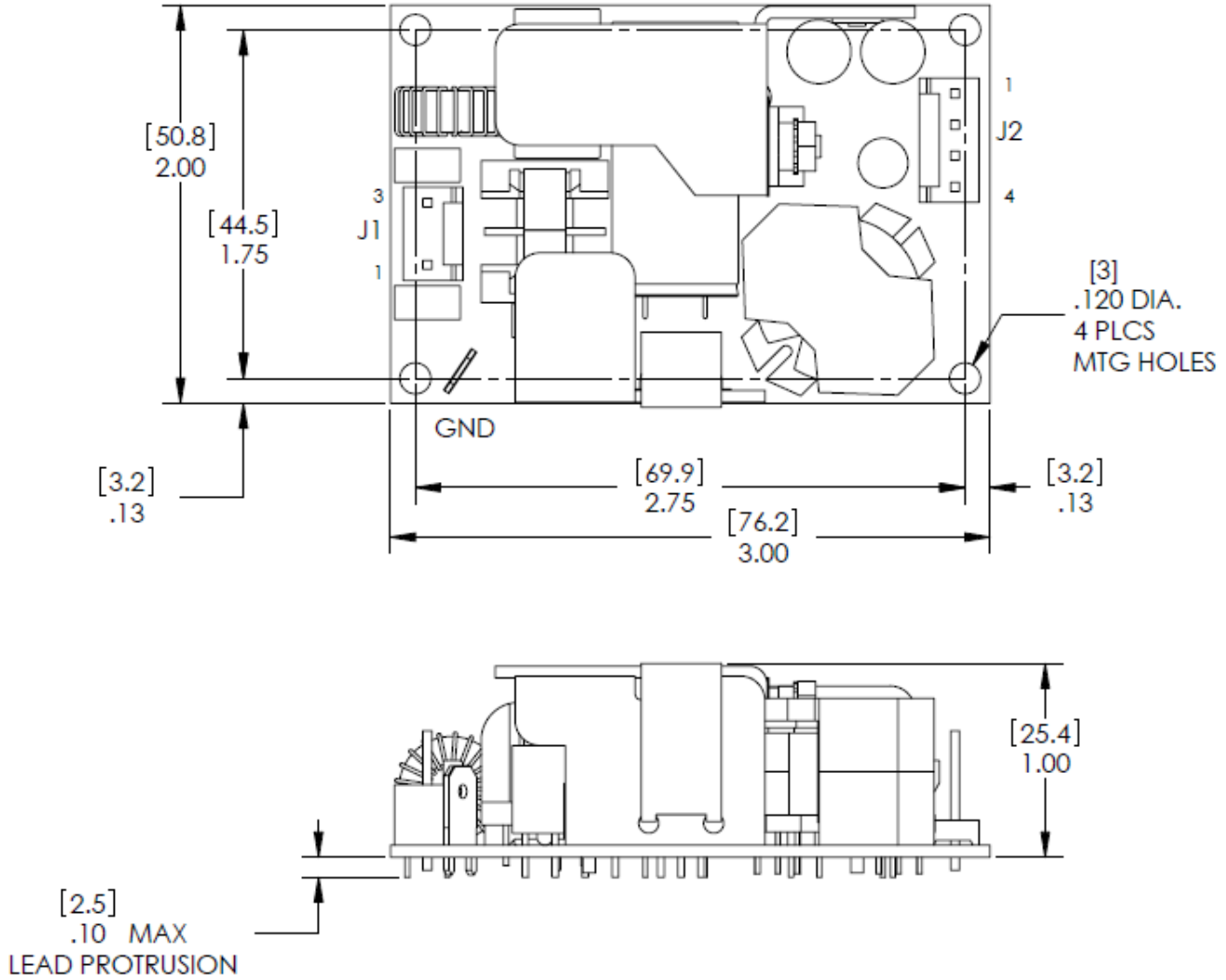
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## Outline Drawing



J1 - AC INPUT AMP 640445-3

PIN 1) LINE  
PIN 2) REMOVED  
PIN 3) NEUTRAL

J2 - DC OUTPUT AMP640445-4

PIN 1) +V1  
PIN 2) +V1  
PIN 3) RTN  
PIN 4) RTN

GND - .25" X .032" FASTON TAB

**Mating Connectors:** J1 = AMP 640250-3, J2 = 640250-4,  
Contacts = AMP 770461-1

**Note:** For Class II (No earth ground) applications, all mounting hardware must be non-conductive.